

## OVERLAPPING NAMES

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Recently Ray Love pointed out an unusual feature of his full name: it can be written out as one continuous word, as RaymonDanieLove. He writes “No one I know has a name that does this...perhaps one name in a thousand or ten thousand has this rare characteristic...is this something that can be quantified?”

The probability of a pair of one-letter overlaps in a three-word name (which is a double overlap) can be reasonably approximated by the square of the probability of a single overlap in a two-word name; that is, if the first probability is one in 20, the probability of two such overlaps occurring independently is about one in 400. (The underlying frequencies of letters in a collection of first names are likely somewhat different from those of surnames.) Therefore, let us examine two-word overlaps.

The easiest way to determine such a probability is by tabulating the fraction of occurrences in a real-life sample of two-word names. In 1990 the Daughters of the American Revolution published the DAR Patriot Index in three volumes, a list of about 118,920 soldiers of the Revolutionary War whose descendants have proved their ancestry. A sample of 5946 names (those appearing on each twentieth page) revealed 169 overlaps, almost one in 35 (a fraction of 0.028). So the probability of a double overlap in a three-part name is conjectured to be one in 1225, at the low end of Ray Love’s guess. No US president (a mixture of two-part and three-part names) has a one-letter overlap.

The one-letter overlap can be generalized to a two-letter or three-letter one. A full search of the 3300 pages for two-letter overlaps involving reasonably common first names turned up 137, or one in 900. A few have likely been overlooked, so this is a lower bound. The corresponding three-letter overlap yielded 30 names, nearly one in 4000:

ChristopHERgsheimer ConRADer 2 PhileMONroe GarLANDerson RowLANDerson PeTERbush  
PeTERrell MarTINKer AbraHAMmond 2 ReuBENnett 2 ReuBENthall EliSHApleigh JaMESser  
JaMESsenger ThoMASon 6 ThoMASsey 3 JonatHANDy JonatHANKins NatHANcock NatHAND  
BenjaMINor

Even larger overlaps, such as James Ames, can be found, but these are augmented by surnames ending in -son or -s, such as John Johnson and Peter Peters.