

Law of Prägnanz

A tendency to interpret ambiguous images as simple and complete, versus complex and incomplete.¹

The Law of Prägnanz is one of several principles referred to as *Gestalt principles of perception*. It asserts that when people are presented with a set of ambiguous elements (elements that can be interpreted in different ways), they interpret the elements in the simplest way. Here, “simplest” refers to arrangements having fewer rather than more elements, having symmetrical rather than asymmetrical compositions, and generally observing the other Gestalt principles of perception.²

For example, a set of shapes that touches at their edges could be interpreted as either adjacent or overlapping. When the shapes are complex, the simplest interpretation is that they are adjacent like pieces in a puzzle. When the shapes are simple, the simplest interpretation is that they overlap one another. The law applies similarly to the way in which images are recalled from memory. For example, people recall the positions of countries on maps as more aligned and symmetrical than they actually are.

The tendency to perceive and recall images as simply as possible indicates that cognitive resources are being applied to translate or encode images into simpler forms. This suggests that fewer cognitive resources may be needed if images are simpler at the outset. Research supports this idea and confirms that people are better able to visually process and remember simple figures than complex figures.³

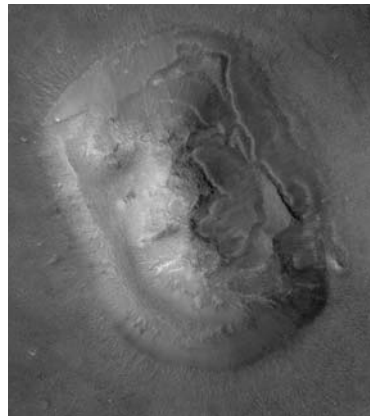
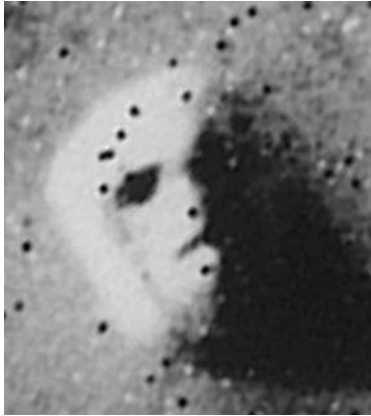
Therefore, minimize the number of elements in a design. Note that symmetrical compositions are perceived as simpler and more stable than asymmetrical compositions, but symmetrical compositions are also perceived to be less interesting. Favor symmetrical compositions when efficiency of use is the priority, and asymmetrical compositions when interestingness is the priority. Consider all of the Gestalt principles of perception (closure, common fate, figure-ground relationship, good continuation, proximity, similarity, and uniform connectedness).

See also Aesthetic-Usability Effect, Ockham's Razor, Rule of Thirds, and Visuospatial Resonance.

¹ Also known as the *law of good configuration*, *law of simplicity*, *law of pregnance*, *law of precision*, and *law of good figure*.

² The seminal work on the Law of Prägnanz is *Principles of Gestalt Psychology* by Kurt Koffka, Harcourt Brace, 1935.

³ See, for example, “The Status of Minimum Principle in the Theoretical Analysis of Visual Perception” by Gary Hatfield and William Epstein, *Psychological Bulletin*, 1985, vol. 97, p. 155–186.



Low resolution images (left) of a rock formation on Mars led many to conclude that intelligent life once existed there. Higher-resolution images (right) taken some years later suggest a more Earth-based explanation: Humans tend to add order and meaning to patterns and formations that do not exist outside their perception.

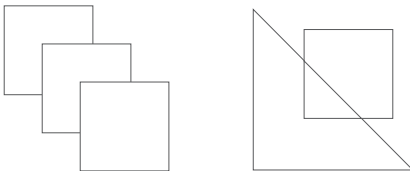
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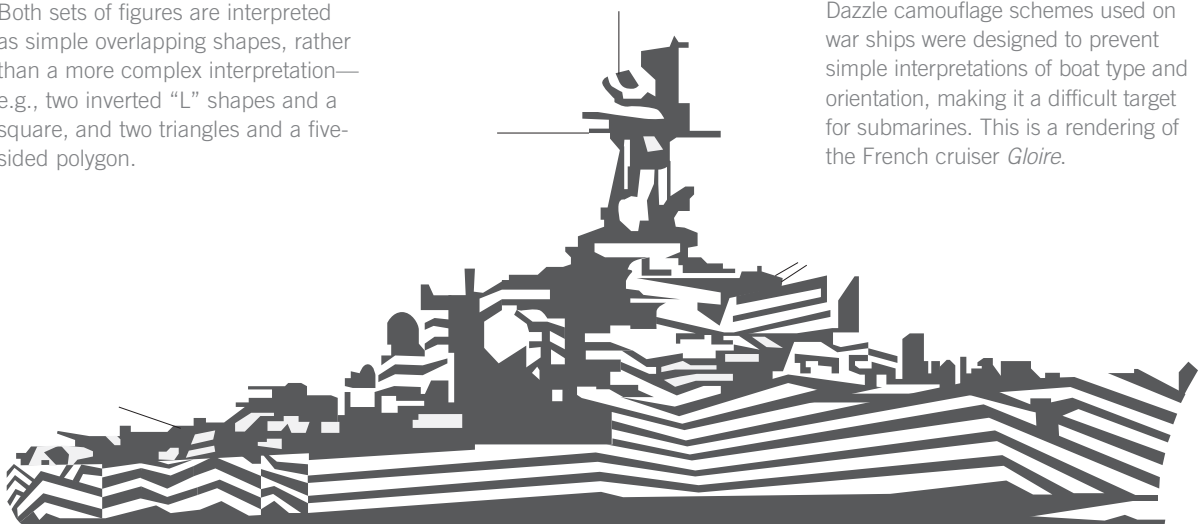
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Both sets of figures are interpreted as simple overlapping shapes, rather than a more complex interpretation—e.g., two inverted “L” shapes and a square, and two triangles and a five-sided polygon.

These sets of characters are interpreted as single faces rather than multiple independent characters.



Dazzle camouflage schemes used on war ships were designed to prevent simple interpretations of boat type and orientation, making it a difficult target for submarines. This is a rendering of the French cruiser *Gloire*.