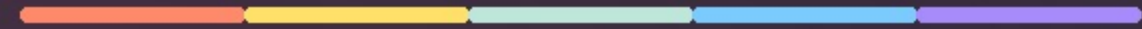


ASYMMETRICAL INCIDENCE OF ANXIETY IN BIOLOGICAL FEMALES

Biopsychosocial Considerations

Evolutionary, social and biological accounts, held in tension.



Short Response Paper 2

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THE PROPOSITION

Biological women are twice as likely to be diagnosed with anxiety disorders (except certain phobias) as biological men. Consider possible evolutionary, social, and biological explanations.

Remes et al. (2016), as cited in Carson (2026a)

A simple question. Simple questions rarely deliver equally parsimonious answers.

THE DIFFICULTY

THE PROBLEM IS NOT SCARCITY
IT IS OVERSUPPLY



Complexity here does not arise from a dearth of plausible, even supported, explanations. It arises from having too many. Three are offered this week, and all three sit inside a biopsychosocial lens which, while multifactorial, can still be myopic.

GENERATIVE TENSION. NOT COLLAPSE

The three accounts are pitted in a generative posture as complementary descriptive vantages on a broader, cross-paradigmatic phenomenon. They are not vandalised by the economy of zero-sum games which seek to monopolise knowledge.



Cook-Greuter (1999)

REDUCTIONISM CUTS BOTH WAYS

NATURALISING

Fixing difference into immutable biology. Difference becomes destiny, and the status quo is quietly ratified.

DISSOLVING

Reducing difference to pure social construction. The distress is explained away rather than explained.

In a domain this politically charged, and rightfully so given the history of power and its asymmetric affordances of safety, welfare and equity, the stakes reach past anxiety into maladies existential and, at times, lethal.

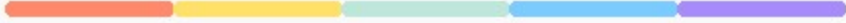
ACCOUNT ONE

EVOLUTIONARY



The logic of a fear system calibrated to over-detect.

THE FALSE-POSITIVE CALCULUS



Fear systems are theorised as adaptive precisely where they are calibrated to hypervigilant over-detection. The one who perceives threat incorrectly gains safety, and pays only in anxiety. The one who misses a real threat pays with everything.

False positive: cheap. False negative: fatal.

LeDoux & Pine (2016); Carson (2026a)

PARENTAL INVESTMENT

Historically, biological females have borne a greater reproductive cost and caregiving demand toward vulnerable offspring. That asymmetry in labour, mobility, independence and power would afford a lower threshold for threat detection a clear selection advantage.

Trivers (1972)

This is an extension of the lecture's species-level claim to the sharper question of sex, and it is offered as mine, unequivocally, at the outset.

TEND-AND-BEFRIEND

A refinement of the axiomatic fight-or-flight mechanism, proposing a distinctively female stress response. Obligated to the protection of young, and working in numbers, biological females mobilise social support rather than fighting or fleeing. Defence becomes distributed.

Taylor et al. (2000), a construct that remains controversial

Read as ancestral pressure rather than present destiny, this is freed of the charge of essentialism, and can bridge the social and the biological rather than ratify a status quo not universally desired.

ACCOUNT TWO

SOCIAL



Survival as the genesis, and the recursive reinforcement, of role.

NOT MERELY INHERITED. TRAINED.



Where biological females have been less mobile and less physically dominant, attentiveness to nearby threat becomes more than inheritance. It becomes socialisation: taught, rehearsed, rewarded, and reinforced by culture, which exerts highly coercive directives about which feelings may be expressed, and by whom.

ARTEFACT IN THE MEASUREMENT

The sex asymmetry may extend from the diagnostic process itself. Differences in help-seeking, in symptom reporting, and in how clinicians evaluate distress, may make the figure less an observation of direct phenomena than an error formed by, and recursively forming, cultural structure.

Altemus et al. (2014); women's greater interpersonal trauma, Carson (2026b)

Constructionist critique here is more than slogan. It does tangible analytic work: genuine artefact is found within the measurement, without ever denying the veracity of the underlying distress.

ACCOUNT THREE

BIOLOGICAL



The physical substrate, layered in, and refused a throne.

THE ENDOCRINE PATHWAY



Ovarian Hormones

Progesterone and oestrogen shape anxiety directly, one illustrative example being the lowering and raising of vulnerability to panic during pregnancy.

The HPA Axis

These hormones modulate the hypothalamic-pituitary-adrenal axis, tracking through puberty, the menstrual cycle, pregnancy and menopause.

Oxytocin

HPA activation further engages the oxytocin systems on which Taylor et al. (2000) base the tend-and-befriend response.

Up- and downregulation of fear and stress, in obviously unique ways. Altemus et al. (2014); Carson (2026b)

BIOLOGY IS NOT THE DEEPER CAUSE

The biological level must refuse coronation as some deeper or truer cause sitting beneath the others. That is the reductionist's nihilistic laziness. Biology, evolutionary history and lived culture co-constitute and co-enact each other in a whole larger than any one, and beyond the sum of just these three lenses.

The frequent error is to invert apprehension: to take the thing seen through a methodological lens for the thing itself.

TWO METAPHORS

THE MOON. RATHER THAN THE FINGER
POINTING AT IT.



And so, to bludgeon another metaphor: the territory of asymmetrical anxiety diagnosis between the sexes is known only by its maps. An adaptive bias toward vigilance. Neuroendocrine machinery. And cultures, constantly adaptive and hyperlocal, and the roles they permit.

The map is not the territory. Neither is any one account the cause.

REFERENCES



Altemus, M., Sarvaiya, N., & Neill Epperson, C. (2014). Sex differences in anxiety and depression clinical perspectives. *Frontiers in Neuroendocrinology*, 35(3), 320-330.

Carson, R. (2026a, June 30). Anxiety disorders [Lecture recording]. Canvas.

Carson, R. (2026b, July 2). Obsessive-compulsive and trauma-related disorders [Lecture recording]. Canvas.

Cook-Greuter, S. R. (1999). Postautonomous ego development: A study of its nature and measurement [Doctoral dissertation, Harvard Graduate School of Education]. ProQuest.

LeDoux, J. E., & Pine, D. S. (2016). Using neuroscience to help understand fear and anxiety: A two-system framework. *The American Journal of Psychiatry*, 173(11), 1083-1093.

Remes, O., Brayne, C., van der Linde, R., & Lafortune, L. (2016). A systematic review of reviews on the prevalence of anxiety disorders in adult populations. *Brain and Behavior*, 6(7), e00497.

Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A. R., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review*, 107(3), 411-429.

Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man, 1871-1971* (pp. 136-179). Aldine.