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"Interdisciplinarity as an approach of unifying science with universal methodologies – practical technical education and children philosophy implications"

Interdisciplinarity of science is highly important in nowadays science, because systems complexity is increasing. Analyzing tools, beginning with Euklid's "Elements" over Descartes's "Regulae" to genuine scientific methodology, have to be reintegrated on a higher level of understanding. The reintegration has to be done by means of more general methods. This can be done with the following method:

1.) An *universal approach* is built, in the sense that theories that are universal applicable are to be preferred rather than single theoretical frameworks
2.) With this approach two or more disciplines are described with regard to *scientific questions* with regard to those two or more disciplines
3.) Thirdly the "unifying language" of the universal research method is used to deduct answers to the questions (2) from premises. With this tunneling path through the knowledge gap of different disciplines a greater and more profound understanding is achieved, through a more valid greater network of world explanations, as with that of one discipline alone.
4.) When this nexus – or network of real world processes - is accomplished, a *compression of information* has to take place. It is necessary in an evolutionary sense that the order is increasing in self-organizing systems as societal ones.

Compression of structure by sustaining or increasing information is the essential part of interdisciplinary value creation. In this sense the understanding of following generations is increasingly greater, meaning that a more realistic reasoning is occurring, due to a more consistent societal language framework. Neil Gershenfeld said in the context of the Fablab experiences with eight years old children in Africa, where children were allowed to use fabrication machines like 3D-printers, that children have a different approach of producing things like this: "They simple draw an idea and print them." So this means that they easily can produce prototypes, that have inherent knowledge realized in them, let this be *exformation*, the information out of the mind gone into the product, out of mind perspective. It can as well be regarded as materialization of ideas in mind. With this the - by the child itself produced - product becomes the language of the child. The language of the *material* – as was this one key terminus of Maria Montessori - has then one certain characteristic: It is a true physical existing *nexus*. The interaction with the material in spatiotemporal proximity is true self adjusting language: *sensomotoric interaction*. This is the language of "realizing" things. Digital tools e.g. are even *accelerating* this *process of realizing products*, which goes hand in hand with an *accelerated understanding*.

The integration of increasing knowledge by this approach, both analytically and materially has a deep impact on social behavior and change in society. Knowledge becomes more available and is hence more and more part of our environment. Simultaneously this leads also to an error correction mechanism, giving self-stability of sustained achievements in knowledge of mankind.