Negentropy and life

Intro

In information theory and statistics, **negentropy** is used as a measure of distance to normality. The concept and phrase "**negative entropy**" was introduced by Erwin Schrödinger in his 1944 popular-science book *What is Life?*[1] Later, Léon Brillouin shortened the phrase to *negentropy*.[2] [3] In 1974, Albert Szent-Györgyi proposed replacing the term *negentropy* with *syntropy*. That term may have originated in the 1940s with the Italian mathematician Luigi Fantappiè, who tried to construct a unified theory of biology and physics. Buckminster Fuller tried to popularize this usage, but *negentropy* remains common.

In a note to *What is Life?* Schrödinger explained his use of this phrase. (Source Wikipedia)

> ... if I had been catering for them [physicists] alone I should have let the discussion turn on *free energy* instead. It is the more familiar notion in this context. But this highly technical term seemed linguistically too near to *energy* for making the average reader alive to the contrast between the two things.

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"Schrödinger asked the question: "How does the living organism avoid decay?" The obvious answer is: "By eating, drinking, breathing and (in the case of plants) assimilating." While energy from nutrients is necessary to sustain an organism's order, Schrödinger also presciently postulated the existence of other molecules equally necessary for creating the order observed in living organisms: "An organism's astonishing gift of concentrating a stream of order on itself and thus escaping the decay into atomic chaos – of drinking orderliness from a suitable environment – seems to be connected with the presence of the aperiodic solids..." We now know that this "aperiodic" crystal is DNA, and that its irregular arrangement is a form of information. "The DNA in the cell nucleus contains the master copy of the software, in duplicate. This software seems to control by specifying an algorithm, or set of instructions, for creating and maintaining the entire organism containing the cell."[4]

DNA and other macromolecules determine an organism's life cycle: birth, growth, maturity, decline, and death. Nutrition is necessary but not sufficient to account for growth in size, as genetics is the governing factor. At some point, virtually all organisms normally decline and die even while remaining in environments that contain sufficient nutrients to sustain life. The controlling factor must be internal and not nutrients or sunlight acting as causal exogenous variables. Organisms inherit the ability to create unique and complex biological structures; it is unlikely for those capabilities to be reinvented or to be taught to each generation. Therefore, DNA must be operative as the prime cause in this characteristic as well. Applying Boltzmann's perspective of the second law, the change of state from a more probable, less ordered, and higher entropy arrangement to one of less probability, more order, and lower entropy (as is seen in biological ordering) calls for a function like that known of DNA. DNA's apparent information-processing function provides a resolution of the Schrödinger paradox posed by life and the entropy requirement of the second law.[5] " (Source Wikipedia)

Negentropy according Charon

Charon claims that in opposite to the Entropy in the space of matter, inside the electrons and in the black holes must be **negentropy.** He explains that inside a black hole or super dense star a kind of pocket is created. And inside this pocket is so much gravity, that space and time are different from our ordinary space and time.
"This difference is explained in part by a "return" of time; i.e. that space recaptures at regular intervals the ensemble of its past states .... On the other hand, the evolution of phenomena in this space happens with increasing negentropy, not increasing entropy, as in the case in our own space. This allows the phenomena in such a space to approach being regarded as Living or Thinking"[6].

References

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3. Léon Brillouin, La science et la théorie de l'information, Masson, 1959
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6. Charon (2005), p. 81 ff