Podcast Script

Battle of the Sexes: Do women really have better social skills than men?

Psyco 403: Topics in Evolutionary Psychology

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Introduction: *Black screen with opening music, showing words "Battle of the Sexes: Do women really have better social skills than men?"*

Narrator: **Music fades but is still slightly in the background**

On campus

We have all heard the phrase "Men are from Mars and women are from Venus", and certainly most of us have experienced times when we feel that we aren't seeing eye-to-eye with our boyfriends or girlfriends. However, we are both from the same species, so how different could we be? We all must have evolved in similar ways. So – are women really more socially adept than men? Can they really pick up on social cues better? Or are these just myths that the media has created. Dr. Louann Brizendine, in her book called *The Female Brain,* says male and female brains are quite different. Connections in men's brains are like connecting routes between country roads, in women's brains, they would be superhighways. It is possible male and female brains have evolved to be different which could explain why we see differences in social cognition. A look into neurological and cognitive research confirms and offers insight into these widely held truisms.

Go to classroom with a chalkboard. Two brains basic brains are drawn on the chalkboard.

Hear a scientific researcher's voice:

We see that men's brains are actually bigger than women's brains by about 9% even after you correct for body size (Brizendine, 2006). (*Write men under the bigger brain and women under the smaller brain).* Men and women have the same number of neurons,

however, they are organized in different ways. In the brain centers for language and hearing, women have 11% more neurons than men do (Witelson, 1995). Centers for memory and emotion are also found to be larger in women (Giedd et al., 1996; Goldstein et al, 2005). *(On board: label area for language, hearing, memory, and emotion)*

Narrator at a playground

All of these regions are associated with social cognition. Social cognition allows us to understand other people's mental states, desires, and emotions. One researcher from Australia, Dr. Sue Walker (2005), compared girls and boys on a measure of theory of mind. Theory of mind is the ability to understand and predict the beliefs, mental states, desires, and feelings of another person. Dr. Walker found was that girls tended to outperform boys on this task even at young ages. Theory of mind was also related to social behavior in boys and girls. Higher theory of mind predicted more aggressive and disruptive behavior for boys but pro-social behavior for girls. Higher scores on theory of mind were also related to less shy behavior in boys.

Fade out into black screen- Show MRI slices of brain (Anna's images obtained Summer 2009)

Hear a scientific researcher's voice:

These differences are also seen in the brain. We all have something called mirror neurons in our brain located in our frontal lobe (Kolb & Whishaw, 2009). These neurons are activated when a person makes a movement, but they also fire when you see someone else make the same movement. Therefore, mirror neurons are thought to underlie social

cognition (Kolb & Whishaw, 2009). It is possible that females may recruit these networks differently than men when engaging in social tasks. Schulte-Ruther and colleagues (2008) looked at gender differences in brain activation for socially relevant tasks using functional magnetic resonance imaging (fMRI). Participants were asked to give their own emotional responses to emotion expressing faces as well as evaluate emotional states expressed by the faces presented. They found that women had far more activity in regions that had a lot of mirror neurons compared to men. Women seem to recruit areas of the brain related so social cognition differently than men. Schulte-Ruther and colleagues say this explains why women typically perform better on tests of empathy, social sensitivity, and emotion recognition.

Narrator on campus:

So why is it that men and women are so dissimilar? Could evolution somehow explain these differences? Dr. David Buss, an evolutionary psychologist, proposed an evolutionary theory that could potentially answer these questions. He hypothesized that dissimilarities in behavior and cognition between genders could have resulted from different selective pressures or where the sexes were faced with different adaptive problems. In contrast, under similar selection pressures you should find that men and women are fairly similar in those areas. Anthropological evidence tells us that men and women were under different selection pressures related to social cognition. Dr. David Geary at the University of Missouri has hypothesized that in ancestral hunter-gatherer societies, women needed to form social networks with non-kin and form stronger social bonds in order to ensure that they would receive the support to help their children

survive. Men would primarily be in a providing role where there was less emphasis on collaboration. In this theory, women with theory of mind and other forms of social cognition would have an advantage over those who did not, and would be more likely to pass on their genes.

Narrator voice over with male/female sculptures and images of planets

So perhaps there is some truth to the phrase "Men are from Mars, and women are from Venus". We have simply had different adaptive pressures from each other leading to different mechanisms in the brain for dealing with social relationships. So the next time you get into a fight with your significant other, remember, they may just not understand you. It is a result of the evolution of their brain.

Music fades in – black screen with credits.

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