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## **Kant's Categories and the Stevenson Screen**

**By John Shand**

One way of thinking about and getting an understanding of Kant's Categories is to draw an analogy with the Stevenson Screen. There are both similarities and differences that are interesting. In explaining this I hope light will be shed on what Kant's Categories are and how they function in our understanding of the world.

The Stevenson Screen was invented by Thomas Stevenson (1818–1887).<sup>1</sup> It is essentially a slatted box, within which there is a thermometer (usually among other measuring devices) that is used by professional meteorologists to measure the surface air temperature of the planet Earth. The nature of its construction allows the flow of air through it, but shelters the thermometer from direct sun, rain, wind, and radiated heat from its surroundings; it is set at a determinate height about the ground, thereby delivering a consistent standard air temperature reading.

The aim is to minimize contingent variations of placement so that the air temperature reading taken in one place is as far as possible truly the air temperature, and not a temperature determined or affected by any other features of where the screen happens to be. Without this it would not be safe and accurate to say that any two places were the same or different in temperature, for without the screen the similarity or difference might be a result of the effects

of different local circumstances other than the air temperature.



[Interior of a Stevenson Screen. Public Domain. Source: CambridgeBayWeather via Wikipedia.]

Kant's Categories are those features of our experience that are determined by our mode of apprehending the world, and they are invariant between the particularities of the content of those experiences. They apply to all experiences of the world, but do not arise from those experiences. But to have content, the Categories have to be applied to experiences, and for experiences to be anything we can understand, they must conform to being formed by or falling under some of the Categories.

As Kant put it:

'Thoughts without content are empty, intuitions without concepts are blind'<sup>2</sup>.

In this way, Kant aimed to avoid both a position where metaphysical speculation falsely claims knowledge about the world independently of experience, and a pure empiricist position which hold that knowledge of the world may be derived only from experience, but which results in scepticism of fundamental ways we have of thinking about the world. The first of these positions was associated with Gottfried Leibniz and his followers, and the second with David Hume.<sup>3</sup>

Kant held that we could know certain things were true of the world independently of experience (*a priori*) but they only have meaning if those determining forms of thinking were applied to and combined with the content of experiences of the world (*a posteriori*). Only in that way could we have knowledge and understanding of the world. This is *Transcendental Idealism*. It contrasts with pure idealism and with pure empiricism, and Kant said it was

logically equivalent to empirical realism, for it maintained that we could only know reality by experience but that that knowing was not and could not be simply the unstructured unmediated apprehension of sense experiences.

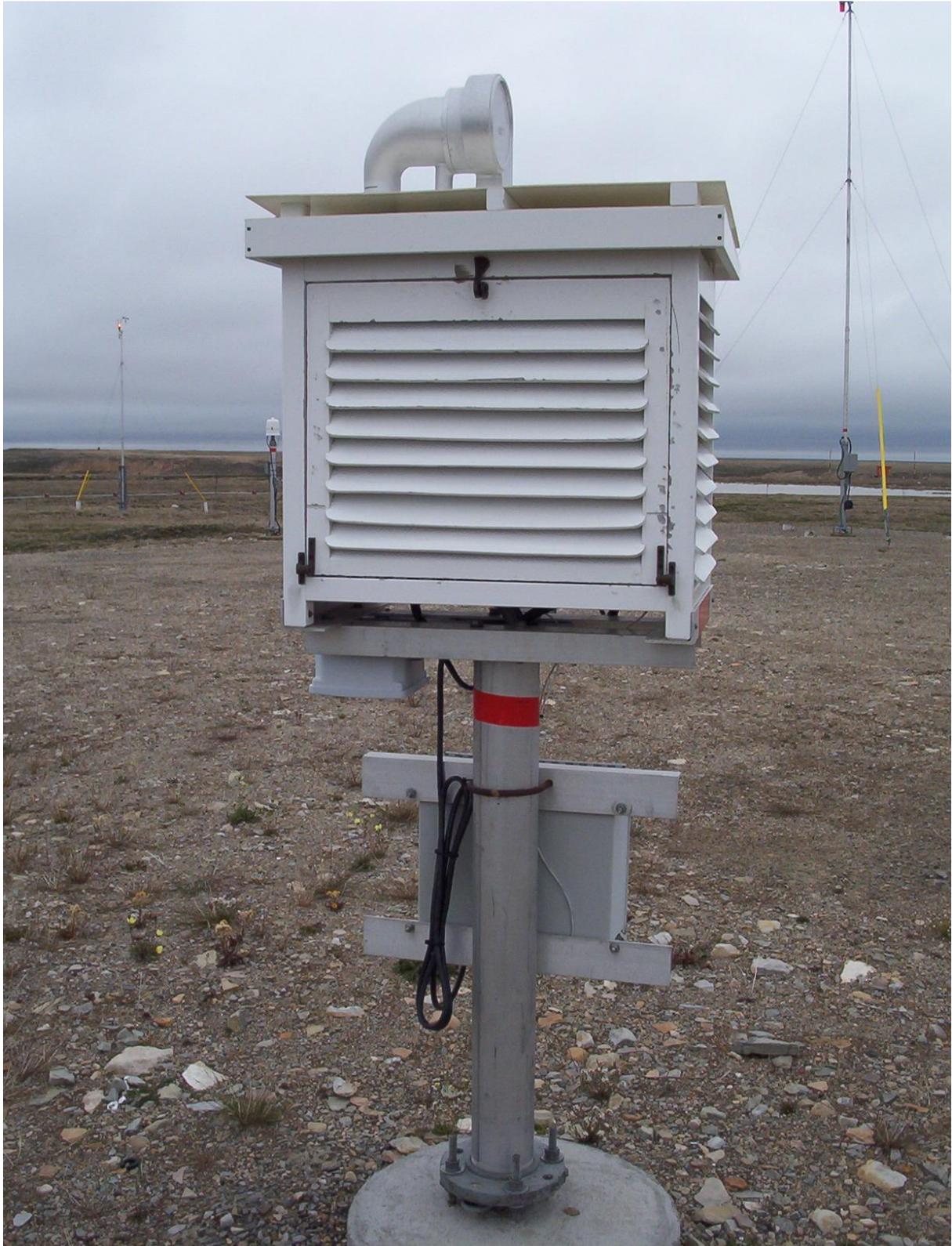
It is important to bear in mind that the Categories only apply to appearances, as the world as experienced, that is in space and time, and that world presents itself to us at all only if it falls under the Categories. If there is some other way, as Kant thought there was, that the world could be in itself, some other reality, that does not concern us here

Kant has four classes of Categories, and under each class three particular forms of category. For simplicity let us consider one: causality, or cause and effect. How do we know that every event must have a cause? Hume, Kant thought, had demonstrated that it cannot be known just by examining experiences alone, nor could it be known as a logical truth for there is no logical contradiction involved in supposing that an event should occur without a cause. Kant solved this by presenting a justification that in order to be apprehended as experiences at all those experiences had to be subject to the structure given by the Categories. This, if you like, presents us with a certain picture of reality, the way things really are, the way the world really is. No experiences of the world are possible without falling under the Categories, and no knowledge of the world is possible without experiences.

Wherein is the analogy between Kant's Categories and the Stevenson Screen?

The Stevenson Screen presents us with a standard way of determining air temperature that ideally eliminates all the contingent features of the places where the temperature is taken. It cannot quite do that, but there are ways of adjusting for the changes in contingent circumstances. But let us set that aside for now.

Suppose we ask the question: what is the *real* (or true) air temperature in a particular place? The answer is the temperature as given by the Stevenson Screen. But suppose we are then asked: but how can we check that the temperature given by the Stevenson Screen is accurate or true? The answer is that there is no way of finding the 'real' or 'true' air temperature apart from that given by the Stevenson Screen.<sup>4</sup> There is no way to 'look around', or one might say, outside, the Stevenson Screen to the world as it is in itself as far as its air temperature goes, independently of the temperature as given by that in the Stevenson Screen. One cannot hold up one and hold up the other and compare them. The Stevenson Screen *is* the form under which the thermometer takes the temperature that is the real or true temperature of the world. That temperature is what is meant by the real temperature. The Stevenson Screen without the thermometer is just an empty box unable to give any knowledge of the world. The thermometer, its measurements, without the Stevenson Screen are meaningless and give no knowledge of the world. Both are required together to give any real knowledge of the world.



[Stevenson Screen. Source: Wikipedia. Public domain.]

Similarly, there is no way to ‘look around’ the Categories to peek at the world as it is in itself, for to do that we would have to apprehend and experience the world devoid of all the possible ways that we can understand it, that the world can be anything to us as something experienced. We cannot hold up the world experienced as mediated by the Categories and compare to the world unmediated by the Categories, for there is no position where such a

comparison can be viewed. This is because viewing the world at all necessarily involves viewing it as mediated by the Categories, and that view is therefore how the world really or truly is, as there is nothing possible to contrast with it as a comparison.

In this sense the Categories act like the Stevenson Screen to present to us reality, with the idea that we could somehow rid ourselves of either to see reality stripped of the form and conditions they impose an impossibility.

But, it may be said, could we not use something else as the standard container for the thermometer? Could the screen not be slightly larger or smaller, set a little higher off or lower to the ground? Would we not then still have a standard way of reading temperature which still rules out (as far as possible) the contingencies of circumstances? At least then we would be able still to compare temperatures of different places such that they are the result of the air temperature in those places and not influenced by other contingencies of the places they are recorded. The answer is that one could. Or at least one could within reasonable bounds.

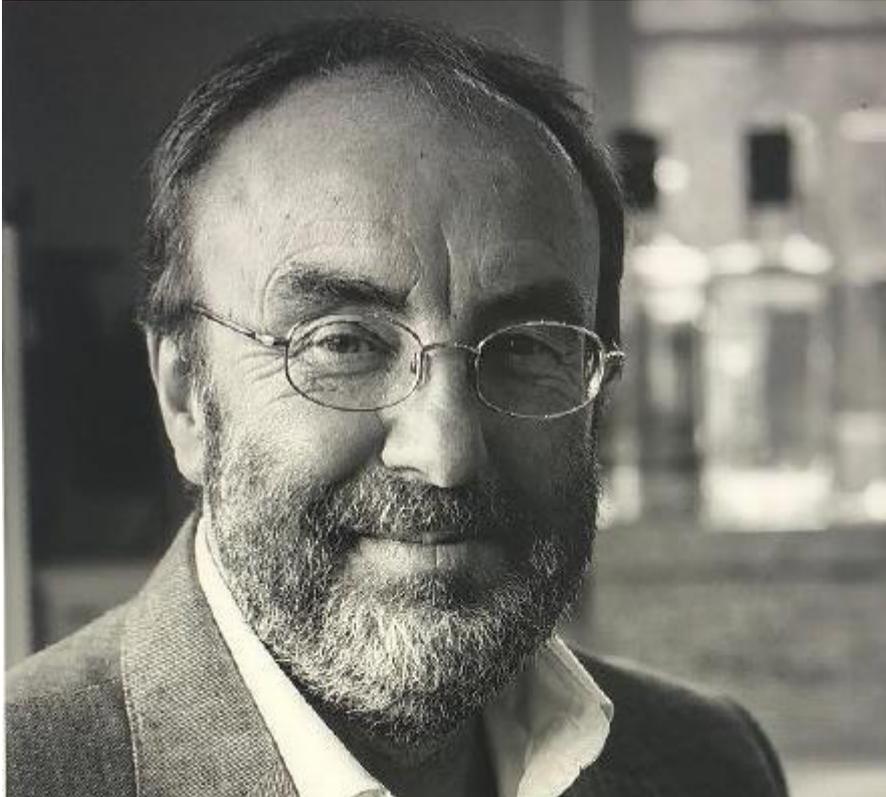
This nicely brings out by analogy the difference between Kant and some of his Kantian followers.

It can be well argued that when Kant himself thought of the Categories, he thought that they were unchangeable as the form of our experience of the world, it being the only way we can know how the world really is. This is because he thought they were required for any rational being to have experience of the world. They are not just contingent psychological features of human minds. This is a difficult position to maintain, though Kant argues powerfully in his Transcendental Deduction for it. Kantian followers supposed that this position was difficult to demonstrate, and further that it was not required to be true to the spirit of Kant, that being that the form of our experiences is determined prior to, and is not derivable from, unstructured unmediated experiences alone. All that is required is that there be some form, some Categories, that regulate and structure our experiences. There may not be *the* set of Categories, but there is always *a* set of Categories.

One might speculate that aliens have different Categories, or go down the historicising road of supposing that the Categories vary over time. But the trueness to the Kantian position on our knowledge of the world is that some Categories or other are always required and present. And these Categories, whatever they are, are, like the Stevenson Screen or whatever may be used in place of it, invariant with the particular circumstances, under which the true nature of reality is thereby determined and known. There is still no way to strip all of them away, and access things as they are in themselves devoid of some determining form of understanding. There is nowhere to stand and have such an unadulterated view, because such a position could necessarily not be a view at all.

Similarly, the Stevenson Screen, or something like the Stevenson Screen, would have to be the standard form under which knowledge of the reality is understood, otherwise it could not be said to be knowledge of reality at all. There would be no way of comparing two parts of reality if there was no commonality in the way they were understood, commonality in the mode of apprehension of the world.

In this, the Categories and the Stevenson Screen play an analogous role. For Kant in the Categories, there is and can only be one Stevenson Screen, for Kantians there may be several Stevenson Screens, but there always has to be some Stevenson Screen, some Categories.



[Dr John Shand](#) is a Visiting Fellow in Philosophy at the Open University. He studied philosophy at the University of Manchester and King's College, University of Cambridge. He has taught at Cambridge, Manchester and the Open University. The author of numerous articles, reviews, and edited books, his own books include, *Arguing Well* (London: Routledge, 2000) and *Philosophy and Philosophers: An Introduction to Western Philosophy*, 2nd edition (London: Routledge, 2014).

*Contact information:*

- Dr John Shand, The Open University, Walton Hall, Milton Keynes, Buckinghamshire, MK7 6AA, United Kingdom.
- <https://open.academia.edu/JohnShand>
- <https://fass.open.ac.uk/philosophy/people>
- <https://oro.open.ac.uk/view/person/jas66.html>

## Notes

1. For those who want the details: [https://en.wikipedia.org/wiki/Stevenson\\_screen](https://en.wikipedia.org/wiki/Stevenson_screen) ↵
2. Immanuel Kant, *Critique of Pure Reason* (A51/B76). By 'intuitions' here Kant means 'perceptions'. The terms 'Categories' and 'concepts' are being used interchangeably here. They might be glossed as ways or modes of thinking of things. ↵
3. Kant said that Hume 'first interrupted [his] dogmatic slumber' (*Prolegomena to Any Future Metaphysics*, Introduction). In fact many interpreters of Hume now think it as a mistake to regard Hume as a sceptic, but it is certainly how some have viewed him. ↵
4. Or some equivalent device. But we will set aside the complications of that for the sake of the point being made here. ↵