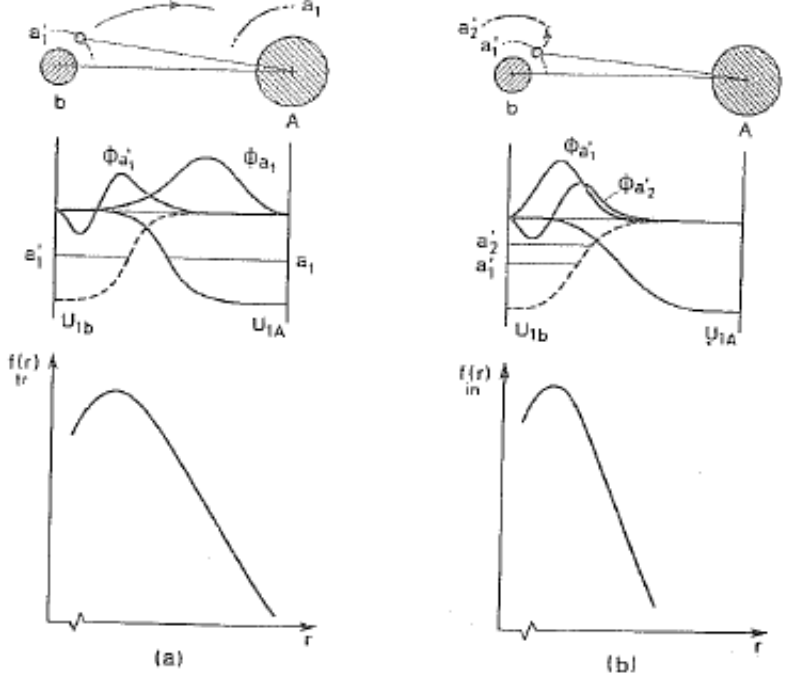

Fig. 1 Schematic representation of the radial dependence of the one-particle transfer and inelastic form factors. In (a) a nucleon moving in the orbital with quantum numbers a'_1 in the projectile a is transferred under the action of the shell model potential U_{1A} to the target nucleus A into an orbital a_1. The dependence of the form factor on the distance between the two nuclei is determined by the overlap of the product of the single-particle wavefunctions $\phi_{a'_1}$ and ϕ_{a_1} with the potential U_{1A}. A schematic representation of this dependence is given at the bottom of (a). In (b) a nucleon in the projectile a is excited under the influence of the target field U_{1A} from the single-particle orbital with quantum numbers a'_1 to the orbital with quantum numbers a'_2. The dependence of the form factor on the distance between the cores is here determined by the overlap of the product of the functions $\phi_{a'_1}$ and $\phi_{a'_2}$ with the potential U_{1A}. A representation of this dependence is shown at the bottom of (b).