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Salience of Visual Parts
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Many objects have component parts, and these parts often differ in their visual salience. In this paper we present a theory of part salience. the theory builds on, and extends, the minima rule for dividing shapes into parts (Hoffman & Richards, 1984). According to this rule, human vision divides silhouettes into parts at a negative minima of curvature, and divides surfaces along negative minima of the principle curvatures. We propose that the salience of a part so defined depends on (at least) three factors: its size relative to the whole object, the degree to which it protrudes, and the strength of its boundaries. We give quantitative definitions for these factors and visual demonstrations of their effects.