Kolmogorov complexity, Matthew effect, Godel Theorem and Chaos

Let us discuss the relation between Kolmogorov complexity, Matthew effect and Godel Theorem.

Let us define System as some logical unit with input and output.

Let us define a version of a system to be its modification done to implement new logical rules.

Let us define Kolmogorov complexity of a system to be Kolmogorov complexity of its subsequent versions.

Theorem A.
Kolmogorov complexity of a system that contains arithmetic rules grows over time.
Proof.
Due to Godel Theorem such system at some point encounters the input that it can not interpret. So, this input makes the system to halt. This results that the system is "upgraded", ie new version of a system is done where such input gets a special handling. Therefore Kolmogorov complexity of a system grows.
QED

Theorem B.
Kolmogorov complexity of a system that has no rules of arithmetic does not grow over time.
Proof.
Assume that it grows over time. Hence at some point it will contain rules of arithmetics since the rules are what makes the complexity of a system. Hence it is not more the system that contains no rules of arithmetic.
QED

In the science, there is well known Matthew effect that can be formulated as "the rich gets richer and the poor gets poorer."

It is easily seen that the above Theorems are the proof of Matthew effect in Computer Science.

Let us now ask the question how much Kolmogorov complexity can grow? What is the limit of its growth?

One can think that there is no limit but in fact there is a limit. For this, recall the notion of Reynolds number from fluid mechanics. It is known that this number is used to determine two cases between fluid flow: laminar or turbulent.

Reynolds number (Re) is defined as a ratio between inertial forces I and viscous forces V.

Reynolds number interpretation has been extended into the area of arbitrary complex systems as well: financial flows, nonlinear networks [1] etc.

All the above can be easily extended to Information by defining the notion of Information flow. Matthew effect shows the difference between two systems above: one is dissipative system where inertial forces are the dominant and another one is accumulative system where viscous forces are the dominant.

Hence we get the result

Theorem on Chaos.
Kolmogorov complexity growth has the limit - Re. At the limit there happens bifurcation. It separates two different Information flow possibilities: laminar and turbulent. After the limit the Information gets no sense anymore since it is chaos.
Proof.
It can be proved by utilizing existing chaos theory.
QED

Theorem on P vs NP.
P vs NP is incorrectly posed problem.
Proof.
Computer is a dissipative system by nature ie it obeys Theorem A. In order to be P = NP it would mean that the corresponding system Kolmogorov complexity grows infinitely, in other words, at some point it crosses the limit Re. After which the notion of Information disappears by previous Theorem on Chaos. Hence the problem whether P = NP or P != NP (or any other problem) will be of no sense anymore.
Moreover, assume P != NP. Due to Godel Theorem there exists a statement that can not be proved or disproved using the rules on which computers work. Let us denote this statement as E.
There exists a problem that is in NP but not in P. Let us denote it as D. Let us consider a statement “E or D”. This task can not be solved by the computer due to it contains D. But at the same it will be solved by the computer because it simply halts at it since it contains E.
QED

Let us recall the three body problem and Lorenz attractor. The three body problem remains unsolved. Why? Because it is incorrectly posed problem too. If one tries to solve it in three dimensions, he encounters ever lasting difficulties. It is the same as movement described by Lorenz equations. At some parameter values the point movement exhibits (recall computer simulations) the chaos but from the perspective of someone who is so to say seating at this point but not from the point of view of those who calculate the coordinates of the point. They are determined by the equations.

[1] Kamenshchikov, Sergey (2013). "Extended Prigogine Theorem: Method for Universal Characterization of Complex System Evolution". Chaos and Complexity