# Gestalt Laws Of Grouping

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## Introduction

The gestalt is a psychological term that refers to the theories of visual perception, which attempt to describe how people organize their visual elements into groups under certain principles. It made remaining assistance to the scientific study of visual perception and problem-solving, making it integrated in other research fields (International Symposium on Visual Computing et al., 2008). According to gestalt psychologists, we see things in a more structured and cohesive manner as opposed to fractional particles in disorder. This led to the emergence of a famous school of thought known as the Gestalt psychology, whose ideas are practical and applicable today. The main proponent of this school is Max Wertheimer-1912. The study of modern psychology has a foundation in the school of thought. This paper aptly examines the gestalt principles in details (Goldstein, 2010).

The principles have two distinct categories that are perceptual grouping and figure and ground. In figure and ground, gestalt psychologists argued that in order to recognize an object, we need to perceive this object as being separate from its surroundings. Therefore, we are likely to see certain image parts as the actual figure and the rest of the areas as the ground since human knowledge is in terms of distinct objects. For instance, when we write words on a paper, we perceive them as being distinct from the paper. Therefore, they assume the characteristics of a figure while the paper becomes a mere background. This is necessary in daily living and interaction as it takes care of aspects of considerable importance. It entails a practical application of what is learnt to identify what is happening instead of relating it to magic (Bernstein, 2007).

Under perceptual grouping, we have various sub-categories for consideration. Firstly, because things of the same kind are on the same matter, then it becomes obvious that they will have the same image properties. Basing assumptions on this, then we will develop a tendency of grouping objects with similar properties ranging from size, shape and texture. This gave rise to the gestalt law of similarity which is one of the easiest. When objects look similar, people perceive them as a group or pattern more often (Goldstein, 2010).

The second law is the gestalt law of proximity. It is the tendency to perceive stimuli that are near to each other as if they belong together. It is diverse, fascinating and complicated at times, of all the principles. It is simply about the relationship of how elements arranged close together and the way we perceive with the eye. It occurs when objects or elements are close to each other. We have a tendency to group nearby objects basing on the fact that matter is cohesive, leading to meaningful configuration of nearby objects (Ware, 2012).

On top of that, we have closure which is the predisposition to complete similar objects that contain gaps. It is how items are if they tend to complete a pattern. When an object is incomplete, or a space not entirely enclosed, and if there is enough space, it provides adequate information to the clue of what the object is, thus people will perceive the whole by filling the missing information (Goldstein, 2007). Tension can be taken to characterize closure in that it seems like a structure with two dimensions. This principle applies when we have a tendency to recognize figures as complete even when some parts of information are missing (Ware, 2012).

Gestalt psychologists are of the view that that continuity is the leaning to see patterns and perceiving things as belonging together. The continuation can be said to occur when the eyes move from an object through to another (International Symposium on Visual Computing et al., 2008). According to this law, objects arranged in either a smooth curve or straight line, are likely to be seen as a single unit. The observer has a tendency to follow a path to where it

leads. The cluttered image method designed in order to study this principle. A contour formed from localized oriented elements entrenched in a random field of homogeneously distributed distracting elements, in order to eliminate the role of proximity. Aligning the contour element tangent, to the contour makes the contour easily detected while randomizing the orientation of the elements makes the contour invisible, clearly demonstrating the role of good continuation in isolation from proximity (Lowe et al, 2007).

Another principle is the law of common fate. According to the proponents, when the objects tend to move in the same direction, people see them a unit. People may see distinct objects with the same motion as a block since they may consist of parts whose motion depend on the object's motion and thus, projecting the image in a coherent way. This principle is valid in a wide range of conditions. As a result, an experiment based on grouping by common luminance changes, shows that elements of a visual scene become dark, even if they have luminance all through, observers will group those elements perceptually (International Symposium on Visual Computing et al., 2008).

The principles under perceptual grouping are extremely beneficial in the learning of different grounds. They provide adequate information applicable in real life situations to grass root level understanding to satisfy people's curiosity. Basic understanding is easy through analysis of all details rather than just trying to understand the situation. The principles have led to the explanation of natural phenomenon that occurs in daily life. We see an organized form of images that we have and which we will continue to encounter daily. The arrangement of this information so as to come up to come up with different patterns as explained by the gestalt school, is what makes it take its position to the contributions in modern psychology (Goldstein, 2010).

The law of Pragnanz has it that gestalt emerges from a non-linear process. This process, like any other physical one, the brain tends towards relatively stable neural states. This notion has

led to initially representational approaches than later, dynamic-systems that model the neural states. This triggered a controversy about what may be the better of the two approaches. After a careful analysis, it is evident that the two complement each other. However, future research may reveal whether the two remain different or can be merged into one, but a bridging function may be played by connections. This in particular is paramount in unveiling details that may be hidden and also providing a stable concrete ground for new findings from the research. This enhances easy understanding of information in the field and its related facts (Goldstein, 2007).

## Conclusion

The epicenter of gestalt theory is putting together based on similarity or rather grouping and how we tend to read between the lines to see the visual field or difficulty. The field of research on perceptual grouping and figure ground organization is thriving, and the overall progress is tremendous. However, significant challenges remain, and most influential, how to integrate the tradition of research with the rest of visionary science. Inadequate computational facilities and process models are also a limitation in the current research in perceptual grouping and figure ground organization. In order to obtain adequate, accurate and reliable information in the fields, there is the need to upgrade systems to meet these goals and objectives. The ultimate goal of science is to provide information to benefit humanity in the social life (Lowe et al, 2007).

Gestalt psychology led to the emergence of structure in perceptual experience. This led to the subjective nature of phenomenal awareness remaining the main topic of research. The school of thought made significant efforts by using tools that were not at their disposal to come up with information in the two fields. Unfortunately, critics criticized the gestalt theory because it offered demonstrations with natural stimuli and formulation of laws with little precision. This translated to claims that gestalt principles were inattentive, innate and independent of

experience being exaggerated. Many questions arose as to gestalt notions in accordance to what we know about vision. To sum up, all principles should provide a clue as to what, how and when events under each occur. The school of thought laid the foundation for future researches in the field to provide relevant information in this respect (International Symposium on Visual Computing et al., 2008).

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