This research endeavors to identify the most productive morphemic sound clusters, or submorphemes, in English and German in so-called unconventional onomatopoeia, such as *flwomp*, *zzuhuck* and *zzzwwmmboom*. Their unconventional status is attributed to having only niche applications and not belonging to the standard-language lexis. A corpus with a total of 474 phoneticized English types and 937 phoneticized German types was constructed to determine: the correlative relationship between 1) sound and context regardless of a submorpheme’s syllabic position in the onomatopoeia; 2) sound and the submorpheme’s syllabic position in the onomatopoeia but regardless of context; and finally, 3) sound, context, and the submorpheme’s syllabic position in the onomatopoeia. Of all the unconventional onomatopoeia investigated, a total of 9 unique submorphemes both in English and in German was found (English: *<a>*, *<ee>* , *<i>* , *<oo>* , *<u>* , *<k>* , *<m>* , *<b>* , *<w>*; German: *<a>* , *<ee>* , *<i>* , *<o>* , *<oo>* , *<u>* , *<ng>* , *<l>* , *<b>*). Syllabic position as opposed to context alone appears to play a greater role in determining whether a sound can be qualified as submorphemic. By and large, however, the interdependency and interrelatedness between sound, context, and syllabic position together proved most informative. Submorphemes were found in all positions of the onomatopoeia (onset, nucleus, and coda) with the nucleus being the most productive syllabic position in every context investigated. As expected, the nucleus was solely occupied by submorphemic vowels, whereas the onset and coda were understandably realized with consonants. Despite the somewhat to incredibly high correlative strength (the lowest phi coefficient being \( \phi = 0.313 \) and the highest \( \phi = 0.948 \)), the submorphemic character of the nucleus in unconventional onomatopoeia may need to be considered with a degree restraint, since it is expected that vowel sounds predominately occupy the nucleus of a word. Furthermore, evidence from this research proves the sub-morphemic status of sound-meaning pairings in unconventional onomatopoeia, in that they are by no means at the same level of productivity or regularity as standard-language morphemes.