

My thanks again for your comments Francesco – which I'm sure are well-intentioned.

We can agree at least that I was never seeking to rediscover that a Weibull distribution can be obtained as the negative of an EV3 random variable.

There was never any intention to suggest I was breaking new ground with a rediscovery of the inverse Weibull distribution. It was actually a question of terminology. Going by the definition in Prabhakar Murthy et al (2004, p. 115) the term "inverse Weibull" seems to be applied to the reciprocal of a random variable from a two-parameter Weibull distribution, which gives the inverse Weibull distribution as an EV2 distribution with location parameter zero. For the submitted paper, I needed a transformation applied to the three-parameter Weibull distribution with a non-negative location parameter. Because I was using a reciprocal transformation as an example I simply couldn't find a name for a distribution obtained as "the reciprocal of a random variable from a three-parameter Weibull distribution with non-zero location parameter" which was quite a mouthful. So I invented the term "H-distribution" as a convenient shorthand – nothing more than that. If that distribution has some existing name then I'm most happy to use the recognised name of course.

The reciprocal transformation was only used as the most simple example I could think of to illustrate the monotonic transformation. There is no suggestion that the H-distribution in itself is some form of discovery worthy of publication – though it does have interesting properties.

The value (or lack of value) of the submitted paper is based entirely on the suggestion that the monotonic transformation provides a basis for an alternative means, with extreme value justification, of estimating exceedance probabilities for positive-valued random variables, using the Weibull distribution as an alternative to the GEV. I believe that's a new suggestion. It is of course, subject to various specific assumptions which must be set out more clearly than I did in the original paper – as was noted by the reviewer. It may happen in fact that the proposed monotonic transformation is not viable from a math viewpoint and that would be sudden death for the whole concept. That's something for the reviewer to make comment on and I'm happy to go with whatever the decision is. Please see also my responses to the reviewer comments.

Just by way of passing mention, I too have Gumbel's text on my shelf – ever since 1980 in fact when I purchased it (along with some others) while I was completing my PhD on applications of extreme value theory in the Earth sciences.

Irrespective of the final review outcome, I'm sure we could enjoy a glass of wine together if our paths should cross at a conference somewhere.

Best wishes

Earl

Prabhakar Murthy et al 2004. Weibull Models. Wiley-Interscience