lognormal−Poisson mean and variance

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Hi everyone,

Back in August I asked:

> e.g. (for clarity) if the parameters of a negative binomial
> (=gamma−Poisson)
> are r and p, then mean = r(1−p)/p variance = r(1−p)/p^2
>
> What are the equivalent expressions for a lognormal−Poisson?

Herman Rubin said

> It cannot be done in closed form with elementary functions.

(and lightened my darkness with respect to "not uniquely
determined")

Now I've foound a reference <(Encyclopedia of Statistical
Sciences (2004), Vol 9; page 6198; Wiley> which says
<quote>
As for all compound Poisson distributions, the factorial
cumulants* of X are equal to the cumulants* (of corresponding
order) of theta. In particular,

E(X) = exp(xi + sigma^2/2)
var(X) = exp(2xi + 2sigma^2)
+ exp(xi +sigma^2/2)
−exp(2xi + sigma^2)
<end quote>
where X is the variable with a Poisson−lognormal distibution
and theta is the expected value of the Poisson to which is
ascribed a lognormal distribution with parameters xi and sigma.

Cumulants are new to me, factorial cumulats even more so
(does that make sense?) and when the British :Library sent me
the page, they didn't include the note to which the asterisk

refers (I guess?). I've been reading the appropriate bits of Kendall and Stuart (vol 1, 4th edn., 1977) but find that very hard going.

My question: do the expressions above for E(X) and var(X) give the mean and variance of a Poisson−lognormal in terms of its parameters?

Thanks in advance
(sorry for the necessary anonymity)

A Lurker

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