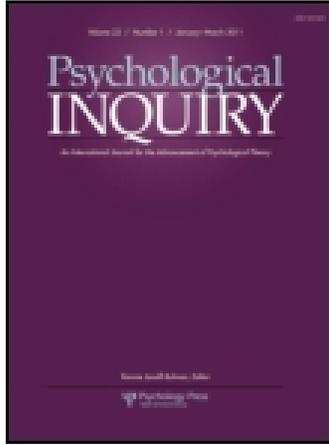


This article was downloaded by: [Washington University in St Louis]

On: 19 August 2014, At: 13:33

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Psychological Inquiry: An International Journal for the Advancement of Psychological Theory

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/hpli20>

### Fast and Slow Sexual Strategies Are Not Opposites: Implications for Personality and Psychopathology

Nicholas S. Holtzman<sup>a</sup> & Angela L. Senne<sup>b</sup>

<sup>a</sup> Department of Psychology, Georgia Southern University, Statesboro, Georgia

<sup>b</sup> Department of Psychology, Washington University in St. Louis, St. Louis, Missouri

Published online: 19 Aug 2014.

To cite this article: Nicholas S. Holtzman & Angela L. Senne (2014) Fast and Slow Sexual Strategies Are Not Opposites: Implications for Personality and Psychopathology, *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory*, 25:3-4, 337-340, DOI: [10.1080/1047840X.2014.915708](https://doi.org/10.1080/1047840X.2014.915708)

To link to this article: <http://dx.doi.org/10.1080/1047840X.2014.915708>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

## Fast and Slow Sexual Strategies Are Not Opposites: Implications for Personality and Psychopathology

**Nicholas S. Holtzman**

*Department of Psychology, Georgia Southern University, Statesboro, Georgia*

**Angela L. Senne**

*Department of Psychology, Washington University in St. Louis, St. Louis, Missouri*

In the target article, Del Giudice (this issue) uses life history theory (LHT) to help explain personality and psychopathology. Although we admit the explanatory power of LHT is enticing, especially to minimalists, and although we have employed LHT previously in theorizing about the evolution of individual differences (Holtzman, Augustine, & Senne, 2011; Holtzman & Strube, 2011), here we offer a skeptical message about LHT in the spirit of scientific progress.

A central assumption of LHT is that short-term mating (the mating strategy preferred by fast life history strategists) is the polar opposite of long-term mating (the mating strategy preferred by slow life history strategists). This means that short-term mating activities, such as having one-night stands, and long-term mating activities, such as getting married and raising children, are assumed to be directly pitted against one another. On the surface, the notion that there is an opposition between these two sexual strategies makes some sense, because time and energy spent engaging in one strategy is time and energy that cannot be spent engaging in the other strategy; however, recent empirical evidence suggests that this opposition may not be as strict as is implied by LHT.

For instance, in a groundbreaking study, Jackson and Kirkpatrick (2007) explored the potential of a multidimensional approach to investigating sexual strategies by developing a measure that contained items aimed at assessing both orientation toward short-term mating and orientation toward long-term mating. They reasoned that if short-term and long-term mating are in fact relatively separate dimensions, then they should be only moderately inversely correlated. In contrast, if short-term and long-term mating are polar opposites on a single dimension, then they should be very strongly inversely correlated. In accordance with their prediction, Jackson and Kirkpatrick (2007) found that the short-term mating orientation and long-term mating orientation scales were only modestly negatively correlated. Thus, the authors concluded that short-term and long-term mating orientation are not opposites on the same dimension but instead should be measured on relatively separate dimensions.

Figure 1 depicts this two-dimensional (2D) model of sexual strategies. In this model, the short-term mating axis extends from the bottom right (low short-term mating orientation) to the top left (high short-term mating orientation), and the long-term mating axis extends from the bottom left (low long-term mating orientation) to the top right (high long-term mating orientation). Whereas traditional orthogonal axes would indicate that short-term and long-term mating orientation are entirely independent of one another ( $r = .00$ ), and a single axis would indicate that short-term and long-term mating orientation are direct opposites of one another ( $r = -1.00$ ), here the axes are intentionally situated between these two extremes, thus reflecting the moderate negative correlation between short-term and long-term mating orientation (Holtzman & Strube, 2013; Jackson & Kirkpatrick, 2007).

This 2D model has an important explanatory advantage over the 1D LHT model. Because LHT pits short-term strategies directly against long-term strategies, LHT can capture only those individuals who use either short-term or long-term sexual strategies exclusively. In contrast, the 2D model of sexual strategies can describe four different varieties of people: those who use short-term strategies only, those who use long-term strategies only, those who use a combination of short-term and long-term strategies, and those who use neither short-term nor long-term sexual strategies. These four varieties constitute the quadrants of Figure 1.

Clearly, there are instances in which a person might use more than one type of sexual strategy or might not use any sexual strategy. Take, for example, an extraverted and open-minded man who, though he has had several children with his wife and engages in parenting activities with her, has a few one-night stands with extramarital partners on the side. Admittedly, there is somewhat of a trade-off between these two activities; it is obvious that a person cannot be in two different geographical locations (a long-term mating context and a short-term mating context) at once. However, this does not imply that a few short-term sexual encounters preclude the man in the example

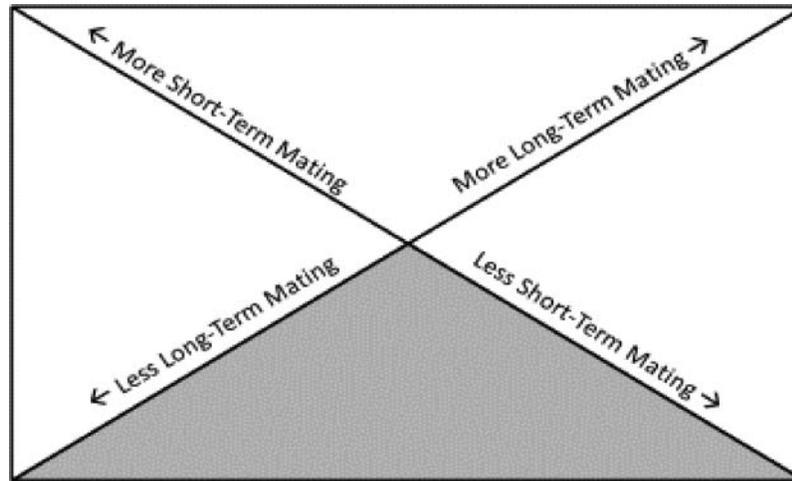


Figure 1. Two-dimensional model of sexual strategies.

from engaging in long-term mating and, by extension, parenting activities (or vice versa). In this example, LHT's presumed opposition between short-term and long-term sexual behavior is largely an illusion; it is clearly possible for a person to engage in both.

On the other hand, consider the case of a young schizoid individual who spends most of her days engaging in solitary activities, such as gardening or simply sitting in a chair. As time goes on, she experiences increasing bouts of catatonia, often remaining silent and motionless for extended periods. This person has neither sexual desires nor sexual prospects, and thus is very low on both short-term and long-term mating orientation. Other examples of individuals who may be low on both short-term and long-term mating include people with various sexual dysfunctions described in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; American Psychiatric Association, 2013). Among these dysfunctions are male hypoactive sexual desire disorder, which is characterized by low or no sexual desire or fantasies in males, and female sexual interest/arousal disorder, which is characterized by low or no sexual desire or fantasies in females (American Psychiatric Association, 2013). Like those with schizoid personality disorder, individuals with these sexual dysfunctions are disinclined to engage in either short-term or long-term mating.

Because people who use a combination of short-term and long-term sexual strategies and people who use neither strategy clearly exist, it is important to examine the personalities of these individuals in addition to the personalities of individuals who use one strategy or the other. However, because the 1D LHT model does not differentiate between those high on both short-term and long-term strategies and those low on both short-term and long-term strategies, it cannot be used to discern the personalities of these two varieties of people. This is a serious flaw of the

LHT model. We argue that the 2D model of sexual strategies provides a promising way of conceptualizing the personalities of individuals such as the man in the preceding example who has extramarital affairs, and the woman in the preceding example who is uninterested in sexual activity altogether. Indeed, some recent evidence suggests that this approach merits further exploration. Holtzman and Strube (2013), for instance, examined the relationship between sexual strategies and personality using separate scales to assess short-term and long-term mating orientation. The authors suggested that if long-term mating captures variance in personality above and beyond that captured by short-term mating, then a 2D sexual strategies model is better suited for investigating individual differences in personality and psychopathology than is a traditional 1D model.

Indeed, whereas Del Giudice struggles to explain the evolutionary basis for Extraversion and Openness using the single LHT dimension, Holtzman and Strube (2013) found that these traits can be mapped onto a 2D model. Specifically, in a U.S. sample, Extraversion correlated positively with both short-term mating orientation and long-term mating orientation. Similarly, Openness correlated positively with short-term mating orientation and, contrary to what would be expected if short-term and long-term mating were direct opposites, did not correlate negatively with long-term mating but rather was unrelated to it. Thus, in line with our example of the extraverted and open-minded man who engages in short-term sexual affairs while still maintaining a long-term relationship, Extraversion and Openness may be two traits that are better accounted for by a 2D sexual strategies model than a 1D model.

Furthermore, whereas Del Giudice does not address the possibility of people who do not engage in sexual activity at all, the 2D model of sexual strategies may provide a useful way of modeling the

personalities of these individuals. Specifically, Holtzman and Strube (2013) found that schizoid personality disorder was strongly negatively correlated with long-term mating but was not related to short-term mating (again in contrast to the positive correlation with short-term mating that would be expected if short-term and long-term mating were direct opposites). Schizoid personality disorder, as in our example of the woman who spends her days in isolation and has no interest in pursuing sexual activity, may therefore be one disorder that maps better onto a 2D model than a 1D model. These points seriously call into question the LHT framework as a general model for individual differences. The minimalistic psychometric approach of LHT forces unidimensionality on a multivariate problem—the problem of personality. In turn, it completely sacrifices our ability to detect both the personalities of people who engage in multiple sexual strategies and the personalities of people who engage in no sexual strategies.

Although this rejection of a strict LHT framework may at first elicit aversion from evolutionary psychologists, we argue that the postulate can be retained that individual differences—including those in psychopathology—emerged through the process of evolution. The key to making the transition in conceptualization, we argue, is the more thorough integration of the concept of mutation–selection balance, which is captured by Keller and Miller’s (2006) evolutionary watershed model of psychopathology. The watershed model posits that some forms of psychopathology result from the slow buildup of very slightly maladaptive mutations across many generations. As the evolutionary game is played, nature strongly selects against seriously harmful (e.g., deadly) mutations, but it does not strongly select against mild mutations. As a consequence, mild mutations can accumulate in certain branches of the genetic tree. Psychopathology, as Keller and Miller (2006) pointed out, is one outcome of this process.

Del Giudice does (albeit briefly) discuss the notion of mutation–selection balance as one possible cause of psychopathology, and we applaud him in this attempt to integrate mutation–selection balance into evolutionary personality psychology. However, we feel that this attempt at integration entails some problems. By acknowledging that some types of psychopathology may result from the buildup of relatively harmless mutations, it seems Del Giudice may be implicitly advocating for another type of multidimensional model (distinct from our 2D sexual strategies model), wherein mutation load constitutes a second dimension, orthogonal to the fast–slow LHT dimension. According to such a model, different types of psychopathology still fall at particular points along a fast–slow continuum but are expressed only at particular levels of mutation load. Although this type of

model would indeed be preferable to the 1D model for which Del Giudice explicitly advocates, it still involves an LHT dimension, which again contains a false opposition between fast (short-term) and slow (long-term) sexual strategies. Our model in Figure 1 does not have this problem.

In addition to avoiding the problem of a false opposition between short-term and long-term sexual strategies, our model explicitly incorporates mutation–selection balance theory. We argue that there is a dumping ground (depicted by the grayed-out bottom quadrant of Figure 1) that captures high mutation load. That is, people who fall within the top three quadrants of Figure 1 (i.e., those high in short-term mating only, those high in long-term mating only, and those high in both short-term and long-term mating) carry fewer mutations than people who fall within the lower (gray) quadrant (i.e., those low in both short-term and long-term mating). As in Keller and Miller’s (2006) evolutionary watershed model of psychopathology, the accumulated mutations of individuals who fall within this lower quadrant may lead to certain types of psychopathology, specifically those types of psychopathology that are associated with low orientation toward both short-term and long-term mating and are therefore associated with lower reproductive success (e.g., schizoid personality disorder).

Thus, expanding upon the ideas put forth by Del Giudice, we argue that there is a cliff-edged function that separates the upper three quadrants in Figure 1 from the lower (gray) quadrant. A cliff-edged function in this instance refers to a phenomenon in which the values assigned to one of the variables in a multivariate space drop dramatically. In this case, the variable for which values drop is reproductive success (which, although not pictured, constitutes a third axis extending three-dimensionally through the center of Figure 1), and the point at which reproductive success drops is when one crosses the threshold from the white quadrants to the gray quadrant in Figure 1. It may be helpful to think of this gray zone as a valley or canyon—a low point representing minimal reproductive success. At this juncture in the history of evolutionary personality psychology, it remains unclear which one of the top three quadrants of Figure 1 is optimal in the sense of yielding the highest reproductive success; in fact, there may even be multiple optima, which could be visualized as mountains rising out of the page in Figure 1. Locating the optimum or optima remains a topic for future research.

In sum, we favor a 2D model of sexual strategies over the 1D LHT model. Not only does it have the potential to double the variance accounted for in individual differences in personality and psychopathology, but it also explicitly integrates the concept of mutation–selection balance.

**Note**

Address correspondence to Nicholas Holtzman, Department of Psychology, Post Office Box 8041, Statesboro, GA 30460-8041. E-mail: nick.holtzman@gmail.com

**References**

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Holtzman, N. S., Augustine, A. A., & Senne, A. L. (2011). Are pro-social or socially aversive people more physically symmetrical? Symmetry in relation to over 200 personality variables. *Journal of Research in Personality, 45*, 687–691. doi:10.1016/j.jrp.2011.08.003
- Holtzman, N. S., & Strube, M. J. (2011). The intertwined evolution of narcissism and short-term mating: An emerging hypothesis. In W. K. Campbell & J. D. Miller (Eds.), *The Handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings and treatments* (pp. 210–220). Hoboken, NJ: Wiley.
- Holtzman, N. S., & Strube, M. J. (2013). Above and beyond short-term mating, long-term mating is uniquely tied to human personality. *Evolutionary Psychology, 11*, 1101–1129.
- Jackson, J. J., & Kirkpatrick, L. A. (2007). The structure and measurement of human mating strategies: toward a multi-dimensional model of sociosexuality. *Evolution and Human Behavior, 28*, 382–391. doi:10.1016/j.evolhumbehav.2007.04.005
- 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, 29*, 385–452. doi:10.1017/s0140525x06009095