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On the entropy flows to disorder

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Gamma distributions, which contain the exponential as a special case, have a distinguished place in the representation of near-Poisson randomness for statistical processes; typically, they represent distributions of spacings between events or voids among objects. Here we look at the properties of the Shannon entropy function and calculate its corresponding flow curves, relating them to examples of constrained degeneration from ordered processes. We consider univariate and bivariate gamma, and Weibull distributions since these also include exponential distributions.

Keywords: Shannon entropy, integral curves, gamma distribution, bivariate gamma, McKay distribution, Weibull