

Figure, Ground, Posture and Movement

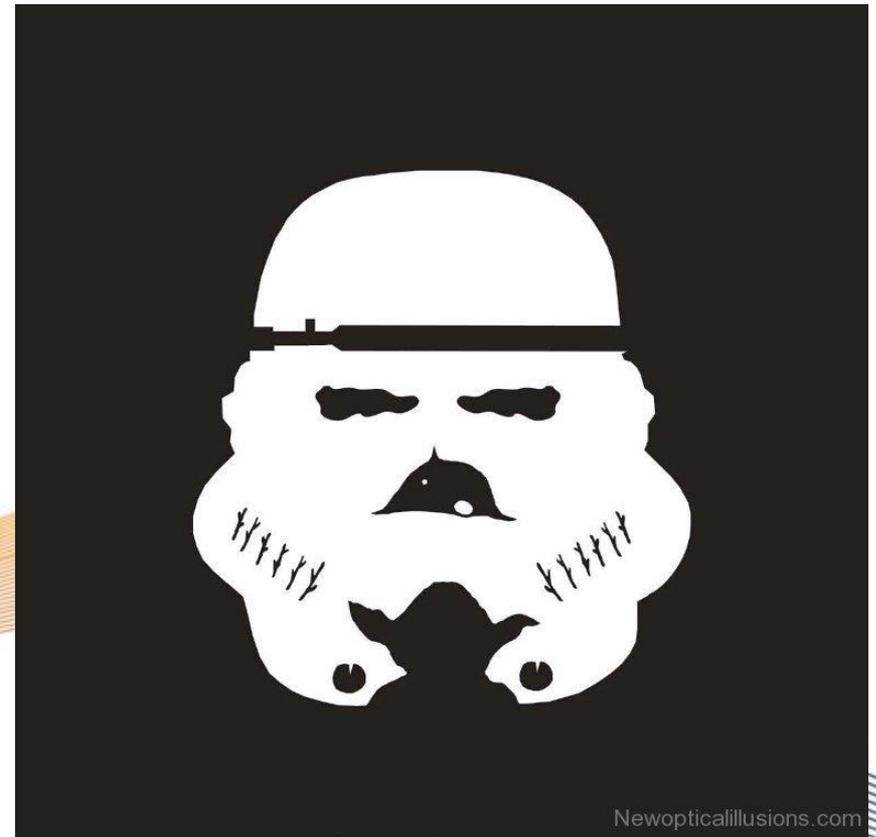


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Greg Kitchener (2017)

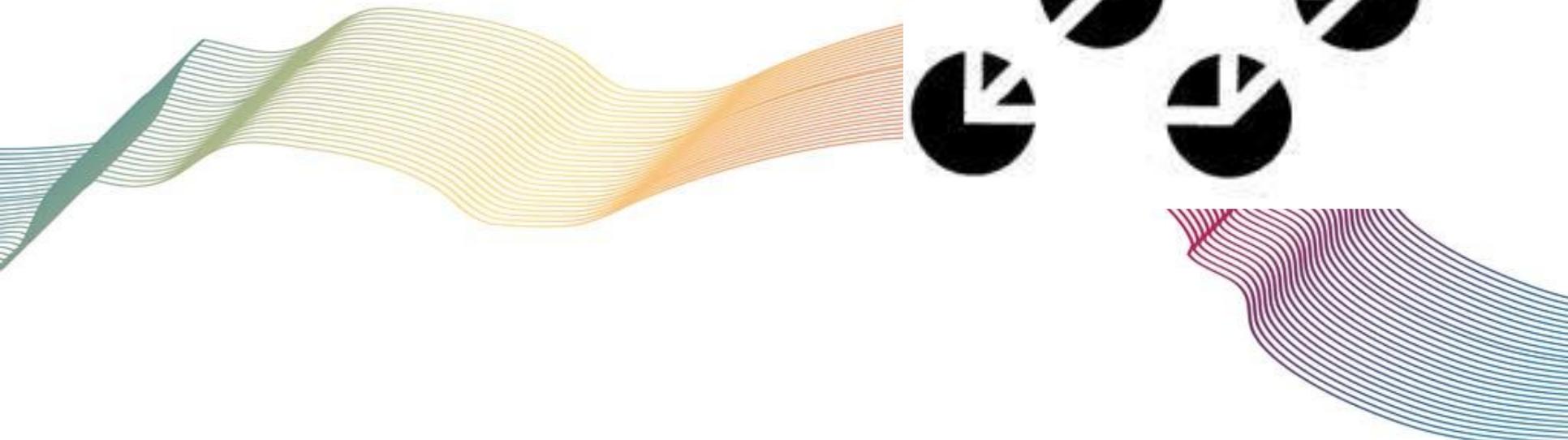
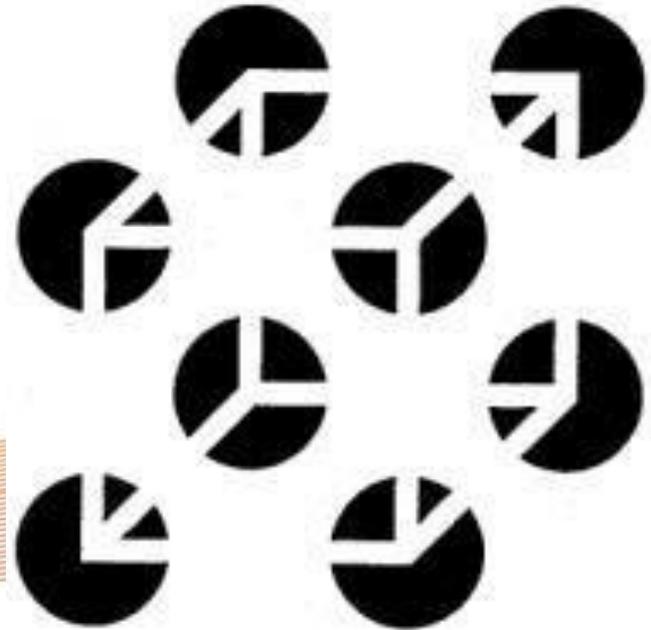
Form may be a figure but it is not a static object.

The ground from which it emerges is the repertoire of body movements by which the figure is made.



Greg Kitchener (2017)

To alter the figure we need to make a change in the ground first.



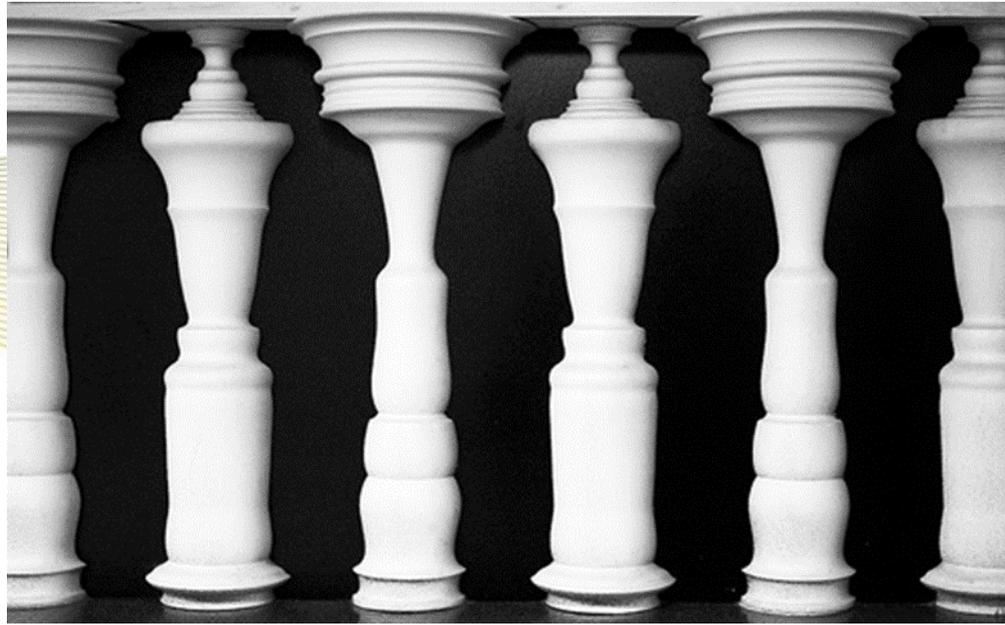
Gestalt Psychology

G W Hartmann, A T Poffenberger (1935)

- The ground is generally localised behind the figure, is less structured or differentiated, less penetrating, less independent, less meaningful, and in a sense, less “real” and lively than the figure.
- The figure has “thing”-character and the ground “stuff”-character, a thing being considered as stuff plus form, as in the case of a water drop which is essentially water and a representative spherical contour.

Routledge Philosophy Guidebook to Merleau-Ponty and Phenomenology of Perception (2011)

Gestalt psychologists claim that every visual experience, and perception, will have a figure-background structure, and if an experience is structured in this way, then it is differentiated.



Routledge Philosophy Guidebook to Merleau-Ponty and Phenomenology of Perception (2011)

- The figure is the focus of attention and is perceived distinctly and in detail, whilst the background is perceived with varying degrees of indistinctness and indeterminacy.
- The subject is conscious of both the figure and the background - they both contribute to 'what it is like' for them - even though their awareness of them is different.
- In contrast, merely registering the presence of things does not contribute to 'what it is like' for the subject.

Visual Psychology

S Renshaw (1965)

The results of movements, and their after-effects, we know form the essential grounds from which emerge meaningful figure processes.



Visual Psychology

S Renshaw (1965)

- If a pattern is organised as a figure within the visual field, it will remain as a figure only for a limited time. Figure structures in a visual field are self-extinguishing.
- This is perfectly consistent with the field concept and its dynamics. Stresses are set up by figure formation in a field so that inside the figure the forces are cohesive and unifying. They tend towards common center.
- Outside the figure region the forces are disjunctive. These comprise the ground within which the figure is formed.
- Things seen as figure or ground have very different properties perceptually.

Visual Psychology

S Renshaw (1965)

- When some unfamiliar object is presented to an observer, the first thing that happens is a vague awareness that there is something out there in the visual field.
- Then comes the stage of the generic object. To the observer, the object falls into some general class known for these objects.
- There is a partial differentiation of the visual field as some areas are suppressed. The pattern of a figure, set in fore, mid, and backgrounds begins to form. Contours are formed, with different operational properties than those seen as ground.

Visual Psychology

S Renshaw (1965)

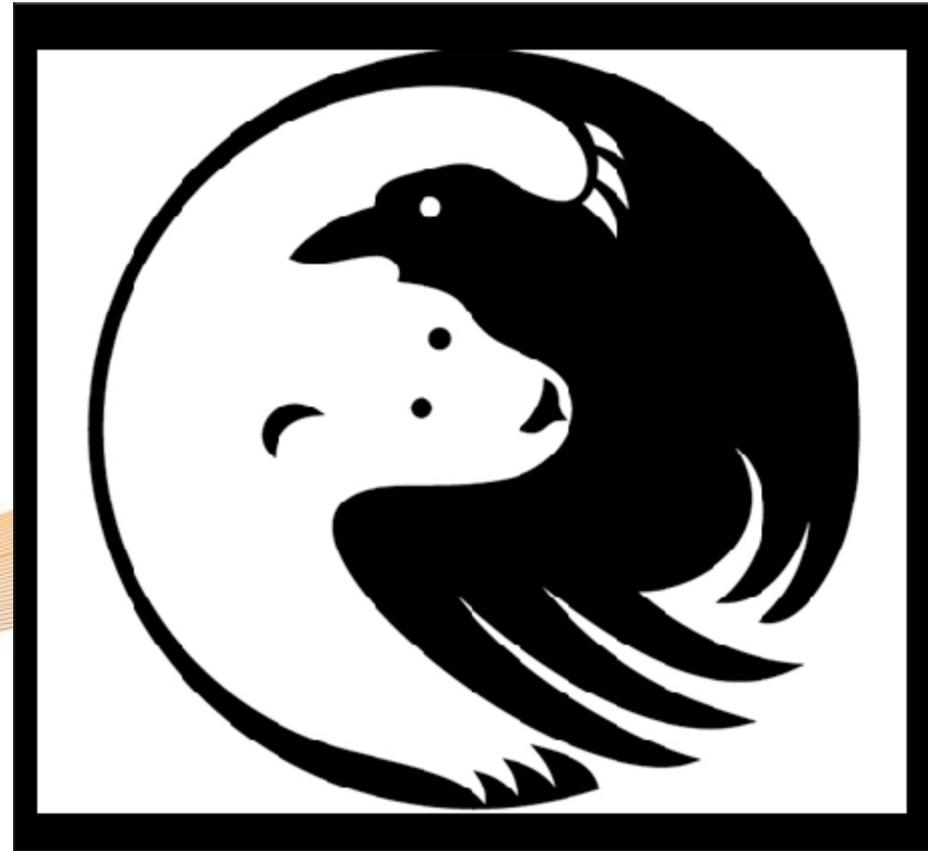
- In the third stage of the process of perceiving, those parts of the field which are relevant and important to the form emerge, and this is called the stage of the specific object.
- Stage four is that of field reorganisation. Regrouping to form a stronger and more stable equilibrium within the field leads to a reference of the field content to various frames of reference, usually expressed as “Is it a....?” or, “It looked like it might be a,” or “I saw something like this last month at’s house.”

Visual Psychology

S Renshaw (1965)

The final stage, which is designated as the effort or search for meaning.

This is an examination of the inferences or guess, a further suppression of irrelevant detail, and often naming or classifying occurs at this point.



Visual Psychology

S Renshaw (1965)

- Then there is the principle of perceptual filling. Sometimes only a part of something needs to be shown, and this touches off trace systems which complete and extend the figure processes to completion.
- A part or parts can often touch off, in perception, the same thing as a whole.
- This is a most important fact, since figure processes form the substance of the cognitive and conative processes which we designate as abstraction and generalisation.

Conative?

This is a most important fact, since figure processes form the substance of the cognitive and conative processes which we designate as abstraction and generalisation.

Conation (from the Latin conatus) is any natural tendency, impulse, striving, or directed effort. ... In short, the **cognitive** part of the brain has to do with intelligence, the **affective** deals with emotions and the **conative** drives how one acts on those thoughts and feelings.

- For example, we can believe teenagers are lazy (cognitive), we do not have to hate the teenagers for being lazy (affective), but we could still try to keep them out of the library because of that fact (conative).

Visual Psychology

S Renshaw (1965)

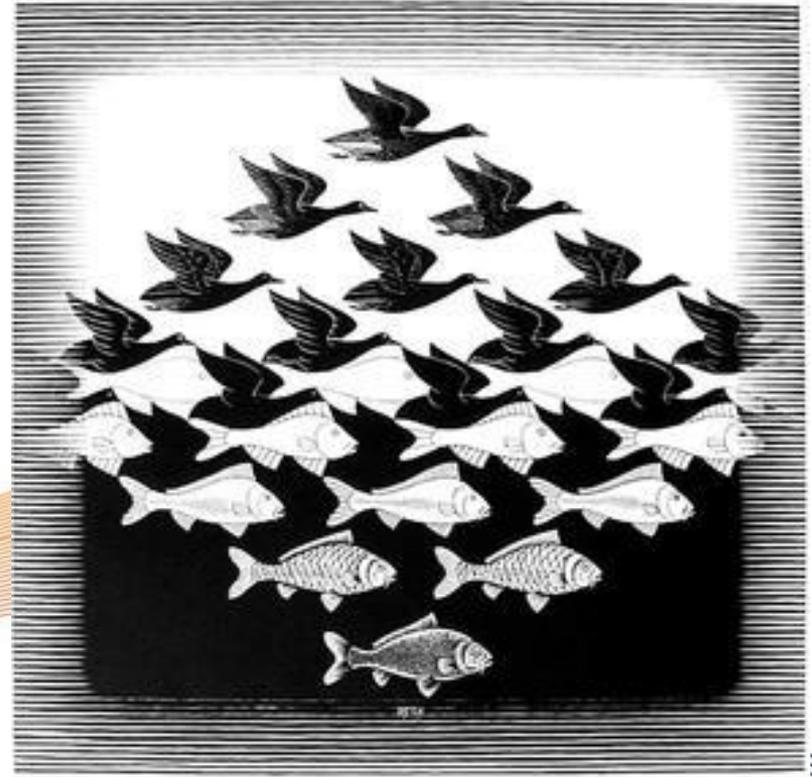
Language which begins as posture, gesture and mimesis is a case in point where the symbols come to touch off not only single meanings but to induce closure, which is another very important function of figure processes.



Visual Psychology

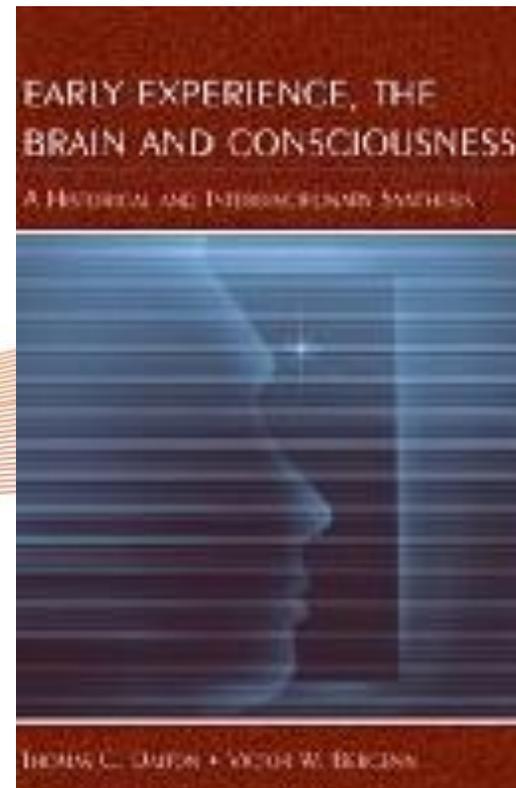
S Renshaw (1965)

The results of movements, and their after-effects, form the essential grounds from which emerge meaningful figure processes.



Early Experience, the Brain and Consciousness, Dalton and Bergenn (2007)

...movement is an intrinsic and ineradicable element of each and every sensory perception.



Early Experience, the Brain and Consciousness, Dalton and Bergenn (2007)

Perceptual knowledge depends on the relationship between:-

- posture that furnishes the ground,
- the spatial position of the object in view,
- intersensory judgement, and
- proprioceptive feedback.

Visual Psychology

S Renshaw (1965)

Sir Henry Head, the eminent neurologist, said
“Every recognisable postural change enters
consciousness already charged with its relation to
something that has gone before.

So, the final product of the tests for the appreciation
of posture, or of passive movement, rises into
consciousness as a measured postural change”.



Visual Psychology

S Renshaw (1965)

Sir Henry Head

“By means of perceptual alterations of position we are always building up a postural model of ourselves which constantly changes.

Every new posture of movement is recorded and the activity of the cortex brings every fresh group of sensations evoked by altered posture into relation with it.

Immediate posture recognition follows as soon as this relation is complete”.

Developmental Diagnosis

Gesell (1941)

- Locomotion is a dynamic, repetitive projection of posture.
- Postural sets are neuro-motor fixations by means of which the child achieves station, balance, stance, steadiness and preparatory poise.



Developmental Diagnosis

Gesell (1941)

- Postural set may issue in overt movement, and it is itself a form of action because it requires active counterbalancing inhibitions.
- Postural set and movement patterns are so closely related that most sensori-motor reactions should be clinically envisaged in terms of posture.

The Brain's Sense of Movement

A Berthoz (2000)

- Posture is the first expression of movement, it is intended or suggested movement, the dynamic form of which is called 'readiness to move'.
- Natural movement is a source of pleasure; pleasure is a necessary element of perception and cognition, and the source of this pleasure is in movement.

Postural Control: A key issue in developmental disorders

M Hadders -Algra, Eva Brogen Carlberg (2008)

Anticipatory Postural Adjustments (APAs)

- A number of mechanisms protect the inherently unstable bipedal posture from mechanical perturbations.
- One of them represents feed-forward changes in the activity of postural muscles in anticipation of a perturbation.

Postural Control: A key issue in developmental disorders

M Hadders -Algra, Eva Brogen Carlberg (2008)

Anticipatory Postural Adjustments (APAs)

- For example, when a standing person makes a very fast shoulder movement, first signs of changes in the muscle activity are seen not in prime movers for the planned action (such as, for example, the deltoid muscles) but in postural muscles of the lower extremities and the trunk.

Postural Control: A key issue in developmental disorders

M Hadders -Algra, Eva Brogen Carlberg (2008)

Anticipatory Postural Adjustments (APAs)

- Such anticipatory postural adjustments (APAs) are seen up to 100-150 ms prior to the first visible change in the activity of prime movers for the focal action.
- They produce shifts in the magnitude and point of application of the resultant reactive force acting on the body from the support surface as well as changes in body configuration, although joint excursions during APAs are typically small, of the order of one degree.

Visual process

Postural control,

- part of the visual process;
- a constantly monitored and modified organisational process;
- a precursor to movements;
- develops alongside movement development.

Visual process

Postural control,

- subconsciously maintains the tonus in the muscles to keep the body in balance and equilibrium;
- is described as being dynamic or static depending on whether the body is moving or staying still.

But even when the body is still, postural control is acting to maintain muscle tone, balance and equilibrium.

Concluding thoughts

- The importance to the visual process of figure/ground and form in perception, cognition and abstraction.



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- The results of movements, and their after-effects, form the essential grounds from which emerge meaningful figure processes.

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- The importance to the visual process of figure/ground and form in perception, cognition and abstraction.
- The results of movements, and their after-effects, form the essential grounds from which emerge meaningful figure processes.
- To alter the figure we need to make a change in the ground first.

Concluding thoughts

- Posture forms the ground for movement to emerge as the figure.



Concluding thoughts

- Posture forms the ground for movement to emerge as the figure.
- In considering figure/ground, we can change the ground to have a change in the figure; and so it is by a change in the postural ground that will gain a change in the movement figure.

Thanks



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