1145-I5-1235 **Kyle D Hansen*** (kylhansen@westmont.edu), Westmont College, 955 La Paz Road, MS# 1799, Santa Barbara, CA 93108, **Mike Brilleslyper** (mike.brilleslyper@usafa.edu), Department of Mathematical Sciences, United States Air Force Academy, 2354 Fairchild Drive, Colorado Springs, CO 80840, and **Russell W Howell** (howell@westmont.edu), Department of Mathematics, Westmont College, 955 La Paz Road, Santa Barbara, CA 93108. *When the Fundamental Theorem of Algebra goes Awry.*

In contrast to an n^{th} degree analytic polynomial, an n^{th} degree (complex) harmonic polynomial can have more than n zeros. In this talk we will explore the family of harmonic trinomials of the form $p(z) = z^n \pm c\bar{z}^k \pm 1$, where n and k are integers with $1 \leq k < n$, and c is a positive real number. We begin by sketching a proof that, for $c = 1$, the harmonic trinomial has n zeros like its analytic counterpart. But as c increases we obtain more zeros. We present a conjecture for the maximum number of zeros, and describe the distribution of these zeros in the complex plane. Finally, we present several partial results and open problems. (Received September 20, 2018)