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Scott Smith* (sesmith@uiwtx.edu), San Antonio, TX 78209. *Log-Weibull X Generalized Distributions.*

We propose a new category of distribution families, called Log-Weibull-X families (LWX). This method of distribution construction applies the log function in the place of the popular odds function. The log function is particularly suited to use with the Weibull transformer, as it produces a true generalization of the transformed family. Focusing on the application of the Exponential and Burr(c,1) models, we will present probability weighted moments, reliability results, properties of maximum likelihood estimation, and an application to real data with comparison to similar transform constructions. (Received August 10, 2020)