Review of: "Relations between e, π and golden ratios"

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Potential competing interests: No potential competing interests to declare.

The connection of Euler's identity to the golden ratio was new for me. What I miss is a hypothesis that interprets the facts presented. One such philosophical concept would see the relations among the constants as some sort of logical '=' in a complex system in which the units of the system interact.

In my field of research, combinatorics of ordering and sorting, with specific regard to cycles, such prominent numbers do exist. *Exp(sum(ln k)$_{k: 1..n}$), Exp(ln(part(n)^2)* cross at *1, 32, 97* and strongly diverge *n > 136,* where the former is known as *n! (oeis.org/A000142),* the latter is defined as *n? (oeis.org/A242615)* and *part(n)* refers to the number of partitions of *n (oeis.org/A000041).* The cycles arising from reordering variants of *a+b=c (a, b ≤ 16, a ≤ b)* present a complex web of interrelations among natural numbers, in which equivalence relation can be found which are conceptually similar to the equivalence relations presented in the paper. One reading of the cycles sees a Fibonacci relation with a_i=const-(a_{i-2}+a_{i-1}).

In general terms, it appears that the challenge of picturing processes known from biology in the conceptual framework of Mathematics leads us to evolving a logical landscape which is much more flexible than the system the Sumerians have left for us to develop. In the updated philosophy of numbers, there exist specific extents and amounts which by their own properties generate manifold discongruences and inbuilt – local – logical contradictions. In such an environment, equivalences can be interrelated like the tubes in the vestibular system.

The author should be encouraged to offer ideas, how the equivalences presented in the paper can be interpreted.