

#1...

The Duty of Nicolai Kolmogorovich

Although it's owner is still very much alive, the name of the Kazakhstani mathematician , Nicolai Kolmogorovich ¹ is already destined for immortality. One thinks of , perhaps ² , only 2 other competitors for the title of " greatest mathematician of the 20th century. "

Kolmogorovich's elegant two-page proof of the Four-Color Map Conjecture, announced in 1980, flattened the academic world like a Caribbean hurricane. The only known proof at that time, announced in 1976 , was that of a group at the University of Illinois directed by Kenneth Appel and Wolfgang Haken. Before the publication of Kolmogorovich's paper, no-one had found a way to reduce its' many-volumed printout holding more than 1,000 hours of computer calculations .

His generalizations of Algebraic Geometry to incorporate the Non-Standard Arithmetic of Robinson and others, are of such brilliance that no other mathematician worth his weight in salt had the audacity to enter this field until just last year ³ .

His 1000-page reformulation of Quantum Field Theory in the 80's , through a dozen articles amounting to more than a thousand pages, led to the discovery of 90 new elementary particles in less than a decade. More are on the way.

In addition to these magnificent 'monuments of unaging intellect', we must cite his greatest spiritual achievement : his innate modesty.

It will soon be 15 years since Nicolai Kolmogorovich published his first attempt to square the circle with unmarked ruler and compass. The definitive proof of the impossibility of this construction had been given

¹Not to be confused with either Andrei Kolmogorovich or Nicolai Galois

²Then again perhaps not, but it is arguable.

³Vaslav Grztyk : Transactions of the Academy of Sciences on Sakhalin Island: Vol. XII, #5 "*Desarques' Theorems in Non-Standard 25-Dimensional Space*"

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by 'The Prince of Mathematicians', Carl Friedrich Gauss, in the 18th century. Although two years of patient examination on the part of several fine mathematicians were needed to find the errors in Kolmogorovich's construction, the rest of the scientific world was more interested in understanding why a man of his eminence would even bother to publish a result, the impossibility of which can be demonstrated by a few paragraphs of simple algebra.

After his subtle mistakes were made public, Kolmogorovich put aside all other work to concentrate on the invention of other methods for squaring the circle with unmarked ruler and compass.⁴ His next construction was so advanced and difficult to understand, that a prolonged investigation lasting more than 12 years involving mathematicians from all over the world was necessary to uncover the flaws in its arguments. It may in fact have been this diversion of talent that delayed the proof of Fermat's Last Theorem until the 1990's!

Providentially, Mankind's treasure-trove of scientific knowledge was not thereby depleted. The spin-off in several major areas of contemporary mathematics was considerable: fields such as "*Finite Combinatorial Trigonometry*", and "*Generalized Abstract Geometrical Constructions in Many-Dimensional Euclidean and Non-Euclidean Spaces*", benefited greatly from what might otherwise have been deemed a colossal waste of time.

Upon reception of the historic 10-volume refutation of his 2nd method in 1995, Nicolai Kolmogorovich had a nervous breakdown that landed him in the violent ward of an exclusive private Psychiatric Institute on the outskirts of Moscow. Now honored as a 'national treasure', the costs of his incarceration were borne by the Kazakhstan

⁴ To highlight the subtlety of the problem, it should be noted that any angle can be trisected with a *marked* ruler and compass, but not with an unmarked ruler, and that the circle can be squared by using a spool of thread.

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government .Poor countries of the Second World - (is that the appropriate term for the fragments of the Soviet Empire?) - have far more respect for the bearers of civilization than our wealthy Western industrial nations.

Within days of his release in January of 1977 , Nicolai Kolmogorovich immediately began working on a third method for squaring the circle!! A chorus of friends, esteemed colleagues, well-wishers and heads of state begged him to relent. A group letter to him was drafted at the annual meeting of the International Congress of Mathematicians. It said, in part:

“ What good can the distinguished Nicolai Kolmogorovich do for the world by making yet another attempt to prove a result which every mathematician knows is impossible? ”

“ Much good, very much good, my friends! ”

he wrote , in his now legendary reply ,

“ More good than all other mathematicians in history! Until I dedicated myself to this project, I’d never done anything more than uncover new facts about numbers and related matters. Yet : if I can succeed in proving a result that is obviously false, something far greater has been accomplished : I have proven the existence of God!

I ask you: what can possibly be more useful than that? ”
