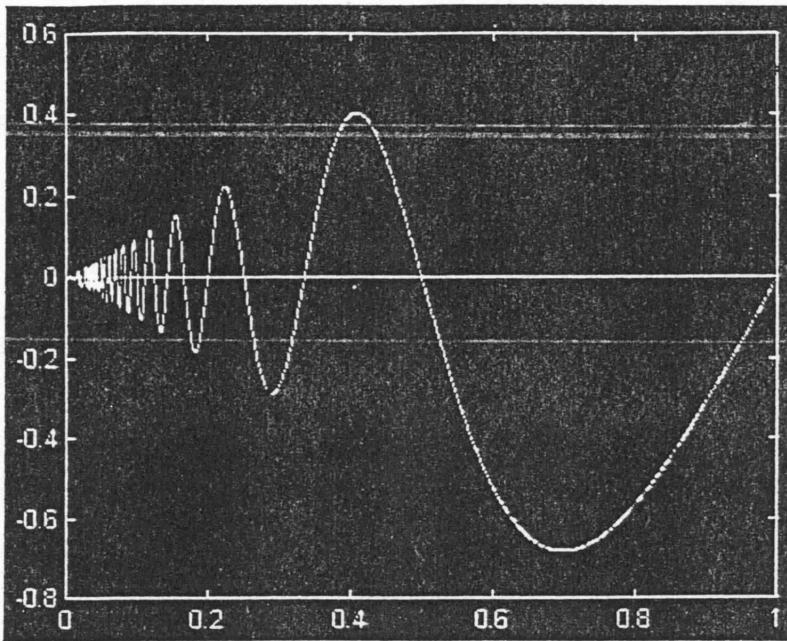FIGURE 2

3.2.4 An Example

Consider the function

$$f(t) = \begin{cases} t\sin\left(\dfrac{\pi}{t}\right) & \text{when } 0 < t \le 1 \\ 0 & \text{when } t = 0 \end{cases} \tag{17}$$

It can be shown that $f(t)$ is not of bounded variation.[6]