# Renaissance of the Conception of *Vis Vitalis*

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Abstract: The history of the controversy between the French School and the German School as far as the conception of *vis vitalis* is concerned has been presented.
My own contribution arising from the research of aloe (*Aloe vera*) has been presented with detailed grounds.

The conception of *vis vitalis* (the force of life) had been formulated in France in the 18th century. In the 20th century the French erudite and thinker Pierre Teilhard de Chardin SJ contrived (in a beautiful scientific form) the conception of *vis vitalis* propelling the life in living organisms. It seemed that the idealistic conceptions of life laid in ruin when the German chemist Friedrich Wöhler had synthesized urea from an inorganic compound as the first organic substance obtained this way.

Friedrich Wöhler had mixed ammonia ions ($NH_4^+$) with cyanate ions ($CNO^-$). He had suspected a salt would be obtained but carbamid appeared. It shook the vitalism.
But cyanate had been extracted from animal blood and the vitalists defended further.
However, Herrmann Kolbe using only inorganic substances made up directly of pure elements, created an organic compound – acetic acid.
But the research of the genius Pasteur in the field of microbiology and biochemistry as well as especially his observations of fermentation led to the conclusion that there were reactions driven only by living organisms in the fermenting milieu.
This conception was not shaken even by the famous and idiotic sentence of Liebig: "*Mr. Pasteur, do you really think that anything can live in dung?*"
Buchner's discovery that fermentation need not be effected by living bacterial cells, stroke a smashing blow at Pasteur's conception. It seemed that it was a deciding blow and it meant the total triumph of the German School over the French one. However, after the discovery of vitamins and during the attempts at their synthesis, the scientists realized that not all the stages of this synthesis can be effected without microbes.
To this day one synthesizes so the vitamins $B_2$, $B_{12}$, C.
So the conception of *vis vitalis* comes back as the boomerang although it is not known whether the enzymatic system of the synthesis of vitamins is so complicated that only perfect Nature can effect it or if each biochemical reaction can be carried without an intermediary of living organisms.
In this work I decided to rise to speak in the continuously unfading discussion between the French School and the German School.
I think the following results are original:
May 6th, 2013: We cut a high shoot of aloe into three parts and put all them to the soil in separate flowerpots. The middle part without leaves and roots is the most interesting. It is obvious that if it pushes forth the leaves, it would be a proof of the existence of *vis vitalis* (the force of life). It is worth adding that the middle part has not any green fragments so its survival would be a great argument for *vis vitalis*. It has only a dark green ring next to the soil but even if it is chlorophyll, the access of light to it has been very difficult because of the lignified tissues.

July 4th, 2013: It appears after two months that the shoot without leaves and roots put into wet soil pushes forth two small leaves at the top.


Photo 1: June 18th, 2013


Photo 2: July 5th, 2013

Photo 3: July 13th, 2013

Photo 4: July 17th, 2013

So the conception of Teilhard de Chardin and Louis Pasteur concerning *vis vitalis* has been confirmed.
When W. K. Röntgen discovered X-rays (the Röntgen radiation) it appeared that many researchers had seen this radiation earlier but nobody had drawn right conclusions.
J. Ginter presents in his book [1] how one could have discovered the corpuscular nature of light fifty years before Einstein. Simply that is the matter that the image on the photographic plate does not emerge at once but first some spots arise. Then the spots are more and more numerous. Finally, the image more and more visible arises with the increase in the number of the spots.
The wave-particle dualism could have been discovered much earlier.
As same as one had to back to the "refuted" conception of the corpuscles of light, just now one should come back to the "refuted" conception of *vis vitalis*.
Let us come back to the experiment.
The aloe shoot had neither leaves nor roots do the resistance of the growth appeared. It is known from physics that the force is needed in purpose to break the resistance. *Vis vitalis* (the force of life) is this force in our case.
In the next work concerning fields of life I will describe the nature of this force [2].
The fact that the heart of an embryo of a chicken begins to throb before the nerve tissue penetrates the heart – is the proof of existence of the fields of life [3].
The great simplicity of this experiment should not indispose. Madame M. Curie said that an experiment had to be easy in order to contribute something new.

References:


1. J. Ginter, "Fizyka fal", PWN Warszawa
2. Z. Morawski, position 5, this website
3. Polish handbooks of animal embryology