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Wenxiong Chen* (wchen@yu.edu), Department of Mathematics, Yeshiva University, 2495 Amsterdam Av., New York, NY 10033, and **Congming Li**. *Symmetry of solutions for nonlinear equations involving the fractional p -Laplacian.*

we consider nonlinear equations involving the fractional p -Laplacian

$$(-\Delta)_p^s u(x) \equiv C_{n,s,p} PV \int_{\mathbb{R}^n} \frac{|u(x) - u(y)|^{p-2} [u(x) - u(y)]}{|x - z|^{n+ps}} dz = f(x, u).$$

We prove a *maximum principle* and obtain key ingredients for carrying on the method of moving planes, such as a *Hopf type lemma*. Then we establish radial symmetry and monotonicity for positive solutions to semilinear equations involving the fractional p -Laplacian in a unit ball and in the whole space. We believe that the methods developed here can be applied to a variety of problems involving nonlinear nonlocal operators. (Received March 03, 2017)