MQ

[Mechanics of the Quantum]

Property 5 :

Hydrogen energy level ratios

from counting compressed quanta

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The problem seems to me how one can formulate statements

about a discontinuum without calling upon a continuum…

...but we still lack the mathematical structure unfortunately.

How much have I already plagued myself in this way !

Albert Einstein **[1]**

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Table of contents

Preface

'Mechanics of the quantum' [MQ theory] searches for the *mechanical microprocesses* of the individual and collective behaviour of quanta (interpreted as building blocks of fields, mass, energy, light…) to reveal *strong causality* behind the laws of physics, rather than interpreting things with probabilities.

These days, 'mechanical' solutions are not very fashionable in context of gaining insight in phenomena governing the smallest scales. But then one should ask, why did we conclude that ? Why did we end up with probabilities (but also with infinities) ? Isn't it simply because we have no direct access to those scales from our reference frame of scale of size ?

Whereas before this era, we could easily test or observe things to derive the laws of physics behind them. And we could actually observe buildings blocks (e.g.) of a smaller scale at the foundation of things on a larger scale. Or imagining, understanding and observing that random motion of particles in a fluid, resulted from collisions with fast moving molecules (Brownian motion).

Thus fundamental physics was engaged in imagining a mechanical microprocess, and formalizing it mathematically, to understand a larger scale phenomenon. Our investigation sofar, forces us to respect *the value and explanatory power of micro-mechanical features at the basis of the laws of physics*. Especially due to the extra property 5 found which links our MQ-model to the atomic realm, previously named GQG-model in the build up of a theory of General Quantum Gravity [See Appendix 4 for properties 1-4 and the associated previous paper references].

Our reference frame from our level of scale does not allow us to interact mechanically with the smaller or smallest scales. But that doesn't mean that things at those scales don't behave in ways similar to classical mechanical processes. Involving e.g. forces acting upon whatever entities, or the principle of action-reaction, or the principle of the path of least resistance, etc.

My work is focused on linking such processes to the laws of physics, which was a.o. induced by exact mathematical and geometrical findings. And it will also form the basis of 3 follow-up papers : MQ - Property 6 - MQ-model generalizes to relativistic energy absorption ..., and MQ - Property 7 and 8 [App.4], due to recent findings and recombination with older findings. Hence the choice for an over-arching name of the theory under development : Mechanics of the quantum : MQ.

And in particular, this research is currently done with our constructed discrete model of energy densities (using a.o. a hybrid concept of problem solving protocols in product design and physics), from which *unifying characteristics emerged*. That is, *they were not fitted a priori into the model*, because the model initially aimed to be a discrete or a quantum model for a causal principle of gravity.

Further investigation of the model reveals new interesting properties. *Without adding new features to the model, or changing the initial setup in any way.* There is also no curve fitting with an abundance of parameters involved in this research.

We stay true to the original model and the original causal principle [See Appendix 1 - intro], and we have done the same for the discovery of the previous 4 properties. Thus we aim to arrive one day at a robust theory with fewer assumptions, while explaining more. *Less is more, only if less does more.*

And besides, fashion often leads to 'more of the same', whereas we need 'less of something different', diversity in problem solving techniques, different angles of approach cooperating, a transdisciplinary modus operandi. I aim to provide one such angle, and I hope that complementary skilled people (theoretical physicists, experimental physicists, engineers, philosophers,...) will look into this work, and extend and improve it with their particular set of knowledge, skills and talents.