

Evolution, the natural course of events, and the second law of thermodynamics

“Evolution is a robust scientific concept”

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Evolution
gradual change



Revolution
radical change

There are 3 completely different types
of change of a system:

1 Variation Change of its parameters

$$\begin{pmatrix} a1 \\ b1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \end{pmatrix}$$



2 Innovation Increase of its dimensions

$$\begin{pmatrix} a1 \\ b1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \\ c2 \end{pmatrix}$$






3 Degeneration Decrease of its dimensions

$$\begin{pmatrix} a1 \\ b1 \\ c1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \end{pmatrix}$$



Billions of variations cannot produce innovations

1. Variation 	2. Innovation 	3. Degeneration 
change in the parameters	increase of the dimensions	decrease of the dimensions
$\begin{pmatrix} a1 \\ b1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \end{pmatrix}$	$\begin{pmatrix} a1 \\ b1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \\ c2 \end{pmatrix}$	$\begin{pmatrix} a1 \\ b1 \\ c1 \end{pmatrix} \rightarrow \begin{pmatrix} a2 \\ b2 \end{pmatrix}$
<ul style="list-style-type: none"> no increase of energy level natural and artificial processes can produce variation and selection ("more/less of the same") 	<ul style="list-style-type: none"> increase of energy level demands work (<i>Principle of Clausius</i>) by mechanics, engineers, or factories "2nd order change; out of the box; quantum leap" 	<ul style="list-style-type: none"> decrease of energy level decay is the natural course of events (<i>Principle of Kelvin</i>), by natural processes (desintegration, weakening, weathering, rusting, oxidation) "...it does not work no more..."
<ul style="list-style-type: none"> by gene regulation and recombination of gene variants and selection <p>W. M. DeJong en H. Degens (2011) "The evolutionary dynamics of digital and nucleotide codes: a mutation protection perspective", in: The Open Evolution Journal, 5 1-4 , op http://bit.ly/1P37x9r</p>	<ul style="list-style-type: none"> would be produced by: the accumulation of irreparable, advantageous, code expanding, inheritable mutations during billions of years. Is produced in reality by gene technology 	<ul style="list-style-type: none"> degeneration is vigorously antagonized by: <ul style="list-style-type: none"> DNA mutation repair systems survival of the fittest sexual reproduction nevertheless degeneration by: accumulation of irreparable, inheritable mutations
<ul style="list-style-type: none"> very big/small dogs, goldfishes, owls, ferns, tomatoes, etc. 	<ul style="list-style-type: none"> modified grains bacteria that produce medicines 	<ul style="list-style-type: none"> cancer, hereditary diseases, severe selective disadvantage

2nd law of thermodynamics combines the principles of Clausius and Kelvin in 1 formula: "Stagnation means decline"

Conclusions

1. There are 3 fundamentally different types of change: variation, innovation and degeneration.
2. Evolution, in the sense of gradual change of living nature by variation and selection exists. But billions of *variations* cannot produce *innovation*.
3. The empirical evidence for variation of the DNA by gene regulation and recombination of gene variants and selection, is wrongly used as evidence for the innovation of the DNA by the accumulation of irreparable, inheritable, advantageous, code expanding mutations of the DNA.
4. It is urgently necessary to formulate evolutionary theory more accurately by distinguishing between *variation* and *innovation* and the underlying mechanisms and associated observations. (Articulation of theories belongs to the core business of scientists. This also holds for evolution biologists).

Summarizing: According to René Fransen evolution is a robust scientific concept. That is incorrect.