

The ability to see complete objects despite occlusion is critical to our visual success. Human vision can amodally complete visual objects that are partially occluded, and modally complete visual objects that occlude other objects. Experiments by Shipley & Kellman (1992a) show that the perceived strength of a completed contour depends on its support ratio: the ratio of length of the "physically" specified contour to the total length of the contour. Experiments by Tommasi, Bressan, & Vallortigara (1995) show that human vision prefers to make modal completions as short as possible, an effect known as Petter's rule (Petter, 1956). This paper studies the relationship between Petter's rule and support ratio, shows that both affect modal completion in figures of homogeneous color, that they combine additively, but that when they compete Petter's dominates. Finally, our results show that Petter's rule is an effect of relative gap lengths and not of relative size.