Behave: The Biology of Humans at our Best and Worst
Robert Sapolsky

This book explores the multifaceted and complex nature of our biology. Looking at the biology through a lens of multiple bodily systems and timeframes by which they would occur. The main theological underpinning of this book is the question of who crossed the road first the chicken or the egg. The time frames which are explored within this book are as follows; seconds before: neurological, seconds; minutes environmental and sensory stimuli hours to days before: hormones, thousands of years before: genetics.

The first part of the book explores various neurological regions and the purposes to which they serve. Lizard brain (automatic regulating functions) limbic system (emotions), frontal cortex (working memory, reason, cognition, gratification, postponement. Within the frontal cortex VMPFC (emotion), dLPFC (cognitive) There is a constant push/pull between these two regions of the brain. Robert then goes over the massive importance of the birs of neurotransmitters pertaining to the propensities of your actions. Neurotransmitters such as dopamine, serotonin etc. have massive effects on the perceptive state that you have.

Sapolsky also goes over the automaticity of the amygdala which is analogous to the type 1 thinking/subconscious process that the brain is set up to look for threats quickly. Sapolsky then goes to talk about the ever so important endocrine system. Sapolsky says that testosterone increase does not actually have correlation with aggression, rather the top-down contextual thought that aggression will lead to more reproductive success will dictate whether or not testosterone will increase aggression or not. There is also the Interestingly enough the hormone for the masculinization of the male brain is actually estrogen within the male brain. There is also the hormone of oxytocin. This hormone is commonly referred to as the love hormone within popular culture, but again there is fairly large dependence on the contextual top down associations with

an increase in testosterone or/and cortisol makes us more prosocial, but also heightens our "us vs them" perceptions, meaning we are only more prosocial to individuals we know and the stress to these Sapolsky also talks about the massive importance of adolescence and the influences it has on your grey brain. It is seen that individuals who face more adversity in their childhood will have bigger and hyperactive amygdalas. There is also the major aspect of genetics on our biology. An very important distinction with the beginning of genetics is that 98% of dna is non coding, that is genes are nothing without the context of environment. There is also the massive influence with culture to our biologies; individuals coming from individualistic cultures will have distinct behavioral patterns from individuals that come from collectivist nations. With the realm of culture there is also the massive savvy of the us vs them dichotomy on our biology. With some of seeing an individual from another race there is increased activation of the amygdala. There is also the slow chronic death and inflammation caused by stress. Sapolsky also looks at aggregate cognitive difference based upon political leanings and the various changes which are induced by these political leanings. There is also the massive effect group identity and belonging have upon your mental and physiological state. There is a strong positivity of affiliation with humans. Finally Sapolsky ends the book on a philosophical discussion on free will and the increased knowledge within the area of neuroscience and physiology which is making the area of human of the "homunculus" smaller and smaller. Overall this was a informative book which honored the interconnectedness that multiple systems have upon each other rather than looking them isolation