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ERRATUM TO "OSCILLATION, CONTINUATION, AND UNIQUENESS OF SOLUTIONS OF RETARDED DIFFERENTIAL EQUATIONS"

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In a recent paper [1] we considered two systems of differential equations

$$x'(t) = u(t, x(t)) + q(t, x(t - r(t))) \tag{1}$$

and

$$y'(t) = u(t, y(t)) + p(t) \tag*{(1)$'$}$$

in which u, q, p, and r are continuous functions satisfying:

(a) u: $[0, \infty) \times R^n \longrightarrow R^n$,

(b) q: $[0, \infty) \times R^n \longrightarrow R^n$,

(c) p: $[0, \infty) \longrightarrow R^n$,

(d) r: $[0, \infty) \longrightarrow [0, \infty)$.

We stated and offered a "proof" of the following result.

Theorem 2. *Suppose that* $\|u(t, x)\| \leq h(t)\|x\|$ *for all* $(t, x) \in [0, \infty) \times R^n$ *and some continuous function* h: $[0, \infty) \longrightarrow [0, \infty)$. *Let* $x(t)$ *be a solution of* (1) *defined on* $[t_0, t_1)$ *and having continuous initial condition. If* $x(t)$ *cannot be defined past* t_1, *then* $\lim_{t \to t_1^-} \|x(t)\| = +\infty$.

It was pointed out to the authors by John Haddock that the proof is not complete. Although we feel that the theorem may still be true, we have been unable to give a complete proof.

REFERENCE

1. T. Burton and R. Grimmer, *Oscillation, continuation, and uniqueness of solutions of retarded differential equations*, Trans. Amer. Math. Soc. 179 (1973), 193–209.

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