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Obsessive Compulsive Personality Disorder as an Adaptive Anachronism: The Operation of Phylogenetic Inertia Upon Obsessive Populations in Western Modernity

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Abstract

Consistent with its classification by the American Psychiatric Association as one of ten personality disorders, nearly all etiologies assume Obsessive Compulsive Personality Disorder to be an environmentally instilled syndrome. However, a recent evolutionary etiology, better accounting for prevalence rates and heritability estimates, ecologically explains obsessive psychology as an adaptation to northern climates with express seasonality, low population density, and low social complexity. While this evolutionary etiology justifiably eschews assumptions of pathology, it does not explain why those assumptions were so long made. To this end, the concept of *phylogenetic inertia*, the decrease in fitness arising from incongruity between past and present selective pressures, is applied. The present paper considers how an evolved strategy could be mistaken for a detrimental disorder by examining the misalignment between evolved obsessive psychology and modernity's demands for flexible attention, communion and collaboration, openness and complexity. As discussed, however, empirical studies are divided, such that only some show evidence of dysfunction; moreover, any evidence of dysfunction is relativistic in that it does not impair survival or decrease reproduction. While suggestions for future research are made, from the weight of present evidence it appears that Obsessive Compulsive Personality Disorder, evolved in prehistory, remains adaptive in modernity and so phylogenetic inertia can only be invoked as a metaphorical heuristic.

Keywords: obsessive-compulsive personality disorder, personality, phylogenetic inertia, modernity, evolution

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Introduction

Obsessive Character as an Evolved Strategy

First styled *anal character* (Freud, 1908/1959), Obsessive Compulsive Personality Disorder (OCPD) can now be found alongside nine other personality disorders in *Diagnostic and statistical manual of mental disorders* (American Psychiatric Association, 2013)[1]. In the century that separates its initial discovery from its current depiction, its name often varied, its description sometimes varied, but its status as a disorder never varied. With characteristic abrasiveness, pedantry, rigidity, stubbornness, low hedonic tone, strained mannerisms, tension, over-controlled emotional expression, sanctimoniousness, reluctance to collaborate, cognitive inflexibility, occasional volatility and judgmental tone, it is not surprising that assumptions of pathology are made uncritically and universally. Yet, OCPD might very well be erroneously classified and condemned.

As previously reviewed (Hertler, 2014a), the etiological theories upon which assumptions of pathology rest have not been supported (Pollak, 1979, 1987). The family systems dynamics posited as mutative of childhood temperament, and formative in adult character, have been recently contradicted by controlled behavioral genetics studies, suggesting that OCPD is "…best explained by genetic factors alone…" (Reichborn-Kjennerud et al., 2007) and that OCPD is not significantly influenced by "common, shared-in-families environmental factors…"

[1] Nomenclature: Presently three terms are employed: Obsessive Compulsive Personality Disorder (OCPD), obsessive, and obsessive psychology. These terms are more or less synonymously used. The first refers to the disorder, the second to persons with that disorder, and the third to the mental and behavioral dispositions imparted by that disorder. Irrespective of the form, it is always the pattern described in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000, 2013) that is being referenced, which is marked by the following symptoms: (a) is preoccupied with details, rules, lists, order, organization, or schedules to the extent that the major point of the activity is lost; (b) shows perfectionism that interferes with task completion; (c) is excessively devoted to work and productivity to the exclusion of leisure activities and friendships; (d) is over-conscientious, scrupulous, and inflexible about matters of morality, ethics, or values; (e) is unable to discard worn-out or worthless objects even when they have no sentimental value; (f) is reluctant to delegate tasks or to work with others unless they submit to exactly his or her way of doing things; (g) adopts a miserly spending style towards both self and others; money is viewed as something to be hoarded for future catastrophes; (h) shows rigidity and stubbornness. So again, whether referring to the disorder as OCPD, the person with the disorder as obsessive, or the mental and behavioral disposition as obsessive psychology, it is the above defined personality disorder that is being referred to. Importantly, OCPD, as described above, is a personality disorder that should not be associated with the similar sounding, but very different, OCD or Obsessive Compulsive Disorder.

(Torgersen et al., 2000). High heritability (Torgersen et al., 2000), temperamentally determined behavior (Morey et al., 2003), and emerging genetic markers (Chapman et al., 2007) suggest that the OCPD is a biologically grounded phenotype, rather than an environmentally imparted disorder (Hertler, 2014b, 2015a). The obsessive traits of conscientiousness, anxious tension, parsimoniousness, future oriented thought, time urgency and rigidity that characterizes approximately five percent (Hertler, 2015b)[2] of the general population (American Psychiatric Association, 2013) was consequently explained evolutionarily (Hertler, 2014b, 2015a).

OCPD was recently (Hertler, 2014b, 2015a) described as an evolved frequency dependent [3] niche strategy whose extreme temperament and behavior evolved subsequent to human migration out of clement equatorial Africa. Briefly, this evolutionary theory finds the origins of obsessive psychology in the shifting selective pressures imposed by the ecology of northern climates during the late Paleolithic and early Neolithic Eras. While northern migration eased competition, suppressed parasitic infections, and limited violent conflicts responsible for much random death at tropical latitudes, it simultaneously imposed the predictable climatic stressors of cold and seasonal scarcity. Northern climes, being cold, and having fewer resources that are less conveniently clustered and less consistently available, dependably and predictably imposed mortal threats. This shift in selective pressures slowly shaped obsessive psychology towards extremity and specialization. Activity was the answer to these new adaptive exigencies. At the insistence of obsessive temperamental traits, adaptive activities such as shelter construction, foraging, food processing, and storage would proceed even during the most balmy summer days, with no need to suffer the cold chill of winter as a spur to action. At high latitudes, winter days are short and so time is compressed; concomitantly, foraging and other activities become inefficient and perilous during the winter months. It is then adaptive to distribute as much of the work of survival as possible across conducive seasons. Conscientious action in the absence of present need was made possible by an underlying anxious disposition with its reflexive tendency to preempt want and exposure by ceaseless action. Within the

[2] Prevalence: Obsessive Compulsive Personality Disorder prevalence varies from a low of one percent to a high of sixteen percent. The low prevalence rate of one percent is found in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), while the prevalence of sixteen percent is found in two studies of psychiatric inpatients diagnosed with between two and three personality disorders per participant. The approximation of five percent used above reflects a middle ground between these rare extremes. More pointedly, it is the exact average of the range of 2.1 to 7.9 percent most recently reported in the fifth edition of the DSM.

[3] Frequency dependent refers to *negative frequency dependent balancing selection*, a form of evolutionary selection in which the fitness of a phenotype decreases as its frequency increases (Penke et al., 2007). Thus, as obsessive numbers wax, the success of the obsessive strategy is predicted to wane.

ecological context of temperate climates with low population density, obsessives evolved to become ordered and organized, rigid in attention and achievement striving, insular and self-reliant, risk-averse and closed to new experience (Hertler, 2014b, 2015a).

An evolutionary etiology is the only ever advanced that positively accounts for the heritability of OCPD, converting it from an inconvenient contradiction into a foundational tenet. Moreover, obsessive personality's high prevalence, functionality, coherent trait complex, and male biased sex ratio (Hertler, 2015a) are more parsimoniously explained by an evolutionary etiology, as is the presence of obsessive traits in the absence of urgent states (Hertler, 2015c). Though, for all the explanatory power gained via an evolutionary explanation that abjures assumptions of pathology, it is unclear why those assumptions were made and maintained. In other words, if OCPD is not a disorder at all, why was it thought one?

Any such account must be multi-factorial. First and foremost, the description of OCPD is old, and the information necessary for its explanation is new. Despite the precocious efforts of Francis Galton, in 1908, when the obsessive psychology was first described (Freud, 1908/1959), and for many years thereafter, there was no formalized discipline of behavioral genetics to show the heritability of personality generally and the heritability of obsessive personality specifically. Likewise, for most of the last hundred years since obsessive personality was first described, evolutionary principles were not systematically applied to human personality. Therefore, for a century, there was no specific evidence or general framework suggesting that psychoanalytic and psychiatric assumptions of pathology should be challenged. Further still, even when this evidence became available, with the exception of three studies (Hertler, 2014a, 2014b, 2015a), it seems not to have been applied towards the understanding of obsessive psychology. Concomitantly, clinically identified obsessives, overrepresented by convenience sampling, loomed large in research studies and samples. In clinical treatment too, there is a self-selection bias, such that those with crippling comorbidities and severe psychosocial problems disproportionately present for treatment, and thus present as prototypical. So, not only was there no genetic evidence of heritability or evolutionary framework for personality to cause doubt, but there was the example of the clinical patient and the psychiatric participant to inspire confidence (Hertler, 2015b).

The Purpose and Structure of the Present Paper

In attempting to understand why an evolved phenotype was so long mistaken for a clinical disorder, the explanatory efficacy of delayed social scientific progress and clinical sampling bias are obvious. In addition, it is precisely because these explanations are obviously influential that they do not call for sustained attention. Alternatively, *phylogenetic inertia*, the decline in fitness arising from a mismatch

between present and past selective regimes, is a third factor that does call for sustained attention because it is at once more relevant and less definite.

Migration out of Africa and into the Eurasian continent commenced approximately fifty thousand years ago (Becker, Glaeser, & Murphy, 1999; Bocquet-Appel & Demars, 2000; Stearns & Hoekstra, 2005), affording tens of thousands of years for expressly seasonal conditions between 40º and 60º north latitude to shape obsessive psychology. In a much shorter space of time this uncivilized and sparsely populated portion of the globe underwent the dramatic transformations wrought by social, scientific, political, and industrial modernism. The present paper dilates on some *potential* ways in which the sudden efflorescence of modernity may have adversely affected the carriers of obsessive traits. After introducing the concept of phylogenetic inertia (Section 3), and after generally considering some pertinent features of modernity (Section 4), the present work proceeds to colloquially explore whether obsessive psychology (Section 3.1) in the form of restricted attention (Section 5), self-reliance (Section 5.1), and closed mindedness (Section 5.2) areancient adaptations become contemporary liabilities. The discussion section addresses the potential for OCPD to remain adaptive when expressed in certain cultures, when manifested less roundly, and when sheltered within congruent micro-niches that riddle the modern environment. To this, is added empirical evidence divided in its demonstration of clinically significant dysfunction, and which does not translate into depressed fitness or fecundity. Speaking to this latter point, the discussion section attributes this inability to appropriately differentiate evolutionarily relevant impairment from culturally relativistic impairment as the source of one hundred year persistence of an erroneous assumption of pathology. Thus it is concluded that while phylogenetic inertia may serve some heuristic value, there is as of yet no evidence that it actually operates on modern obsessive populations.

Phylogenetic Inertia

Phylogenetic inertia, originally *evolutionary inertia* (Blomberg & Garland, 2002; Simpson, 1944), is a biological concept denoting the relative loss of fitness resulting from a mismatch between existing and ancestral environments. Sometimes, an ancestral form is represented in the present population because there is a "lag-time between a past world, in which a certain morphology or behavior was adaptive, and the present world, in which the morphology or behavior apparently has no function" (Cachel, 2006, p. 201). In this way, phylogenetic inertia is much like physical inertia (Wilson, 2000). An environmental pressure exerts a force, the effects of which can be felt even after that force has ceased. In understanding phylogenetic inertia, one has to recall that evolution proceeds by way of historical process, as much as by way of mechanistic laws (Russell, 2011). Any species "…has not only selection pressures at the present, but also a history of selection

pressures that shaped its behavior in the past" (Lott, 2009, p. 171). Cachel (2006, p. 201) provides an instructive example of phylogenetic inertia:

> "… the American pronghorn antelope (*Antilocapraamericana*) … exhibits a suite of characters that are inexplicable in modem terms (Byers, 1997). Pronghorn antelopes can run at speeds of 100 km/hour, and have the stamina of Thomson's gazelles – yet, no modern American predator exists that would warrant such speed and stamina … It seems probable that these pronghorn locomotor … specializations evolved in a late Cenozoic world replete with dangerous predators that are now long extinct."

Phylogenetic inertia is a widely used explanatory mechanism (Shanahan, 2011) found, for example, in accounts of mouth morphology in Australian anuran larvae (Van Buskirk, 2009), thermoregulation in certain South American rodent species (Bacigalupe, Nespolo, Opazo, & Bozinovic, 2004) and life history traits of passerine birds (Pienaar, Ilany, Geffen, Yom-Tov, & Gaillard, 2013). Among *Homo sapiens,* phylogenetic inertia is classically illustrated by the spinal problems associated with bipedalism (Blomberg & Garland, 2002; Gould & Lewontin, 1979), and may also explain the high incidence of breast cancer among women living in post-demographic transition societies (Greaves, 2000; Stearns & Koella, 2008)[4].

Phylogenetic Inertia: Plasticity versus Specialization

Unending phenotypic plasticity is an implausible ideal (Penke, Denissen, & Miller, 2007). No organism could plastically adapt to all environmental contingencies (Dall, Houston, & McNamara, 2004; Scheiner, 2006) chiefly because this pluripotency would be so demanding and costly (Nettle, 2006). Nevertheless there is a spectrum of plasticity, with generalists on one side and specialists on the other. Sparrows (Rajashekar & Venkatesha, 2008), crows (Johnson, 1994), raccoons (Ikeda, Asano, Matoba, & Abe, 2004) and coyotes (Cepek, 2004; Gehrt & Clark, 2003) are phenotypically plastic, most notably in their dietary requirements. They are omnivorous generalists that seem to survive and even thrive amidst rapid anthropogenic change. In contrast, there are dietary specialists (Higgins,

[4] Women in modern industrialized countries that have moved through the demographic transition rear fewer children, and less frequently breastfeed those few children that they do rear. Pregnancy and nursing have the effect of inhibiting the cyclical compositional changes in breast tissue that are part of monthly cycling. When these natural restraints are inhibited by low birth rates and strategic family planning, cyclical compositional change augments, and consequently so do rates of cellular turnover, genetic mutation, and cancerous growth (Greaves, 2000; Stearns & Koella, 2008). Thus, phylogenetic inertia can be inferred, as repetitive and rapid breast tissue compositional change is an adaptation to ancestral mating patterns that is now harmful to those women who presently display a post-demographic transition mating pattern.

Bercovitch, Tobey, & Andrus, 2011). Koalas, for example, have developed morphological changes, such as an elongated colon and cecum that enable the digestion of eucalyptus leaves, a largely unexploited resource. Along with gross anatomical changes, come specialized physiological changes allowing the koala to detoxify eucalyptus leaves with glucuronic acid and specialized micro flora (Feldhamer, Drickamer, Vessey, Merritt, & Krajewski, 2007). These specializations are likely the result of interspecific character displacement. This means that competition for resources with other species drove the koala into its present gastronomical niche. By exploiting toxic eucalyptus leaves, the koala is released from interspecific competition for non-toxic foliage. However, specialization is a double edged sword. While a "jack of all trades is master of none"; "a superb specialist is often a poor generalist: when the reproductive success of a species increases as it becomes adapted to one resource, its reproductive success on other resources decreases" (Stearns & Hoekstra, 2005, p. 461). Often the original adaptation was gained by way of tradeoff. "Tolerance breadth" is sacrificed to "fitness in the optimum environment" (Chevin, Lande, & Mace, 2010). These specializations, and the consequent occupation of a smaller niche breadth, make the koala more dependent on environmental stasis (Colwell & Futuyma, 1971). The fate of eucalyptus forests and koala populations are inextricably linked (Martin, 1985). For the specialist, change, anthropogenically instilled or otherwise, more often brings extinction (Slatyer, Hirst, & Sexton, 2013).

So, phylogenetic inertia seems to disproportionately affect specialists. Generalists, already exploiting a wider niche breadth, weather change better (Chevin et al., 2010). Generalists have, so to speak, distributed their risk; they have diversified their methods of resource acquisition and resource use, and are thus less affected by change. In this way generalists are like investors that diversify their stock portfolios by purchasing stock across companies within the automobile industry, service industries, airlines and electronics companies. This way, if there is a severe downturn in electronics stock prices, for example, they remain solvent because of their remaining unaffected investments. As diversified investors are more likely to remain solvent in the midst of unforeseen economic change, so generalists are more likely to remain adaptive in the midst of rapid environmental change.

The obsessive is more like the koala than the crow[5]. He is a poor generalist, but a good specialist. As the koala acquired extreme physiological and anatomical

[5] When it is said that the obsessive is more like the koala than the crow, it should be understood that this is true only relative to other humans. Largely by virtue of unprecedented cognitive ability, all humans are extremely adaptive generalists, as evidenced by their diets, culture and geographic distribution across six continents with extremely diverse ecological characteristics. Within a distribution of phenotypic plasticity, obsessives, with their rigid and stylized temperamental adaptations, are quite negatively skewed, though, again, amidst a species which is most positively skewed.

adaptations through specialization, the obsessive acquired extreme cognitive and temperamental adaptations through specialization. Both, however, are now saddled with their respective adaptations; these adaptations, alimentary or temperamental, cannot be thrown off in instances in which they are not now favorable. The slow process of evolution fashioned these adaptations. They are not phenotypically plastic.

Modernity

The specializations of obsessive psychology were well suited to the northern latitudes, which shaped them. It mattered little that obsessives lost a measure of phenotypic plasticity through the acquisition of genetically derived temperamental, psychological specializations because; relatively speaking, stasis and continuity reigned during the upper Paleolithic and during a great part of the Neolithic Era. Before historical times, the northern lands of Europe, for instance, were sparsely populated (Trigger, 2003) and uncivilized (McNeill, 1984), as evidenced by lack of sophisticated municipal structures, public works, and architecture (Hanser, 2006). Northern latitudes once provided a state of nature that was Hobbesian in its climatic stress and seasonal scarcity, and Rousseauian in its free lands and low density.

This status quo gave way to rapid change. Geographic regions within temperate northern latitudes with express seasonality are precisely those regions that have been most thoroughly modernized (Gallup, Sachs, & Mellinger, 1999; Strulik, 2008), becoming at once less Hobbesian and less Rousseauian. For instance, Western European countries such as England, France, Germany, and Holland, as evidenced, for example, by gross domestic product (Nordhaus, 2006),have become dense, synchronized, and advanced polities. During the early modern era, defined by British Marxist historian Hobshawn (2005) as the 289 years between 1500 and 1789, these lands began to experience the effects of urbanization (Bucholz, 2012), industrialization (Landes, 2003), and collectivization (Brody, 2000). These societies express extreme division of labor and economic interdependence (Durkheim, 2014; Perkin, 1990). Popular revolutions created political complexity (Brewer, 2008; Dunn, 1999; Jordan, 1993), scientific progress created intellectual complexity (Weaver, 1948), and population increases created vocational complexity (Durkheim, 2014). Self-representation, faction and party began to replace simpler hierarchical, kin-based socio-political structures (Israel, 2011; Machiavelli, 1901; Tocqueville, 1835/2004), while knowledge proliferated, replacing traditional explanatory narratives with probabilistic empirical theories (Berlin, 1996; Hertler, Krauss, & Ward, 2015).

The cumulative effects of condensed cultural epochs such as the Renaissance and the Enlightenment, along with developments such as the Scientific and Industrial Revolutions, had implications for self and identity as well. The son of a milliner, cordwainer, cooper or blacksmith could then become a lawyer, governor,

preacher or representative (Coser, 1991; Howe, 2009). This had the combined effect of introducing vertiginous degrees of choice and cultural fluidity. Life likewise became more socially and symbolically complex (Hertler, Krauss, &Ward, in press). In the West, since the middle ages, identity was no longer received so much as explicitly and actively created by an "artful process" of "self-design" (Breitwieser, 1984, p. 21). Modern persons, described as Protean (Lifton, 1993), pluralistic (Hermans, 2001) and polyphonic (Raggatt, 2000), interface with many different persons and assume many different roles (Mitchell, 1992; Searle, 2004). Yet at the same time at which persons must be individualistic and individuated, they must also be cooperative and interdependent (Hertler, Krauss, & Ward, 2014). In sum, as compared to ancestral environments, modern environments seem to call for flexibility, what would be biologically referred to as phenotypic plasticity. Especially in terms of modernity's demands for flexible attention, communion, collaboration, and openness, obsessive psychology might be thought anachronistic.

Obsessive Attention

The American Psychiatric Association (2000, 2013) specifically describes obsessive attention as disordered, though the peculiarity of obsessive attention (Salzman, 1985; Shapiro, 1999; Yovel, Revelle, & Mineka, 2005) is better understood as a tradeoff, rather than as a symptom. It is like a tradeoff in life history evolution in which, for example, one can invest little in many offspring, as do most fish (Winemiller & Rose, 1993), or invest much in few offspring, as do all elephants (Riedman, 1982). With regards to attention, obsessives make a similar tradeoff. Instead of quality and quantity of offspring, obsessives tradeoff between the flexibility and fixedness of attention. Obsessives, unlike most persons, do not strike a balance between extremes; rather they come firmly down on the side of fixedness, having a "narrow and closed" field of perception (Kyrios, Nedeljkovic, Moulding, & Doron, 2007) with little "volitional mobility of attention" (Fineberg et al., 2010; Shapiro, 1999, p. 27). Empirical studies concur, showing that obsessives, to the degree that they have trouble perceiving large global stimuli, are better at perceiving small local stimuli (Schneider, 2006; Yovel et al., 2005). If ordinary attention is like flood light, obsessive attention is like a spotlight. Whatever obsessive attention is fixed on is comparatively more illuminated, but the periphery is comparatively darker. Nevertheless, however well illuminated the center may be, with a darker periphery it becomes harder to reorient; to find the point at which the luminescent center will be most advantageously focused.

In ancestral environments, there were only so many things that could be the subject of attentional focus. Many were physical labors such as sowing and reaping, hunting and trapping, storing and curing, building and repairing. These activities were not only finite, but also concrete. Needs and priorities could be much more easily tracked. Therefore, the fixedness of attention, when paired with conscientious action, would have been quite productive and adaptive, while its

corresponding lack of flexibility would have been hardly impairing or maladaptive. Conversely, modern environments make many more demands upon one's attention. Success comes in ignoring irrelevant stimuli and also in fluidly allocating attention from one percept to another, both of which the obsessive does poorly. A lack of attentional flexibility, among other cognitive features, underlies the obsessive's relative inability to effectively budget time and prioritize responsibilities (American Psychiatric Association, 2013). Since attention determines the locus of obsessive labor at any given time, poor allocation and limited flexibility will render the obsessive apt to fixate on, and orient laboring powers towards, something of little consequence, while fully neglecting something of greater consequence; for example, focusing on the method rather than the outcome (Salzman, 1985), or the list rather than its accomplishment (American Psychiatric Association, 2013), or the trees rather than the forest (Yovelet al., 2005).

Collaboration and Communion

Obsessive persons have been cited for social troubles. Most notably, in emphasizing work, they marginalize relationships (American Psychiatric Association, 2013). In addition, they are low in agreeableness, a trait that often serves to cement relationships and preserve them through time. Low agreeableness, especially as manifested as limited altruism and low compliance (Furnham & Crump, 2005; Samuel & Widiger, 2010; Widiger & Costa, 1994), complements the core of OCPD with its self-reliant conscientiousness and future oriented conservation. Some degree of mistrust, avoidance and selfishness ancestrally restricted exploitation and kept the products of obsessive labor for the laborer (Hertler, in press). Nevertheless, in modern environments where one invariably lives and works among many non-related others, the interpersonal corollaries of low agreeableness are more apt to become liabilities. Moreover, related traits such as rigidity and stubbornness, as well as reluctance to delegate responsibilities, make it ever more challenging for obsessives to function within complex interdependent systems (Kyrios et al., 2007). Even in the work place, this is noticeable, for obsessives are excellent workers, but poor employees and bosses. As employees they have trouble navigating between servility and insubordination; they have trouble following the lead of a superior and accepting their constructions of vocational duties and methods of execution (Mudrack, 2004). Alternatively, as bosses, because they have trouble delegating tasks (American Psychiatric Association, 2013), they tend to tyrannize and micromanage their employees. At the same time, their emotional modulation problems (Villemarette-Pittman, Stanford, Greve, Houston, & Mathias, 2004) make it hard for them to be appropriately assertive. Collectively, these traits make collaboration and communion distinctly difficult.

In the sparsely populated northerly climates in which obsessives historically thrived, collaboration and communion were not indispensable. With restricted

populations of Neolithic, northern latitudes clustered into nodes, there remained vast empty expanses (Bocquet-Appel & Demars, 2000) in which obsessives could feasibly work for themselves and by themselves, supporting and only routinely interfacing with extended kin networks. In the middle to late Neolithic Era, as population density rose and unclaimed land grew scarcer (Cochran & Harpending, 2009), societies became more effectively caged and social participation became compulsory (Mann, 2012). Personal latitude and insular living waxed more impractical with the advent of obligate suzerainty (Shepheard, 1899), feudal control of lands (Wickham, 1984), and the closing of the commons (Brody, 2000). At the same time as collaboration became more important, unceasing labor became less important. As Adam Smith (1776/1887) famously noted, an individual working alone might not be able to produce more than a pin a day, but ten odd laborers working together could produce thousands. Modern environments, through processes such as industrialized agriculture and mass production, decreased the value of absolute raw labor and increased the value of the capacity to flexibly deploy that labor as part of an organized effort.

So while obsessive conscientiousness would seem to provide a competitive advantage in many vocational settings, low agreeableness and other associated features might undermine, negate or reverse that advantage. The reversal of the advantage of conscientiousness is most apt to arise in those settings where impression management, reciprocal altruism, Machiavellianism, and charisma are highly remunerative. Arguably, as modernity increasingly compelled collaboration, it had the effect of making the obsessive like a poorly cast cog in a highly synchronized machine. Even if obsessives prove good "organization men", through their conscientious, selfless, loyal, dependable, prudent, and responsible service within bureaucracies (Millon & Davis, 1996, p. 516), they are prone to exploitation by self-interested employers and demoralization by organizational flux. For better or worse, obsessives, perforce, became absorbed into larger social systems, which disputably exposes their weaknesses more often than it accentuates their strengths.

Openness and Complexity

OCPD and openness to experience are negatively correlated, with four of six facets of being significantly depressed in trait studies (Hertler, 2015a; Lynam & Widiger, 2001).The urgency of the obsessive's anxious mind and the correspondent need for action have coevolved a complementary lack of openness to experience (Hertler, in press) disposing obsessives to use limited information (Gibbs Gallagher, South, & Oltmanns, 2003) to form precepts which can guide behavior, help to make predications, and control outcomes. In consequence, obsessives scruple about process, exaggerating means so much so that they sometimes obscure ends. Heretofore, however, low openness would not have proved detrimental amidst the limited complexity of ancestral environments; environments that were more physical and tangible than social and abstract. More sequestered and absorbed

in battling the external environment with its coming cold and variable resources, the obsessive could become a concrete thinker, unimpeded by the possession of simple explanatory schemas.

Increasingly, modern Western cultures emphasize abstract reasoning (Cassirer, 1951) and flexible symbolic thought (Flynn, 2011, 2012) at odds with the dichotomous thinking (Beck & Freeman, 1990; Millon & Davis, 1996) and fixed algorithmic thought that appropriately guided the behavior and informed the opinion of obsessives in ancestral environments. Notwithstanding modernity's call for plasticity, temperament strongly disposes obsessives to remain ideological thinkers that abide by their often poorly constructed precepts even when they are poorly served by them. Also, temperamentally low openness,incongruously expressed amidst modernity, serves as the likely reason why some researchers (Aycicegi-Dinn, Dinn, & Caldwell-Harris, 2009) discern an almost moral resistance to trial and error problem solving and a lack of openness to feedback that has beenequated toquasi-perseverative dysfunction. Modernity arguably imposes a need for change and innovation (Hakken, 1993; Ogan, 2007) that obsessives, with their lack of openness, instinctively resist. An obsessive then is apt to behave more like Herbert Hoover than F.D. Roosevelt, showing an innate resistance to pragmatic experimentation even when fixed principles prove wanting. Obsessives, too, are constitutionally reactionary in an age of unprecedented progress. Moreso than the general population, obsessives raised on pen and paper will resist typewriters, those raised on typewriters will resist word processors and those raised on word processors will resist personal computers. This resistance is not based on rational grounds, but the prejudice that derives from low openness. This same lack of openness will make it difficult for obsessives to make the transitions from place to place, thought to thought, position to position, so often requisite of moderns. Not surprisingly, modern obsessives are temperamentally inclined to harken back to earlier times and ruminate on themes of declension.

Discussion

There is perhaps no level of any personality trait that brings unequivocal evolutionary relevant remuneration. Such a trait, because it would be driven to fixation at the ideal level, would cease to vary within the population. Consequently, the diversity in personality suggests tradeoffs rather than evolutionary optima. This of course applies to the extremes of obsessive personality. It should then not be forgotten that in certain contexts and cultures, obsessive fixedness of attention, insular independence, and closed rigidity are apt to be positively termed concentration, self-reliance, and doggedness. In this vein, Honigmann (1967) argues, implicitly in obvious opposition to the operation of phylogenetic inertia, that, "obsessive-compulsive personality is one of the, if not the predominant, social character structures, embodying as it does so much of the general world view of the

Protestant Work Ethic and capitalist social and economic organization" (Pollak, 1979).

Though generally holding fast to the prevailing assumption that obsessive persons are disordered, Millon and Davis (1996, p. 518) argue that OCPD if not fully expressed, is actually beneficial within the context of modernity:

> "… Perhaps more than any other personality style, especially in advanced and successful societies, are those who evince a mild variant of the obsessive-compulsive personality disorder. Here we see not so much the driven, tense, and rigid adherence to external demands and to a perfectionism that typifies the disordered state; rather we see a well-disciplined and organized lifestyle that enables individuals to function efficiently and successfully in most of their endeavors. When things go wrong, there is a measure of discomfort that leads to a resolution, not indecisiveness and anxiety …".

Millon and Davis (1996, p. 518) go on to suggest that those pursuing advanced studies, and readers of their 818 page, double columned, exhaustive review of personality disorders, are "themselves likely to possess partial traits of the compulsive style". Therefore, while Millon and Davis (1996) do not go nearly so far as to suggest, as does Honigmann (1967), that obsessive psychology defines Western modernity, they do at least believe that a circumscribed variant of OCPD can promote success within Western modernity. In effect, Millon and Davis (1996) are invoking the now accepted view that personality traits, patterns, and disorders can be expressed continuously; and they thereafter imply that only those far down this continuum, categorically expressing OCPD strongly enough to be clinically diagnosed, are maladaptive. From this perspective, one would conclude that phylogenetic inertia only operates on those roundly expressing OCPD in the full complement of its features.

Still other authors (Gorer, 1943; Paykel & Prusoff, 1973) believe OCPD to be quite functional, not when it is attenuated in its severity, but when expressed "within various professional groups and specialty occupations and among individuals in bureaucratic and managerial positions" (Pollak, 1979). In this view, phylogenetic inertia would operate only on those obsessives that fail to shelter within congruent niches. This latter point exposes the important fact that environments, especially modern Western environments, are in fact complex, offering any number of asylums. In appreciating this point, one sees that any attempt to positively relate OCPD and phylogenetic inertia is further complicated by the presence of micro-niches within environments, which are, not only sometimes fortuitously found, but actively sought and even independently created. Just as beavers construct dams so as to make lakes, chameleons change color to better camouflage themselves, and reptiles maneuver in and out of the sun, basking and then burrowing in order to find external conditions that match their internal

needs, so "humans try to expose themselves as well as they can to the selection pressure that suit their traits best" (Penke, 2011, p. 257).

As Dumont (2010, p. 134) states, humans engage in both *niche building* and *niche seeking*, activities which are variously described in the ecological, psychological and evolutionary literature as "niche construction (Laland & Brown, 2006), genotype-specific habitat selection (Hedrick, 1990), active gene-environment correlation (Plomin et al., 2008), experience producing drives (Bouchard, Lykken, Tellegen, & McGue, 1996), or simply personal freedom" (Penke, 2011). It then becomes clear that the presence and creation of micro-niche diversity complicates any monolithic treatment of environments (Odling-Smee, Laland, & Feldman, 2003), making it difficult to determine how individual obsessive persons interface with modernity at the local level. To assume that obsessives cannot adjust to modern Western cultures that are generally unsupportive of obsessive psychology, is akin to assuming that frogs cannot adjust to hot Arizona deserts that are generally unsupportive of amphibian physiology[6]. Like a desert, Western societies carry defining features, making both deserts and Western societies meaningful concepts; yet to treat either as a homogeneous environment is to fail to appreciate the niches and micro-niches that add variability amidst, and therefore afford refuge from, harshness. While deserts are prototypically arid and hot, there are naturally occurring cold nights and flash floods, as well as artificially created dens that are perpetually dark, cool and moist. In a like manner, though modern Western societies have an overarching structure, that structure is riddled with heterogeneity. In fact, the global complexity potentially inimical to obsessive psychology, and the presence of micro-niches that can afford refuge from that complexity, wax in tandem as societies approximate Modern Western density and diversity. Perhaps then, it is not that modernity offers no refuge to the obsessive, but rather that obsessive traits such as low openness and restricted attentional flexibility make it at once more difficult, and more important, for obsessives to promptly find refuge within appropriate micro-niches.

In considering whether phylogenetic inertia truly operates on OCPD, empirical evidence is of course a necessary supplement to theoretical conjecture: evidence of relational problems, especially in marriage (Costa, Samuels, Bagby, Daffin, & Norton, 2005) serves as an example of research findings that might be assumed to implicate the action of phylogenetic inertia. Another study potentially

[6] As per the Arizona State Government Game and Fish Department (azgfd.gov), there are presently twenty-four frog species in the state, not all of which are confined to its most cool and moist areas. For instance, Arizona Barking Frogs, in addition to bypassing the tadpole stage, manage in the desert regions of Southern Arizona by sheltering in rock outcroppings and underground limestone lacunae (Goldberg & Schwalbe, 2004). In addition, the Lowland Burrowing Tree frog, in addition to shedding several layers of skin to form water conserving cocoon-like structure, shelters deeply underground in self-sealed burrows to survive the dry heat of the southern Sonoran Desert (Elliott, Gerhardt, & Davidson, 2009).

indicating the operation of phylogenetic inertia used over 1,700 participants from across six mental health centers specializing in the treatment of personality disorders, finding Obsessive Compulsive Personality Disorder and Borderline Personality Disorder to be most economically expensive in terms of direct treatment costs and indirect loss of productivity costs (Soeteman, Hakkaart-van Roijen, Verheul, & Busschbach, 2008). Likewise, the presence of OCPD appears to complicate the treatment and exacerbate the nature of certain Axis I disorders, such as obsessive-compulsive disorder, chronic depression, anorexia nervosa, bulimia nervosa, and generalized anxiety disorder. Finally, when present in depressed persons, OCPD increases the risk for suicidal ideation and behavior (Diaconu & Turecki, 2009).

However, as previously reviewed (Hertler, 2015a), there are many indications that obsessive persons, even when sampled from clinics and formally identified by clinicians, might survive and even thrive amidst modernity.

Obsessive compulsive personality disorder was associated with the ‘least overall functional impairment among the personality disorders' (Barber, Morse, Krakauer, Chittams, & Crits-Christoph, 1997; Nakao et al., 1992; Skodol et al., 2002); OCPD is the least pathological of the personality disorders (Kyrios et al., 2007); OCPD is not associated with impaired autonomy or attachment problems as are many personality disorders, such as borderline and avoidant personality (Aaronson, Bender, Skodol, & Gunderson, 2006; Kyrios et al., 2007); OCPD is associated with fewer comorbidities than most other personality disorders (McGlashan et al., 2000); OCPD is not associated with depressed global assessment of function (GAF) (Jovev & Jackson, 2004). Perhaps most strikingly, obsessive character is predictive of worldly success (Ryder, Costa, & Bagby, 2007; Ullrich, Farrington, & Coid, 2007). Specifically, obsessive personality was found to be positively related to "high socio-economic status, good income, and supervisory responsibilities at work, spacious living conditions and home ownership" (Ullrich et al., 2007).

It is important, not only to view evidence of dysfunction alongside countervailing studies, but to question whether or not evidence of dysfunction implicates the action of phylogenetic inertia. Economic treatment costs, for example, do not equate to reduced reproductive fitness. Even an increased incidence of relational problems cannot be unquestioningly assumed to equate to reduced fitness. Only correlations between suicidal behavior and OCPD positively indicate some role for phylogenetic inertia, and even then, this role is only as strong as the correlation, and as relevant as the proportion of obsessives it affects. These cautionary statements, equate more generally to a larger point; namely that any discussion of phylogenetic inertia and OCPD must clearly distinguish between culturally relevant standards of psychological health and evolutionary relevant standards of adaptive fitness. These are all too easy to conflate. In addition, if they are conflated the role of phylogenetic inertia will be grievously misunderstood.

Phylogenetic inertia can only properly be said to be operating if survival and reproduction are depressed. If obsessives presently reproduce at the same rate as the general population, phylogenetic inertia is not technically present, despite any documentation of clinically or culturally relevant impairment. While many modern Western societies may socially value flexible, happy, spontaneous, agreeable, and imperturbable persons, it does not follow that failure to live up to these ideals implies evolutionarily relevant depression in fitness (Boudreau, Boswell, & Judge, 2001; Nettle, 2006; Wilson, 2000).

On this score it is instructive to consider the work of Gutiérrez et al. (2013) in which evolutionarily relevant fitness was differentiated from traditional clinical symptomatology. As quoted in Hertler (2015b):

"… high-C subjects, that is, participants showing general elevations on Cluster C personality disorder traits, of which OCPD is one of three, (1) spent a longer time on studies and in job preparation, (2) displayed higher job stability, (3) attained higher educational and vocational levels (4) more routinely attained positions of status (5) and more easily attained resources. In contrast, high-C subjects were less likely (1) to be arrested, (2) obtain illegal income, (3) abuse drugs, or (4) engage in violent aggression. Moreover, it should be noted that these participants were selected from a sample of treatment seeking outpatients, some of which were retained in spite of mild to moderate comorbid Axis I disorders ...".

When collectively considering those three personality disorders within cluster C, of which OCPD is one, there was a general failure to find attenuated reproduction and survival. So then, the weight of evidence suggests that phylogenetic inertia is not operating, and that obsessive psychology, once adaptive, is still adaptive.

However, even if obsessives are reproductively competitive, one might still find that the concept of phylogenetic inertia has a metaphorical application. In that instance, phylogenetic inertia might be useful as an explanatory heuristic even if it is not a demonstrable fact. In other words, one could use it to understand why someone with OCPD might have culturally relevant difficulties, even if those difficulties do not impair survival and reproduction. Either way, it is instructive to think about how specializations acquired through adapting to very different ancestral conditions can now cause recognizable problems for modern obsessives. Additionally, even a figurative consideration of phylogenetic inertia serves the end of reconciling a clinical and evolutionary understanding of OCPD, explaining how an evolved pattern could be mistaken, for so long and by so many, for a pathological pattern. The answer, in short, is that the standards by which clinical impairment is determined, have been, and continue to be, culturally relativistic. Clinical impairment and normal variation are erroneously separated using value laden judgment where only evolutionary standards are applicable.

Indisputably, there is a vital incongruity between modernity and the ancestral times in which obsessive psychology was forged and thrived; but even when extant

research is paired with concerted thought and logical inference, it remains impossible to definitively determine whether, to some small degree, phylogenetic inertia truly operates on OCPD. The weight of evidence seems to say that it does not. Yet, while it seems that obsessive psychology, forged in the upper Paleolithic and late Neolithic Eras, remains adaptive in modernity, only research with the definite end of detecting phylogenetic inertia will ultimately allow for a transition from colloquial conjecture to positive evidence. Still, initiating this research will impose all but prohibitive challenges, requiring valid information concerning (1) absolute prevalence rates; (2) clinical versus non-clinical proportions; (3) numerical trajectory across several generations; and (4) accurate distribution data. As it stands prevalence estimates within the literature range from a low of one percent (American Psychiatric Association, 2000) to a high of sixteen percent (Hertler, 2015b; Hummelen, Wilberg, Pedersen, & Karterud, 2008); even the comparatively confined range of 2.1 to 7.9 percent most recently provided by the American Psychiatric Association (2013) is far too broad. Further still, for measuring the intergenerational changes in prevalence that would signal the operation of phylogenetic inertia, data would have to be longitudinal. Finally, once gathered, such data should be reviewed in a manner sensitive to, for example, the effects of migration and the significance of the demographic transition. With monetary, temporal, and geographic feasibility problems, it is not likely that pointed studies will soon be undertaken. Still, with culturally relativistic evidence of function counterbalancing evidence of dysfunction, and no evidence of depressed survival and reproduction, phylogenetic inertia very likely holds only heuristic value, partially explaining why OCPD was so long thought a disorder, but not actually suggesting that it should be considered one.

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Opsesivno-kompulzivni poremećaj ličnosti kao adaptivni anakronizam: "Filogenetska inercija" i opsesivnost populacije u modernom zapadnjačkom društvu

Sažetak

Opsesivno-kompulzivni poremećaj ličnosti, koji Američko psihijatrijsko udruženje određuje kao jedan od deset poremećaja ličnosti, prema gotovo svim se etiologijama smatra okolinski uvjetovanim sindromom. Međutim, novija evolucijska objašnjenja, uzimajući u obzir indekse rasprostranjenosti i procjene heritabilnosti, objašnjavaju opsesivnu patologiju kao adaptaciju na klimatske specifičnosti sjeverne klime, koje imaju izražena godišnja doba, nisku gustoću naseljenosti i nisku socijalnu kompleksnost. Iako ova evolucijska etiologija opravdano izbjegava pretpostavke patologije, ne objašnjava zašto su te pretpostavke prisutne već odavno. U tu se svrhu upotrebljava "filogenetska inercija", odnosno smanjenje u sposobnostima koje proizlazi iz nepodudarnosti između prošlih i sadašnjih selekcijskih pritisaka. Rad pojašnjava na koji se način razvijena strategija može zamijeniti za štetni poremećaj proučavajući odstupanje između razvijene opsesivne psihologije i društvenim zahtjevima za fleksibilnom pažnjom, suradnjom, otvorenosti i kompleksnosti. Kako se i navodi, empirijska su istraživanja podijeljena te samo neka donose dokaze o disfunkcionalnosti, s time da je ta disfunkcionalnost relativna jer ne dovodi u pitanje preživljavanje i ne smanjuje reproduciranje. U radu su dane su preporuke za daljnja istraživanja. Na temelju dosadašnjih istraživanja može se smatrati kako je opsesivno-kompulzivni poremećaj ličnosti, razvijen još u pretpovijesno doba, idalje adaptivan u modernom društvu te se "filogenetska inercija" može rabiti samo kao metaforična heuristika.

Ključne riječi: opsesivno-kompulzivni poremećaj ličnosti, ličnost, filogenetska inercija, moderno društvo, evolucija

Trastorno obsesivo-compulsivo de la personalidad como anacronismo adaptativo: "Inercia filogenética" y la obsesión de la población en la sociedad moderna occidental

Resumen

Trastorno obsesivo-compulsivo de la personalidad, clasificado por la Asociación Estadounidense de Psiquiatría como uno de 10 trastornos de la personalidad, según casi todas las etiologías se considera un síndrome condicionado por el entorno. Sin embargo, explicaciones evolutivas recientes, tomando en consideración los índices de divulgación y valoraciones de heredabilidad, explican la patología obsesiva como adaptación a las especificidades climáticas del clima norteño, que tienen expresadas las estaciones del año, baja densidad de población y baja complejidad social. Aunque esta etiología evolutiva evita con razón las suposiciones de la patología, no explica por qué estas suposiciones existen desde hace mucho tiempo. Con este fin se usa la inercia filogenética, o sea, la disminución en las capacidades que proviene de la incongruencia entre las presiones selectivas pasadas y actuales. El estudio aclara de qué manera esta estrategia desarrollada se puede confundir con el trastorno dañino, investigando la desalineación entre la psicología obsesiva desarrollada y las exigencias sociales para la atención flexible, cooperación, franqueza y complejidad. Como se indica, las investigaciones empíricas están divididas y sólo algunas tienen pruebas sobre la disfunción, que también es relativa ya que no pone en duda la supervivencia y no disminuye la reproducción. Se dan sugerencias para investigaciones futuras. A base de investigaciones actuales se puede considerar que el trastorno obsesivo-compulsivo de la personalidad, desarrollado ya en los tiempos prehistóricos, sigue adaptativo en la sociedad moderna y la inercia filogenética se puede usar sólo como heurística metafórica.

Palabras claves: trastorno obsesivo-compulsivo de la personalidad, personalidad, inercia filogenética, sociedad moderna, evolución

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