

CONTRARY TO WHAT WAS PREVIOUSLY ANNOUNCED... ...QUANTA ARE ALL SIAMESE

AUGUSTO CAPELLO

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is copyrighter of this paper 2011
submitted to

THE NOWERGIAN ACADEMY OF SCIENCE AND LETTERS

When energy goes in... numbers
alias:
Palindronic Simmetry

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KAPP'S STATEMENT

In a COHERENT¹ QM² system, with powerful computation, the $Q\omega m$ interaction for each sequential strike

$$[T_{Ex}^>(cktm_1; cktm_{\rightarrow n})]Q$$

and the assigned/arbitrary stochastic derivative

$$[NP(HyNP_1; HyNP_{\rightarrow n})]m$$

is configured by a nanometric structure, with a typical process sequence of **Ex;Tx; >ionstrike**, with a hybrid Prima-Quantimetric function.

One can deduce that each criterion to define the QM coherence in \mathbf{t} is dependent on the creation of n - Q -structures correlated to n - m -functions.

And where, if $(n_{qm}-1QM)\mathbf{t} \rightarrow \infty$, all Q -inferences are PRIME-ATTRIBUTABLE and the m -derivates are SPECULAR EQUIVALENTS OF PRIME NUMBERS.

1 - COHERENT, inferring the "CONSECUTIO QUANTORUM ERGA OMNES, RELATO EFFECTU, NUMEROS".

2 - New domain, known as QUANTIMATIC

SYMBOLS

Q = Quantum World

m = Mathematical World

$Qm, Q\omega m$ = **Quantimatic World**

$CKTM$ = Checkatom Stereotopography Profile

NP = Class of Prime Numbers

$HyNP$ = Hybrid Class of Specular Functions

$T_{Ex}^>$ = Sequential Strike

Ex = Energy Function

Tx = Time Function

$lonstrike$ = Heisenberg's Theory

FOREWORD

I had the opportunity to meet Mr Augusto Capello personally at the I.S.C. laboratories in Wakefield, MA (USA). It was 8 November 1999. Fate had played a trick on us, not so much a dirty one as one that was much more provocative. Fate was trying to verify if two elements, A (me) and B (him) could find a *quasi-symmetry* with respect to out mental black holes.

A hypothesis, as confirmed subsequently by our close mental-investigative relationship, where, to be honest to future generations, I have always lost. I say lost because, though Augusto (as he is keen to point out himself) is devoid of *that piece of academic paper*, he has always given me a run for my money. I recall that one day on the telephone to him in Roquebrune Cap-Martin, at the Victoria Hotel, I proposed a pact to him along the lines of: "Dear Kapp (as he wanted me to call him), you do the thinking and I'll do the sums, ok? And what I present here is one of the many accounts I have to settle with him.

Benoît Mandelbrot

PART ONE

INTRODUCTION TO THE FORMAL ACCEPTABILITY OF THE NEW QUANTIMATIC DOMAIN

Inventor: *AUGUSTO CAPELLO*

Supervisor: *B. MANDELBROT*

“Fundamental intuition must have the following properties:

- 1) Be built by our intellect.*
- 2) The mathematical objects are conceived as a work of the thinking spirit*
- 3) Mathematical knowledge is independent of experience.*
- 4) This fundamental intuition is independent of the language it possesses.*
- 5) It infers an objective reality of thinking beings.”*

Haskell B. Curry

We shall try, therefore, to deduce from these sense-endowed *Q-matic truths* the coherence and the logic in relation to the fundamental definitions of mathematics. The ideal pathway, as clearly appears from the now all too evident (but never previously deduced by any researcher) demonstration of a new **univocal identifying reality of atomic derivation** discovered and effected in Augusto Capello’s integrated **Checkatom** protocol, is formulated on the strategic question of the tautological legality of marrying Thingamebob to Whathisname, better known as:

Atoms ↔ Numbers

What the intellectual impetus to allow him to draw such a parallel, an equation of this sort, may be, is not known. But if such a thing occurred, then John Brockman is right when he says that *the future of research is directly proportional to the mad ideas that materialize in a given moment.*

Having made this due premise, I shall discuss what in the introductory title I call the **reasons for formal acceptability of Kapp’s Statement**³, which he let me have personally with his own message.

His considerations begin with Galilei’s problem in his **Discourses: The comparison between (potentially, as the inventor specifies) INFINITE SETS.**

3 - Kapp’s Statement (alias Augusto Capello): draft written in Roquebrune Cap-Martin, France 14/1/2009.

It is extremely evident that the hypothesis covered merges legitimately in that it is precisely at the very base of Set Theory. Forgive my intrusion but I, too, started from the same intellectual expression in order to drive out the fractal world. Now, and I state this unequivocally, the **atomic world** ↔ **mathematical world** interaction, which we shall hereafter write as **QM**, using the inventor's symbol, could lead us much further than the very domain of fractals has so far imagined or demonstrated. But it is not about this that we intend to speak here now.

It is, anyhow, indisputable that in **QM** there is unequivocally the concept of *one-to-one* correspondence, a *sine qua non* condition of Cantor's Set Theory.

Let me now open a nice little parenthesis, which moreover I know is appreciated by the inventor, who stressed how important his classical studies had been for him in relation to concepts seemingly far from the context of Greek philosophy.

If beings are many, it is necessary for them to be as many as they are.

In this case they will be limited.

If they are many, beings will be infinite...

Zeno of Elea

It is precisely by reflecting upon this second consideration that Capello devised a true mechanistic-arithmetic architecture, where **many quanta** would call each other not only by **name** or **mathematical symbol** but also **vice versa**.

It is not difficult to understand where this *mad* process can be shifted. Indeed, if it is true that computational science sets the pace of application *tending to infinity*, exact sciences as far as they are concerned must unfortunately deal with a worrying series of propositions that express *an impossibility of its own*.

And as the Hungarian mathematician Farkas Bolyai said regarding unresolved problems (the problem of the parallels), "*this eternal solar eclipse, this flaw in geometry, this eternal cloud on virgin truth is incomprehensible...and intolerable*".

If we replace the word **geometry** with the word **quanta**, which would blow in the spirit of **QM** on the eternal cloud that looms over the **mathematical** virgin truth, we find ourselves having swept away (thank

you, Kapp) every metaphysical interference for having thought *only* about the scientific decline of *QM*, without in any way putting God into the question.

Let us proceed rapidly, therefore, in the analysis of *QM*, and more precisely let us ask ourselves a second fundamental question: do we find the power of the continuum in *QM*?

If **quanta** and **numbers** express it, it means that they can be formally considered as **two sets that have the power of the continuum**.

We shall, however, in the case of *QM*, modify Cantor's motto thus: *je le vois, et je le crois!*

If a daring experimental network is found, and it will be found, it will be easy to see what one could not have believed.

In order to stress my impersonal neutrality on the topic better, I could objectively deduce, again in regard to infinite sets, that the internal *QM* proposition to define and achieve such correspondences leads, upon first analysis, to an overview of the type: *in the night of the infinite, all cats are grey*.

It would be like saying that possible correspondences of the desired kind are found **only** in the case of **significantly differently structured sets**.

In this point of view even Galileo had doubts about the real possibility of recording differences in size in the case of infinite sets. If to this we add the fact that Cantor showed that **the set of real numbers is uncountable**, and that just the set of real numbers between 0 and 1 is of a higher power than that of the set of natural numbers, we can assert that in such a framework "*if a finite number of elements is added to, or removed from, an infinite set, the power nevertheless will not change.*"⁴

The (mental experiment) *QM* result is astonishing because it is able to demonstrate a **one-to-one correspondence** between **entities of different dimensions**.

It is, of course, clear that an intuitionist could consider that it is not admissible to assume the *in actu* infinite; one might be tempted to brush off *QM* as a *special case* on the basis of the arithmetic rule of the formation of members. I must say again here that, in regard to *QM*, by the **QM set** we understand any **Q** gathering, in a whole of specific and distinct **q objects** of the intuition, which are nothing other than **Q elements**.

4 - cf. Hessenberg.

If, furthermore, in experimental testing, *QM* demonstrates that it is also its own prerogative to tend to infinity, even the infinitely small, this will mean that cats will be able to stay being grey, perhaps because of instrumental unsuitability or relativistic localization in the case of the marriage of

Photons ↔ Numbers

Pending suitable lighting, every **Q** cat though grey will be recognisable by its **M** meow. Amusing, isn't it? I stress again the relatable importance within the *QM* hypothesis between the *Q* sets and the *M* sets as regards the formal acceptability of the *QM* domain.

To quote Cantor again, "*if it is possible to put an invertible one-to-one correspondence between the elements of two sets, then these sets are of the same power*".

Let us move our attention now to the appropriate formulation of the fundamental mathematical level that can be associated with *QM* when, as in this case, we intend to describe the ingredients capable of lighting the mathematical flame.

This is the most delicate of the problems relating to the formalization of the *QM* domain:

Does it have its own completeness and logical decidability?

I must say first of all that *QM* is endowed with its own symbolic lettering for guidance, which, however, we shall not use here to the delight of mathematicians who are so attached to the traditional *typographical guise of propositions*.

I cannot find a better way than to hark back to Finsler for this case of *QM* type. Essentially (I report his thought here) he established that, "*in set theory there cannot be more than one countable number of demonstrations of mathematical theorems*⁵".

All demonstrations are performed using a finite number of *symbols and signs*. These are clearly of the +, - and = kind, as used in mathematics, plus letters of the alphabet and other objects to which one can trace back in a conventional way by means of the corresponding relativization of symbols. Therefore, from a countable set *I* we shall deduce from it that it is simply the set of all the possible combinations of the signs available to the typographer/mathematician. It appears immediately clear that *I* is countable, on condition that the *lexical* formalities stay under the umbrella of some established rule. Let us remember that the set of real numbers **is not countable**. However, both the set of rational numbers and the set of

5 - cf. Finsler

algebraic numbers are countable. If in the formal structure of **QM** we are tempted to peep out towards those transcendental, that is, non-algebraic numbers of a set I , we will have an α as a transcendental number, and in a proposition thus assumed it would be deduced **that it is not demonstrable for all transcendental numbers.**

Why?

It is simple: the set of all demonstrations is countable, whereas the set of transcendental numbers has the power of the continuum.

At this point, before knocking on Gödel's door, we must pause (I know that it is wearisome but it is very useful) to consider the concept of **visible arithmetic Function**, such as an $f(x)$ for example, which associates non-negative whole numbers (THE VALUES OF THE FUNCTION) with non-negative whole numbers $0, 1, 2, \dots$, (THE ARGUMENT). Having said that, such an $f(n)$ function will be called *computable* if we have at our disposal a procedure by means of which for **every value of n** the value $f(n)$ of the function is calculable with a finite number of steps.

Example:

$$f_1(n) = [\bar{n}],$$

Or an $f_2(10) = 2, f_2(16) = 4, f_2(31) = 1$, these are examples under a more general $f_3(n) =$ the number of factors before $n, ;$ or also a $[q] \leq q$, where q is the biggest whole number. Now, referring again to **QM**, it is established that the following items must always be named: words, letters of an accepted language, numbers, symbols (: * -), real or invented atomic acronyms, particle photons, wave photons, the **ANTI**something and an **OBLIQUE** atomic class that the inventor conceptualizes (but it has not yet been demonstrated due to the difficult nature of the concept) as **PSEUDO**something, where his **Siamese quanta** are the qualifying **Qq** subset.

The number 0, which the inventor would like (he is still pondering the matter) at the centre of the relativistic segment a, b , the length of the trajectory of the two or more strike lines, and perhaps also converging, because of its above-mentioned **process sequence** $QM \text{ Ex;Tx; } >$ ionstrike, we shall use for now much more simply as a sign of separation. It is true that we shall no longer be able to use numbers 10, 20,

30 etc. etc. as symbols. This is not a problem because with a *self-correspondence* for example *themselves* VS the numbers from 1 to 9 such is in 11 the number 0. Using this trick one might translate: Kapp, Benoit, the element He, the positron, and maybe even the atom -H. You will understand that I have entered the Gödel-izing antechamber.

Now, *computably*, with every function of this type we will derive a useful procedure so as to be able to calculate *every n*, according to $f(n)$, as:

$$f(0) = 1$$

and

$$f(n) = n \cdot f(n - 1)$$

Gödel-izing this procedure, the Gödel number of the function $f(n)$ will be associated.

However, we still need to define a *non-computable function* (by Gödel-izing it) such that:

Def. 1

$$g(n) = \begin{cases} 1, & \text{if } n \text{ is not the Gödel number of a calculable function} \\ f \ n \ 1, & \text{if } n \text{ is the Gödel number of the calculable function } f \ n \end{cases}$$

will mean that (the function) $g(n)$ **cannot be calculable**.

It can be deduced that for *QM* Def. 1 cannot be hypothesized as a *calculation procedure*. It does, however, admit a possibility of structuring due to the *difference of cases*. And if, when they exist and are required, the possibilities to *decide-calculate* something are required, we define a:

Def. 2

$$h(n) = \begin{cases} 1, & \text{if } n \text{ is a prime number,} \\ n, & \text{otherwise,} \end{cases}$$

We will find here too, as in Def. 1, a difference of cases where a decision is implied; which *the decision* is possible to transform into a calculation procedure.

With the recursive method⁶ made up when needed, a *QM* function will be set up that is 0 **only when it is a prime number**.

We will be able, consequently, to calculate $h(n)$ in this way:

$$h(n) = \begin{cases} 1, & \text{if } QM \ n = 0 \\ n, & \text{in the opposite case.} \end{cases}$$

6 - cf Peter

Behold, therefore, appearing in the Quantimatic fog the much sought-after KAPPAUTOMAINVENTOR, also known mathematically as *automatic QM(n) function* of Def. 2.

Obviously such a machine cannot exist for Def. 1. However, beware that if the result is *not decidable* when n is the Gödel number of a computable function, please note carefully that such an assertion says nothing other than *there is no computable function that realizes decision problems for every n* .

At this point allow me to introduce briefly the important concept of *free variable* to examine whether in M of QM arithmetic formulae can be considered coherent to the system.

Let Q and M be assertions of the formal system proposed. The Gödel number of $Q \rightarrow M$ will be structured starting from the Gödel number α of Q and β of M , thus:

$$\alpha \ 00 \ \gamma \ 00 \ \beta$$

γ being the Gödel number of the sign $\rightarrow, .$

Overlooking here the prompt clarification of this ratio between the Gödel number n of the formula $fn(x)$ and the number m of the demonstration of $fn(n)$, we will arrive at a formula $A(n,m)$ which is true **only if m is the Gödel number of the demonstration of $fn(n)$** . This proposition:

$$| \text{for all } x', A(x,x') \text{ is false} |$$

but in the case of the *free variable* x above, we deduce that $fx(x)$ is not demonstrable.

This is the reason for the "ARBITRARINESS" introduced by Capello in defining a choice criterion possible only for M , when there are X^{xm} of a different nature, for example:

$$XqBIO \leftrightarrow M, XqNEURO \leftrightarrow M, XqFOTO \leftrightarrow M, \text{ and others.}$$

Therefore, summarizing and remixing calculations and concepts and vice versa, we will have:

1. There exist non-decidable problems in QM but precisely for this reason QM is **synchronous with the Formal System**.
2. QM does not have the means to define itself *formally non-contradictory* but for set Q the question is a matter for arithmetic M .
3. The Science of Formal Systems cannot, therefore, reject *a priori* the whole QM intuitive-logical-mathematical structure because of the following small and yet gigantic quibble: ***QM is not demonstrable as "non-contradictory" with MQ means.***

These are essentially the reasons that I believe to be rather convincing to show, even though in perhaps a slightly long-winded way, the **FORMAL COHERENCE TO THE PRINCIPLES OF MATHEMATICS OF THE NEW QUANTIMATIC DOMAIN.**

SECOND PART

At this point I am sorely tempted to enter inside the Q world of QM not as an expert, since I am not, but as a *quantum apostate*, because Capello has put it into my head that QM might (and Feynman, please have pity on us) obtain more thorough interpretations not so much about the *struck* atoms as about what is in the so-called **interatomic void**. Perhaps, great heresy though it is, one could admire an ENERGETIC-FRACTAL-MATHEMATICAL map of that which **lies in the shade** or **fused together** or **hand in hand with an electron** or **a photon** within an **IB1 FLOW** between start point x and end point y, for a time T_x and E_x .

The quantum apostasy was obviously conceived by the inventor of QM and baptised as

KAPP'S MACHINE

(A contraption that he will describe himself later.)

A few premises, therefore, are required in order to stress (if it is still necessary) that:

1. The so-called *laws* always turn out to be more and more bizarre and contrasting with clear intuition.
2. By **the same time** I mean the **simultaneousness relativistically speaking** is and remains a merely debatable assertion.
3. The Equations of quantum mechanics tell us *mathematically* the precise state of things, but only of those that actually exist.

I would like here, however, to reintroduce the *oddities* within all this; just imagine "*if there is ever anyone who can understand them*" (Feynman). Let us, therefore, go straight to the ion-strike using the most classic experimental tools: two holes.

When energy arrives, we will have a torrent of ions. Each of these is a single identifiable unit. After the census of arrivals has been carried out, a graph of curve D_1 will be obtained where the two curves relating to the two holes through which the ionic impact arrived, and which we shall call d_1 and d_2 , are such that $D_1 = d_1 + d_2$, and *without interference*.

Let us look at the quantum aspect of the experiment with WAVES, typically water waves. Again passing through the two holes the energy of the wave no longer has values that are *strictly related to single units* as for ions but rather it will acquire ANY VALUE. Let us then measure the energy relative to the waves in a certain point. Let us call it *I*, Intensity. The curve I_1 , with two open holes, is more complicated than the first

example. I shall overlook, for the sake of conciseness, the comparisons of the breakdown of the measurements for each hole F_1 and F_2 . Mathematically, curve I_1 , assuming the statistical heights of the water flow (for F_1 and F_2) h_1 and h_2 , says that I_1 is not equal to the height but **proportional to its square**. Therefore, if for $H_1 = h_1 + h_2$, we will have here:

$$I_1 \neq i_1 + i_2 \text{ with interference}$$

and

$$I_1 = (H_1)^2$$

$$i_1 = (h_1)^2$$

$$i_2 = (h_2)^2$$

It can be noticed that I_1 is no longer equal to $i_1 + i_2$.

This is a necessary premise in order to arrive at the heart of the theoretical experiment using the *KAPPELIAN HYPOTHESIS*.

We shoot electrons, they arrive in single units like particles. We measure the arrival probabilities, calculate the average, etc., etc., and we shall see something strange: we will obtain a curve the same as that, with interference, for waves. By analogy, we shall change I_1 to E_1 , and h to **Ap**, which we shall call **probability amplitude**. The electron, as also the photon, has two different types of behaviour. In this regard a proposition may be put forward such that *an electron passes either through hole F_1 or through hole F_2* . However, the logic of calculation tells us that this is **false**. False because the case holds that the electron is split *temporarily* into two, in the infinitesimal time it takes it to actually pass through this or that hole.

In order to check if this is ever true, we shall illuminate them, and they will diffuse the light.

- *What will we see?*

That the electron passes, whole, all of it, either through one hole or through the other.

- *Are we or are we not faced with a paradox?*

To begin with, we have ascertained that if an electron is illuminated, it *vibrates* and consequently it behaves differently. However, in the case of a *minimum number of illuminating photons*, it can happen that some electrons are able to cross one or the other hole *unseen*.

- *Is it legitimate to wonder if this true/experimental result tells us the whole truth about the phenomenon, or is there something else?*

There again, it must be stressed that in every such experiment, it is impossible to arrange the light without *disturbing* the arrival distribution of the electrons, and this **without destroying the interference**. Heisenberg clarifies everything for us with his theory.

Thus, as the sense of this theory is that it is **impossible** to have equipment that can *see* precisely which hole the electrons pass through, it follows that we, hapless beings, must resign ourselves to the figure of interference that Lord Electron, it is presumed, wishes. If, however, Heisenberg's theory were a novel, anyone would end up swearing that if there is something that does not work, it is because somewhere there is the *Deus ex machina*.

So, must we resign ourselves, in the best case, to live with the idea that "fundamental laws" are doped with probabilistic dice? Or what is there that could put the probabilistic guillotine out to pasture once and for all?

If there were this something, it would be definable with the expression *et voilà, les jeux de la physique sont faits!*"

The theory of the hidden variable, clearly, is like the fable of the sour grapes and, as I am not the fox of the tale, I shall leave you in the company of quantum flashes and unexpected energy shadows, as Capello will entitle his *Mad mental experiment*.

*The day before the Big Bang, the Devil,
weary of his own indecisiveness, asked*

God if he was the same.

God replied, "Yes and no..."

Kapp

To my friend *Benedict*, Ω October, 10 - 2010

You were mad

about my

proposition:

Man?...

...A fractal of God.

Now that you know,

Benoît,

tell me the Truth:

is it really like that?

KAPP'S MACHINE

1. Tech-gears
2. Integrated software
3. Trojan horses
4. Energies
5. Domains
6. Targets
7. *Go*
8. Detectors / Filters
9. Drafts
10. Kappellian numbers



Krypto Algorithm by Plasma Powered

GREEK ACCUSATIVE

- Tell me, oh Machine, do you speak of Truth lying, or of False Truths of yours?

+ I speak in the name of the Gods: TRUE and FALSE are your problem.

- I must know, Machine.

+ What a pity... Me, too.

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