



Paraphilia Is Not a Natural Kind: Comment on Bailey and Hsu (2025)

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Received: 18 December 2025 / Revised: 18 December 2025 / Accepted: 19 December 2025

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In a recent article in *Archives of Sexual Behavior*, Bailey and Hsu (2025) addressed the hypothesis that *paraphilia* constitutes a *natural kind*, "a grouping that reflects the structure of the natural world rather than the interests and actions of human beings" (Bird & Tobin, 2023). I would like to briefly discuss Bailey and Hsu's hypothesis, methodology, observations, and conclusions. My principal contentions are these:

1. Bailey and Hsu's natural kind hypothesis was falsified: *Paraphilia* is not a natural kind.
2. Logistic multiple regression analysis confirmed that *paraphilia* is not a natural kind.
3. Bailey and Hsu's Paraphilic Interests Scale Contrast (PISC) measure further confirmed that *paraphilia* is not a natural kind.

Bailey and Hsu's Natural Kind Hypothesis Was Falsified: *Paraphilia* Is Not a Natural Kind

Among philosophers of science, the meaning and significance of the concept *natural kind* is a topic of ongoing debate (Slater & Borghini, 2011). Although there is no universally accepted definition of a natural kind, Zachar (2015) set forth some generally accepted criteria. In his view, natural kinds:

- (a) are naturally occurring as opposed to artificial; (b) have clearly demarcated boundaries separating members of the natural kind from non-members; (c) possess observable features that are causally produced by internal properties; and (d) these causal properties can be used to objectively validate category membership (p. 288).

Haslam (2002) similarly proposed that natural kinds "reflect the outward expression of a single causal essence or defining property" (p. 212). He explained:

Natural kinds must meet a particularly stringent etiological requirement. Only if a discrete category is the product of a defining property and/or a specific and sufficient causal factor can it be called a natural kind. Needless to say, meeting this requirement represents a formidable scientific task (p. 215).

Bailey and Hsu embraced this daunting task and its stringent requirements. They hypothesized that all genuine paraphilias constitute a natural kind because they reflect the influence of a shared causal factor. As a result of this causal factor, every person with any genuine paraphilia will have an increased propensity to experience every other paraphilia as well. Although these propensities may be small, their net effect in any sufficiently large paraphilic sample will be an elevated prevalence of all other paraphilias relative to control samples. Because all paraphilias are hypothesized to be elevated in all paraphilic samples, the specific paraphilic interests used to construct scales for comparing paraphilic and control samples can be chosen at will. Lest anyone consider this an exaggerated description, here are Bailey and Hsu's own words:

If paraphilias share a common cause, and if paraphilic interests are well-measured by self-report items, then the mean of a set of self-rated paraphilic interests should be higher among paraphilic men compared with non-paraphilic men. This should be true regardless of which paraphilia items are chosen for scale construction and which paraphilic samples are chosen for comparison to controls. Furthermore, the paraphilias chosen for items need not correspond with the paraphilic samples studied (p. 2785).

This was a bold hypothesis, given that paraphilias are extremely diverse and do not display any obvious shared features. Possible etiologic factors for paraphilias proposed in the psychiatric literature include genetics, prenatal

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environment, epilepsy, head injuries, early experiences with parents and caregivers, psychological trauma, social learning, and classical and operant conditioning (Lawrence, 2009; Schippers et al., 2025). The existence of a single, universally shared causal factor might seem improbable.

Bailey and Hsu used their Paraphilic Interests Scale (PIS; Hsu et al., 2015) to examine their hypothesis. Members of their paraphilic and control samples were asked to rate how arousing they found 11 different paraphilic scenarios using five-point Likert scales. The hypothesis would predict that the mean PIS scores of all the paraphilic samples should be higher than the mean scores of the control samples. Not surprisingly these predictions were not fulfilled, and the natural kind hypothesis was falsified. As Bailey and Hsu's Fig. 2 on p. 2789 reveals, the distributions of mean scores in the paraphilic and control samples were strikingly similar and essentially indistinguishable. Mean PIS scores were actually lower in the paraphilic samples, albeit the difference was not statistically significant. These results were inconsistent with the predictions of the natural kind hypothesis and thus falsified the hypothesis. The evidence clearly demonstrated that *paraphilia* is not a natural kind.

Because the natural kind hypothesis was rejected, Bailey and Hsu's (2025) prominent statements to the contrary were erroneous and inexplicable. Their claim that their "results provide tentative support for... the proposition that *paraphilia* is a natural kind" (p. 2779) was baseless. Their assertion that their "results provide a promising if tentative affirmative answer to the question whether *paraphilia* is a natural kind" (p. 2801) was unfounded. These representations by Bailey and Hsu were fallacious and had no basis in fact.

Note that even if it were possible to construct some alternative scale that would yield results not inconsistent with the natural kind hypothesis, the disconfirming results with PIS would be sufficient to falsify the hypothesis. The hypothesis predicted that elevated paraphilic interests would be observable in all paraphilic samples using any scale constructed in accordance with the hypothesis, so if even one correctly constructed scale such as PIS failed to yield the predicted results, the hypothesis would necessarily be rejected.

Logistic Multiple Regression Analysis Confirmed that *Paraphilia* Is Not a Natural Kind

Bailey and Hsu examined their data using logistic multiple regression analysis and discovered that four PIS items—the measures of transvestism, fetishism, masochistic humiliation, and sadistic humiliation—were positively associated with the paraphilic samples, whereas the remaining seven—two measures of voyeurism, two of exhibitionism, and one each of frotteurism, masochistic pain, and sadistic pain—were

negatively associated. The paraphilic and control samples displayed comparable and generally low levels of paraphilic interests, but their specific preferences differed. The paraphilic samples were more aroused by transvestism, fetishism, and masochistic humiliation but less aroused by voyeurism, exhibitionism, and frotteurism. These results provided another clear demonstration that the natural kind hypothesis was false. According to the hypothesis, all paraphilic interests should be higher in the paraphilic samples than in the control samples, but voyeurism, exhibitionism, and frotteurism were observed to be lower.

Bailey and Hsu's PISC Measure Further Confirmed that *Paraphilia* Is Not a Natural Kind

Bailey and Hsu seemed to believe that if they could devise a measure that would successfully distinguish between the paraphilic and control samples this might somehow provide support for their hypothesis, even though that hypothesis had already been falsified with PIS. They used the results of their logistic multiple regression analysis to create a novel PISC measure, calculated as the mean score for the four PIS items favored by the paraphilic samples, minus the mean score for the seven items favored by the control samples. PISC was designed to maximize differences between the paraphilic and control samples and to yield positive scores in the former and negative scores in the latter. It should be obvious that PISC would not be an appropriate measure for examining the natural kind hypothesis, because not all paraphilic interests would result in higher scores: Some, including voyeurism, exhibitionism, and frotteurism, would result in lower scores. But even if PISC was an appropriate measure, its results were inconsistent with the natural kind hypothesis.

The center panel in Bailey and Hsu's Fig. 3 on p. 2792 displays the distribution of sample means for PISC, which Bailey and Hsu originally called Y2. All the control samples had negative mean scores, but at least three of the paraphilic samples did too, including persons with pedophilia and zoophilia. Are pedophilia and zoophilia genuine paraphilias? Based on PISC scores, they apparently are not. PISC scores could not reliably distinguish between the paraphilic and control samples: No matter what score was chosen to define the category boundary, one or more paraphilic or control samples would always be misclassified. Thus, Bailey and Hsu's statement that PISC "successfully distinguished paraphilic and control samples, with an appreciable effect size" (p. 2794) is at best misleading. A significant difference in mean scores between the paraphilic and control samples would of course be expected, given that PISC was specifically designed to produce this result, but the overlap in scores meant that PISC

could not accurately differentiate between the paraphilic and control samples.

The center panel in Bailey and Hsu's Fig. 3 also reveals that mean PISC scores in the paraphilic and control samples existed on a smooth continuum, with no discontinuities except at the highest level. There was no evidence of a distinct, well-defined natural boundary for the category *paraphilia*, and this was yet another indication that the natural kind hypothesis was false.

Funding Not applicable.

Declarations

Competing interests Not applicable.

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