If the holes are as large as indicated by the free electron calculation, they are probably spread out along the intersection of the slant faces (see Fig. 2) and are no longer confined to the corners. Considering the complex topology of such a hole surface, the terms in Table 4 referring to the hole energies have little validity. (Low field de Haas van Alphen work in cadmium indeed reveals annomalies in the hole observations.[19])

For the reason described above the model of Leigh could not reasonably be expected to apply in detail to cadmium. Some features of the model can be expected, however, to estimate two major physical contributions to the shear stiffnesses and equilibrium condition. These contributions are the Coulomb and full zone terms. We have accordingly proceeded in the following way: a) arbitrary, but reasonable values of $\alpha_o = 1.00$, $Z^2 = 0.60$ have been assigned to the parameters which appear in these contributions. These simple and plausible values correspond with those which were found necessary to fit the model to experiment in the cases of aluminum[7], magnesium[7] and indium[5]. b) the Coulomb and full zone contributions to equations (6), (7) and (8) were then computed, and subtracted from the experimental values. c) the remainder is assigned to the overlap-hole terms in equations (6), (7) and (8). The results of this process are shown in Table 5. Presumably the