(a) ϕ_g

(b) ϕ_u
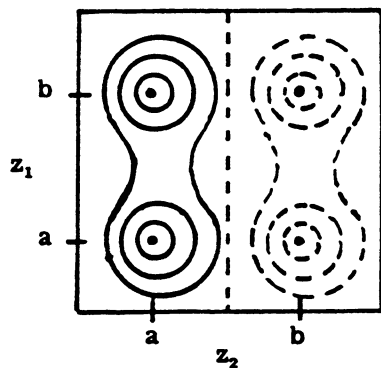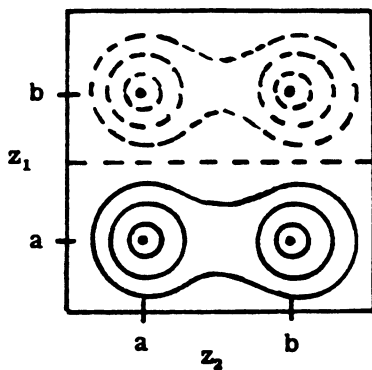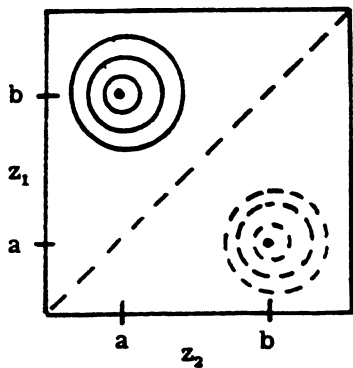
(c) $\Phi_{gu}(1,2) = \phi_g(1)\phi_u(2)$

(d) $\Phi_{ug}(1,2) = \phi_u(1)\phi_g(2)$

(e) $^3\Phi_u(1,2) = \phi_g\phi_u - \phi_u\phi_g$

(f) $^1\Phi_u(1,2) = \phi_g\phi_u + \phi_u\phi_g$