where $c'(\theta) = c(\theta)/k(\theta)$ and $d\nu(x) = \phi_E(x)\, d\mu(x)$. Truncation has not changed the relative density function, and the result follows from the form of (1).

Next suppose that, instead of accepting values with probability one in E and with probability zero outside E, we select according to a fixed Borel function $\phi(x)$, the chance of accepting a value x being $\phi(x)$. The new family of distributions has the same sufficient statistics for the same reason.

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ON A PROBABILITY DISTRIBUTION

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1. Introduction. The problem treated is that of generalizing the Bernouilli distribution to the case where the probability of success is not constant from trial to trial but depends on the number of previous successes. The case where the probability of an event depends on the number of trials is easily handled and is not the case treated here. Several special cases of such a distribution have been worked out at one time or another. (E.g. C. C. Craig found the solution for one such special case and thus called the author's attention to the problem.)

The solution involves the Newton divided difference expansion of powers in a form which can be utilized for computation if the number of trials is not too large. In the case where the probabilities on a single trial are small an approximation, (similar to that of the Poisson distribution to the Bernouilli distribution) can be found.

Applications can obviously be made to urn schema in which black balls are replaced, but white balls are removed. Similarly, applications can be made to the distribution of the number of plants in a given area.

2. Solution of the problem. Specifically the problem is as follows: "What is the probability that in n trials of an event it will occur x times presuming that the probability of the event on a given trial depends only on the number of previous successes?" Denote by $P(n, x)$ the probability of x successes in n trials and by p_x the probability of the event after x previous successes. As

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