

Wanting Women: Sex, Gender, and the Specificity of Sexual Arousal

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In this exhaustive review, Chivers (2017) provides the most comprehensive and authoritative synthesis to date on the phenomenon of nonspecific sexual response in heterosexual (androphilic) women—i.e., the capacity for women with male-centered sexual attractions to experience genital arousal in response to female sexual stimuli, sometimes in direct contradiction with their own subjective experiences of sexual desire. Chivers' groundbreaking publication on the “category specificity” of men's and women's genital arousal (Chivers, Rieger, Latty, & Bailey, 2004) challenged long-held assumptions about female and male sexuality and sexual orientation and ushered in a tide of creative, multimethod research on this topic. Chivers' present review of this research uses prevailing theoretical models of sexual arousal to synthesize extant empirical findings, evaluate the plausibility of competing explanatory hypotheses, and identify some of the most important unanswered questions for future study.

Perhaps the greatest contribution of this review is that it allows us to stand back and reevaluate this entire phenomenon with new eyes. Along these lines, I must admit that Chivers' exhaustive review has jolted me away from my own pet theories regarding category specificity and has prompted me to consider an entirely different explanatory approach—separate from the 10 hypotheses she reviews—which honestly never occurred to me before (a point I admit with some chagrin, given that it may have occurred to many of my colleagues). I am not yet convinced myself that this alternative approach is a “better” way to interpret the phenomenon, but I set it forth in the spirit of Chivers' call for future rigorous research on this topic.

Preferred/Nonpreferred or Female/Male?

Let us begin with the facts: Table 1 summarizes the patterns of genital responses that have been identified in women and men across different sexual orientation groups (*sexual orientation* denoting individuals' self-reported pattern of sexual attractions). These are global summaries based on Chivers' review, and they do not reflect some of the context-sensitive findings that she unearthed in the empirical literature, but they convey the overall thrust of the findings. For example, only androphilic (heterosexual) women show reliably nonspecific genital responses (i.e., genital arousal to both women and men, despite their pattern of exclusive sexual attractions to men), whereas ambisexual (bisexual) and gynephilic (lesbian) women have been found to show category-specific genital responses (i.e., responses that concord with their self-reported pattern of sexual attractions). The second column of Table 1 indicates whether each sexual orientation group shows category-specific versus nonspecific patterns of genital response. This column immediately reveals the quandary addressed by Chivers: Why is it that the only group showing reliably nonspecific responses is heterosexual (androphilic) women? All other groups have shown category-specific patterns of genital response (with some variations stemming from context and methodology). The “odd group out” is clearly heterosexual women. Looking at this column, the most compelling question is the one addressed by Chivers: *Why are heterosexual (androphilic) women uniquely “nonspecific” in their genital responses?* What adaptive functions might this serve? What are the cultural and biological pathways through which this pattern may have developed and what functions might it serve?

But now take a look at the last column in the table, which indicates whether each group has shown genital arousal to *female* sexual stimuli. Suddenly, a new pattern emerges. Whereas genital response to male sexual stimuli varies from group to group, genital response to female sexual stimuli is strikingly

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Table 1 Patterns of genital response to female and male sexual stimuli among different sexual orientation groups

Sexual orientation group	Category specific? (i.e., genital arousal consistent with self-reported pattern of sexual attractions)	Arousal to men?	Arousal to women?
Heterosexual (androphilic) women	No	Yes	Yes
Heterosexual (gynephilic) men	Yes	No	Yes
Bisexual (ambisexual) women	Yes	Yes	Yes
Bisexual (ambisexual) men	Yes	Yes	Yes
Lesbian (gynephilic) women	Yes	No	Yes
Gay (androphilic) men	Yes	Yes	No

consistent: *Every* sexual orientation group except for gay (androphilic) men has reliably shown genital arousal to female sexual stimuli, independent of whether they report that women are their “preferred” sexual stimuli. From this perspective, the “odd group out” is not heterosexual women, but gay men. Focusing on this column, an entirely different question emerges: Why is it that *everyone* is genitally aroused by *female* sexual stimuli except for gay (androphilic) men? What are the cultural and biological pathways through which *this* pattern may have developed, and what functions might it serve?

Previous research on category specificity has divided up patterns of genital arousal into two categories: arousal to a *preferred* target versus arousal to a *non-preferred* target. In this framework, a heterosexual (androphilic) woman’s arousal to female sexual stimuli is functionally equivalent to a heterosexual (gynephilic) man’s arousal to male sexual stimuli. Both of those stimuli are “non-preferred.” Similarly, a lesbian (gynephilic) woman’s arousal to female sexual stimuli is functionally equivalent to a heterosexual (androphilic) woman’s arousal to male sexual stimuli: Both of those stimuli are “preferred.” Yet, is this the right framework to use? After all, Chivers concludes from her review that one’s *sexual orientation* (i.e., one’s pattern of subjective erotic preference) often diverges from one’s *genital responsiveness* to sexual stimuli. Perhaps, then, we need to apply entirely different categorical frameworks to these two phenomena. If we want to understand one’s *subjective sexual attraction* to a target, the key distinction is whether the target is one’s “preferred” versus “nonpreferred” gender. Yet, if we want to understand one’s *genital arousal* to a target, the key distinction may be “female versus male” instead of “preferred versus nonpreferred.”

This yields a different research agenda for the future: Instead of (or in addition to) pondering the unique category nonspecificity of androphilic women, we should be asking *why* female sexual stimuli reliably elicit genital arousal in everyone except for androphilic men. Most of the 10 hypotheses laid out (and expertly evaluated) by Chivers revolve around the “preferred/nonpreferred” distinction, but there are two hypotheses which—in combination with one another—may be able to explain why *female* sexual stimuli reliably provoke genital arousal in all groups except for androphilic men. These are Hypothesis 3, the

Sexual Objectification Hypothesis, and Hypothesis 10, the Non-sexual Motivation to Attend to Sexual Stimuli Hypothesis.

Rethinking the Sexual Objectification Hypothesis

As Chivers summarizes, the Sexual Objectification Hypothesis argues that because women’s bodies are broadly eroticized in popular culture and media, androphilic women may gradually come to objectify and sexualize women due to repeated exposure to these images, developing a pattern of (potentially non-conscious) sexual response to female sexual stimuli despite the fact that they do not find such stimuli intrinsically rewarding. The mechanism underlying this process is the one outlined in Hypothesis 10, in which *heightened attention* to female sexual stimuli, even when such attention is guided by nonsexual factors such as intrasexual competition, can trigger a sequence of automatic cognitive processes that produce genital arousal. Chivers finds the empirical evidence for the objectification hypothesis to be unconvincing, but the handful of studies that she cites do not really provide an adequate test. To be fair, it might be impossible to reliably test the objectification hypothesis without cross-cultural research, given that the core phenomenon—pervasive lifelong exposure to sexualized visual images of women—is relatively uniform among contemporary Western women. The experimental studies reviewed by Chivers focused on the “stance” that women adopt when viewing sexual stimuli (participant versus observer), but this is really a different issue. Participant versus observer stance is irrelevant if exposure to *any* sexualized visual image of women is capable of triggering the processes outlined in Hypothesis 10 and resulting in genital arousal.

The other piece of information that is important for evaluating the objectification hypothesis—and which may have deserved more attention in Chivers’ review—concerns the mind-numbing *scope* of exposure to sexual images of women’s bodies in the contemporary West, and the fact that young children are awash in these images during *every phase* of their sexual development. As reviewed in a comprehensive APA Task Force Report on the Sexualization of Girls (2007), children and adolescents view at least 6 h of visual media each day, and *all* of these sources present

more sexually explicit images of female than male bodies. To provide just a few examples outlined in the report, female nudity is four times more likely in mainstream movies than male nudity, and television ads show provocatively dressed women three times more often than provocatively dressed men. Furthermore, depictions of nude and partially nude women have been steadily increasing over the past several decades and are now pervasive even within video games and action figures. Hence, from a child's *very earliest* exposure to visual images of men and women, the images of women are more likely to trigger sexual interest and arousal, simply because sexually explicit images of women are encountered more frequently than explicit images of men. When we consider that this disparity is encountered again and again, thousands of times over the entire course of childhood, adolescence, and adulthood, it should come as no surprise that androphilic women may develop patterns of conditioned genital arousal to female sexual stimuli, regardless of their conscious preference for men.

Yet why, then, do androphilic (gay) *men* fail to show genital arousal to female sexual stimuli? If exposure to female sexual stimuli is culturally pervasive, shouldn't androphilic men develop the same nonconscious genital responses to female stimuli that are observed in androphilic women? The key difference here may concern *attentional intensity*. As outlined in Hypothesis 10, the opportunity for women to develop genital arousal when exposed to female sexual stimuli should be heightened when women direct *focused attention* to other women and their bodies (potentially because of intrasexual competition). The average girl growing up in Western culture is directly encouraged by peers and by the media to attend carefully to other women's bodies and analyze their sexual desirability, in order to evaluate (and potentially learn to amplify) their own desirability. The same is not true for androphilic men. Androphilic men are just as likely as other individuals to encounter female sexual stimuli during childhood and adolescence, yet because of their androphilic preference, they are not likely to find such stimuli intrinsically rewarding. Because of that fact, and because they have no cultural pressure to carefully scrutinize the sexual attractiveness of female bodies, they may be less likely to devote the sort of sustained attention to female sexual stimuli that is necessary to develop a reliable, automatic genital response. Finally, it bears noting that the only experimental context in which androphilic women *fail* to show genital arousal to female sexual stimuli is one in which the sexual stimuli are photographs of exposed female vulvas (rather than images of complete female bodies engaged in sexual activity). I would argue that androphilic women's lack of genital arousal to exposed vulvas can be explained by the fact that women have very few opportunities during childhood and adolescence to see and to become aroused by such images. Practically all of the sexualized images of women that are available in television, movies, and magazines focus on exposed breasts and buttocks and do not provide close-up shots of open vulvas. Hence, if androphilic women's genital arousal to female sexual

stimuli represents a conditioned response to sexual images that they have encountered in mainstream culture repeatedly from childhood to adulthood, it should not be surprising that the only female sexual stimulus that *fails* to elicit genital arousal in androphilic women is the one that almost *never* appears in mainstream culture: an exposed and open vulva.

Where Should We Go From Here?

To be clear, I am *not* suggesting that the phenomenon of non-specific genital arousal in androphilic women is an artifact of our society's saturation with sexualized female imagery. Rather, I think that our attempts to understand category nonspecificity in androphilic women must pay greater attention to the way in which this cultural saturation changes the meaning of "category-nonspecific" for different gender and sexual orientation groups. Androphilic women have been encountering sexually explicit images of their "nonpreferred" gender (women) over and over throughout their lifetimes, whereas gynephilic men are unlikely to have the same longstanding cultural exposure to sexually explicit images of *their* nonpreferred gender (men). We must take these differences in exposure into account when interpreting patterns of category-specific and nonspecific arousal. Although it may be convenient from an experimental perspective to neatly divide sexual stimuli into "preferred" and "nonpreferred" categories, this ignores the messy reality of individuals' own lifelong histories of exposure to certain types of images.

This, of course, circles back to one of the most important questions raised by Chivers' review, and by her own body of research: Just what are the features that make a stimulus "sexual competent," or capable of eliciting a genital response? As her review conclusively demonstrates, "gender preference" is not always the most important factor. For some, the sexual acts depicted in the stimulus are more important than the genders involved (Chivers, Roy, Grimbos, Cantor, & Seto, 2014; Chivers, Seto, & Blanchard, 2007). For others, firsthand experience with these acts may matter. For yet another group of individuals, the ages of the participants may prove determinative (Seto, 2017). I would argue that we have neglected to give sufficient attention to *previous exposure*—from childhood to adulthood—to sexualized images of females versus males.

These questions become even more important when we consider the incredible spectrum of gender presentation now available in contemporary culture, and the fact that some "female sexual stimuli" are actually better described as "female appearing" or "female presenting" stimuli. If one views a sexualized image of a transwoman who presents as female, but possesses (unobserved) male external genitalia, it makes sense to consider this a "female" sexual stimuli, but it raises the question of which specific gender cues (Face? Breasts? Voice? Body shape?) are "necessary" or "sufficient" to code a stimulus as female versus male. To parse these factors, sexuality researchers

need to devote more attention to gender as a *social–developmental achievement*. By the time that adult men and women sit down to participate in a sexuality study, they differ from one another in many more ways than just their biological sex, due to their unique social and developmental histories. The average woman raised in the contemporary West is likely to have spent at least a decade carefully evaluating erotic images of women’s bodies—at the grocery store checkout line, watching mainstream T.V. and movies, and even watching news footage related to presidential debates. There is simply no way that we can continue ignoring this fact when we try to understand her genital response to female sexual stimuli during experimental studies. We clearly need to devote more substantial attention to the *interaction* between the “preferred” status of a target and the degree of its cultural availability and eroticization.

In terms of setting a research agenda for the future, we may want to devote greater attention to investigating category specificity and nonspecificity in populations with vastly different degrees of exposure to sexualized images of female and male bodies. Although this may seem impossible on a logistical level, it is worth remembering that members of strict religious groups, as well as members of certain isolated social groups, often grow up with much lower degrees of exposure to mainstream sexualized imagery than the average Western young adult (and certainly less than the average participant in sexuality research, given that such participants tend to have more liberal and open-minded approaches to sexuality in general). Of course, such individuals may have significant reservations about participating in studies of sexual response, but that is not reason enough to continue excluding them. We may need to work harder to find such participants and to convince them of the scientific value of their participation, but this effort would be worth it. The issue of representativeness in sexuality research has long dogged us and, in a topic such as this one, it is a deal breaker. If we want to draw reliable conclusions about some of the most unique and startling aspects of sexual response in androphilic women, we need to do a better job in assessing *all* androphilic women, and not just the ones who are most willing to participate in invasive and potentially embarrassing experimental studies [for these reasons, methodologies which do not rely on genital measurement, such as viewing time and pupil dilation, may prove helpful (e.g., Rieger & Savin-Williams, 2012; Wallen & Rupp, 2010)]. To be clear, I am just as guilty of this shortcoming as every other sexuality researcher: Yet after nearly two decades living in Utah, one of the most politically and religiously conservative states in the U.S., I have become painfully aware of the enormous number of women whose experiences I have failed to adequately represent in my research. I still have not figured out how to convince such women that participation in sexuality studies is important enough to outweigh their personal reservations, but I believe that as a community, sexuality researchers need to stop tacitly accepting the non-representativeness of our samples. We will never be able to understand a phenomenon as complex as

category nonspecificity if we cannot assess it with truly representative, cross-cultural samples.

Another critical “take-home” message from Chivers’ research is the importance of conducting greater research on men. As I have argued above, it is not yet clear whether androphilic women represent the “odd” group (because they are more nonspecific in their genital arousal than all other groups) or whether androphilic men represent the “odd” group (because they are the only group failing to show arousal to female sexual stimuli). Female sexuality was once thought to be more fluid and plastic than men’s (Baumeister, 2000, Diamond, 2008), but recent research has begun to challenge this view (Diamond, Dickenson, & Blair, 2017). For example, the population of men with bisexual patterns of attraction, with patterns of behavior that diverge from their self-reported attractions, and/or changes in attractions over time, is far larger than previously thought (Diamond, 2016). Given that same-sex sexuality in men has historically been more stigmatized than same-sex sexuality in women, *and* that male bisexuality has historically faced more skepticism (from both the LGBT and heterosexual communities) than female bisexuality, it is possible that we are entering an utterly new era with regard to androphilic, ambiphilic, and gynephilic men’s opportunities to experience and express “non-preferred” patterns of arousal. Notably, some cultural commentators have noted that the increasing availability of sexualized images of male bodies has created new psychological challenges for young men (Prud’homme, 2015), and this increased exposure likely creates opportunities for both girls and boys to develop conditioned associations with sexualized *male* stimuli in the same way that has historically been seen with female stimuli. If cultural exposure to such images is responsible for the phenomenon of “nonspecific” arousal in women, then we should observe a progressive increase in “nonspecific” arousal among gynephilic men over the coming years (a possibility that may help to explain the growing phenomenon of avowedly straight Western men reporting periodic same-sex arousal or behavior, as described in Savin-Williams, Rieger, & Rosenthal, 2013; Savin-Williams & Vrangalova, 2013; Ward, 2015).

I want to close by addressing some of the most important *but taboo* aspects of this topic. To be sure, research on category-nonspecific sexual arousal is some of the most “dangerous” sexuality research currently being conducted. Almost everything about this line of research challenges the social order, and instead of shying away from this fact, we should address it directly and even embrace it. Society has long wanted to believe that individuals can be neatly categorized into gay and straight categories (largely, I suspect, so that they can feel secure in their own heterosexual privilege), and this has been shown to be wrong. Even if your neighbor has never consciously wanted a same-sex relationship, he or she may possess a basic capacity for same-sex arousal, and he/she may find this knowledge deeply threatening. Perhaps even more troubling, if we conclude that pervasive life-long exposure to certain types of sexualized images can appreciably *expand* one’s capacity for genital arousal to “nonpreferred”

genders and acts, then this raises uncomfortable questions about the responsibility and capacity of parents, governments, filmmakers, and television networks to monitor and tailor the images they present to the public in order to avoid “shaping” the sexuality of their viewers. For thousands of years, patriarchal societies have disseminated a greater number of sexualized images of women than men, presumably for the pleasure and enjoyment of gynephilic men. If we conclude that such images can provoke—and sustain—sexual arousal in *women* as well as men, then the patriarchy may need to consider whether this is a price it is willing to pay for male pleasure. Will male television executives decide to restrict sexualized images of women for fear that their own wives and daughters will be “made” a little bit queer, even if these restrictions reduce the popularity of their programs with male viewers? Who knows. We are clearly in a moment of greater cultural awareness of these issues, and it is possible that the entire body of studies reviewed by Chivers may need to be replicated in another 10 years in order for us to fully grasp the nature of this phenomenon and its particular “nature/culture” alchemy. Right now, infants are being born who will have opportunities for sexual exploration and arousal—on their phones, on their televisions, on their computer screens, through their webcams—that confound our expectations and that involve a broader spectrum of gender presentations than we can imagine. We will have to take the experiences of this emerging population into account if we are to truly understand the phenomenon of nonspecificity in sexual arousal and the degree to which it exists independently of—or embedded within—our dramatically changing social context.

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