

We solve our problems essentially as fast as we state them

The brain of every mathematician carries a fragment of our “cloud in the tree”, a little personal cloud where our synapses touch Hilbert’s tree. These little clouds may have fractal geometry and thus relatively large boundaries. Hard to tell at this stage but one may take analogy from the study of the human movements where our neuron’s system *avoids* most paths through many degrees of freedom as experiments show. This may be also the mathematical strategy of our brain, responsible for instance, for the equality $P = NP$ of everyday mathematics. We solve our problems essentially as fast as we state them. It took, probably, a couple of thousand brain-hours to state the Fermat theorem and mere instance (compared to $\exp 2000$) to solve it, no more than 10^5 brain-hours. (Actually, one has to compare the length of the proof to the time needed to find it. Maybe, the *shortest* proof of Fermat in reasonable units is of the order $\log(\text{time spent on the search of the proof})$.) This “practical equality” $P = NP$ is in flagrant contradiction with our mathematical intuition as we expect NP to be far away from P . Here is a fundamental gap in our understanding (if there any) of how mathematics works. We need, besides pure thought, biological, psychological study and/or computer experimentation. But as a community we shy away from such problems, scared of contamination by philosophy. We are too proud to talk about something we do not understand 100% but maybe we should at some occasions imitate scientists and try to navigate with 5% visibility. We cannot know everything in full, but this is not a reason to stay at home.

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