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**Deepak Basyal\*** (deepakji@nmsu.edu), Dept of Mathematical Sciences, MSC 3MB P.O. Box 30001, Las Cruces, NM 88003-8001. *Treatment of and trouble with zero in three centuries of American arithmetic.*

The realization of zero as a number has a long history. Initially, zero (cipher) was used solely as a placeholder; however, zero got its rightful place when it was abstractly defined in the New Math of the 1960s. Zero's journey from 'placeholder to cardinality of the empty set' and 'from sunya to zero' makes a really good story. In this presentation I will discuss the fact that the authors of arithmetic books throughout American history avoided using arithmetic problems involving zero. Why and how zero was treated throughout the 18th and 19th centuries, and how and when transition points in the meaning of zero appeared with the passage of time, are the main concerns of this presentation. It was a troublemaker when it first appeared; however, it is a vital member of the number system of arithmetic in modern mathematics. (Received September 20, 2010)