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Two-Point Distortion Bounds for Biholomorphic Mappings of the Ball in \mathbb{C}^n . Preliminary report.

Lower and upper two-point distortion bounds for families \mathcal{F} of biholomorphic mappings on the unit ball \mathbb{B} of \mathbb{C}^n are given in terms of the (trace) order of the linear-invariant family generated by \mathcal{F} , bounds on ratios involving the derivative and Jacobian of the mappings in \mathcal{F} , and the Carathéodory distance on \mathbb{B} . (By two-point distortion bounds, we mean estimates on $\|f(b) - f(a)\|$ for $a, b \in \mathbb{B}$ and $f \in \mathcal{F}$.) This immediately results in growth bounds for such mappings. A contrast is drawn between these bounds and two-point distortion bounds in terms of the norm order of the generated linear-invariant family. (Received September 17, 2013)