Subscribe

SHARE LATEST

Sign up for our free newsletters. Sign Up

Bering in Mind

Homophobia Phobia: Bad Science or Bad Science Comprehension?

By Jesse Bering on March 22, 2011

Two columns ago, I discussed evolutionary psychologist Gordon Gallup's theory about the possible adaptive function of homophobia, or, more broadly defined, negative attitudes toward gay people. Central to his position—which, he assures me, has not since wavered—is that homophobic responses "are proportional to the extent to which the homosexual [is] in a position that might provide extended contact with children and/or would allow the person to influence a child's emerging sexuality." I also described a set of studies meant to test some hypotheses related to this theory, and which, according to Gallup, offered provisional evidentiary support.

I expressed some unease with the implications (and insinuations) of Gallup's line of argument. But I was also rather unabashed in my conviction that his theory, though impolitic, was not only plausible, but also insightful and worth revisiting, particularly now, when homophobia may be too hastily, and simplistically, characterized as

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology.

See Subscription Options

Already a subscriber? **Sign in.**

homophobia may be adaptive, and furthermore that it is adaptive because children exposed to homosexuals may themselves develop same-sex attractions, is a delicate affair, to say the least. It is tempting to see Gallup's position, as many indeed have, as a homophobia apologetic disguised as science, one that was specific to a particular time and place. A 2006 piece by [illegible] Clark, for example, accused Gallup of "suggest[ing] that negative attitudes and discrimination directed toward homosexuals are justified on evolutionary grounds." Jeremy Yoder, a PhD student studying evolutionary biology, concludes similarly that Gallup's unwarranted argument "gives natural selection approval to prevailing ugly stereotypes."

I did give fair warning in my original post, I should say, that Gallup's theory was sure to provoke just these types of defensive, emotion-addled responses, that it was "likely to boil untold liters of blood and prompt mountains of angry fists to clench in revolt." And this it did, such as in the above cases. PZ Myers, by contrast, was disappointed that Gallup's work didn't deliver the much-anticipated "throb of adrenaline" that I'd promised him. I can try to deliver for Myers this time, but I did add the caveat, did I not, that "it's the best—the kindest—of you out there likely to get the most upset."

After swiftly dismissing the expected lunatic fringe (any non-sarcastic mention of Sodom and Gomorrah would qualify as such), there was still a coterie of unhappy responders to my post, the vast majority from a corner that readers might not expect to be so opposed to Gallup's arguments—evolutionary biology. Between the disciplines, it's no secret that many evolutionary biologists have a "problem" with evolutionary psychology, holding its practitioners in *almost* the same regard as creationists. "Ugh," wrote one Pharyngula commentator, "[e]volutionary psychologists make the rest of us look bad. I have to smile and make nice when we pass in the faculty lounge. It brings me great pain." What Christ-like behavior indeed.

Sign up for *Scientific American*'s free newsletters. Sign Up

To get at the heart of their problems with Gallup's theory, and to try to better understand this animosity over evolutionary psychology and why it's so often hailed as the country cousin of their own discipline, Gordon Gallup has agreed—rather nice of him, given the tone—to respond to these biologists' concerns.

You have 3 free articles left.

BERING: Let's address the elephant in the room. It's embarrassing for me to even ask this of you, since the answer is so obviously "no" to me. Is your theory a justification of your own homophobia?

Support our award-winning coverage of advances in science & technology.

See Subscription Options

Already a subscriber? **Sign in.**

GALLUP: A lot of people think eory it's a window unto their soul. I have lots of theories. (See CV (pdf).) I have a theory of homophobia, I have a theory of homosexuality, and I have a theory of permanent breast enlargement in women, just to mention a few. So that would make me a homophobic, homosexual who is preoccupied with women's breasts. I am not homophobic and I'm not homosexual. My only interest in homosexuality and homophobia is to use evolutionary theory to generate evidence that may shed new light on what have heretofore been poorly understood phenomena.

BERING: Evolutionary biologists, but also non-specialists, casually deride evolutionary psychology as generating "just-so stories." Jon Wilkins, for example, of the Santa Fe Institute, reminds us that, "plausibility is NOT scientific proof." Likewise, Yoder layers his critique of your work with references to Brother Grimm fairy tales. Larry Moran of the University of Toronto, writes, "Why is it that respected evolutionary psychologists think these just-so stories are an important part of their discipline?"

How has this just-so-story rhetoric affected your research, and what, in your view, are the implications of this type of Gouldian-era language for the discipline as a whole?

GALLUP: Just as the title of my 1996 reply to John Archer implies, everything in science boils down to a matter of evidence. I have never taken the position that plausibility is a substitute for evidence. My 1995 paper along with my reply to Archer is based almost entirely on evidence. It is interesting how my critics tip-toe around the fact that my approach is based on a testable hypothesis, and how they go out of their way to side-step the fact that the data we've collected are consistent with the predictions. Whether it is politically incorrect or contrary to prevailing social dogma, is irrelevant. In science, knowing is preferable to not knowing. Minds are like parachutes, they only function when they're open. If I were a homosexual, I'd want to know about these data.

While we're on the topic of "just-so stories," one of the comments on the SciAm blog

You have 3 free articles left.

concern about child sexual abuse. But if that were the case, then why in the third study did the level of concern about a child staying overnight at a friend's house in the presence of the friend's homosexual parent flip flop as a function of whether there was a match between the sex of the child and the sex of the homosexual parent? Homosexuals don't hav sexual abuse. Heterosexual matches also pose a risk of child sexual abuse!

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

BERING: One common complaint lodged against evolutionary psychology is that its methods, which typically do not track the claimed fitness benefit, are inadequate for testing its hypotheses. PZ Myers, in surveying your homophobia studies, writes:

> *They know nothing about heritability, they've shown nothing about differential survival or fecundity ... Is this to be the fate of evolutionary psychology, that it shrivels away into irrelevancy as its proponents overhype (sic) feeble, pathetic data sets?*

Myers is, of course, notorious for such over-the-top statements—like the Jim Bakker of New Atheists, a caricature of sweat, histrionics and stage glitter, he sees religious conspiracies as often as evangelicals see the Devil. But Yoder also complains that your work fails to "mention evidence of heritability or a fitness benefit to homophobia." (Rob Kurzban explains, importantly, how Yoder bungles the term *heritability* in reference to evolved adaptations: "If Yoder is right [about the definition of heritability], someone needs to update Wikipedia. And all the biology textbooks.")

So how do you respond to these concerns that evolutionary psychology, with its focus on modern behaviors and decision-making, ignores genetics?

GALLUP: Assertions that evolutionary psychologists know nothing about heritability and fail to relate their findings to survival and fecundity are naïve and unfounded. As detailed in a series of recent reviews, people with faces judged to be more attractive are more fertile. Men with attractive faces have higher quality sperm, men and

You have 3 free articles left.

systems. A recent study based on over 10,000 people shows that those with attractive faces do in fact have more children. Both men and women with fewer deviations from bilateral symmetry (low fluctuating asymmetry) are mentally, physically, and genetically healthier, and more fertile. Guess what? They also have more attractive faces.

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

We've shown that a person's voice is also related to fitness. Just as people with more attractive faces are more symmetrical, the same is true for people with more attractive voices. The sound of a person's voice conveys information about their gender, age, body configuration, hormonal status, when they lost their virginity, how many sex partners they've had, their propensity for infidelity, whether they are on birth control pills, and whether they are in the fertile phase of their menstrual cycle.

There are many other well-documented proxies for fitness. Evolutionary psychologists have found that women with hourglass figures (low waist-to-hip ratios) are rated as more attractive, and it's been shown that these women are healthier and more fertile. They also have more attractive voices.

Grip strength (pdf) is another compelling case in point. Individual differences in grip strength predict recovery from surgery, morbidity, joint impairment, bone density, fat-free body mass, muscle mass, disability and morbidity, protein loss, and even the risk of dementia. Grip strength is not only heritable, but men with high grip strength scores also have more attractive faces and, would you believe, more attractive voices.

While we're on the subject, heritability and heritable are not always the same. Rather than being an index of whether a trait is inherited, heritability is a measure of the proportion of individual differences in the expression of a trait that are due to underlying differences in genes. With the exception of a pair of identical twins, heritability is always greater than zero. No one has ever done a selective breeding experiment and failed to find an effect, and that includes behavioral traits.

Now, what about homosexuality? For most of human evolutionary history, exclusive homosexuality would have been tantamount to a ticket to reproductive oblivion. Even today, adult male homosexuals who also engage in heterosexual intercourse are the exception rather than the rule. If homosexuality were only heritable, it would have disappeared long ago. In the context of our discussion of homophobia, what would

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology.

See Subscription Options

Already a subscriber? **Sign in.**

out of their way to encourage and engineer homosexual lifestyles among their children? Enough said? Not quite. What causes homosexuality? Heterosexuality does, both literally and figuratively. Unless you've been conceived through artificial means, everyone, regardless of their sexual orientation, owes their very existence to the heterosexual activity of their pa

BERING: The most controversial aspect of your theory is that gay adults can influence a child's developing sexuality, increasing their adult arousability to same-sex partners. Homosexual offspring, you argue, would normally be detrimental to overall genetic fitness; even bisexual offspring would be so, all else being equal.

Some animal models demonstrate how specific developmental experiences are linked to adult sexuality (for example, rat pups that nurse from dams whose teats are sprayed with a citral scent have difficulty ejaculating as adults during intercourse with any female that isn't similarly lemony smelling), but much less is known about the precise role of early childhood experiences in shaping adult sexuality. We do, however, know that there is not a straightforward genetic pathway, as evidenced by the fact that, in some cases, only one member of an identical twin set is homosexual. Can you expound on this issue of "sexual imprinting"?

GALLUP: In contrast to women, men have what amounts to a monopoly on paraphilias and kinky sex. This is consistent with the idea that there may be a critical period following the onset of puberty that leads to sexual imprinting in males. This can be used to generate a number of testable predictions. Sexual experiences that occur before or after the critical period ought to have little or no lasting effect on sexual orientation. With parental homophobia, evolution doesn't always result in perfect outcomes. As evidenced by the 1995 data from the third study, parents show a generalized concern for young children that are perceived to be impressionable.

According to an imprinting model, prepubertal boys who are sexually molested by older males should be relatively unaffected in terms of their sexual orientation. I would also predict that heterosexual men sent to prison and coerced into same-sex relationships with other inmates, ought to resume heterosexual lifestyles on being released. There are data that show that being sent to all male boarding schools increases the incidence of homosexuality; I would predict that this effect would be conditional upon whether they were in such schools when they went through puberty. As detailed in my 1996 reply to Archer, we've collected data from male homosexuals

You have 3 free articles left.

orientation until they have their first same-sex postpubertal sexual experience. I would also expect other "sex object choices," such as fetishes, to be tied to sexual experiences males have in association with sex shortly after the onset of puberty.

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

BERING: You claim, citing seve homosexual men are more likely to have sexual relations with children and adolescents than are heterosexual men. In an email exchange with Ray Blanchard, perhaps the world's leading scholar on the study of "erotic age orientation," he confirmed that a major analysis of penile responses indeed shows that, "homosexual pedophiles constitute a disproportionate number of pedophiles." But he also adds an important caveat, which is that most homosexual males are teleiophiles—attracted to adults—and they are no more attracted to children than are heterosexual teleiophiles.

Hence the confusing language in popular summaries of this analysis, such as Alice Dreger's, "Do gay men have more sexual interest in children than straight men do? No. And we have lab studies to prove it." That's correct. However, it's important to understand that she and Blanchard use "gay men" to refer to homosexual teleiophiles only, excluding from this category those attracted to prepubescent or pubescent boys. Blanchard clarified for me: "Neither of us uses 'gay' as a synonym for 'homosexual.' We use 'gay' as a synonym for 'homosexual teleiophile.' He's also non-committal about your theory but leans toward skepticism, largely because of the following:

> *Homosexual pedophiles are rarely detectably effeminate; in contrast, homosexual teleiophiles often are. Homosexual pedophiles become soccer coaches; drag queens generally do not. The degree of separation might not be perfect, but it could be good enough for natural selection, which doesn't have to get it right every single time. Therefore separating children from the most visible homosexual men, which is probably what happens, would have no adaptive value whatsoever.*

How do you reconcile these observations with your theory?

GALLUP: The evidence reviewed in my 1996 response to John Archer shows that the

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

postpubertal age—is far higher than Blanchard suggests. There is also evidence that shows that the propensity to have sex with minors is positively correlated with promiscuity among homosexual males. Unlike heterosexual pedophiles, homosexuals who have sex with minors target young postpubertal victims. Although they rarely admit it, heterosexual males ex to photos of young postpubescent females as well. Homosexuals are merely expressing a generalized evolved male strategy that puts a premium on youth. Unlike a man, a woman's capacity to reproduce following puberty is inversely proportional to her age.

BERING: Finally, if you were to conduct a follow-up study today, what, if anything, would you do differently? What questions remain unanswered in your mind, and how do they relate to the ostensibly positive shifts in attitudes regarding gays and lesbians since your original theory formation?

GALLUP: With the help of a transfer student from Taiwan, the surveys used in my 1995 paper were translated into Chinese. When this student returned to Taiwan several years later, she was able to replicate all of the effects I reported in a sample of native Taiwanese college students. While this doesn't prove the results are a cross-cultural universal, it certainly implies that they aren't an artifact of Western culture.

Several years ago, following a talk I gave on homophobia, a colleague who was there sent me the following anecdote which shows how the results of our research on hypothetical parenting questions have real world implications, and suggests how these evolved mechanisms operate below the radar:

> *My husband has a former student who is gay. He and my husband still collaborate and the student comes here to work on papers once or twice a year and he stays at our place. The three of us have spent quite a bit of time talking about the student's life–he has a steady partner, and both of them continue to 'cruise'–and my husband's never seemed at all bothered by it. The first time the student came to stay after our son was born my husband was incredibly aggressive with him–verbally and physically. At one point, my husband was outdoors and the student, my son and I*

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

> *went outdoors to let him know. He immediately got on my case for leaving the baby "alone." That night, I talked to my husband about your ideas about parent's attitudes towards homosexuals and he was pretty shocked. He said he had felt very uncomfortable with [illegible] and didn't understand it, because he had never been upset before. My husband has two daughters and he said it never bothered him when the student was around them and that the student had babysat for them on any number of occasions. Clearly, he feels quite differently about it now, although rationally he's not worried about the student.*

Before anyone accepts the unfounded assertions that my work is an attempt to somehow demean and diminish homosexuality and promote homophobia, they should read my 1995 paper. If you do, you will learn that the theory also predicts that even homosexuals ought to be homophobic under certain circumstances.

Contrary to the claim that most evolutionary psychologists make evolutionary biologists look bad, it's my critics who haven't bothered to read the literature and should know better, that make themselves look bad.

***

Bering here, to address an important issue in closing. Yoder, along with Forbes' blogger Will Wilkinson and Scienceblogs' Mike the Mad Biologist found fault with my decision to popularize Gallup's obscure, dated research: "Why on Earth would Bering dredge up Gallup's adaptive fairytale a decade and a half after it was published, if it was baseless to begin with?" [Is there some secret induction ceremony I should be aware of in which biologist yearlings must swear an oath to their stodgy supervisor to endlessly echo this generic just-so-story mantra?]

My answer is two-fold: First, simply because it is not baseless. I don't agree with Gallup on all of the details (for example, he gives too short shrift, I think, to heritable individual differences in the potential for sexual imprinting and homosexuality). As I emphasized in my original post, Gallup's 1995 study is imperfect, as all early-stage research endeavors are, and indeed his findings are not without alternative

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology
See Subscription Options
Already a subscriber? **Sign in.**

Wilkinson, Wilkins, or Morgan—actually engages with Gallup's specific findings, but instead simply brush off the data as "bad science" or "ridiculous"). But Gallup's findings are the only data available, and they do indeed, as he says, support his hypotheses. Never did I—and never, ever, anywhere, do I—use the word "prove." Psychological science is cumula ophobia constitutes an adaptation remains an open question. (Hence the question mark after my title, "Natural Homophobes?"—re-billed as the sensationalized "Darwin Hates Fags").

Second, perhaps Yoder, a gay man like me, I gather, lives in a happily cloistered, academic, professional world with kind intellectual friends and colleagues whose stomachs no longer turn—or do they?—when happening upon two men or two women cuddling and kissing; perhaps this privileged social ambience has created in him the impression that homophobia is "obviously" a socially-learned, cultural bias, since it has indeed gotten better even over the short course of our own lives.

But, and I'll stand by this claim, with the possible exception of artificially populated communities such as certain neighborhoods in San Francisco, there is not a single human society on this planet—and there probably never has been, even in ancient Greece, even among the Sambia of New Guinea—where two men can share a romantic kiss and embrace, *especially* in the presence of children, without meeting palpable disapproval. If you doubt this, go out on Main Street and try it; notice how many parents quickly shuffle their children away or, among gay-friendlier parents, watch how their faces are frozen with indecision about how to handle this scene so that it complements their humanitarian views. (I couldn't persuade my partner, Juan, to conduct this experiment with me, so, intrepid gay souls, please do report back.) And if it's all social learning, it's curious, is it not, that children all over the globe must be explicitly taught *not to be* homophobic, not the other way around; antigay attitudes in sixth-grade boys seem as naturally emerging as language acquisition in infants. Exceptions are rare; so rare, in fact, that they make national headlines.

I, for one, would like to know why this aversion to gay people is, always has been, and always may be, so endemic to our species. Evolved social biases—in whatever form they take—can only wither away the more by shining a mercilessly bright light of science on them. If this reveals unsavory blemishes, such as the stereotype that gay men are pedophiles, so be it. Some are—and as Blanchard's data reveal, homosexual males are in fact overrepresented in this category. Most aren't. As I've said before, data don't cringe; people do. The fear among gay men of being branded as pedophiles

You have 3 free articles left.

self-serving nod of approval for us to dehumanize other social undesirables. "Well, I'm gay, but at least I'm not one of *them*." But of course not all such individuals are child molesters. I'm very much of the same mind as Blanchard about this, when he writes that, "they cannot be blamed for what they feel and they should be supported for the constant self-restraint they must exercise in order to behave ethically."

Support our award-winning coverage of advances in science & technology.

See Subscription Options

Already a subscriber? **Sign in.**

So, I'll continue to dredge up any old theory, no matter how meager the supporting data, that—with revised methodologies and growing conceptual nuance—can inspire other researchers to better understand why human beings who, through absolutely no fault of their own, aside from the fact that their genitals happen to leaven or lubricate in statistically atypical fashion at the sight of a penis or vagina, are all over the world, right now, being beaten, derided, driven to suicide and murdered.

About The Author: Want more Bering in Mind? Follow Jesse on Twitter @JesseBering, visit www.jessebering.com, or friend Jesse on Facebook. Jesse is the author of newly released book, The Belief Instinct: The Psychology of Souls, Destiny and the Meaning of Life (W. W. Norton).

The views expressed are those of the author(s) and are not necessarily those of Scientific American.

ABOUT THE AUTHOR(S)

Jesse Bering

Jesse Bering is Associate Professor of Science Communication at the University of Otago in New Zealand. He is the author of The Belief Instinct (2011), Why Is the Penis Shaped Like That? (2012) and Perv (2013). To learn more about Jesse's work, visit www.jessebering.com or add him on Facebook (https://www.facebook.com/jesse.bering).

Recent Articles

"I Am a Lonely Soul": Does Culture Determine How People Commit Suicide?

Sex and Suicide: Why Do More Men than Women Kill Themselves?

One Last Goodbye: The Strange Case of Terminal Lucidity

You have 3 free articles left.

READ THIS NEXT

Support our award-winning coverage of advances in science & technology.

See Subscription Options

Already a subscriber? **Sign in.**

PHYSICS

Science News Briefs from Arou

10 hours ago — Sarah Lewin Frasier

EARTH

Seismologists Find the World Quieted Down During Pandemic Lockdowns

July 25, 2020 — Christopher Intagliata

POLICY & ETHICS

Joining Pro-Business Groups Can Make Tech Firms Seem to Be Antiscience

July 25, 2020 — Naomi Oreskes

PUBLIC HEALTH

World War II's Warsaw Ghetto Holds Lifesaving Lessons for COVID-19

July 24, 2020 — Gary Stix

PUBLIC HEALTH

Coronavirus News Roundup: July 18-July 24

July 24, 2020 — Robin Lloyd | Opinion

EVOLUTION

World's Smallest Dinosaur is Probably a Lizard

July 24, 2020 — Giuliana Viglione and Nature magazine

NEWSLETTER

Get smart. Sign up for our email newsletter.

Sign Up

You have 3 free articles left.

Support our award-winning coverage of advances in science & technology.
See Subscription Options
Already a subscriber? **Sign in.**

PREVIOUS

Signs, signs, everywhere signs: Seeing God in tsunamis and

By Jesse Bering on March 13, 2011

NEXT

"In God We Trust" (At least until the government gets its act together)

By Jesse Bering on April 8, 2011

Support Science Journalism

Subscribe Now!

FOLLOW US

SCIENTIFIC AMERICAN ARABIC

العربية

You have 3 free articles left.

Return & Refund Policy FAQs

Support our award-winning coverage of advances in science & technology.

About Contact Us

Press Room Site Map

See Subscription Options

Advertise Privacy Policy

Already a subscriber? **Sign in.**

SA Custom Media California Consumer Privacy Statement

Terms of Use Use of cookies/Do not sell my data

International Editions

Scientific American is part of Springer Nature, which owns or has commercial relations with thousands of scientific publications (many of them can be found at www.springernature.com/us). Scientific American maintains a strict policy of editorial independence in reporting developments in science to our readers.

© 2020 SCIENTIFIC AMERICAN, A DIVISION OF NATURE AMERICA, INC.

ALL RIGHTS RESERVED.

You have 3 free articles left.