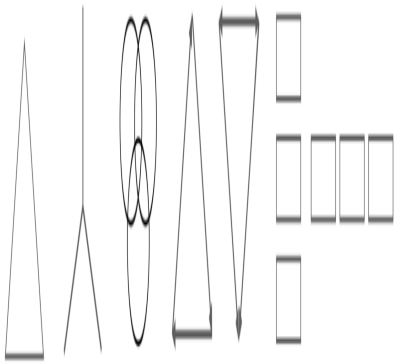


What does a theory look like?

Description

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What do theories look like? They are shaped like *triangles*. Theories are triangular. I am being glib, but according to one of the top OED definitions, a theory is a â??collection of theorems forming a connected system.â?• The least number of entities that can be connected to create a number of relationships greater than the number of the entities is *three* (see note). Itâ??s a minimal network. Two is good â?? with both entities positioned at the end of a straight line, or one above the other â?? but three of anything is where the combination starts to get interesting.

Most of us recognise instantly three of something, even three *different* things, without counting them. See Graham Shawcross on subitising. Also see some youtube clips teaching infants to count and calculate by instantly recognising clusters of 2, 3, 4, 5 and 6 (e.g. The Subitizing Song). The earliest lessons focus on threes. Groups of three are easy to pick out at a glance however they are arranged.



The number three makes good diagrams. Triangles are easy to draw. The corners can be described variously, as can the lines connecting them. Three parameters (x, y and z) are sufficient to define a point in space (relative to an origin), three vectors define the trajectory of a point moving through space, and as any camper or tripod user knows, three anchor points stabilise a vertical pole.



As the philosopher G.W.F. Hegel (1770-1831) assumed, singular concepts turn rapidly into twos and then threes: a (1) *thesis* draws attention to its (2) *antithesis* producing a (3) *synthesis*. Even Jacques Derrida, whoâ??s philosophy pivots on the philosophy of the opposition (twos), resorts to a third term to subvert his protagonistsâ?? metaphysical claims. So Derrida aggravates the discourse asserting the privilege of (1) *speech* over (2) *writing*, not by arguing for the superiority of either, but identifies an entity

that precedes them both ontologically, namely (3) *protowriting*.

Geometries based on the number three provide useful templates, with arcs and vertices labelled variously, through which to peg down the basic components of many complicated theories.

Here is a tip for making a theory: if you must use diagrams then start with a triangle, or at least three circles or boxes. You can keep adding to that, but retain the prominence of the initial three.

Many thinkers avoid being pegged down by triangular logic, and so eschew diagrams altogether. Thatâ??s not the case with C.S. Peirce, who elevated triadic thinking to something like a diagrammatic â??obsession.â?• See previous post on triadomania.

Here is a list of common triads by Peirce and others in no particular order:

- major premise, minor premise, conclusion (Aristotle)
- thesis, antithesis, synthesis (Hegel)
- firmness, commodity, delight (Vitruvius)
- firstness, secondness, thirdness (Peirce)
- icon, index, symbol (Peirce)
- deduction, induction, abduction (Peirce)
- symbol, reference, referent (Ogden and Richards)
- world 1, world 2, world 3 (Karl Popper)
- building, dwelling, thinking (Heidegger)
- poetry, language, thought (Heidegger)
- zany, cute, interesting (Sianne Ngai)
- analysis, synthesis, enumeration (Descartes)
- analysis, synthesis, evaluation (Christopher Alexander)
- Father, Son, Holy Spirit (New Testament)
- Michaelmas, Lent, Easter (Old University term structure)
- red, green, blue
- solid, liquid, gas
- mother, father, offspring
- Jocasta, Laius, Oedipus (Oedipus myth and Freud)
- blood, sweat, tears (New testament, Winston Churchill)
- libertÃ©, Ã©galitÃ©, fraternitÃ© (epithet of France)
- veni, vidi, vici (Julius Caesar)
- life, liberty, and the pursuit of happiness (U.S. Declaration of Independence)
- pick yourself up, brush yourself off, start all over again (Dorothy Fields)

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The would-be theorist faces several challenges: What is the domain in which the triad has relevance? Do its elements cover all cases and situations? Are the three elements of equal weight, size, importance? Would the theory be served better with a differently numbered polygon? How are the components related? What does the configuration leave out?

Bibliography

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Notes

- For a historical take on a theorist as a witness see blog post: What are audiences for?
- â??The least number of entities that can be connected to create a number of relationships greater than the number of the entities is *three*.â?• Actually, itâ??s four, as four points can be connected by six lines. Three points can be connected by only three lines. But then it depends on how you define â??relationships.â?• If the sides of a triangle have directional vectors, i.e. have a single arrow head on each side, then there are eight ways of arranging the vectors (2 to the power of 3). In the case of two points joined by a directional arrow, there are only two configurations (2 to the power of 1). Four points provides 64 configurations (2 to the power of 6). Technically, four interconnected points make a planar network (or graph), meaning itâ??s possible to draw connectors so that none cross over each other, but one of the connecting lines at least will have to be a curved line. A network of three nodes has no such constraint. Two nodes joined by a line is not really a network. A triangular network is arguably the simplest network. It makes a circuit that can be traversed in several ways without looking complicated.

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Category

1. Design

Tags

1. Peirce
2. thinking
3. triad
4. triangle

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