A new evolutionary paradigm: the Associations for the Mutual Sharing of Advantages and of Disadvantages.

Pierre BRICAGE

Faculté des Sciences, Université de Pau, avenue de l'Université, 64000 Pau, France, Europe pierre.bricage@univ-pau.fr

"To eat and not to be eaten!" for "To preserve its life, and to reproduce its life form!" such is the survival's law of the living systems. (1*, 2*)

The survival of a lichen, a whole with two partners, depends on a steady state for the sharing of advantages and of disadvantages: the benefits for the host are the damages for the guest and reciprocally. The symbiosis is an association for the mutual sharing of profits and losses but not "for mutual benefits"! (2*, 3*, 4*)

Together the partners survive in environments where the surviving for each is impossible. But, the mutual survival depends on reciprocal limitations. Each partner will survive only if the other survives first! The growth of each is limited by the growth of the other.

A plant cell is a "unity through diversity" for the recycling of waste products into foods. Its growth is only a way to acquire new capabilities. The surviving is possible without growing. (3*)

The Ruminants' survival is the result from their aptitude to be hosts for guests allowing an increase of the host capacity of the environment. The Ruminants provide the house and the food: their rumen offers an optimal environment for microbes. But, they eat products of microbes' digestion and digest the microbes, without them they would die from hunger!

The advantages for the hosts are the disadvantages for the guests and reciprocally. (4*)

The man shares a common environment with the other animals.

What brings some risks! Epidemics of influenza originate from viruses, that survive into birds and pigs, before they invade the man. The human survival depends on the survival of other organisms. Their mutual survival depends on a limitation: the need of a sufficient survival of plants and animals.

The man must not survive for eating, he needs to eat for surviving! Through his for himself increase of the host capacity of the environment, he increases the violence between species that were previously associated into mutual networks. He destroys the dynamics of the associations, only for his own benefit at a short duration. The steady states' displacements provoke unpredictable changes! (3*, 4*, 5*)

The man would rather have to increase his capacity to be a guest of the environment!

Partnership of "unity through diversity" for the mutual sharing of profits and injuries, the symbiosis has been allowing the survival of the organisms for billions of years.

For supporting the environment changes, organisms have interconnected together into wholes, that have allowed the increase of the capacity of the environment to be their host, through the increase of their capacities to be the guests of the environment.

The development, is not durable, if it is not sustainable for the environment.

The organism survival is durable if sustainable for the environment, namely if it does not impair the durable survivals of the other organisms that share the same environment.

"To convert the disadvantages into advantages" and "To prevent the conversion of the advantages into disadvantages" such is the natural survival's rule. (2*)

- 1* Bricage P. (1991) Les Caractéristiques des Organismes Vivants. Fac. Sci. Univ. Pau, A.P.I.D.S., 44 p.
- 2* Bricage P. (1998) La Survie des Systèmes Vivants. Atelier MCX20 "Prendre soin de l'homme",

Programme Européen Modélisation de la Complexité MCX, Pau, 19 oct. 1998, 3 p.

- 3* Bricage P. (2000) La nature de la violence dans la nature Colloque AFSCET Andé, 18-19 mars 2000, 7 p.
- 4* Bricage P. (2001) Les Associations à avantages et inconvénients partagés.

Atelier MCX20 L'éthique de la prise en charge sanitaire et sociale. Arcachon, 11 mai 2001, 21 p.

5* Bricage P.& al. (1990) Appraisement of the defoliator Lepidoptera associations in a hardwood forest. Ikartzaleak 13 (Acta Entomologica Vasconae 1): 5-26.

The Bertalanffy Anniversary Conference "Unity Through Diversity", University of Vienna,

1-4 November 2001

"The creation of a sustainable society depends on Innovative Systems Thinking (IST)"