

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/309734622>

Orienting Basic Research on Chronophiliias

Article *in* Archives of Sexual Behavior · November 2016

DOI: 10.1007/s10508-016-0885-1

CITATION

1

READS

108

2 authors:



[J. Michael Bailey](#)

Northwestern University

144 PUBLICATIONS **7,104** CITATIONS

[SEE PROFILE](#)



[Kevin J Hsu](#)

Northwestern University

11 PUBLICATIONS **25** CITATIONS

[SEE PROFILE](#)

Orienting Basic Research on Chronophilias

J. Michael Bailey¹  · Kevin J. Hsu¹

Received: 10 October 2016 / Accepted: 18 October 2016
© Springer Science+Business Media New York 2016

Seto (2016) has provided a stimulating conceptual review of the chronophilias as potential sexual orientations, mostly focusing on pedohebephilia. While largely agreeing with him, we offer several clarifications, elaborations, and speculations, in the spirit of motivating basic research in this interesting and important area.

Seto (2016) suggests we define sexual orientation expansively, as “a stable tendency to preferentially orient—in terms of attention, interest, attraction, and genital arousal—to particular classes of sexual stimuli.” He continues: “If we accept this broader definition, then we can imagine that individuals actually have multiple sexual orientations rather than a single sexual orientation, corresponding to their sexual preferences along a variety of different dimensions, including age.”

For several reasons, we believe that this approach is unhelpful. First, *sexual orientation* has routinely been distinguished from *sexual identity* and *sexual behavior*, because of the recognition that the three characteristics can diverge (Bailey, 2009; Rieger, Chivers, & Bailey, 2005; Semon, Hsu, Rosenthal, & Bailey, 2016). Consider, for example, a heterosexually married man who only has sex with his wife, identifies as bisexual, but whose sexual fantasies are exclusively about men. We think it is most accurate to say that he has a heterosexual behavior pattern, a bisexual identity, and (most likely) a homosexual teleiophilic orientation. To define his sexual orientation broadly, depending on which aspect of sexual orientation one is talking about, is confusing. Offering multiple different definitions of one term is rarely a good scientific approach.

Second, sexual orientation is generally understood to represent a preference for adult male or adult female partners (or both). We have no issue with extending the definition of sexual orientation to other dimensions of preference, such as, most relevantly, to the degree of physical maturity preferred in a potential or fantasized sex partner. But importantly, it is preference and not behavioral tendency, attentional biases, or self-reported identity that most people—including us—understand to mean sexual orientation. This does not mean, of course, that sexual orientation is uncorrelated with these other phenomena. On the contrary, the correlations are usually substantial (Chivers, Rieger, Latty, & Bailey, 2004; Semon et al., 2016). A better way to think about the varied phenomena that Seto (2016) would consider as a person’s sexual orientation is that they are different indicators of a latent variable comprising sexual orientation. We specify, and defend, our understanding of the latent sexual orientation variable in the next section.

A third reason why we disagree with Seto’s (2016) definition of sexual orientation is that a better, much narrower definition exists that is consistent with research, parsimoniously accounts for important facts, and likely has important implications for guiding future research.

Men’s Sexual Orientation Is Their Sexual Arousal Pattern

For men, sexual orientation is equivalent to their sexual arousal pattern (Bailey, 2009). For example, heterosexual men experience much greater sexual arousal when interacting with, fantasizing about, or viewing erotica depicting women than they do when interacting with, fantasizing about, or viewing erotica depicting men. Homosexual men show the opposite pattern. Conversely, a man who experiences strong sexual arousal to adult men that is much stronger than his arousal to adult

✉ J. Michael Bailey
jm-bailey@northwestern.edu

¹ Department of Psychology, Northwestern University, 2029
Sheridan Road, Evanston, IL 60208, USA

women is homosexual, regardless of what he says about his sexuality or with whom he tends to have sex. The best measure of a man's sexual orientation is his genital arousal pattern to sexual stimuli depicting different kinds of persons, which might include men and women, prepubescent boys and girls, and pubescent boys and girls. Sexual arousal comprises more than genital arousal. Subjective sexual arousal generally precedes, and may occur without, genital arousal. Thus, a sexual arousal pattern is a latent variable, and thus unlikely to be measured perfectly by any single genital arousal assessment.

Researchers of pedohebephilia have used genital arousal patterns as a kind of diagnostic gold standard. When men's genital arousal patterns are well measured, it is genital arousal pattern—not offense history, and certainly not relationship history or sexual identity—that provides the best estimate of men's sexual preference. For example, research with genital arousal patterns provides the best data concerning the percentage of child molesters who are teleiophilic versus pedohebephilic (e.g., Lykins et al., 2010; Seto, 2008). Similarly, researchers have used genital arousal patterns to explore sexual preference among incest offenders (Blanchard et al., 2006) and adolescent sex offenders against children (Seto, Lalumière, & Blanchard, 2000), to validate psychometric scales of pedohebephilic interest (Seto & Lalumière, 2001), and to establish child pornography offenses as an indicator of pedohebephilic interest (Seto, Cantor, & Blanchard, 2006). This research has not generally been conducted with the assumption that sexual arousal assessment is part of a battery assessing broadly defined pedohebephilia, with sexual arousal (and interest) merely representing one aspect. Rather, researchers have behaved as if phallometric testing is the best, albeit imperfect, measure of sexual preference.

Our proposed definition of sexual orientation is not only methodologically convenient, due to the objective nature of genital arousal assessment. Sexual arousal patterns are subjectively and developmentally crucial to understanding one's own sexual orientation. We believe that men who must learn they have unusual sexual orientations or preferences do so because of their sexual arousal patterns. Homosexual men are much more sexually aroused by attractive males than by females. Pedohebephilic men are much more sexually aroused by children than by adults. Admittedly, our assertions here remain untested hypotheses. But we encourage all men to recall the feelings they had, especially during adolescence, when near to attractive members of their sexually preferred category of person. We hypothesize that sexual arousal is the core feeling they experienced.

Our proposed definition of sexual orientation does not generally apply to women. Men, but not women, show a category-specific pattern of genital sexual arousal with respect to gender (Chivers et al., 2004; Chivers, Seto, & Blanchard, 2007; Suschinsky, Lalumière, & Chivers, 2009). In contrast to both homosexual and heterosexual men, heterosexual women show an indifferent pattern of genital arousal (i.e., they tend to be

equally aroused by male and female stimuli), and homosexual women show a diminished category-specific pattern of genital arousal (i.e., they tend to be more aroused by female stimuli, but with a smaller difference in arousal to stimulus categories), compared with men. Although first demonstrated for genital arousal, the sex difference in category specificity has been demonstrated for other measures associated with sexual arousal, such as neural activation to erotic stimuli (Safron et al., 2007; Sylva et al., 2013). Bailey (2009) proposed that most women (especially heterosexual women) may not have a sexual orientation. Readers who do not wish to contemplate that degree of divergence between the sexes must nevertheless agree that sexual orientation appears to work differently in men and women. This sex difference is not a problem in considering chronophilias. Indeed, it is consistent with sex differences in their occurrence.

Why Men?

The vast majority of individuals committing sexual offenses against children are men (Seto, 2016). The same appears to be true about pedohebephilic interests per se. We recently conducted a large survey of adults sexually attracted to children (Bailey, Hsu, & Bernhard, 2016a). Of nearly 1300 respondents, only about 5 % were women. Furthermore, the females were less exclusively pedohebephilic by self-report, compared with the males.

The overwhelming preponderance of men among adults sexually attracted to children is consistent with a more general, likely related, and likely important phenomenon: the overwhelming preponderance of men among persons with *paraphilias*. Paraphilias are generally assumed to include unusual sexual interests such as pedohebephilia, autogynephilia (a man's arousal by the idea of being a woman), acrotomophilia (sexual attraction to amputees), apotemnophilia (arousal by the idea of being an amputee), fetishism (arousal by nonliving objects or body parts not generally eroticized), sadism, masochism, exhibitionism, frotteurism, and voyeurism. The list we provide is not exhaustive. Furthermore, there is no clear definition or test of what comprises a paraphilia. Partly for this reason, *paraphilia* is a disputed category (e.g., Moser, 2001). However, the fact that nearly all paraphilic individuals are men is interesting, and it suggests that classifying a sexual interest as a paraphilia may reflect a fact of nature rather than (or in addition to) a mere value judgment.

It is unlikely to be coincidental that it is men who have both a category specific sexual arousal pattern and a propensity to have paraphilias. One way of thinking about category specificity is as a strongly motivating, rigidly fixed, bias to experience sexual arousal toward one kind of person (or perhaps also one type of activity). For evolutionarily sensible reasons, category-specific arousal usually promotes men's seeking sexual intercourse with sexually mature women. However, for reasons still

largely unknown, the bias is sometimes rerouted to other types of persons, including men and children.

Women do not usually have category-specific sexual arousal, and so they are less susceptible to rerouting. The exception, of course, is homosexuality. Even in this respect, however, women appear more flexible (i.e., less specific) than men (Diamond, 2008), and homosexual women are less common (Bailey et al., 2016b). Rerouting from androphilia to gynephilia in women appears to have some analogous causes as rerouting from gynephilia to androphilia in men, likely involving atypical sexual differentiation of the brain (Bailey et al., 2016b). Supporting this theory, homosexual individuals tend to possess a subset of sex-atypical characteristics. Notably, in homosexual women, this includes a more category-specific sexual arousal pattern. It appears that this rerouting—from androphilia to gynephilia, or vice versa—has completely different causes from rerouting that results in paraphilias; otherwise, women would have much higher rates of paraphilias. Furthermore, paraphilias and homosexuality appear to have different correlates (Cantor, 2012).

Some women display behavior and report feelings that may seem to reflect paraphilias, but they have not been well studied. In our view, some have been too quick to assume that such women have paraphilias (see, e.g., Bergner, 2009, Chapter 2). The women's unusual behavior may be due to other causes. Seto (2016) notes that most paraphilias are far more common in men than in women but lists masochism as an exception. Alternatively, perhaps masochistic phenomena in women are not often paraphilic. The dangerous practice, autoerotic asphyxiation, appears most often to be motivated by masochism in men and has the markings of a paraphilia: It is solitary (thus not engaged in for social reasons), sexually motivated, and often associated with other paraphilias (Blanchard & Hucker, 1991). Inconsistent with a high rate of paraphilic masochism in women, deaths due to autoerotic asphyxiation are 50 times more common among men than among women, and women who die this way are less likely to display paraphilic markings (e.g., their death scenes are less likely to include masochistic pornography). We suspect that female masochism and garden variety BDSM have similar origins in both sexes, and that both are quite different from paraphilic masochism. Similarly, we doubt that women accused of sex crimes against children are often pedohebephilic. If truly paraphilic women exist, we hypothesize they may be especially likely to be homosexual. This is because homosexual women have some degree of category specificity.

Is Pedophilia a Paraphilia?

We have both admitted that *paraphilia* is a vague concept and made scientific arguments premised on its validity. That represents the non-ideal, current state of knowledge. Scientists have too long neglected to study the construct validity of paraphilia as

a general category. To the extent that different paraphilias have shared causes and similar expression, construct validity of the general category of paraphilia is supported. Otherwise, the complaint that labeling sexual interests as paraphilias represents only the value judgments that they are weird and problematic needs to be taken seriously.

Beyond the lack of scientific progress regarding the validity of paraphilias in general, scientists studying chronophilias (most often pedohebephilia) have mostly neglected to produce evidence that these sexual interests are paraphilias. Aside from the undisputed evidence that pedohebephilia is overwhelmingly a male phenomenon, what evidence could support the hypothesis that it is a paraphilia? A second, interesting characteristic of paraphilias is that some of them co-occur within an individual far more often than one would expect by chance. For example, men who have died due to autoerotic asphyxiation are often cross-dressed, supporting a correlation between masochism and auto-gynephilia (Blanchard & Hucker, 1991). This suggests the possibility of a general paraphilia susceptibility underlying superficially dissimilar phenomena. But do pedohebephilic men disproportionately have other paraphilias? Results from one research group suggested a high prevalence of paraphilias among pedohebephilic men (Abel, Becker, Cunningham-Rathner, Mittelman, & Rouleau, 1988). If the large effect sizes they reported are generally accurate, then it should not be difficult for other research to replicate them. Unfortunately, however, we have not noticed such replications, perhaps reflecting that researchers have not tried. In our opinion, it is important to know whether pedohebephilia and other chronophilias tend to co-occur with other paraphilias, in order to increase the construct validity of paraphilias, generally, and to support the more specific hypothesis that chronophilias are paraphilias.

Researchers of chronophilias would increase their contribution by adding non-chronophilic paraphilic control groups when possible. For example, Cantor et al. (2008) found evidence for particular brain differences between pedophilic and non-pedophilic men. As interesting as such a finding may be, it would have been even more so had it included men with other paraphilias. Doing so would have allowed inference regarding whether differences were related to chronophilias per se or to paraphilias more generally. A necessary complication in this work is that we refer to pedohebephilia, chronophilias, masochism, and other sexual interests as paraphilias while simultaneously pointing out limitations of scientific support for their validity as paraphilias. This is true, however, of all concepts that are in the early stages of research.

Why Children?

Even if *paraphilia* is ultimately vindicated as a valid category, the question would remain why some paraphilic men become preferentially attracted to children, others to amputees, and

others to the idea of themselves as women, among other peculiar interests. Seto (2016) considers the possibility that unusual chronophilias may occur due to evolutionary balancing selection. We offer the following alternative hypothesis.

Men do not generally need to learn to be more attracted to fertile women than to either pre-fertile children or elderly adults. A preference for fertile women is likely an adaptation whose particular mechanisms consist of both excitatory and inhibitory mechanisms—increased sexual arousal to fertile women and, importantly, mechanisms that sexually discriminate against humans that are somewhat similar (e.g., female and also objectively attractive) but at an unfertile level of sexual maturity. Chronophilias may result from developmental disruption of this complex adaptation. For example, pedohebephilia may arise from a developmental perturbation in which mechanisms that usually facilitate attraction to fertile women but not to children have opposite effects. That is, pedohebephilia may result from a reversal (and hence a failure) of an adaptive developmental program.

This is the least specific and most speculative idea we have offered, and we do not expect it will be useful anytime soon. However, it seems to us more consistent with what we know about paraphilias, which are associated with preferred sexual targets that differ dramatically rather than subtly from typical sexual targets. Furthermore, our hypothesis is consistent with cases mentioned by Seto (2016) in which the same men appear to be attracted to both children and the elderly.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no potential conflicts of interests related to this article.

Ethical Standards This article does not contain any studies with human participants performed by any of the authors.

References

- Abel, G. G., Becker, J. V., Cunningham-Rathner, J., Mittelman, M., & Rouleau, J. L. (1988). Multiple paraphilic diagnoses among sex offenders. *Bulletin of the American Academy of Psychiatry and the Law*, 16, 153–168.
- Bailey, J. M. (2009). What is sexual orientation and do women have one? In D. A. Hope (Ed.), *Contemporary perspectives on lesbian, gay, and bisexual identities* (pp. 43–63). New York, NY: Springer.
- Bailey, J. M., Hsu, K. J., & Bernhard, P. A. (2016a). An Internet study of men sexually attracted to children: Sexual attraction patterns. *Journal of Abnormal Psychology*, 125, 976–988.
- Bailey, J. M., Vasey, P. L., Diamond, L. M., Breedlove, S. M., Vilain, E., & Epprecht, M. (2016b). Sexual orientation, controversy, and science. *Psychological Science in the Public Interest*, 17, 45–101.
- Bergner, D. (2009). *The other side of desire: Four journeys into the far realms of lust and longing*. New York, NY: Harper Collins.
- Blanchard, R., & Hucker, S. J. (1991). Age, transvestism, bondage, and concurrent paraphilic activities in 117 fatal cases of autoerotic asphyxia. *British Journal of Psychiatry*, 159, 371–377.
- Blanchard, R., Kuban, M. E., Blak, T., Cantor, J. M., Klassen, P. E., & Dickey, R. (2006). Phallometric comparison of pedophilic interest in nonadmitting sexual offenders against stepdaughters, biologically related girls, and unrelated girls. *Sexual Abuse: A Journal of Research and Treatment*, 18, 1–14.
- Cantor, J. M. (2012). Is homosexuality a paraphilia? The evidence for and against. *Archives of Sexual Behavior*, 41, 237–247.
- Cantor, J. M., Kabani, N., Christensen, B. K., Zipursky, R. B., Barbaree, H. E., Dickey, R., ... Blanchard, R. (2008). Cerebral white matter deficiencies in pedophilic men. *Journal of Psychiatric Research*, 42, 167–183.
- Chivers, M. L., Rieger, G., Latty, E., & Bailey, J. M. (2004). A sex difference in the specificity of sexual arousal. *Psychological Science*, 15, 736–744.
- Chivers, M. L., Seto, M. C., & Blanchard, R. (2007). Gender and sexual orientation differences in sexual response to sexual activities versus gender of actors in sexual films. *Journal of Personality and Social Psychology*, 93, 1108–1121.
- Diamond, L. M. (2008). *Sexual fluidity: Understanding women's love and desire*. Cambridge, MA: Harvard University Press.
- Lykins, A. D., Cantor, J. M., Kuban, M. E., Blak, T., Dickey, R., Klassen, P. E., & Blanchard, R. (2010). Sexual arousal to female children in gynephilic men. *Sexual Abuse: A Journal of Research and Treatment*, 22, 279–289.
- Moser, C. (2001). Paraphilia: A critique of a confused concept. In P. J. Kleinplatz (Ed.), *New directions in sex therapy: Innovations and alternatives* (pp. 91–108). Philadelphia, PA: Brunner-Routledge.
- Rieger, G., Chivers, M. L., & Bailey, J. M. (2005). Sexual arousal patterns of bisexual men. *Psychological Science*, 16, 579–584.
- Safron, A., Barch, B., Bailey, J. M., Gitelman, D. R., Parrish, T. B., & Reber, P. J. (2007). Neural correlates of sexual arousal in homosexual and heterosexual men. *Behavioral Neuroscience*, 121, 237–248.
- Semon, T. L., Hsu, K. J., Rosenthal, A. M., & Bailey, J. M. (2016). Bisexual phenomena among gay-identified men. *Archives of Sexual Behavior*. doi:10.1007/s10508-016-0849-5.
- Seto, M. C. (2008). *Pedophilia and sexual offending against children: Theory, assessment, and intervention*. Washington, DC: American Psychological Association.
- Seto, M. C. (2016). The puzzle of male chronophilias. *Archives of Sexual Behavior*. doi:10.1007/s10508-016-0799-y.
- Seto, M. C., Cantor, J. M., & Blanchard, R. (2006). Child pornography offenses are a valid diagnostic indicator of pedophilia. *Journal of Abnormal Psychology*, 115, 610–615.
- Seto, M. C., & Lalumière, M. L. (2001). A brief screening scale to identify pedophilic interests among child molesters. *Sexual Abuse: A Journal of Research and Treatment*, 13, 15–25.
- Seto, M. C., Lalumière, M. L., & Blanchard, R. (2000). The discriminative validity of a phallometric test for pedophilic interests among adolescent sex offenders against children. *Psychological Assessment*, 12, 319–327.
- Suschinsky, K. D., Lalumière, M. L., & Chivers, M. L. (2009). Sex differences in patterns of genital sexual arousal: Measurement artifacts or true phenomena? *Archives of Sexual Behavior*, 38, 559–573.
- Sylvia, D., Safron, A., Rosenthal, A. M., Reber, P. J., Parrish, T. B., & Bailey, J. M. (2013). Neural correlates of sexual arousal in heterosexual and homosexual women and men. *Hormones and Behavior*, 64, 673–684.