In this study we extend an earlier investigation into the bis(phenalenyl)metal complexes to look at the half sandwich phenalenyl complexes (M***P***) with the monovalent metals of groups 1 and 11. Our objective in this contribution is to extend our understanding of the nature of the bonding between the metals and the exceptionally stable phenalenyl rings. In particular we have been interested to determine whether the extreme sensitivity of the phenalenyl radical to the shell structure of metals is observed in the monovalent systems. In an investigation of the full sandwich compounds with the divalent metals in period four we identified an unusual progression from a high (η^6,η^6) to a low (η^1,η^1) hapticity going across the periodic table (from Ca on the left to Zn on the right). M-C bond distances in the η^6 group 1 systems are similar for all six bonds, but they are not identical. The node at the central C atom in the tri-ring structure makes bonds to that center particularly weak, and long. The group 11 systems do not form half-sandwich type structures. We fund no stable η^6 isomer. They collapse instead η^1 structures in which the metal forms a solitary σ bond to one of the C centers on the edge of the 12 C ring. The stability and bonding preferences in these compounds are discussed.