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Trans-species modeling theory

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Humans and animals are examples of evolved complex adaptive systems. It is difficult to predict the outcome from perturbations to such systems because of the characteristics of complex systems. Modeling even one complex adaptive system in order to predict outcomes from perturbations is difficult. Predicting outcomes to one evolved complex adaptive system based on outcomes from a second, especially when the perturbation occurs at higher levels of organization, is even more problematic. Using animal models to predict human outcomes to perturbations such as disease and drugs should have a very low predictive value. The author will present empirical evidence confirming this and suggest a theory to explain this phenomenon. Trans-Species Modeling Theory states: "While trans-species extrapolation is possible when perturbations concern lower levels of organization or when studying morphology and function on the gross level, one evolved, complex system will not be of predictive value for another when the perturbation affects higher levels of organization." TSMT is supported by vast amounts of empirical evidence, is consistent with science outside of the specific areas of biology it addresses, and both explains current scientific facts as well as predicting the answers to future questions. The author will elaborate on TSMT, complex systems, evolutionary biology, and the empirical evidence supporting TSMT.

Biography

Ray Greek received his MD from the University of Alabama at Birmingham in 1985 and completed a residency in anesthesiology in 1989 at the University of Wisconsin. He has taught at the medical schools of the University of Wisconsin and Thomas Jefferson University in Philadelphia. He has performed research with animals and humans. He is the President and Co-founder of the not-for-profit Americans for Medical Advancement (AFMA).

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