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D (II)H Paper IV-Systems in Psychology

Topic: Gestalt Principles

In perception, there are many organizing principles called **gestalt laws**. The most general version is called the **law of prägnanz**. Prägnanz is German for pregnant, but in the sense of pregnant with meaning, rather than pregnant with child. This law says that we are innately driven to experience things in as good a gestalt as possible. "Good" can mean many things here, such as regular, orderly, simple, symmetrical, and so on, which then refer to specific gestalt laws.

For example, a set of dots outlining the shape of a star is likely to be perceived as a star, not as a set of dots. We tend to complete the figure, make it the way it "should" be, finish it. Like we somehow manage to see this as a "B"...

The **law of closure** says that, if something is missing in an otherwise complete figure, we will tend to add it. A triangle, for example, with a small part of its edge missing, will still be seen as a triangle. We will "close" the gap.

The **law of similarity** says that we will tend to group similar items together, to see them as forming a gestalt, within a larger form. Here is a simple typographic example:

OXXXXXXXXXX

XOXXXXXXXX

XXOXXXXXXXX

XXXOXXXXXXX

XXXXOXXXXXX

XXXXXOXXXXX

XXXXXXOXXXX

XXXXXXXOXXX

XXXXXXXXOXX

XXXXXXXXXOX

XXXXXXXXXXO

It is just natural for us to see the o's as a line within a field of x's.

Another law is the law of proximity. Things that are close together as seen as belonging together. For example...

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You are much more likely to see three lines of close-together *'s than 14 vertical collections of 3 *'s each.

Next, there's the law of symmetry. Take a look at this example:

[   ][   ][   ]

Despite the pressure of proximity to group the brackets nearest each other together, symmetry overwhelms our perception and makes us see them as pairs of symmetrical brackets.

Another law is the law of continuity. When we can see a line, for example, as continuing through another line, rather than stopping and starting, we will do so, as in this example, which we see as composed of two lines, not as a combination of two angles...:
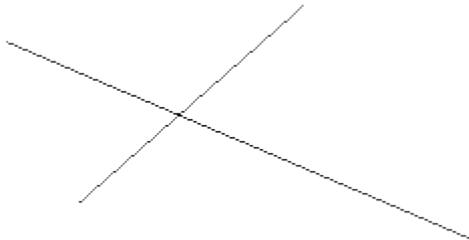
Figure-ground is another Gestalt psychology principle. It was first introduced by the Danish phenomenologist Edgar Rubin (1886-1951). The classic example is this one...

Basically, we seem to have an innate tendency to pereive one aspect of an event as the figure or fore-ground and the other as the ground or back-ground. There is only one image here, and yet, by changing nothing but our attitude, we can see two different things. It doesn't even seem to be possible to see them both at the same time!

But the gestalt principles are by no means restricted to perception -- that's just where they were first noticed. Take, for example, **memory**. That too seems to work by these laws. If you see an irregular saw-tooth figure, it is likely that your memory will

straighten it out for you a bit. Or, if you experience something that doesn't quite make sense to you, you will tend to remember it as having meaning that may not have been there. A good example is dreams: Watch yourself the next time you tell someone a dream and see if you don't notice yourself modifying the dream a little to force it to make sense!

Learning was something the Gestalt psychologists were particularly interested in. One thing they noticed right away is that we often learn, not the literal things in front of us, but the **relations** between them. For example, chickens can be made to peck at the lighter of two gray swatches. When they are then presented with another two swatches, one of which is the lighter of the two preceding swatches, and the other a swatch that is even lighter, they will peck not at the one they pecked at before, but at the lighter one! Even something as stupid as a chicken "understands" the idea of relative lightness and darkness.

Gestalt theory is well known for its concept of **insight learning**. People tend to misunderstand what is being suggested here: They are not so much talking about flashes of intuition, but rather solving a problem by means of the recognition of a gestalt or organizing principle.

The most famous example of insight learning involved a chimp named Sultan. He was presented with many different practical problems (most involving getting a hard-to-reach banana). When, for example, he had been allowed to play with sticks that could be put together like a fishing pole, he appeared to consider in a very human fashion the situation of the out-of-reach banana thoughtfully -- and then rather suddenly jump up, assemble the poles, and reach the banana.

A similar example involved a five year old girl, presented with a geometry problem way over her head: How do you figure the area of a parallelogram? She considered, then excitedly asked for a pair of scissors. She cut off a triangle from one end, and moved it around to the other side, turning the parallelogram into a simple rectangle. Wertheimer called this **productive thinking**.
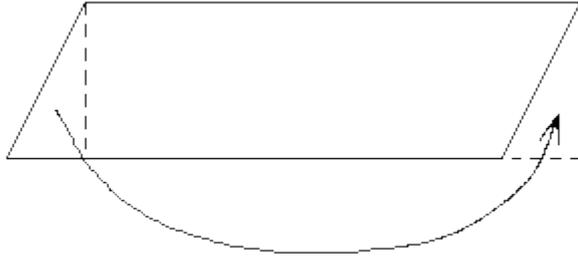
The idea behind both of these examples, and much of the gestalt explanation of things, is that the world of our experiencing is meaningfully organized, to one degree or another. When we learn or solve problems, we are essentially recognizing meaning that is there, in the experience, for the "dis-covering."

Most of what we've just looked at has been absorbed into "mainstream" psychology -- to such a degree that many people forget to give credit to the people who discovered these principles! There is one more part of their theory that has had less acceptance: **Isomorphism**.

Isomorphism suggests that there is some clear similarity in the gestalt patterning of stimuli and of the activity in the brain while we are perceiving the stimuli. There is a "map" of the experience with the same structural order as the experience itself, albeit "constructed" of very different materials! We are still waiting to see what an experience "looks" like in an experiencing brain. It may take a while.

Kurt Lewin: Gestalt Psychology, even though it no longer survives as a separate entity, has had an enormous impact. Two people in particular lead the way in introducing it into other aspects of psychology: Kurt Goldstein and Kurt Lewin.

Kurt Lewin was born September 9, 1890, in Mogilno, Poland. He received his PhD from the University of Berlin under Stumpf. After military service, he returned to Berlin where he worked with Wertheimer, Koffka, and Köhler.

He went to the U.S. as a guest lecturer at Stanford and Cornell, and took a position at the University of Iowa in 1935. In 1944, he created and directed the Research Center for Group Dynamics at MIT. He died in 1947, just beginning his work there.

Lewin created a **topological** theory that expressed human dynamics in the form of a **map** representing a person's **life space**. The map is patterned with one's needs, desires, and goal, and **vectors** or arrows indicating the directions and strengths of these forces -- all operating as a Gestalt.

This theory inspired any number of psychologists in the U.S., most particularly those in social psychology. Among the people he influenced were Muzafer Sherif, Solomon Asch, and Leon Festinger.

Kurt Goldstein: The other person was Kurt Goldstein. Born in 1878, he received his MD from the University of Breslau in 1903. He went to teach at the Neurological Institute of the University of Frankfurt, where he met the founders of Gestalt psychology.

He went to Berlin to be a professor there, and then went on to New York City in 1935. There, he wrote **The Organism** in 1939, and later **Human Nature in the Light of Pathology** in 1963. He died in 1965.

Goldstein developed a holistic view of brain function, based on research that showed that people with brain damage learned to use other parts of their brains in compensation. He extended his holism to the entire organism, and postulated that there was only one drive in human functioning, and coined the term **self-actualization**. Self-preservation, the usual postulated central motive, he said, is actually pathological!

Goldstein and his idea of self-actualization influence quite a few young personality theorists and therapists. Among them would be Gordon Allport, Carl Rogers, and Abraham Maslow, founders of the American humanistic psychology movement.

Source: Baron -Psychology