

an unnatural history

It is pointlessly masochistic that we (i.e., all of humanity) are still unnecessarily choosing to suffer for a fundamental mistake made in the development of mathematics during times of antiquity, reportedly by Brahmagupta of India (circa 628). This respected and productive [most of the time] mathematician incompetently devised the peculiar, “self-trapping” method of multiplying positive and negative factors that became the worldwide standard for multiplication.

Of course, when one further considers the ramifications such that conventional multiplication and thus, conventional involution give rise to a conventional algebra in which there does not exist the capability to solve some imperatively-solvable, simple equations within the real number system, inadequacies and crises compound. As a direct result, the imaginary unit and complex number system had to be immediately invented sheerly to enable their solution.

When confronted with such a formidable shortcoming in the capabilities of conventional multiplication within conventional algebra, it is surprising that instead of re-evaluating conventional multiplication in search of some basic error or limitation that could have easily been found (to make the correction identical to that presented within this paper), a dogmatic position was stubbornly maintained wherein it was assumed in absolute terms that no error in conventional multiplication could have possibly been made or thus, could currently exist within it.

Upon such arrogant logic, it was indisputably further assumed by the mathematical establishment of centuries ago that there inexplicably existed ample justification for the arbitrary creation of one new number system, the complex number system. [Delays and controversies, notwithstanding.] Ironically, the creation of the complex number system was absolutely necessary to enable conventional algebra to work-given the restraining, flawed assumption that conventional arithmetic with the real number system was inerrant and structurally-simplified. Of course, the huge ramification completely missed and not predicted at all during the era of its invention a few centuries ago was that ample justification for the arbitrary creation of an infinite number of hypercomplex number systems had also been assumed which is cumbersome and problematic.

With a holistic overview now afforded to us by historical developments spanning appr. 14 centuries, we can now easily see the obvious that the mathematical establishment of antiquity essentially painted itself into a corner (through abysmal lack of foresight) and then later, cheated to escape the trap (that was its own fault for creating).

For an appropriate analogy ...

It is not at all surprising to witness a novice at Chess playing into direct, catastrophic traps due to his/her inability to think clearly and comprehensively only 1-2 moves ahead in complicated situations. What is surprising is for such a gross incompetent to insist upon arrogantly calling himself/herself (and being called) an official “master of the game”, dishonestly or close-mindedly refuse to admit to making any mistake (despite the bad outcome that is painfully evident for anyone to see) and rant at anyone (esp. someone who is not also an official “master of the game”) who dares to correctly point-out his/her error.

If this ridiculous folly had not caused several serious, lasting dilemmas for mathematics (and in turn, most natural sciences), it would be humorous. Instead, it is such an overwhelming testament to and absolute proof of the astonishing levels of stupidity and/or ignorance still prevalent within the minds of virtually all 21st century mathematicians that, after it is inevitably straightened-out, educated people from future centuries will certainly be contemptuous, dismayed or puzzled. They will probably also have considerable difficulty seriously believing or accepting that such a travesty really could and did happen as well as coming to grips with how it could possibly happen.

They will surely be resolutely disrespectful and derisive toward the memory of those leaders and members of the mathematical establishment who actively, shamelessly fought against the correction of serious errors in basic arithmetic even after they had been pointed-out clearly, explicitly and exhaustively. The culpability of all individuals who are paid to advance science yet cynically, secretly choose to be enemies of science, knowing they can get away with it, just to complacently avoid the disruption that progress/change entails, is much too high to be forgivable.

When individuals are, by strict policy, rewarded greatly for compliance and punished severely for defiance by an educational institution, important, large and disruptive reforms never occur.

What we are witnessing is not merely an innocent (although serious) theoretical mistake in the historic development of mathematics but instead, a continuing compounding of a root, serious, theoretical mistake (with devastating consequences to the intelligibility and symmetry of the mathematical literature) and its intentional, widespread cover-up spanning at least a few centuries- always to prevent any major disruption in the basic textbooks and mathematical literature for the benefit of those experts currently in power. Of course, this could not have been accomplished without the arrogant, corrupt disregard and defiance of any/all evidence and quality ideas to the contrary known at the time by those who were well-informed (and there have always been some).

In centuries past, it was especially easy for the history of mathematics to be written by the corrupt victors of all disputes (similar to this one) who successfully disposed of virtually all evidence of dissent or at least, all evidence of dissent that was rational and intelligent, thereby leaving modern, objective historians of mathematics with little or nothing to justify the position of dissent. Fortunately, it has become more difficult for the status quo to keep secrets in the modern, internet age.

In case you are wondering ...

No, I am not falling for an inviting paranoid or contemptuous fallacy, characteristic of many conspiracy theories, due to an unrealistic expectation that mathematical institutions and their leaders, esp. in centuries past, should have operated and thought perfectly. I do not ever expect perfection.

The topic at hand is not whether the first serious mistake to basic arithmetic, committed in ancient history, occurred accidentally. In fact, I have no reason to doubt that indeed it did occur accidentally. Rather, the topic at hand is why and how such a serious, fundamental mistake (painfully evident to anyone with any sense who has examined it as well as an impossible topic for any educated mathematician to have not been required to cover) neither has been nor is in the process of being corrected. After all, we live in a age where professional mathematicians have, by far, the greatest resources ever in history at their command- human, computer, technological, financial, etc.

Overall, this self-serving, corrupt pattern of behavior, consistently demonstrated by mathematical academia worldwide for many centuries, could not have caused any effect other than to slow and degrade human progress educationally, technologically and economically. Ironically and hypocritically, academic mathematicians brazenly and dishonestly take as much credit as they can for all human progress to date from people in other walks in life who typically are naïve about the unexpectedly-disgraceful history as well as present-day workings of mathematical institutions.

- Q- How can someone who is highly-educated, well-paid, well-treated and respected be foolish or corrupt to such an extreme that he/she is willfully an agent for stagnation who uses all of his/her bureaucratic power to defeat all “disruptive” reforms and ideas that would be highly beneficial?**
- Q- How can someone who owes their highly-privileged existence in society to the greatest ideal in science (mathematics) care so little about it and be willing to do so little for it that they allow their overall societal effect to definitely be as an enemy of progress?**

We can be relatively sure that various leaders and prominent individuals with the power to control or influence mathematical academia have been behaving very badly for centuries and having their way. [Not just historically but also presently.]

With respect to those mathematicians who knowingly allow serious, fundamental errors to persist in mathematics, the best analogy I can think of is to liken this corrupt behavior to that of bad, spoiled children who are drunk with power, throw temper tantrums at will or whim and always get away with it. Of course, nothing provokes a worse temper tantrum than whenever anyone dares to try to correct them over anything since they believe themselves to be the “smartest of the smart” who never make or perpetuate mistakes.

[Note that no fair consideration of the critical point this person made ever occurs.]

In a neverending way, they stubbornly refuse to maturely address, truthfully admit to and correct any of the consequences of their own bad behavior, mathematically or socially, yet the only feedback they ever experience is that they are given total, undeserved, unearned victories every time. Unfortunately, until/unless their power to behave as badly as they wish, anytime they wish, without any repercussions is completely taken away, no aspect of their behavior will ever improve at all and nothing constructive of non-trivial value will ever be accomplished throughout their entire adult lives. Yes, we still live in a world where mathematical academia is totally out-of-reach from any conceivable reforms from outside itself under the established power structure and its corrupt, egomaniac leaders know it quite well, with confidence.

The foundational errors in constructing conventional arithmetic are so extreme, it is literally inconceivable how they realistically could have been made any worse. With conventional multiplication involving positive and/or negative real numbers corrupted, one can only wonder if it is even possible for any sane person to have unintentionally corrupted the only simpler binary operation, conventional addition, involving positive and/or negative real numbers.

In fact, if they had somehow managed to mess-up conventional addition as well, the results would have grossly, measurably contradicted real-world experience to such an extreme that it would have been evident to intelligent laymen and turned “number theorists” into “numerologists” (as outcasts from society) in a likewise manner as incompetence-to-the-lunatic-extreme can turn “astronomers” into “astrologers” (as outcasts from society).

Therefore, a reasonable textbook definition of a “dumbass” as being, “Someone who thinks something so extremely dumb, it could not have practically been exceeded.” is evidently an appropriate, fair and unexaggerated way to describe a typical 21st century mathematician who believes in conventional multiplication as being correct and accurate. In dramatic contrast to their own assessment of their intelligence, knowledge and vision, typical, modern mathematicians provably cannot see mathematical reality clearly and correctly any further than what is physically-evident, direct experience ... right in front of their faces. Everything past that has been distorted to such an extreme that it is only an incomprehensible blur to them.

Unfortunately, problems compound with each more abstract branch of mathematics that is successively built upon the unsound, asymmetrical foundation of conventional multiplication (within conventional arithmetic). This means that more problems exist for conventional algebra than conventional arithmetic and likewise, more problems exist for conventional analytic geometry, conventional analytic trigonometry and conventional calculus than conventional algebra.

An appropriate analogy for the naïve effort (currently underway and more active than ever before in history) to correctly build evermore-sophisticated analytic/numerical branches or specializations of mathematics ultimately based upon conventional arithmetic is ...

- trying to build more floors in a neverending way onto a skyscraper with a broken, lopsided, asymmetrical foundation.

Ultimately, the effort is doomed to stagnation and failure- regardless of the amount of ingenuity applied to it. Each successively-higher floor becomes exponentially more unstable, complicated and difficult to build. A law of diminishing returns soon sets in with it eventually becoming impossible (or virtually so) to successfully build any more floors. This effect is already evident and commonly noticed (although misinterpreted) in modern mathematics where extreme efforts of abstraction are required in modern times to create anything new and only the researchers understand (or imagine they understand) their own work with such creations always being of trivial or unknown [translation: zero] importance.

It is past time for the old building to be condemned and destroyed in order to clear the construction site for a new building. The major mistakes made in the unsuccessful construction of the old skyscraper can only be used as abject lessons to be avoided and thereby instruct us in how to successfully build a much better, new skyscraper from the ground up.
