For a Jordan domain $\Omega$ in the extended complex plane $\mathbb{C}$, let $f_1$ and $f_2$ map $\Omega$ and $\Omega^* = \mathbb{C} \setminus \overline{\Omega}$ conformally onto the unit disk $\mathbb{D}$ and $\mathbb{D}^* = \mathbb{C} \setminus \overline{\mathbb{D}}$, respectively. Extending $f_1$ and $f_2$ homeomorphically to the boundary, one can define a homeomorphism of the unit circle as $h_\Omega = f_2 \circ f_1^{-1}|_{\partial \mathbb{D}}$, which is called a sewing homeomorphism induced by the Jordan domain $\Omega$. In this talk, we explore some connections between the analytic properties of the sewing homeomorphism $h_\Omega$ and the geometric properties of a Jordan domain $\Omega$. In particular, using conformal invariants such as harmonic measure, extremal distance, and reduced extremal distance, we give several necessary and sufficient conditions for the sewing homeomorphism to be bi-Lipschitz or bi-Hölder. (Received September 12, 2016)