

The cognitive roles of behavioral variability in humans and other animals

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A problem in behavioral studies is how to qualitatively and quantitatively study rigidity and its complementary variability. Deconstructing behavior into its elemental units, the acts, is an effective analytic method, with common acts rendering behavior its rigidity and pragmatism, and idiosyncratic acts conferring flexibility, adaptivity, individualism, and when needed also psychological components like preparation, confirmation, and transition between tasks. The excessive performance of idiosyncratic acts characterizes ritualized behavior in which these acts are a means to reduce anxiety and gain a feeling of controllability and predictability. Behavioral variability, as manifested in the form of idiosyncratic acts, can thus accomplish a range of functions. It may serve as a preparatory, confirmatory, or transitional phase; it may render the organism adaptivity, reduce anxiety, and facilitate the motor exploration necessary for learning; and, it may serve in establishing individual identity, and enable the organism to test its environment. In light of this spectrum of potential

functions, behavioral variability does not seem to be simply a noise or by-product of motor activity, but an essential component that has been preserved in the evolution of behavioral patterns, much like the genetic variability in biology.

