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Dario Maestripieri Ph.D.  
Games Primates Play

# Gender Differences in Personality Are Larger than Previously Thought

New study confirms that men's minds come from Mars and women's from Venus.

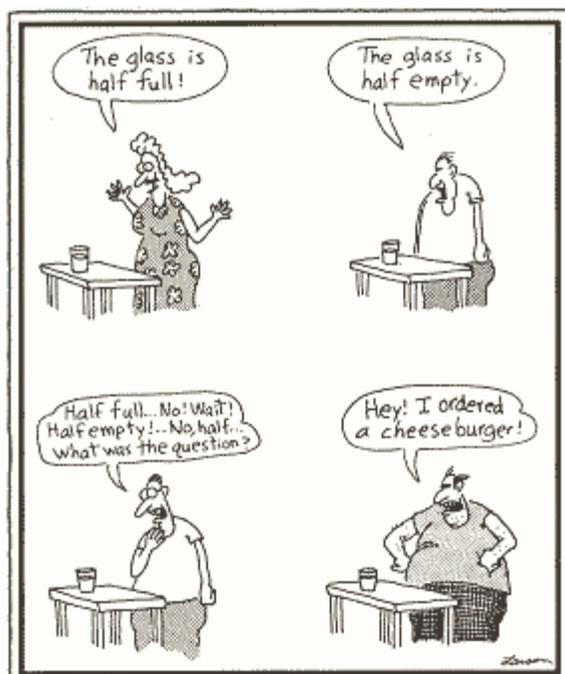
Posted Jan 14, 2012

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The four basic personality types

A new study confirms that men's minds come from Mars and women's from Venus. In an article recently published in the online journal PLoS ONE, Italian cognitive psychologist Marco Del Giudice and his collaborators compared the personality traits of men and women in a sample of over 10,000 people and found huge differences. Women scored much higher than in men in Sensitivity, Warmth, and Apprehension, while men scored higher than women in Emotional Stability, Dominance, Rule-Consciousness, and Vigilance. When many personality traits were considered simultaneously, there was only a 10% overlap between the distributions of these traits in men and women. Essentially, the study suggests that when it comes to personality men and women belong to two different species. Although many of us have long known - on the basis of personal experience - that women are generally more sensitive than men, and men are slightly more emotionally stable than women, previous studies comparing personality traits in men and women found few or no quantitative differences. Del Giudice and his collaborators argue that these previous studies didn't use an appropriate methodology. Their argument is that measuring personality at the level of the Big Five - the way it was done before - can potentially hide some important differences between the sexes because this approach lacks resolution. They suggest, instead, that in order to get the most accurate picture of sex differences, researchers need to (a) measure personality with a higher resolution than that afforded by the Big Five, (b) estimate sex differences on latent factors rather than observed scores; and (c) assess global differences between males and females by computing a multivariate effect size. And this

is exactly what they did in the study reported in the PLoS ONE article.

The personality data for this study were obtained from an existing database, in which 10,261 adults of US nationality were interviewed in 1993 to validate a particular personality questionnaire (16PF). The people in the sample were 50.1% female and 49.9% male. The sample was primarily white (77.9%), was proportionally geographically distributed, and on average, the educational level and years in education of the sample was greater than that of the US population. Personality was assessed with 15 primary scales, corresponding to the following traits: Warmth (reserved vs. warm), Emotional Stability (reactive vs. emotionally stable), Dominance (deferential vs. dominant), Liveliness (serious vs. lively), Rule-Consciousness (expedient vs. rule-conscious), Social Boldness (shy vs. socially bold), Sensitivity (utilitarian vs. sensitive), Vigilance (trusting vs. vigilant), Abstractness (grounded vs. abstracted), Privatness (forthright vs. private), Apprehension (self-assured vs. apprehensive), Openness to Change (traditional vs. open to change), Self-Reliance (group-oriented vs. self-reliant), Perfectionism (tolerates disorder vs. perfectionistic), and Tension (relaxed vs. tense). These 15 primary scales were further organized into the following 5 global scales: Extraversion (Warmth, Liveliness, Social Boldness, Privatness, and Self-Reliance), Anxiety (Emotional Stability, Vigilance, Apprehension, and Tension), Tough-Mindedness (Warmth, Sensitivity, Abstractedness, and Openness to Change), Independence (Dominance, Social Boldness, Vigilance, and Openness to Change) and Self-Control (Liveliness, Rule-Consciousness, and Perfectionism).

Del Giudice and collaborators used a statistical technique called multigroup latent variable modeling to estimate sex differences on individual personality dimensions, which were then aggregated to yield a multivariate effect size (Mahalanobis D). They found a global effect size  $D = 2.71$ , corresponding to an overlap of only 10% between the male and female distributions. This is an extremely large effect by any psychological standard, which suggests that the sex differences in personality are of the same magnitude as the sex differences in aggression or vocational interests.

From an evolutionary perspective, large differences in personality between the sexes make perfect sense. Divergent sexual selection pressures on men and women are expected to produce substantial differences in personality traits that influence mating and reproductive strategies. For example, sexual promiscuity is predicted by extraversion, openness to experience, neuroticism (especially in women), positive schizotypy, and the "dark triad" traits (i.e., narcissism, psychopathy, and Machiavellianism). Negative predictors of promiscuity and short-term mating include agreeableness, conscientiousness, honesty, and autistic-like traits. Relationship instability is associated with extraversion, neuroticism, low agreeableness, and low conscientiousness. In addition to their direct influences on predispositions for sexual promiscuity and relationship instability or sexual monogamy and parental investment, personality traits may also influence competitive tendencies such as status-seeking and risk-taking.

Del Giudice and colleagues conclude that from an evolutionary perspective personality traits are clearly not neutral with respect to sexual selection. "Instead, there are grounds to expect robust and wide-ranging sex differences in this area, resulting in strongly sexually differentiated patterns of emotion, thought, and behavior - as if there were two human natures."

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Del Giudice, M., Booth, T., and Irwing, P. (2012). The distance between Mars and Venus: Measuring global sex differences in personality. PLoS ONE 7(1): e29265.

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23 Comments

....

Submitted by EJ on January 15, 2012 - 12:18pm

Can I get a "Who cares?"

Reply to EJ

Quote EJ

## Sexual promiscuity

Submitted by Anonymous on January 16, 2012 - 7:37am

Sexual promiscuity is based on the size of a persons libido the traits that predict promiscuity- extraversion, openness to experience, neuroticism (especially in women), positive schizotypy, and the "dark triad" traits (i.e., narcissism, psychopathy, and Machiavellianism) are simply tools one has to satisfy libido (for men at least),

Would an agreeable male introvert be able to have as many partners as an extroverted bad boy?

There are people with all of the traits that predict promiscuity but have low libido and so they are able but unwilling to be promiscuous.

Reply to Anonymous

Quote Anonymous

## Highly suspect; probably narcissistically based

Submitted by Anonymous on January 16, 2012 - 4:57pm

This study seems highly flawed to me. For one, there were no women scientists

involved. Women who have reviewed

I imagine it is appealing to think that you don't have to factor in socialization and the historical barriers to women getting direct access to resources and can just reinforce that system, but this doesn't fly, sorry.

See Dorothy Dinnerstein's "The Mermaid and the Minotaur" for one explanation of why some male scientists would collaborate to perpetuate these myths.

Reply to Anonymous

Quote Anonymous

## Typical feminist...

Submitted by lvlsk on November 4, 2016 - 11:07am

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The results don't fit into your agenda bubble so you blame the patriarchy.

Grow up angry little girl and stop being so emotional and knee-jerk.

Reply to lvlsk

Quote lvlsk

## Agreed

Submitted by Kass on November 22, 2016 - 10:25am

I agree, the differences seem highly socialized.

Reply to Kass

Quote Kass

## No women scientists or reviewers

Submitted by Anonymous on January 16, 2012 - 5:01pm

I recommend that readers see other articles about this study. It has been debunked pretty readily by several other reviewers, including some female ones not in this "club" that wants to reinforce this.

Reply to Anonymous

Quote Anonymous

## Could you provide the links

Submitted by Anonymous on January 20, 2012 - 5:47pm

Could you provide the links to these articles? I'm having a hard time believing this study also.... heck, my own personality barely aligns with this.

Reply to Anonymous

Quote Anonymous

## Exceptions

Submitted by MPP on December 16, 2018 - 10:46am

Just because it doesn't align with your personality doesn't mean it is not true. There are always exceptions.

Reply to MPP

Quote MPP

## Of course our evolutionary

Submitted by ec194010 on January 21, 2012 - 12:01pm

Of course our evolutionary history would inspire different personality traits between the two sexes, but this is likely not as extreme as the data show. If Del Giudice et al. had gained a more cross-cultural sampling, or even had sampled a different culture, would these results necessarily be the same? I do not believe so, because people can change their personalities overnight if something extreme enough happens to them. Did the study take this type of variation into account?

Reply to ec194010

Quote ec194010

## Fits common experience and evolutionary sense

Submitted by GaryT on February 2, 2012 - 11:54am

Of course this is politically incorrect, but what difference does that make if it is true.

Every subset of animal is a product of their evolutionary upbringing, and their survival was dependent upon successfully interacting within their society and biology.

Women have lived in a very different, albeit overlapping, worlds and existence than men. Their innate tendencies in personality has to reflect that.

Although we live in a far more enlightened social world (at least in western societies), that cannot erase what has made women women, a legacy that has existed thousands of times longer in duration than our faster evolving civilizations and increasingly sophisticated mores.

The objections here all fall back upon the nature/nurture controversy.

I believe that we as individuals, we are 80% nature and 20% nurture.

Reply to GaryT

Quote GaryT

## No it's 50% nature and 50%

Submitted by Lemsip on November 4, 2016 - 7:02am

No it's 50% nature and 50% nurture and some would say 25% nature and 75% nurture.

Reply to Lemsip

Quote Lemsip

## Fits common experience and evolutionary sense

Submitted by GaryT on February 2, 2012 - 12:03pm

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I believe that we as individuals, we are 80% nature and 20% nurture.

Reply to GaryT

Quote GaryT

## this whole thing plays into

Submitted by Anonymous on February 8, 2012 - 7:09pm

this whole thing plays into the documented concept of men seeing women as other-than, and unlike men, the default humans, whereas women do not draw these lines. this is a root of chauvinism and objectification. i know it must serve you to find support for the dynamic, but i've drawn a line between you and the rest of humanity, so it hardly matters that you've the "soapbox of influence".

also, to commenter Gary, most of human existence took place in the time prior to what is popularly called "history" - nomadic people with tasks somewhat differentiated but absolutely in the same spheres and environments. tasks were transferable and expedience was the determinant.

Reply to Anonymous

Quote Anonymous

## Same Spheres and Environments?

Submitted by GaryT on February 11, 2012 - 10:14am

While men and women coexist in the same physical spaces, that is not the same spheres and environments.

Mankind has also coexisted his/her physical space with other domesticated animals, but that quite amply illustrates that the same space is not the same environment.

Due to womens' smaller stature, physical strength and natural charter to the vulnerable conditions of child bearing/rearing, women have almost always had to suffer from second class citizenship in the evolution of mankind.

This societal status would cause a fundamentally different base personality type to express due to evolutionary pressures; where a man could generally address interpersonal challenges directly and possibly brutally, women were necessarily conformed to achieving societal and familial success by a less direct approach.

Virtually all of the conclusions this study reports, reflect that kind of personality conformation.

As a man I don't consider it flattering to women many of these findings, but I tend to believe it nonetheless.

It is in recognizing what is first, and in using one's intellect to moderate natural (but detrimental) tendencies, that individuals can improve their responses in principled way.

Reply to GaryT

Quote GaryT

## The first concern I have with

Submitted by Anonymous on February 16, 2012 - 2:34pm

The first concern I have with the study is the fact that the survey was taken from only US citizens, primarily white, and all educated? How is this survey even considered relevant? Overall, personality is a difficult topic to test. There are a number of problems when testing an individuals behavior; was the individual having a bad day? did they just end a relationship? did they just get a promotion? did they just in a fender bender? All of these situations would skew the personality that would be observed in a participant. Not only considering the near future in an individuals life is important. Most of the personality traits that are being analyzed in this study are those that develop in a person over time. For example; if an individual is seen as "rule-conscious" it could be because during their child hood their parents were abusive, naturally that individual would grow up to listen to rules.

More data needs to be collected, bottom line.

Reply to Anonymous

Quote Anonymous

## I think this study is too

Submitted by js274608 on February 22, 2012 - 6:18pm

I think this study is too narrow. It would be more convincing if it were done in a cross-cultural manner. I think studying a wider range of societies around the world would have given a better indication. I also think it is a bit extreme in general. I can think of plenty contradictions to this study and would be interested in seeing the results of this study in other societies and cultures.

Reply to js274608

Quote js274608

## I think this study is too

Submitted by js274608 on February 22, 2012 - 6:22pm

I think this study is too narrow. If this were done more cross-culturally I would be more convinced. Most of the participants were white and from the US. This seems extremely unfinished. I also think that American society has a major impact on the results of this study and once again, including other societies and cultures would create a much better study in my opinion.

Reply to js274608

Quote js274608

## It's true that a

Submitted by Anonymous on February 22, 2014 - 1:03pm

It's true that a cross-cultural study would be more valuable, but educated white Americans are a group I would expect to be much more motivated to play down gender differences in their responses. (I suspect making it more cross-cultural would make the differences show up as even more extreme.)

Reply to Anonymous

Quote Anonymous

## Sample Size

Submitted by Jeff on August 24, 2016 - 11:15pm

Mahalanobis D (which is the measure in which Del Giudice rated differences between men's and women's personalities) is not an unbiased measure of effect size, from what I can tell.

For some background, as a general rule of statistics, when you measure the overlap between variables this way, the amount of overlap you'll get between them

depends on the sample size. Del Giudice used 10,000 people, which is probably overkill. So, when he says there's only 10% overlap between men and women, that's not necessarily the case. Had he measured 300 men and women instead, the overlap would have been much larger.

Reply to Jeff

Quote Jeff

## Which tells you that it's a

Submitted by Johanna on March 19, 2018 - 1:22pm

Which tells you that it's a bad test to use on small samples.

As statistical tests get more reliable with sample size, there is no such thing as a too large sample size from a statistical point of view.

Reply to Johanna

Quote Johanna

## I think this is a very well

Submitted by angel on September 9, 2016 - 10:15am

I think this is a very well written article, also it supports my claim that personality is affected by gender.

Reply to angel

Quote angel

## Nothing here proves that

Submitted by cat on November 4, 2016 - 4:31am

Nothing here proves that gender is innate rather than learned.

Reply to cat

Quote cat

## It isn't so much how male and

Submitted by Lemsip on November 4, 2016 - 6:59am

It isn't so much how male and female brains are wired but social conditioning and sex hormones so the innate differences don't really kick in until puberty and then wear off later in life

Reply to Lemsip

Quote Lemsip

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Dario Maestriperi, Ph.D., is a professor of comparative human development, evolutionary biology, and neurobiology at the University of Chicago.

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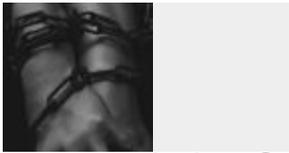


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