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(i) The function f is continuous along that portion of the curves $\{ x_1 = q_1 (u_1+t, u_2, ..., u_n), ..., x_n = q_n (u_1+t, u_2, ..., u_n) \}, ..., \{ x_1 = q_1 (u_1, ..., u_{n-1}, u_n+t), ..., x_n = q_n (u_1, ..., u_{n-1}, u_n+t) \}$ which lie in G, for every $(u_1, ..., u_n)$ in $T(G)$.

(ii) For each permissible [1]) value of $(u_1, ..., u_{i-1}, u_{i+1}, ..., u_n)$ in R^{n-1} the function $f(q_1 (u_1, ..., u_n), ..., q_n (u_1, ..., u_n))$ is a monotonic function of u_i, the direction of monotonicity being dependent upon the choice of the point $(u_1, ..., u_{i-1}, u_{i+1}, ..., u_n)$ in R^{n-1}; all for $i = 1, ..., n$. Then $f(x_1, ..., x_n)$ is continuous in G.

Corollary 2: Let $f(x_1, ..., x_n)$ be a real valued function defined on an open set $G \subseteq R^n$ and let $v_i = (\lambda_{i,1}, ..., \lambda_{i,n})$ $(i=1, ..., n)$ be linearly independent vectors in R^n. If the function f is continuous along that portion of every line passing through G and parallel to v_i $(i=1, ..., n)$, and f is monotonic along each of these lines (the direction of monotonicity depending upon the choice of line), then $f(x_1, ..., x_n)$ is continuous in G.

REFERENCES

[1] Kruse, R. L. and J. J. Deely, " Joint Continuity of Monotonic Functions, *Amer Math. Monthly*, 7» (1969), pg. (74-76).

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[1]) Permissible values of $(u_1, ..., u_{i-1}, u_{i+l}, ..., u_n)$ in R^{n-1} being those for which $(u_1, ..., u_n) \varepsilon T(G)$.