

1145-VS-1921      **Justin Moccaldi\*** (justinmoccaldi@gmail.com) and **Roman Wong**. *An Ancient Chinese Problem and Two Sequences*.

In their article that appears in the 2018 May issue of CMJ, Ezra Brown and Matthew Crawford showed that the solution to a generalization to the ancient Chinese problem *Five Families Around a Well* actually involves the derangement sequence  $d(n) = n! \sum_{k=0}^n \frac{(-1)^k}{k!}$  and the sequence  $w(n) = n! + (-1)^n$ . They also observed that for all  $n < 10^5$ ,  $\gcd(d(n), w(n)) = 1$  except when  $n = 9$ . We explore this oddity further and use Python to extend the coprime property beyond  $n = 10^5$ . (Received September 24, 2018)