There are different ways to analyze rovibrational structure of molecules having several large amplitude motions of different type, like internal rotation and inversion or ring-puckering. In my research group we have developed and used methods starting from potential surfaces for large amplitude motions but also applied purely effective Hamiltonians, where tunneling splittings were key parameters. Whatever is the method the following problems must be solved when addressing a rovibrational problem with large amplitude vibrations: 1) a definition of the permutation-inversion molecular symmetry group, 2) a choice of the internal coordinates and their transformation in the symmetry group, 3) derivation of the Hamiltonian in chosen coordinates, 4) calculation of the Hamiltonian matrix elements in a symmetrized basis set. These points will be discussed. The advantage of methods which start from the geometry and potential surface for large amplitude vibrations give much clearer picture of internal dynamics of molecules but generally the fit to experimental data is much poorer. The fitting procedure is strongly non-linear and the iteration procedure much longer. The effective Hamiltonians the fit is generally much better since almost all optimized parameters are linear but the parameters have no clear physical meaning. This method is very useful in the assignment of experimental spectra. Results of the application of both method to methylamine and hydrazine will be presented.