

Abstract tesi di dottorato in Scienze Cognitive (ciclo XX) di Stefano Guidi

Titolo della tesi: "Framing the frame: goodness-of-fit within a rectangular frame and the aesthetics of visual composition".

Abstract:

We present a series of experiments in which we examined what determines the way simple shapes, such as small circles or isosceles triangles are considered to fit within a framed space, either by themselves, or in the context of other elements simultaneously present in the frame. In several experiments, the rectangle's center was rated as the best-fitting position for a small, circular dot, with elevated fit ratings also along global axes of symmetry (both horizontal and vertical) and local axes of symmetry (on angle bisectors). Together, centeredness and symmetry accounted for more than 90% of the variance. Changing the probes to isosceles triangles or chevrons revealed strong orientational effects, especially when the probe's axis of symmetry were aligned with the frame's axes of symmetry as mentioned above. Fit-ratings within rectangles at different orientations (0, 45, 90, and 135 degrees) showed that these orientational effects were driven by alignment with the rectangle's sides rather than with gravitational or retinal axes. Directional biases for better fit were also evident when the triangle pointed into the frame, upward, and/or rightward. The pattern of fit-ratings for a dot changed dramatically when a second contextual dot was also present, but high ratings were still observed when the whole configuration was symmetrical and when the two dots were close together and/or parallel to the frame's sides. When the two dots differed in size, thus breaking precise symmetry, observers gave higher ratings to positions that achieved balance in their visual weights. Alignment, proximity and symmetry were the most influential factors also when the contextual dot was a short line, instead of another circle. When the line was extended, so that it divided the frame into two smaller rectangular parts, however, the pattern of fit ratings changed again, with the internal structure of the smaller inner rectangles dominating that of the larger outer rectangle. Overall, the results of our experiments show that the goodness-of-fit of a single probe shape within a frame seem to be mainly driven by the structural properties of the space (center and symmetry axes) and by the relationship between this structure and the structure of the probe itself (alignment, coincidence, parallelism). When more than one element is present, fit depends on the symmetry and balance of the global configuration relative to the structure of the frame, but relations among the elements, such as alignment and proximity, also seem to play again an important role. These results are discussed as relevant to the psychology of aesthetic preferences for visual composition.