[in press, *Behavioral and Brain Sciences*]

Commentary on Keller, M. C. & Miller, G.

Word Counts:
Abstract: *60* words
Main Text: *998* words
References: *221* words
Total Text: *1279* words

Why the Adaptationist Perspective Must Be Considered: The Example of Morbid Jealousy

Judith A. Easton
Department of Psychology
Florida Atlantic University
2912 College Avenue
Davie, FL 33314
USA
(954) 829-6625 (for correspondence)
jeaston1@fau.edu
Lucas D. Schipper
Department of Psychology
Florida Atlantic University
2912 College Avenue
Davie, FL 33314
USA
lschippe@fau.edu
Todd K. Shackelford
Department of Psychology
Florida Atlantic University
2912 College Avenue
Davie, FL 33314
USA
(954) 236-1179
tshackel@fau.edu

Abstract: We describe Delusional Disorder-Jealous Type ("morbid jealousy") with the adaptationist perspective used by Darwinian psychiatrists and evolutionary psychologists to explain the relatively common existence and continued prevalence of mental disorders. We then apply the "harmful dysfunction" analysis to morbid jealousy, including a

discussion of this disorder as (1) an end on a continuum of normal jealousy or (2) a discrete entity.

An evolutionary psychological approach to explaining the relatively common existence and continued prevalence of mental disorder historically has required explaining a disorder's potential adaptive benefits. As Keller and Miller (KM) note, Darwinian psychiatrists and evolutionary psychologists assume an adaptationist position, thus keeping natural selection at the etiologic forefront. If it is theoretically possible and empirically verifiable that mental disorder susceptibility alleles increased fitness in some ancestral conditions, then a balancing selection explanation of the existence and prevalence of mental disorders may be justified.

Delusional disorder-jealous type or "morbid jealousy" is a disorder that causes individuals to misinterpret everyday actions as cues to a partner's sexual infidelity. Constant accusations of infidelity, vigilant monitoring of a partner's behavior and restricting a partner's actions are typical of individuals diagnosed with morbid jealousy (American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 2000; and see Kingham & Gordan, 2004; Shepherd, 1961; Vauhkonen, 1968). The benefits and costs of morbid jealousy are well documented (e.g., Buss, 2000; Enoch & Trethowan, 1979; Kingham & Gordon, 2004; Mowat, 1966; Shepherd, 1961). If morbid jealousy is an extreme form of normal sexual jealousy, it is reasonable to hypothesize that morbid jealousy may thwart partner infidelity, perhaps more effectively than normal sexual jealousy, thereby increasing the fitness of ancestral individuals with morbid jealousy. Whether the alleles associated with the costs of morbid jealousy-such as decreased daily functioning, increased risk of mate defection, and increased susceptibility to other debilitating mental disorders-would be exactly balanced through antagonistic pleiotropy by increases in the fitness payoffs of the associated benefits is unknown. Despite empirical challenges, an adaptationist perspective using balancing selection, specifically antagonistic pleiotropy, may explain the relatively common existence and continued prevalence of morbid jealousy and perhaps additional mental disorders.

Wakefield (1999; 2005) has argued that mental disorders can only be classified as such when they are harmful dysfunctions. A dysfunction is a failure of a mechanism to perform as it was designed by natural selection. According to this definition, the disorder cannot be the function of a naturally selected mechanism. Therefore, a dysfunction of jealousy mechanisms would occur when they failed to motivate behaviors designed to prevent a partner's infidelity. Individuals diagnosed with morbid jealousy do deploy behaviors that function to prevent partner infidelity, even if the cues that activate the jealousy mechanisms are imagined by the individual. Perhaps morbid jealousy does not meet the dysfunction criterion and therefore should not be considered a mental disorder.

Wakefield's (1999, 2005) harmful dysfunction analysis specifies a second criterion that must be met for a mental disorder to be considered as such. The disorder must generate harm, as defined by society. To conclude that morbid jealousy is not a disorder without assessing the associated harm would be a mistake, according to the harmful dysfunction analysis. Lives are disrupted, including the lives of the morbidly jealous individuals

themselves as they constantly monitor their partner's behavior (e.g., Seeman, 1979). Substantial stress is added to the relationship as morbidly jealous individuals constantly accuse their partner of infidelity (e.g., Vauhkonen, 1968). Potential rivals may be derogated or attacked, partners of the morbidly jealous may be psychologically and physically abused, and sometimes this assault escalates to murder (e.g., Kingham & Gordon, 2004, Mowat, 1966, Shepherd, 1961). Although morbid jealousy is harmful, is it more harmful than normal sexual jealousy? In fact, the greatest predictor of intimate partner homicide is sexual jealousy (Daly & Wilson, 1988). It is possible that morbidly jealous individuals are more abusive toward their partners or are more likely to murder them than individuals who experience normal sexual jealousy, but research has not investigated this possibility.

Morbid jealousy may be explained best not as a discrete categorical mental disorder, but as a continuation of normal sexual jealousy. Before this determination can be made, however, several factors must be examined (J.C. Wakefield, personal communication, March 20, 2006). First, we need to determine if the morbid jealousy tail of a normal curve hides discrete points of jealousy disorders. For example, there are many causes of low intelligence. However, a smooth normal curve of intelligence would group these distinct causes together and would hide the individual causes of low intelligence. The same might be true of a normal sexual jealousy curve. Examining individual cases of morbid jealousy and comparing the symptoms and behaviors could help determine if a normal sexual jealousy curve is grouping together distinct causes of morbid jealousy. If there are not multiple, distinct cases of morbid jealousy, then it could be argued that morbid jealousy is a continuation of normal sexual jealousy.

Second, we need to determine if the morbid jealousy end of a sexual jealousy curve is fitness-enhancing. Previous research has documented the adaptive benefits of normal sexual jealousy, notably that it may prevent partner infidelity (e.g., Buss, 2000). If morbid jealousy has similar adaptive benefits, this might provide further evidence that it should be viewed as part of a continuum of normal sexual jealousy.

Third, morbid jealousy may not be produced by a dysfunction of jealousy mechanisms, but instead by a dysfunction of related mechanisms. For example, individuals with morbid jealousy may have dysfunctions in mate retention mechanisms. If this is the case, then morbid jealousy could not be considered continuous with normal sexual jealousy, as these related dysfunctions do not occur with sexual jealousy. This third issue could be investigated by examining individuals diagnosed with morbid jealousy to determine if they have other, related dysfunctions.

Whether morbid jealousy is a discrete categorical mental illness or part of a continuum of normal sexual jealousy remains to be determined. We have discussed three research questions that could help address this question. Investigation of these questions through careful examination of individuals with morbid jealousy may lead to clarification of delusional disorder-jealous type, and may represent a model that could be used to clarify other mental disorders. Additionally, this clarification should lend support to continued

use of the adaptationist approach, and should provide a better understanding for the continued prevalence of disorders.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Buss, D. M. (2000). *The dangerous passion: Why jealousy is necessary in love and sex.* New York: Free Press.

Daly, M., & Wilson, M. (1988). *Homicide.* Hawthorne, NY: Aldine de Gruyter.

Enoch, M. D., & Trethowan, W. H. (1979). The Othello syndrome. In *Uncommon psychiatric syndromes.* Bristol: John Wright & Sons, Ltd.

Keller, M. C., & Miller, G. (2006). Resolving the paradox of common, harmful, heritable mental disorders: Which evolutionary genetic models work best? *Behavioral and Brain Sciences.*

Kingham, M., & Gordon, H. (2004). Aspects of morbid jealousy. *Advances in Psychiatric Treatment, 10,* 207-215.

Mowat, R. R. (1966). *Morbid jealousy and murder: A psychiatric study of morbidly jealous murders at Broadmoor.* London: Tavistock Publications Limited.

Seeman, M. V. (1979). Pathological jealousy. *Psychiatry, 42,* 351-361.

Shepherd, M. (1961). Morbid jealousy: Some clinical and social aspects of a psychiatric symptom. *Journal of Mental Science, 107,* 687-753.

Vauhkonen, K. (1968). *On the pathogenesis of morbid jealousy.* Helsinki, Finland: Kunnallispaino.

Wakefield, J. C. (1999). Evolutionary versus prototype analyses of the concept of disorder. *Journal of Abnormal Psychology, 108,* 374-399.

Wakefield, J. C. (2005). Biological function and dysfunction. In David M. Buss (Ed.), *The Handbook of Evolutionary Psychology* (pp. 878-902). Hoboken, New Jersey: John Wiley & Sons, Inc.