$\bigcup_{L' \in B_L} L'$, $V_2(r)$ is tangent to X at $\pi(y) \in L$ or $q = L' \cap L$ respectively ($\because$ $y \in F \Rightarrow \pi : F \to L$, $\pi(y) \in L \Rightarrow \overline{L, \pi(y)}$ is tangent to X at $\pi(y)$, and $y \in L' \Rightarrow L' + L = \overline{L, y} = V_2(r)$ is tangent to X at $q = L' \cap L$). Thus y must be in $(X - L) - \bigcup_{L' \in B_L} L'$. $\Rightarrow$ As we have seen above, f_L is one to one. $\cdot$ $\tilde{f}_L(p) = \overline{L, p} \cap V_3 = r$. $\Rightarrow$ $\tilde{f}_L^{-1}(r) = \{p\}$.

2. In case L_1, L_2 and L are again distinct, but have a point $p \in L$ in common — i.e., $V_2(r) \cap X = L$ — we see that $V_2(r)$ is tangent to X exactly at p. (See Figure 27.)

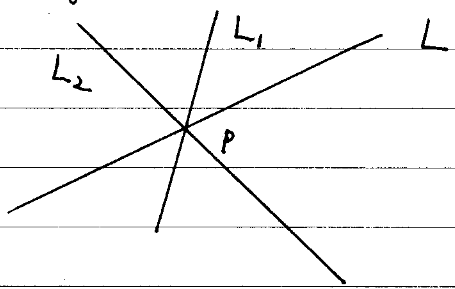

Figure 27

$T_p(G) \supset L, L_1 \Rightarrow T_p(G) \supset \overline{L, L_1} = V_2(r)$
Similarly, $T_p(F) \supset V_2(r) \Rightarrow T_p(X) = T_p(F) \cap T_p(G) \supset V_2(r)$. $\Rightarrow$ $V_2(r)$ is tangent to X at p.
If $V_2(r)$ is tangent to X at q, then $V_2(r)$ is tangent to G at q since $V_2(r) \subset T_q(X) \subset T_q(G)$.