The sociobiological development and arousal of implicit motives: The emergence of a growth-and-prune model of motive development and the continued linkage of hormones and motives throughout the life span

Köllner, M. G., & Janson, K. T. (2017). The sociobiological development and arousal of implicit motives: The emergence of a growth-and-prune model of motive development and the continued linkage of hormones and motives throughout the life span. *Psychoneuroendocrinology*, 83S, 70. doi:10.1016/j.psyneuen.2017.07.426

This manuscript is a preprint of the published article available at
<https://www.sciencedirect.com/science/article/pii/S0306453017310715>

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Background: Research points to three groups of interrelationships of hormones with implicit motives. The first two are organizational: First, prenatal hormones (e.g., testosterone) may provide a biological basis for initial development of the implicit power motive (and probably other motives), as the 2D:4D ratio was associated with this motive in three samples when considering activity inhibition, a marker for functional right-hemispheric brain lateralization. After this biological basis has been pruned to varying degrees by parental demands in early childhood, a second organizational phase seems to modulate implicit motives: The interaction between the power motive and activity inhibition was also related to facial width-to-height ratio, a likely marker of pubertal testosterone, when aggregating two samples. We speculate that after this second phase, peers further trim the power motive to varying degrees. The third pathway is activational and its strength may depend on the outcomes of the two organizational phases: For example, higher progesterone around ovulation entails higher affiliation motivation in the luteal phase and testosterone responses after winning or losing dominance contests are scaled by power motive strength.

Conclusions: We propose a tentative life-span model of the relationship between steroid hormones and implicit motives in which two growth-and-prune phases lay the foundation for arousal effects later in life. Future research may corroborate this model via (1) testing the associations of motives with organizational hormone effects using other markers like anogenital distance, (2) exploring social influences on motive development during adolescence, and (3) including saliva sampling in all studies involving motive arousal.