

TALK

THE NEURAL AND GENETIC CORRELATES OF PAIR-BONDING

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ABSTRACT

In recent decades, researchers have made notable advances in understanding the mechanisms that underly pair-bonds— the selective preference for a specific individual, that often includes proximity-seeking, cohabitation, affectionate behaviors, mate guarding, reproduction, shared rearing of offspring, aggression towards strangers, and coordinated behaviors between the pair. Access to advanced techniques, such as fMRI, EEG, and virtual reality, as well as animal studies, have provided the platform to advance our understanding of the mechanisms that support the formation and maintenance of pair-bonds. Also, the emerging field of relationship science has expanded, exploring phenomena to address trends of the current times, such as singlehood, novel reproductive methods, and online dating. Unique to humans, and sometimes coinciding with pair-bonding, is the complex phenomenon of romantic love— a basic human motivation involving an intense desire to be united with the beloved physically, cognitively, and emotionally. In this talk, I will discuss studies on the neural and genetic basis of romantic love and pair-bonding in new, established, and long-term human relationships. Cumulatively, this body of work provides evidence for a central role of the mesolimbic reward neural pathway in pair-bonding, and suggests how neural and hormonal mechanisms may contribute to this evolutionarily conserved process that has implications for reproduction, well-being, and evolution of the species. I will highlight the richness of relationship science representing countries around the globe, various methods, and topics that reveal the complexity of the romantic love and relationships. Finally, I will discuss some possible future directions for the field of relationship science.