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On a Heuristic Point of View Concerning the Mass of the Higgs Boson.

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In a recent paper [1] on the modeling of emergent patterns in complex biological and physical systems, an overview of the Bayesian approach [2] that has been used to model the space-time curvature of a static spherically symmetric massive system is presented. Among the emergent properties of such a system, stands a gravitational field that can be described by a modified Newton's law under low speed weak field conditions. Moreover this methodological approach suggests that many physical constants can be seen as emerging numerical patterns, some of which being linked together by specific relationships, once the proper mappings between flat and curved space representations are taken into account. The basic hypothesis behind the present paper is that if all the masses in the Universe have a common origin, through the interaction with a Higgs field, there might be some indirect manifestations of this phenomenon at various scales and may be some relationships could be pointed out between the different masses values as measured in an arbitrary system of units. To highlight this assumption, we briefly explore in the sequel, a few relationships and limits that can be established among reference masses and their measurements (like the electron, the proton and the Higgs boson masses$\cdots$). This study indirectly suggests that some constants of the Standard Model are not independent, which might reduce their number.

[1]Plamondon, R., O'Reilly, C., Ouellet-Plamondon, C., (2014) Strokes against Strokes, Strokes for Strides, Pattern Recognition, 47, 929-944.

[2] Plamondon, R."Patterns in Physics: Toward a Unifying Theory",Presses Internationales Polytechnique (2012).

[3] Plamondon, R., Ouellet-Plamondon, C., (2014) Emergence of a quasi Newtonian law of gravitation: a geometrical impact study, in Press, Proceedings of the Thirteenth Marcel Grossman Meeting on General Relativity, K. Rosquist, R.T. Jantzen, R. Ruffini, (Eds), World Scientific, Singapore, 1-3.

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