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Alfonso Castro, Claremont, CA , and **Stephen B Robinson*** (sbr@wfu.edu), Winston-Salem, NC 27106. *Infinitely Many Solutions for an Asymmetric and Weakly Superlinear Elliptic Boundary Value Problem.*

We consider the boundary value problem

$$\begin{aligned} -\Delta u &= f(u) \text{ in } \Omega, \\ u &= 0 \text{ on } \partial\Omega, \end{aligned}$$

where Ω is a smooth bounded domain in \mathbb{R}^2 , and $f(t)$ is a smooth nondecreasing function satisfying $f(0) = 0$. We show that if f satisfies a growth condition that we refer to as *weakly superlinear*, then the given problem has infinitely many solutions with ever increasing Morse index. We emphasize that f is not assumed to be an odd function, so obtaining infinitely many solutions using standard symmetry related arguments is not possible. (Received January 29, 2019)