



Mind

**For the sake of the mind, cancel Kahneman!**

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For Review Only

2 **Abstract**

3 Kahneman's 'Asian disease' has nothing to do with Asians or their diseases; it is disrespectful of  
4 the basic principles of psychology. The attendant research--*fooling people*--is not science. Here  
5 I show how to build a science of the mind.

For Review Only

## 6 **1. Asian disease**

7 ‘Asian disease’ (Tversky and Kahneman 1981, p. 453)?

8

9 Kahneman, in rationalizing the racist(?) association--Asian disease--of a race with an undesirable  
10 condition of the human body, says: ‘the example was written in the 1970s’ (Kahneman 2011, p.  
11 477), while continuing to repeat it (e.g. Kahneman 2003, p. 697). But, that racism is wrong is no  
12 secret in the 70s. All the more distressing, as is invariably the case with racism, it is uncalled  
13 for: there is nothing in the scientific content of Tversky and Kahneman (1981) that warrants  
14 ‘Asian disease’. Nor is there any data that I know of (beginning with mythical and all the way to  
15 the contemporary medical understanding of the concept of disease, along with its prevalence  
16 amongst various races) that would, statistically speaking, associate disease with Asians, and  
17 thereby make it ‘concrete’ as claimed by Kahneman (2011, p. 477). All of this takes on the  
18 immediacy of Headline News, given our race against artificial intelligence to contain its racist  
19 behaviour (Kapur 2021). To get a feel for the damage already done, google asian disease, and  
20 none of the search results (page 1) have anything to do with Asians or their diseases.

21

22 We all know about the ‘basket of deplorables’ made out of ‘the crooked timber of humanity’ (cf.  
23 Berlin 2013). I cannot help but think that Kahneman, being a psychologist, would not have  
24 concocted ‘Asian disease’ had he read the Principles of Psychology: ‘I called the appearance of  
25 snow “micaceous”; and the moment I did so, the other connotations of the word “micaceous”  
26 dragged the snow farther away from ordinary snow and seemed even to aggravate the peculiar  
27 look’ (James 1890, p. 512).

28

29 Is it right (or wrong) to cancel Kahneman? What about his contributions to thinking, which  
30 morphed into a textbook on the workings of the mind (cf. Kahneman 2011)? Do we have to  
31 cancel his ‘profound’ contribution to the science of mind: it is easy to fool people (e.g. Tversky  
32 and Kahneman 1983)? Yes, we do! In doing so, we broad-mindedly interpret the same findings  
33 as: human beings are--by default--trusting! In our everyday lives we do not go around fooling  
34 our fellow human beings, nor are we constantly on the lookout. Trust--mutual trust--transforms  
35 individual human beings into cohesive societies. Canceling Kahneman and his cancerous  
36 research program--*work hard to find easy ways to fool people*--is indispensable in resurrecting  
37 the failed enterprise that is cognitive science (cf. Núñez et al. 2019).

38

39 Given the dangers inherent in investigating ways and means that can potentially harm humanity  
40 (cf. the COVID pandemic that we--devoid of our individual and collective agency--are living in  
41 a spectator-mode), we need to scientifically--sensibly and reasonably--address: do we want to  
42 invest--intellectually and financially--in Kahneman et al. questionnaires deliberately designed to  
43 elicit wrong answers? Nobody would disagree with, say: the number of black cats cannot be  
44 greater than the number of cats. But, with their crooked Linda problem, Kahneman got many to  
45 say: there are more black cats than cats, so to speak (Tversky and Kahneman 1983, p. 293).  
46 There is not much that one can learn about walking by watching (during morning rush hour)  
47 people step on banana peels (surreptitiously dropped on the walkway), slip, and fall. Even if  
48 ‘falling people’ is the only way to scientifically understand how people walk, human societies

49 need more than ‘the only way’ (that we know of, with its implicit ignorance) to fund planned-fall  
50 of innocent people going about their lives.

51

52 To see the ridiculousness of Kahneman et al. approach to mind, take a look at your resume. A  
53 neuroscientist does not speak of all that the neuroscientist is not good at (e.g. Avadhanam,  
54 Kuchipudi, and Naarikeelapaakam); so is the case with astronomers, librarians, and pretty much  
55 everybody. In everyday life, I do not introduce myself as: Hi, I am not a skyscraper eating  
56 clouds for breakfast (notwithstanding the fact that it is true). We identify and describe ourselves  
57 in terms of what we are; more specifically, in terms of what we are good at.

58

59 Of course, knowing how and when a system fails is an integral part of many disciplines (e.g.  
60 stress testing in engineering). In fact, visual illusions have been put to good use to tell apart the  
61 neural correlates of conscious perception from neural coding of physical stimuli (e.g. Stoner and  
62 Albright 1992). [Having credited where credit is due] Failures, however telling they might be,  
63 do not define anything.

64

## 65 **2. On defining the mind**

66 The scientific method for defining an object is in terms of: *what it is good for* (Lawvere and  
67 Rosebrugh 2003, pp. 26-31; Lawvere and Schanuel 2009, p. 334). Note that the method of  
68 defining an object in terms of ‘what it is good for’ is refined compared to the method of defining

69 objects in terms of their functions. You can use a pen to scratch your itchy back, but what  
70 figures in the definition of PEN is WRITING (and not scratching).

71

72 Now the question ‘what is mind?’ can be answered in terms of ‘what is mind good for?’ Phrased  
73 differently, what is it that would not be but for the human mind? But for the human mind, there  
74 would not be mathematics in particular and science in general. Mathematics, by virtue of being a  
75 product of the human mind, retains traces of the process--*workings of the mind*--that gave birth to  
76 the product: mathematics (inventions and discoveries). This immediately suggests a productive  
77 research program: study mathematics to gain insights into the workings of the human mind (e.g.  
78 Ehresmann and Vanbremeersch 2007; Posina, Ghista, and Roy 2017).

79

80 If a mountain of a theory can be made out of a simple mathematical mistake (cf. bat and ball  
81 problem; Kahneman and Frederick 2002), imagine all the progress we could have made by  
82 studying the evermore refined mathematical understanding of reality mediated by the human  
83 mind. Mathematical concepts, as Schapira (2016) notes, do not differ fundamentally from the  
84 commonplace ideas of everyday life. Of course, there are psychologists--obsessed with errors  
85 and unable to look beyond limitations--that cannot see the parallels between individual cognition  
86 and collective science (e.g. Pinker; see Fodor 2006, p. 93). Thankfully, we have Einstein:  
87 ‘science is nothing more than a refinement of everyday thinking’ (Einstein 2003, p. 23). Simply  
88 put, cognition is science writ small.

89

90 One argument against studying mathematics with the objective of knowing ‘how we know’ is  
91 that mathematical knowing is too special to inform knowing in general, but that is exactly how  
92 we [scientifically] know: it is the too special motion of a dropped object that led to the  
93 development of the science of motion in general (Lawvere and Schanuel 2009, p. 4; see also  
94 Posina 2020a). In closing, cataloging mistakes of the mind can never amount to a science of the  
95 mind. The science of the mind needs to be built on the solid foundation of the scientifically most  
96 refined mathematical understanding of the relationship between particulars, their properties,  
97 theories, and models (Lawvere 1994, 2004; see also  
98 <http://www.math.union.edu/~niefiels/13conference/Web/>), which parallels the relationship  
99 between physical stimuli, their neural coding, mental concepts, and conscious perception  
100 constituting cognition (Posina, Ghista, and Roy 2017). In addition to the familiar categories of  
101 Being (characterized by their modes of cohesion; the way parts of a whole stick together) and  
102 Becoming (with its types of variation that are respectful of the respective modes of cohesion;  
103 Johansson’s point light walker <<https://youtu.be/r0kLC-pridl>> is a good illustration of becoming  
104 consistent with being; see also Lawvere and Schanuel 2009, p. 152), we need a category of  
105 Reflecting in order to synthesize ontology and epistemology into which reality is analyzed (ibid.  
106 pp. 84-85). The significance of *synthesis after analysis* in the course of scientific development  
107 has been emphasized by none other than Newton (1934; see also Posina 2020b). The needed  
108 category of Reflecting can be based on the adjointness between the geometry of figures and its  
109 subjective reflections in algebra (Lawvere 2016; Lawvere and Schanuel 2009, pp. 370-371;  
110 Posina 2020a). Having said what needs to be stated clearly, I leave it to psychologists to choose  
111 science--defined as: ever more refined alignment of reason with experience--or selfies (Geman  
112 and Geman 2016).



113

114 **References**115 Berlin, I. (2013) *The Crooked Timber of Humanity*, Princeton University Press.116 Ehresmann, A. C. and Vanbreemeersch, J.-P. (2007) *Memory Evolutive Systems: Hierarchy,*  
117 *Emergence, Cognition*, Elsevier Science.118 Einstein, A. (2003) Physics & reality. *Daedalus* 132: 22-25.119 Fodor, J. (2006) How the mind works: What we still don't know. *Daedalus* 135: 86-94.120 Geman, D. and Geman, S. (2016) Science in the age of selfies. *Proc Natl Acad Sci USA* 113:  
121 9384-9387 <<https://www.pnas.org/doi/pdf/10.1073/pnas.1609793113>>.122 James, W. (1890) *Principles of Psychology*, Henry Holt and Company.123 Kahneman, D. (2003) A perspective on judgment and choice: Mapping bounded rationality.  
124 *American Psychologist* 58: 697-720.125 Kahneman, D. (2011) *Thinking, Fast and Slow*, Farrar, Straus and Giroux.126 Kahneman, D. and Frederick, S. (2002) Representativeness revisited: Attribute substitution in  
127 intuitive judgment, in *Heuristics and Biases: The Psychology of Intuitive Judgment*, T. Gilovich,  
128 D. Griffin, and D. Kahneman (Eds.), Cambridge University Press, pp. 49-81.129 Kapur, S. (2021) Reducing racial bias in AI models for clinical use requires a top-down  
130 intervention. *Nature Machine Intelligence* 3: 460.

- 131 Lawvere, F. W. (1994) Tools for the advancement of objective logic: Closed categories and  
132 toposes, in *The Logical Foundations of Cognition*, J. Macnamara and G.E. Reyes (Eds.), Oxford  
133 University Press, pp. 43-56.
- 134 Lawvere, F. W. (2004) Functorial semantics of algebraic theories and some algebraic problems  
135 in the context of functorial semantics of algebraic theories. *Reprints in Theory and Applications*  
136 *of Categories* 5: 1-121 <<http://tac.mta.ca/tac/reprints/articles/5/tr5.pdf>>.
- 137 Lawvere, F. W. (2016) Birkhoff's theorem from a geometric perspective: A simple example.  
138 *Categories and General Algebraic Structures with Applications* 4: 1-7  
139 <[https://cgasa.sbu.ac.ir/article\\_12425\\_b4ce2ab0ae3a843f00ff011b054f918b.pdf](https://cgasa.sbu.ac.ir/article_12425_b4ce2ab0ae3a843f00ff011b054f918b.pdf)>.
- 140 Lawvere, F. W. and Rosebrugh, R. (2003) *Sets for Mathematics*, Cambridge University Press.
- 141 Lawvere, F. W. and Schanuel, S. H. (2009) *Conceptual Mathematics: A First Introduction to*  
142 *Categories*, Cambridge University Press.
- 143 Newton, I. (1934) *Principia*, F. Cajori (Ed.)  
144 <[https://sites.google.com/site/encyclopediaofideas/science-and-nature/newton-and-the-method-](https://sites.google.com/site/encyclopediaofideas/science-and-nature/newton-and-the-method-of-analysis)  
145 [of-analysis](https://sites.google.com/site/encyclopediaofideas/science-and-nature/newton-and-the-method-of-analysis)>.
- 146 Núñez, R., Allen, M., Gao, R., Miller Rigoli, C., Relaford-Doyle, J., and Semenuks, A. (2019)  
147 What happened to cognitive science? *Nature Human Behaviour* 3: 782-791.
- 148 Posina, V. R. (2020a) Hard, harder, and the hardest problem: The society of cognitive selves.  
149 *Tattva Journal of Philosophy* 12: 75-92  
150 <<https://journals.christuniversity.in//index.php/tattva/article/view/2233>>.

- 151 Posina, V. R. (2020b) On making sense of science. *Neuron* (online comment  
152 <[https://www.cell.com/neuron/fulltext/S0896-6273\(20\)30533-X#comments-heading](https://www.cell.com/neuron/fulltext/S0896-6273(20)30533-X#comments-heading)>.
- 153 Posina, V. R., Ghista, D. N., and Roy, S. (2017) Functorial semantics for the advancement of the  
154 science of cognition. *Mind & Matter* 15: 161-184 <<https://philpapers.org/rec/POSFSF-2>>.
- 155 Schapira, P. (2016) Categories: From zero to infinity. *Inference* 2(1) <[https://inference-  
156 review.com/article/categories-from-zero-to-infinity](https://inference-review.com/article/categories-from-zero-to-infinity)>.
- 157 Stoner, G. R. and Albright, T. D. (1992) Neural correlates of perceptual motion coherence.  
158 *Nature* 358: 412-414.
- 159 Tversky, A. and Kahneman, D. (1981) The framing of decisions and the psychology of choice.  
160 *Science* 211: 453-458.
- 161 Tversky, A. and Kahneman, D. (1983) Extensional versus intuitive reasoning: The conjunction  
162 fallacy in probability judgment. *Psychological Review* 90: 293-315.