

Psychopathology of Organisations:**Summary and Conclusion****with an****Evolutionary Spin**

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Where shall I begin? Let me go back to the very beginning of time. Because Joachim began with Sigmund Freud, I decided to end with Charles Darwin.

Darwin taught us that variation, inheritance, and selection led to the development of a new species some 50,000 years ago, probably somewhere in Africa: the modern human. New mutations to the human genome led to changes in the human brain, which enabled our ancestors to have the capacity to make and use sophisticated tools. Members of this new species fashioned sophisticated weapons and invented new ways of hunting and gathering that allowed a much larger population of *homo* species to flourish than had ever previously existed. In addition, they developed a complex social system and culture.

The influence of human culture has been powerful enough to alter the course of biological evolution. Human invention has altered the environment in a momentous way. As a result of these environmental changes, human traits that were once beneficial in the context of biological evolution have become maladaptive in the context of cultural evolution, and vice versa. For example, Mother Nature designed us to be most fertile and productive in our 20s and early 30s, and few individuals survived their 60th birthday. Medical advances enormously increased our live expectancy (and are now creating

complicated problems with health care politics, etc). Unfortunately, however, the timetable of our career goals is often at odds with our biological clock. Today, women in their mid to late 40s visit fertility clinics and spend thousands of their dollars that they earned during their career in the hope to give birth to their first child.

Dr. Sara Cox presented an elaborate bio-psych-social model of the effects of job stress on work-related sexual and reproductive health. The model distinguishes between antecedent variables, reproductive processes, and outcomes, which are in a complex relationship with negative and positive feedback loops. This model is very consistent with cognitive theories of sexual dysfunction (e.g., Barlow's theory of male erectile dysfunction). This model assumes that incorrect expectations and stress leads to performance anxiety in males, who then focus their attention to non-sexual stimuli, which lowers and inhibits sexual arousal, which leads to a further increase in performance anxiety and stress, completing a vicious cycle. During therapy, the patient receives corrective information and learns how to break this negative feedback loop by focusing attention to sexual stimuli and lowering the level of stress. Very similar models apply to many anxiety disorders. However, Dr. Cox also reminds us that these problems need to be put in a larger social, psychological, and, I might add, evolutionary context.

Evolutionary psychology examines the role of evolved psychological mechanisms in shaping human behavior and experience. Evolved psychological mechanisms are understood to be a set of processes inside an individual, which have developed into their current form as a result of successfully solving specific adaptive problems for that individual's ancestors (e.g., Buss, 1999). Generally, an adaptive solution is one that increases the inclusive fitness of the individual, meaning that his or her genes have an

increased chance of being represented in subsequent generations (Hamilton, 1964). For this reason, social contact and affiliation are fundamental needs of essentially all species. Social subordination is correlated with high levels of cortisol (a stress hormone) in free-ranging wild baboons (Sapolsky, Alberts, & Altmann, 1997), and elevated levels of oxytocin and vasopressin (two pituitary hormones) in prairie voles (Insel, 1997). In humans, social anxiety is correlated with levels of serotonin and dopamine (two common neurotransmitters) in the central nervous system (Stein, 1998). Therefore, it is desirable for an individual of a particular species to occupy a high rank in the social hierarchy. This brings me to Dr. Paul Babiak's presentation. His analyses of the "snakes in suits" - who occupy high-level managerial positions in the corporate world, such as at Enron and mutual funds, is particularly intriguing and puzzling. They do not match the stereotype of a regular joe-schmo-type psychopath. They may not kill dozens of women and store their body parts in a freezer for later consumption. Yet, they are nevertheless dangerous and ruthless predators who share many of the same core features with the Dahmers and jack-the-rippers of the world. Interestingly, there is also concerning overlap between successful managers and those corporate psychopaths. As Dr. Babiak has shown, there is only a fine line between the smart business man who maximizes his own profit and the ruthless snake in a suit with no moral values and who exploits others. An evolutionary perspective is very consistent with many of Dr. Babiak's observations.

Our species is highly dependent on the social support of others (Baumeister & Leary, 1995), and ostracism from the social group has a number of negative consequences, such as lowered self-esteem (Baumeister & Leary, 1995; Baumeister & Tice, 1990; Chartier, Walker, & Stein, 2001). Humans are, therefore, constantly engaged

in a competitive bid for social resources, and failure in this regard is costly (Gilbert, 2001). As a result, humans have evolved high-level motivations to compete for the approval and support of others (Barkow, 1989). We need to be liked, valued, and approved of in order to elicit parental investment, develop supportive peer relationships, attract desirable mates, and engage successfully in many types of social relationships (Tooby and Cosmides, 1996). Because time and energy are precious commodities, humans choose to invest their resources in people who are likely to be useful to them and help them achieve their own self-interests (Barkow, 1975, 1989; Tooby & Cosmides, 1996). As Dr. Babiak pointed out, psychopaths are very aware of this and are masters in manipulating others in order to achieve their personal goals.

In order to draw potential allies toward investing in them, evolutionary psychology also taught us that humans continually engage in a process of impression management (Barkow, 1989; Gilbert, 2001; Leary, 2001). This process requires an ability to view oneself and one's social position from another individual's point of view and to have insight into how others think and feel. Byrne (1995) called these cognitive processes "theories of mind." In addition, many humans are able to sense the emotions other people experience. This process, called empathy, is something that psychopaths seem to lack. These abilities probably evolved during recent primate evolution in order to help individuals understand how others think and to enable them to make predictions of how others will behave. Interestingly, empathy and altruism are evolutionarily adaptive, although the single individual might not necessarily benefit from it. However, it is evolutionarily adaptive because it promotes survival of the species, and an individual's genes have an increased chance of being represented in subsequent generations

(Hamilton, 1964). For example, a father who dies in an attempt to rescue his son acts in accordance with predictions of evolutionary models. In contrast, genes that lead to antisocial and psychopathic behaviors is evolutionarily non-adaptive and would eventually result in elimination of the species. For example, statistical modeling showed that selfish individuals in a cooperative group will significantly reduce the number of cooperative individuals in the next generation. However, after an initial increase in the number of individuals with such a “selfish gene” (Dawkins, 1982), the population will eventually disappear – unless a few cooperative individuals survive. It seems as if evolution provided us with a safety mechanism that punishes individual selfishness and promotes cooperation.

These evolutionary defense and safety mechanisms also seem to influence the assessment of costs and benefits in individual decision-making situations (Gilbert, 2001). Some theorists assume that there are “evolutionary memories” in humans (Mineka, 1992). In contrast to memories that fade away with the passage of time, these memory processes evolved along evolutionary principles of “adaptive conservatism” (Hendersen, 1985). This hypothesis states that, for our ancestors, it was much more costly (for their own survival) to mistakenly assume that a situation was safe when it was in fact dangerous than it was to err on the safe side and assume that a situation was dangerous even if it was not (Buss, 1999; Gilbert, 1998). Therefore, a cognitive bias that favors false positives (incorrectly perceiving danger) over false negatives (incorrectly assuming safety) becomes evolutionarily adaptive. As a result, humans characteristically fail to adhere to rules of logic and mathematical probabilities, especially under conditions of uncertainty and when pressed for time (e.g., Tversky & Kahnemann, 1974), which leads

to fast and frugal decision-making heuristics (Todd and Gigerenzer, 2000). The effects of these human variables on the organizational structure and processes are closely related to the term “human capital,” which was discussed by Dr. Erich Barthel. Dr. Barthel emphasized the importance for taken human capital into consideration in important decisions of corporations because they insure stability and growth.

In sum, the presentations of this symposium point to a surprisingly under-researched area, which is at the interaction between clinical and organizational psychology: Psychopathology of organizations. We heard examples of such psychopathologies and their determinant factors. As it became obvious during the discussion, this topic crosses the boundaries of many different disciplines, including clinical psychology, economics, organizational psychology, and even evolutionary psychology. Joachim’s talk earlier presented the enormous complexity and multidisciplinary nature of our topic. The relevant theories span from Stanley Miligram’s study on obedience, over Philip Zimbardo’s Stanford prison experiment on deindividuation, to Geert Hofstede’s cultural dimensions in management psychology. Not surprisingly, these presentations of our symposium only constitute a small subsample of possible topics in this area. Other obvious topics that could have been part of this symposium include substance use problems in organizations, the effects of workstress on the immune system and health in general, the relationship between productivity and health, and the effects of leadership styles on employees’ mental health, to name just a few. We hope that we were able to convince you that this is an important but understudied area and hope that it will stimulate future research.