

Meeting: 1009, Annandale-on-Hudson, New York, SS 7A, Special Session on Special Functions and Orthogonal Polynomials: Theory and Applications

1009-33-7 **George E. Andrews*** (andrews@math.psu.edu), Department of Mathematics, McAllister Bldg., Penn State University, University Park, PA 16802. *Carlitz and the General 3-Phi-2.*

In a letter dated March 3, 1971, Leonard Carlitz defined a sequence of polynomials that generalizes the Al-Salam/Carlitz polynomials and reduces to the Al-Salam/Carlitz polynomials when two parameters are appropriately specialized. Carlitz concluded the letter by stating that it would be of interest to find properties of these polynomials when all the parameters are free. I shall attempt to explain the background of this problem and to show how it helps to explain some of the mysteries surrounding the transformations associated with the basic hypergeometric series $3\text{-}\Phi\text{-}2$. (Received January 12, 2005)