Podcast Script #1: Similar symmetry detection in humans and non-human animals Group #3: Patrick Maloney, Brandy DeRudder (& Laura Klaver) Evolutionary Psychology 403 Podcast Script #1: Similar Symmetry Detection in Humans and Non-human Animals

SKIT: If humans have preferences for attractive faces, due to symmetry components, do other

animals/species have preferences for their own species based on similar processes?

SETTING: Brandy and Patrick are talking, sitting down on chairs in a classroom.

BRANDY: Hi Patrick!

PATRICK: Hey how are you Brandy?

- BRANDY: Well... I'm still single... I'm looking for someone who's got good qualities, but I don't really know what to look for...
- PATRICK: Well my girlfriend has really good qualities. Did you know that an honest signal of mate quality is bilateral symmetry?

BRANDY: But how do those signal good qualities about a mate?

- PATRICK: Bilateral symmetry can serve as a phenotypic indicator of superior genes and immune system function.
- BRANDY: Does this mean that you are less likely to become sick if you have a more symmetrical face?
- PATRICK: Perhaps. My girlfriend hasn't gotten sick in the 5 years we've been together! She hasn't even had a cold or the flu since I've known her.

BRANDY: My goodness that's attractive, and let me guess, her face must be very symmetrical.

PATRICK: Your right, her face is very symmetrical, but it's not quite that simple Brandy! Phenotypic traits such as bilateral facial and body symmetry, shiny hair, and flawless skin are related to a person's ability to resist environmental factors such as poor habitat quality, parasitism, genetic mutations, and toxic exposure. Bilateral symmetry is just one of many honest indicators about an individuals' genotype and immune system functioning.

- BRANDY: Oh I see. So asymmetries in the face could be a result of an individuals' exposure to chemicals or toxins in their prenatal environment.
- PATRICK: Yes. Or perhaps they never had access to proper health care, or limited access to other essential resources like proper nutrition.
- BRANDY: So either way, these are all possibilities that could have contributed to Random Deviations from Bilateral Symmetry... Oh Patrick, my ex boyfriend's facial features had Large Random Deviations from bilateral symmetry. I found that to be so unattractive. Now I have a better understanding of why we broke up!
- PATRICK: That could be for the best, because he may not have had the best genes if he had large asymmetries in his face.
- BRANDY: Well that makes me feel better! You're lucky Patrick. At least your girlfriend has Symmetrical features. If you guys decide to have kids, then because of her good health that is honestly Signaled by her facial symmetry, your kids will have heritable resistance to pathogens and other detrimental environmental factors.
- PATRICK: I hope so! You see, facial symmetry is associated with physical attractiveness because it is a phenotypic indicator of biological fitness. Many cultures have been found to use symmetrical designs in the form of facial painting to enhance their physical attractiveness.

(Show symmetrical facial paintings in different cultures)

The Selk'nam, Huli, Kikuyu and Blackfoot tribes have used such strategies to increase facial symmetry and therefore increase their attractiveness.

In their study, Rodrigo Cardenas and Lauren Harris from Michigan State University found that symmetrical faces are judged to be more attractive than asymmetrical faces. They also discovered that adding asymmetrical designs to symmetrical faces decreased their attractiveness, where as adding symmetrical designs to asymmetrical faces increased their attractiveness.

(Show symmetrical and asymmetrical faces and facial paintings)

- BRANDY: Maybe if humans have preferences for attractive faces, due to symmetry components, other animals have preferences for their own species based on similar processes.
- PATRICK: Yes they do. In a study on *Macaca mulatta* monkeys Corri Waitt and Anthony Little found that faces are also used as a way to portray information, and symmetry is perceived as attractive amongst non-human species. Their looking behavior for visual preference for symmetry was assessed. f MRI evidence showed that nonhuman primates and humans share the same neural mechanisms to detect symmetry.
- BRANDY: So non-human primates and humans may use similar processes when choosing mates. Using the phenotypic cue of bilateral symmetry, a mate can gain information about the health of the other sex.
- PATRICK: That's right. Because humans and non-human species use similar processes in mate selection, these processes for selecting bilateral facial symmetry may have a similar evolutionary origin. So both human and non-human species alike seem to favour potential mates who signal higher resistance to pathogens.

BRANDY: So In other words, chronic parasites exist everywhere. It can be adaptive to choose a good mate who honestly signals good health and superior genes by having facial symmetry. Thanks Patrick! Now I have a better idea of what to look for in a man!

References:

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- Rhodes, G., Zebrowitz, L.A., Clark, A., Kalick, S.M., & Hightower, A. (2001). Do facial averageness and symmetry signal health? *Evolution and Human Behavior, 22,* 31-46.
- Waitt, C., & Little, A.C. (2006). Preferences for symmetry in conspecific facial shape among Macaca mulatta. *International Journal of Primatology*, *27*, 133-145.