

# MATHEMATICAL EXISTENCE : A REORIENTATION

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## 1. THE PROBLEMS

The 'reality' of the existential problems, relative to the life in general and to the science in particular, is either profoundly 'real' in the most properly scholastic sense or absurdly 'surreal' in the most contemporary academic sense. Or plain 'unreal' in common sense.

The 'gut-feeling' of the latter sort, a certain impatience doubtlessly due to the in-the-know-feeling of the viscera of the common man, is naturally real in the heart of, say, Judy (or Jerusha Abbot of *Daddy-Long-Legs*<sup>1</sup>). Happily in love with the Life at Large in her senior year at Vassar circa 1900, she was honestly scandalized at 'the dreadful lessons in philosophy' taught by the 'queer old duck' of a professor spending

\* The causes of delay in the publication of the present work may perhaps most clearly explain the reason for its existence as well. To appear in the form of a *READINGS IN THE PROBLEMS OF MATHEMATICAL EXISTENCE*, the editing of a dozen articles, chosen out of about fifty, began early in 1969. It was about the same time, however, that my studies in Sociology of Knowledge in general and of Science in particular had begun to reorient me in the direction of the 'sociocultural' approach. The first of *Les Études* in the latter grew eventually into a *SOCIOLOGY OF MATHEMATICS AND MATHEMATICIANS*, appearing in 1975. Such a radical change in course, more than once or twice, forced me to discard the near-complete editing of the present work in 1973 and again in 1975. Meanwhile, in the spirit of 'faute de mieux' (which had been more or less my own *modus operandi* in publication for the last two decades), an unfinished study is to appear here in the present format of a semi-'Reading' with three instant 'neo-classic' papers interpolated in the main text.

'his entire time ... trying to figure out whether matter in reality exists or whether he only thinks it exists.'

The queer old duck of a philosophy of reality *qua* illusion is still very much alive and kicking today, as in *Zen and the Art of Motorcycle Maintenance*.<sup>2</sup> A Hindu philosopher (at Benares Hindu University where its author once studied) is described here as answering, smiling serenely, 'yes' to the question: Were the atomic bombs on Hiroshima and Nagasaki also nothing but illusion?

What nonsense, the rottenest sort of nonsense! — so the legendary Man in the Street may scream at this juncture if, in particular, the latter happens to be worrying about the 'real' possibility of the 'actual' extinction of the entire mankind thanks to the reality of the current crises.<sup>3</sup>

To which, of course, the Hindu philosopher would respond serenely, again: The possibility or even the 'actuality' of the extinction is an illusion.

It is this sort of possibly vacuous tit-for-tat, probably the typical 'sorry predicament'<sup>4</sup> of one man milking a he-goat and the other holding a sieve, that the professionals in any school of philosophy could not help resorting to one of the most routine questions in their old trade, such as: What do you mean by 'illusion'? by 'reality'? by 'existence'?

It may be said, moreover, that man is 'being-in-the-world' (Heidegger),<sup>5</sup> hence that the essence of man lies in his existence, in his 'openness to the world'.<sup>6</sup> If so (if only for the sake of making rational arguments possible), how is the so-called 'mathematical existence' in particular related to the 'existence' in general (as above)?

The present work is then to reexamine such time-honored problems as above in the light of the 'Philosophy Today' in general

## 2. THE PLAN

The 'Philosophy Today', in USA in particular, may divide itself, roughly but neither unfairly nor exaggeratedly, into two major schools: Positive-Analytic *versus* Phenomenological-

Existential. And, incredible though it may sound, the latter is almost completely ignored here and abroad as far as the philosophy of science, social or natural, and of mathematics is concerned; it has hardly been tried, even, to see whether it may work out well, after all, in some areas of the study at issue. Hence the *raison d'être* of the present volume.

That is, while the first two articles are typically of an analytic and/or positivistic approach to the classical confrontation between Platonism *versus* Nominalism (Chapters 2-3: 'What Do Symbols Symbolize?'), the third article is to open up a few new roads for different approach, first through the school of Phenomenology/Existentialism. Any philosopher of the latter school 'should better be on welfare!' - so some positivistic and/or analytic Turks may (and do) darkly mutter now and then, but they, too, may find the 'taste of the pudding in the eating' in Chapter 4. Try they should, at least, to taste it even at the risk of indigestion. For, I submit, the cardinal sin (especially for the young) in philosophy is to grow so old, sometimes all too soon, as to be unwilling or unable to try, even, anything novel or different. Hence, as Kant said, to grow old [especially if prematurely<sup>o</sup>] is a sin, punishable by death.

In this spirit of The Old Kant (if nobody else), then, the student of philosophy, professional or otherwise, may be invited to 'taste the pudding' in the last two articles (Chapters 5-6) for a sociocultural orientation.

#### NOTES

1. By Jean Webster, 1912, p.261 (in the first edition, or in the letter of 'January 9' of the senior year).
2. By Robert M. Pirsig, 1974 (publisher: William Morris & Co.).
3. Such as 'The Bomb' (since August 6, 1945), the 'Population Bomb' (to include its corollary, the 'Race Bomb', also coined by Paul Ehrlich)

which in turn entails the 'Information Bomb' or the 'Future Shock' or what is the same, the 'Culture Lag' (the term coined by W.G. Ogburn – over six decades ago! – to signify precisely the same) or the 'Input Overload' and the like, to characterize the 'current crises' – cf. J.Fang - P.K.Takayama: *Sociology of Mathematics and Mathematicians - A Prolegomenon*, Paideia 1975, pp.17-21. (Also, if I may add [whatever its worth], I have actually offered a proseminar in 'A Philosophy of Crises' which will presently yield a work titled *UNK UNK [The Unknown Unknown]*, sometime in 1979).

4. Kant's own phrase in his first Critique (which I may already have all too frequently quoted in my works, but I can't help it).
5. Cf. his *Sain und Zeit* (Eng.tr. 1962), p.78 et pass.
6. Cf. *ib.* p.67.
7. Incredibly, again, this kind of infantile arrogance or plain pure and unadulterated Anti-Philosophy can actually be seen or heard today, indeed often enough, especially among the 'philosophers (friends or lovers of wisdom)' of sciences who would insist on their grand prerogative to 'prescribe' all the 'scientific methods' for all the scientists at any time or place. With the 'friends' like them, no doubt, Philosophy is not to be in need of any enemy, real or imagined.

On the other hand, the petty narrow-mindedness of the 'philosopher' may not be limited to the 'teachers' (Doctors) of Philosophy today, if Diogenes Laertius, for instance, can be trusted; for, according to him, Plato (of all philosophers!) desired to see all the works by Democritus 'burnt'.

This may, or may not, have something to do with the burning passion in the 'love of wisdom'; but, then, the time-honored 'wisdom': 'Never be excessive (μηδὲν ἄγαν)!' should be recalled all the more urgently. If only for the sake of sanity in philosophy.

Or, for that matter, if only in the light of the glaring fact that no 'working' scientist has ever closely followed the kind of sweeping 'methodology prescribed' by the so-called philosopher of sciences for any worthwhile discovery or invention.

8. This oft-quoted dictum of Kant appears also in the 'Lose Blätter' (in *NW [Akademieausgabe]*, XXIII, p.463, 'Vorarbeiten zum Streit der Fakultäten'), in the context of his views on Disease, Death, etc.

It may be of interest to note here that the current fashion in the Bioethic to distinguish Death from Dying should be considered rather thoroughly hackneyed in the light of the above context (which in turn owe something to Montaigne – cf. his *Essais*, Book I, Chap. XX. – to imply the [relative] origin to be as early as 1571-80).

The 'prematurely' is my own interpolation, however, with little or no consideration of the original content or context.