a $\underset{\sim}{70}$, $L = 0^+$, a $\underset{\sim}{56}$, $L = 2^+$, a $\underset{\sim}{70}$, $L = 2^+$, and a $\underset{\sim}{20}$, $L = 1^+$. The $\underset{\sim}{56}$, $L = 2^+$ no doubt contains the first Regge recurrence of the ground state.

Now the symmetry under $U(6) \times U(6)$ of the mass operator and the meson and baryon spectra, when we neglect the perturbation term M^1, is by no means reflected in an obvious way in the matrix elements of $F_i(\underset{\sim}{k}_\perp)$ and $F_i^5(\underset{\sim}{k}_\perp)$, i.e., the electromagnetic and weak form factors, or in the matrix elements of $T_i^x(\underset{\sim}{k}_\perp)$ and $T_i^y(\underset{\sim}{k}_\perp)$ either. Indeed, let us consider the algebra of $[U(6)]_W$ at ∞, composed of $F_i(0)$, $F_i^5(0)$, $T_i^x(0)$, and $T_i^y(0)$. In the limit of neglecting M^1, there are still the unitary transformations e^{iS} that make these operators different from the corresponding generators of the $[U(6)]_W$ subgroup of $U(6) \times U(6)$. For example, for the baryon, we have

$$F_i^5(0) = e^{iS_1} \frac{\lambda_i^{(1)}}{2} \sigma_z^{(1)} e^{-iS_1} + e^{iS_2} \frac{\lambda_i^{(2)}}{2} \sigma_z^{(2)} e^{-iS_2}$$

$$+ e^{iS_3} \frac{\lambda_i^{(3)}}{2} \sigma_z^{(3)} e^{-iS_3}$$

$$\neq \frac{\lambda_i^{(1)}}{2} \sigma_z^{(1)} + \frac{\lambda_i^{(2)}}{2} \sigma_z^{(2)} + \frac{\lambda_i^{(3)}}{2} \sigma_z^{(3)} \quad . \tag{3.5}$$

The operators S vanish only when we let <u>all the masses of all baryon states be equal and furthermore let the common mass value tend to ∞</u>. Only in such a drastic limit are the generators of the $[U(6)]_W$ subgroup of $U(6) \times U(6)$ (under which $M^{(0)}$ is invariant) equal to the generators of $[U(6)]_W$ at $P_z = \infty$. Only in such a drastic limit are