

What's the use of variables?

Description

Trumpian-style relativism and denialism assumes the right to make up some numbers and refuse others: votes, profits, employment rates, infections and crowd sizes. That's to mistake *variable* for *uncertain*, *unreliable* and *arbitrary* as if it's up for grabs.

Variables 101

In maths and logic a variable is a symbol standing for something unspecified, though you might know the range of options: numbers, words, truth or false status, probability, and to specified levels of precision. In computer programming a variable is: "A data item that can take on more than one value during or between programs and is stored in a particular designated area of memory" (OED).

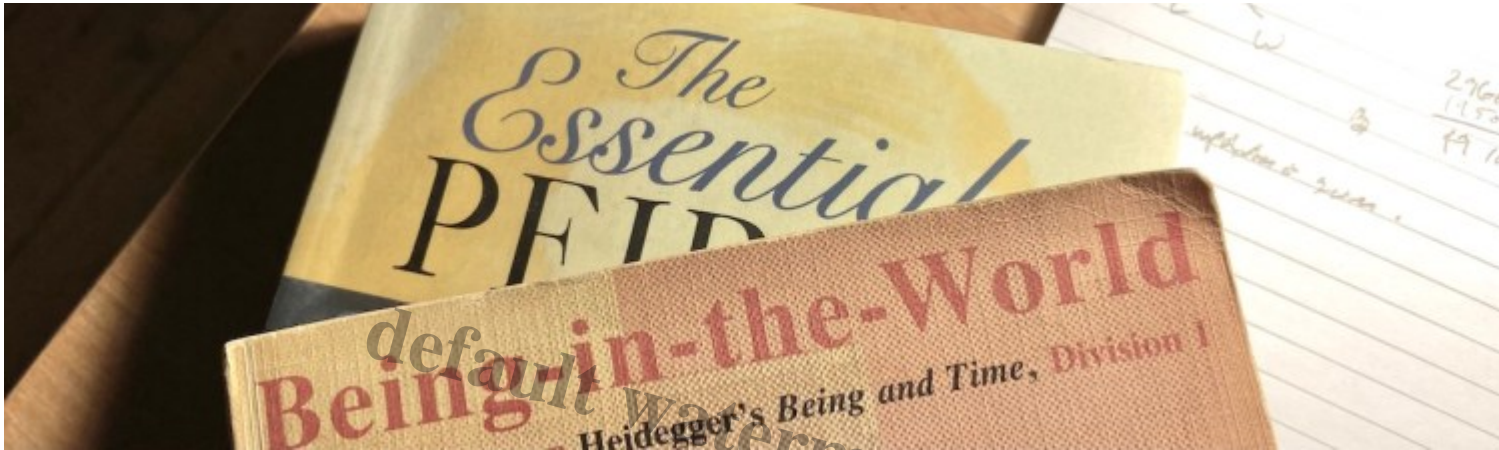
Variables that are operable and computable are key elements within symbolic systems, e.g. formulas, equations, algorithms, logic statements, databases, mathematical and geometrical proofs, models, network graphs, tabulations and theories. They help codify relationships, offering explanations and predictions. As entities in communication, variables also belong within semiotic systems, a type of sign that C.S. Peirce abstrusely called *Thirdness*. See post: [Peirce decoded](#).

In everyday usage, a *variable* is: "Something which is liable to vary or change; a changeable factor, feature, or element" (OED). The converse of a variable is a *constant*. What constitutes a variable or a constant depends on how you frame your domain of interest: the climate, politics, congestion, rising prices, public health, etc.

What's in a variable?

From a practical point of view, variables are of most use when eventually *instantiated*, i.e. replaced by a number, value, quality or quantity that the variable stands for. It's measured, counted or calculated in ways that preserve the relationships amongst a set of variables. Area, Length and Width are three variables in $\text{Area} = \text{Length} \times \text{Width}$. If you assign two of these values then you can instantiate the third one via the relationships in the formula.

Taking a pragmatic line, bolstered by my interpretation of the philosophy of C.S. Peirce, I'm prepared to say that variables don't exist independently of some framework of practical use. The length, width and area of a rectangular city block don't enjoy some independent existence. They are conjured up as something required, measured, calculated or recorded, i.e. there's a context of use. In another post, I want to explore further the concept of *hidden variables*. But in this sense, all variables are hidden: covert, invisible or latent, until grounded in a pragmatic, communicative and calculative framework.



Putting variables in their place

Further argument for the *situatedness* of variables comes from a reading of Martin Heidegger's *Being and Time*, particularly as explained in the book by the philosopher Hubert Dreyfus: *Being-in-the-world: A Commentary on Heidegger's Being and Time, Division I*.

Dreyfus provides a helpful tabulation of Heidegger's "Modes of being" that starts with the way we encounter the world in a mode of unselfconscious engagement. That's at the top of the table as a mode of being more in touch primordially with who we are as *beings in the world*. Outside of that experience, at certain moments aspects of the world stand out as peculiar, or there's some glitch in our encounter with the world. At that stage we may identify objects that present to us in evaluative terms: too heavy, nice and warm, attractive, repulsive, and other qualitative encounters. That's at the next level down in Dreyfus/Heidegger's tabulation of modes of being.

In reflecting on our encounters in the world we might also incline towards identifying "isolable, determinate properties, and objects as collections of properties (hammer weighs 500g)" (125). I would say that's a mode of encounter that invokes calculable variables. Beyond that mode of encounter we might also incline towards a world view in which we think of ourselves as isolated subjects contemplating an object world: "Bare facts, sense data, *res extensa*" (125). That last mode of being was René Descartes' starting point: the identification of a distinction between subject and object.

Useful variables

The Cartesian world view is a primary target of pragmatic and phenomenological philosophy. Descartes started his ontology with variables (Length, Width, Depth). Heidegger was concerned to reverse the

reductive Cartesian proposition that an understanding of the world and our place in it can be accomplished by considering simple parts to make a complex whole — number as a basis of understanding space, logic as a basis for understanding thought, data as the basis for understanding being in the world.

By a Heideggerian reading, variables are contextual, derivative, and reflect our particular practical needs at the time, not to mention our cultural preoccupations and prejudices. Similarly, the notion of pure data is illusive. No one has experienced it. Data is a useful construct in certain practical investigations. See posts: [I am not a statistic](#), and [Inconspicuous architecture](#).

Use value provides a helpful antidote to Trumpian-style self serving relativism and denialism: an assumed right to make up your own arbitrary variables and instantiations. See post: [Armchair postmodernism](#).

References

- Coyne, Richard. 2019. *Peirce for Architects*. London: Routledge
- Dreyfus, Hubert L. 1991. *Being-in-the-world: A Commentary on Heidegger's Being and Time, Division I*. Cambridge, Mass.: MIT Press
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Category

1. Culture

Tags

1. Dreyfus
2. Heidegger
3. Peirce
4. pragmatism

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