

SOCIETAL and ENVIRONMENTAL RESPONSIBILITY

Balancing individual and collective actions: humanity and systems interaction.



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The difference between communism and capitalism is nothing more than the dialectical relationship between the values of freedom (individual) and distributive justice (collectivity) the source of all sociopolitical problems in the world. These two values show that "more individual freedom, less distributive justice" and vice-versa. The problems and the solution for a better social understanding is to find the best balance between these universal values.

The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man.

George Bernard Shaw

I am curious to know how much we are influenced by cycles of higher systems in which we are, by cycles of lower systems which are in us, and how much influence we have -as individuals or groups- on the processes of emergence of complex systems. Life has much more imagination, knowledge and abilities than we have. We have a lot to learn from Life's resiliency history.

EMCSR 2014

As a person member of a family, as a worker member of a team, as a decider member of an enterprise, as a leader member of a society, as an elected people with responsibility for the governance of a country, or as a citizen, everyone is concerned with decisions that imply both individual persons and collectivities.

Whatever your decision and action, for you and other people who are concerned, there are never advantages without disadvantages. And, depending on the place, time and action, all that is an advantage for some people is always a disadvantage for others. How can we share these mutual and reciprocal advantages and disadvantages?

HERE TO STAY



Wangari Maathai



Conflict between man and nature



Mikhail Gorbachev



has been increasing to an extent likely to undermine the very foundations of life on earth.

HERE TO STAY

James Lovelock



Edgar Morin



We have to understand that we're approaching a bottleneck



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Social and environmental responsibility: balancing individual and collective actions (IASCYS Symposium)



Complexity of social responsibility

Matjaž Mulej

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Anita Hrast
Zdenka Ženko



Why unemployment is so high in Spain?: a look from an axiological systemic perspective

Francisco Parra-Luna
IASCYS



Approach to societal risk measurement by on-line community concerns



Xijin Tang

Professor



Chinese Academy of Sciences
Institute of Systems Science
China

What could future learning structures look like and why would we care? The praxis of complex adaptive systems and learning structures



Dr. Susu Nousala
Aalto University, Finland

Researcher in sustainable design
University of Melbourne, Australia
Research Fellow at the (Australasian Centre for the Governance and Management of Urban Transport)
Faculty of Architecture, Building and Planning



Anne STEENHOUT, Prof. Dr, Senior Researcher
Environmental Sciences
ULB Université Libre de Bruxelles, Belgique
Ecotoxicological Evaluation on Pollutants,
Safety and Impacts on Humans
EU Expert

Challenges in protecting human health and ecosystems

SOCIETAL and ENVIRONMENTAL RESPONSIBILITY

09:00 presentation of **the Academy (IASCYS)**

talks (20 minutes +10 minutes discussion)

09:30 Xijin TANG **Approach to societal risk measurement by online community concerns.**

10:00 Susu NOUSALA **What could future learning structures look like and why would we care?**
The praxis of complex adaptive systems and learning structures.

break at 10:30

11:00 Anne STEENHOUT **Challenges in protecting human health and ecosystems**

11:30 Francisco PARA-LUNA (IASCYS) **Why unemployment is so high in Spain ? :**
A look from an axiological systemic perspective.

12:00 Matjaz MULEJ (IASCYS) **Complexity of Social responsibility.**



Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages ARMSADA A Fruitful Predictive Paradigm.

Pierre Bricage

Association PELLEAS, 9 route de Saint Armou, 64450 Lasclaveries, France,
Vice-President AFSCET, ENSAM, 75013 Paris, France, pierre.bricage@univ-pau.fr

Abstract: To survive the living systems must eat and not to be eaten. But, soon or late, every one is eaten [1]. The law of the strongest is not-at-all the best! The only way to escape for a moment from the struggle for life [2] is to enter into an Association for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages (ARMSADA <http://armsada.eu>) [3]. A lichen is both an organism and an ecosystem. A cell is both an ecosystem and an endosyncenosis (ceno: to meet and fuse, syn: into a system, endo: with a new internal structural and functional organization). Both are ARMSADAs. A neuron emerges from the “unity through diversity” between a population of Schwann’s cells and a giant cell. The legumes’ nodes emerge from the fusion of a population of Monera with an organism. The cell emerged with the help of a RNA virus from a microbial mat of Monera [3]. In their new endophysiotope (endo: internal, tope: space, physio: of functioning), the parcceners are absolutely dependent from each others [4]. Every ARMSADA emerges when the partners lose simultaneously the capacity to kill the other one(s) [3, 5]. In the new Whole, all that is an advantage for a partner is a disadvantage for the other one(s). The “parcceners” are linked together “for the best and for the worst”. Symbiosis is not at all a win-win association but an ARMSADA [3, 4]: the benefits are not for the partners but only for their Whole which expresses new “abilities”. But, through the iteration of the process of new ARMSADAs’ emerging, the new -more and more complex- “system-of-systems” is, more and more, independent of its ecoexotope (exo: external, tope: space, eco: of inhabitation). The endophysiotope [6] of a i level of organization is the ecoexotope of previous i-n levels. So the Whole is also less and more than the sum of its parts [2]: because of the semi-autonomy of the parcceners abilities of the previous levels are lost but new are gained. There are never advantages without disadvantages! To survive that is to turn disadvantages into advantages and to avoid advantages turning into disadvantages: *the survival of the fittest is the survival of the best fitted mutual sharing association!* The systemic disfunction of its ARMSADA explains the cell apoptosis as the result of the death of one endangered internal partner (the moneral parts: the population of mitochondria or the nucleus) which results into the death of the whole endosyncenosis. Cancer also is a breaking of the cell’s ARMSADA. Cells that should have to die, because of external dangers, “thanks” to the escape of internal dormant viruses do not [4]. Through this metamorphosis their new endophysiotope survives but their previous ecoexotope, the organism, is altered and endangered. Into an ARMSADA each partner can survive only if the other ones survive first. Man is not an exception! AIDS and cancer curative vaccines [4, 5] that had been proposed using this ARMSADA paradigm are coming effectively in practice. Ecosystems management must take into account that paradigm before any change, economic and social managements should too [7].

Keywords: apoptosis, breakage, cancer, cell level, curative vaccines, ecosystem level, governance, lichen, limits, metamorphosis, Monera, mutualism, network, organism level, parceners, prisoners' dilemma, symbiosis, threshold, trans-disciplinarity, virus, wholeness.

Key concepts: ago-antagonism [3], capacity of hosting, capacity to be hosted, constrain dangers, contingency, endosyncenosis, ergodicity, modularity, percolation.

Key paradigms: ARMSADA (<http://armsada.eu>), ecoexotope, endophysiotope.

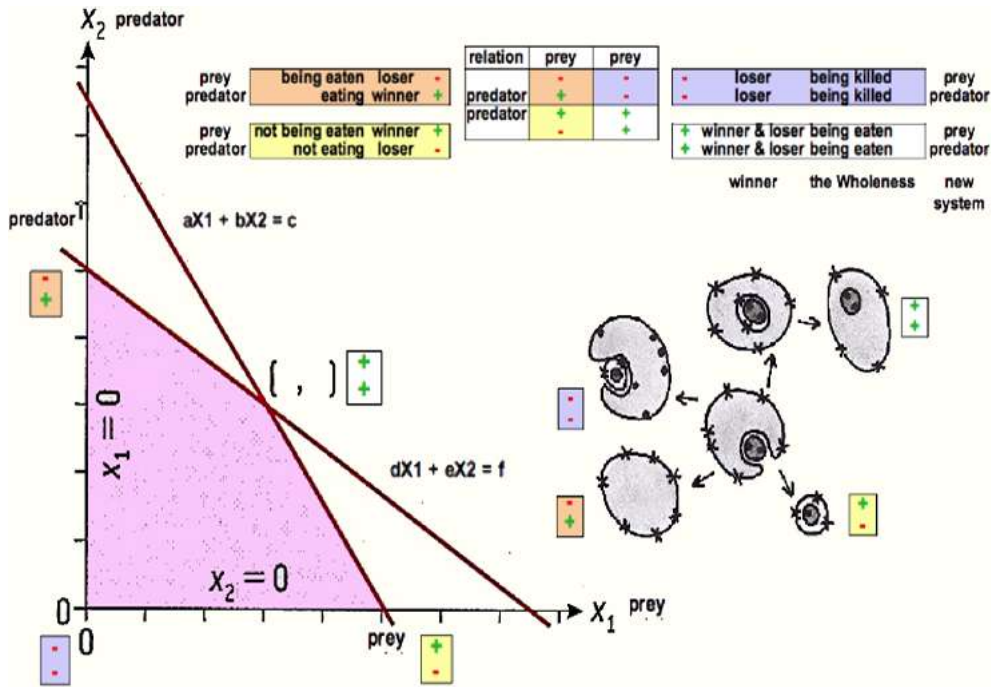


Figure 1: ARMSADA emergence. (Bricage Pierre, 2008, [4, 5], Creative Commons ShareAlike)

Simplex representation of predator-prey interaction. Prisoners' dilemma like table. Emergence graph.

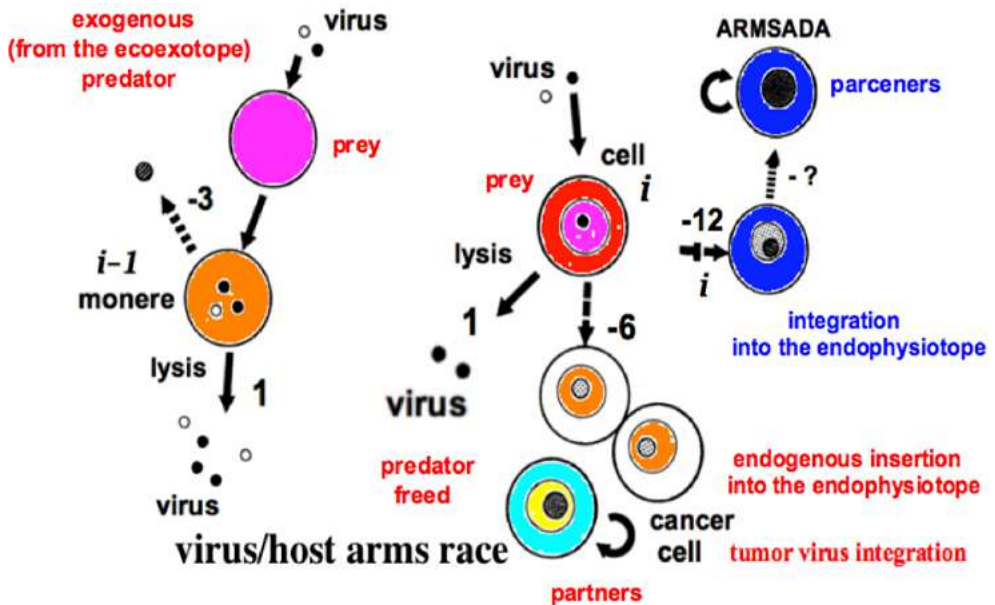


Figure 2: Constrained dangers integration. (Bricage Pierre, 2008, [5], Creative Commons ShareAlike)

organization level: $i, i-1$, probabilities: $-3, -6, -12$ (power laws of 10), predator-prey interaction.

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About the Author

Pierre Bricage

Born in 1947 (Paris, France, Europe), graduated in biochemistry, embryology and genetics from Paris 6 University (the first French University in ARWU, in the top 15 in Natural Sciences and 5 in Mathematics), as ENS Alumnus he passed the aggregation of biology. He learned American Civilization in CalTech, California (ranking 5). Now retired, he edited or published more than 250 pedagogic or scientific works in more than 20 countries <http://web.univ-pau.fr/~bricage>. During 8 years at the University of Dakar (Senegal, Africa), the biological rhythms of biochemical, ecological, physiological & genetical markers of plant enzymes & pigments were his research interests for sustainable management of natural resources and environmental education. As head of the Biology department at the University of Pau, France, he founded a centre for Agricultural Research. During 40 years, as researcher in biochemistry, enzymology, genetics, microbiology, animal or plant physiology, and systems analysis, he taught Systems Theories & Micro-Informatics applied to Quality Control, Health and Social Sciences (Societal Engineering and Man's Societal Environmental Responsibility). Pointing to Fundamentals in Biology, with On Line "Creative Commons" works (<http://hal.archives-ouvertes.fr/hal-00130218/fr>) he has been developing new Key concepts (endophysiotope, ecoexotope, gauge invariance of life, phylotagmotaphology <http://hal.archives-ouvertes.fr/hal-00423730/fr>), through the Paradigm of ARMSADA "Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages" <http://www.armsada.eu>, with applications in curative vaccines (cancer, AIDS). He is Vice-President of the French Association for Systemics and Cybernetics AFSCET (<http://www.afscet.asso.fr>), Deputy Secretary General of the European Union for Systemics UES-EUS (<http://ues-eus.eu/>), Member of the Directorate of the World Organisation of Systems and Cybernetics WOSC (<http://www.wosc.co/>) and Secretary General of the International Academy for Systems and Cybernetic Sciences IASCYS (<http://www.iascys.org>).

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

ARMSADA

A Fruitful Predictive Paradigm

Pierre BRICAGE

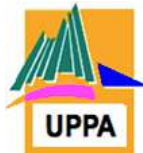
Université de Pau et des Pays de l'Adour UPPA, Pau, France

Association Française de Science des Systèmes AFSCET, Paris, France

European Union for Systemics UES-EUS, Brussels, Belgique,

World Organisation of Systems and Cybernetics WOSC, Lincoln, UK

International Academy for Systems and Cybernetic Sciences IASCYS, Wien, Österreich



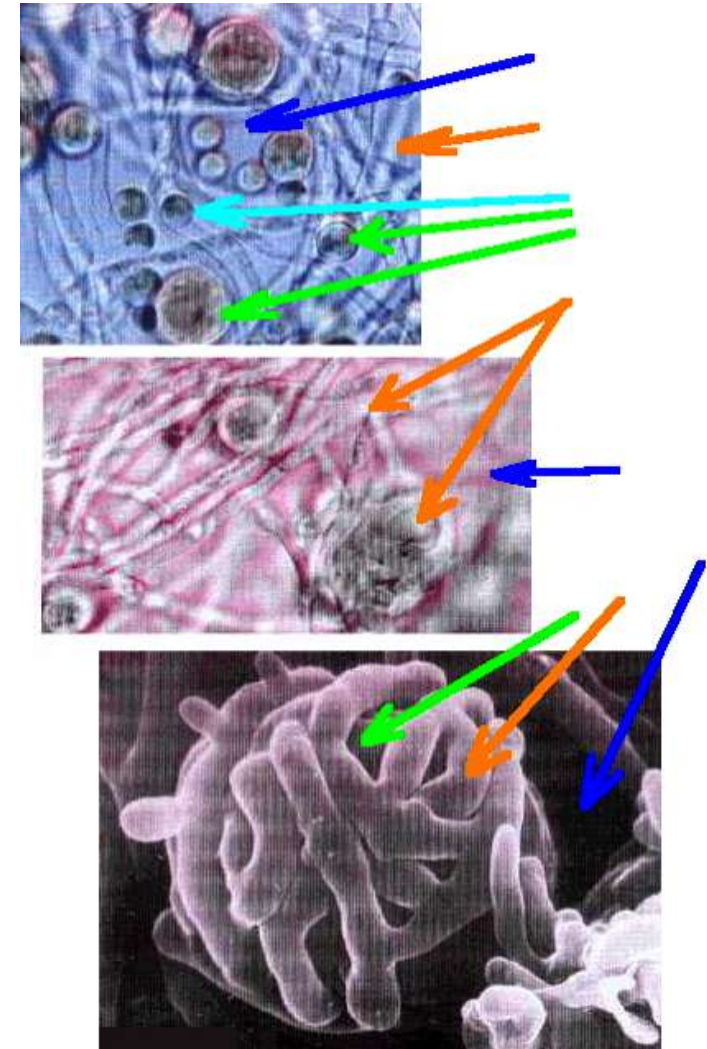
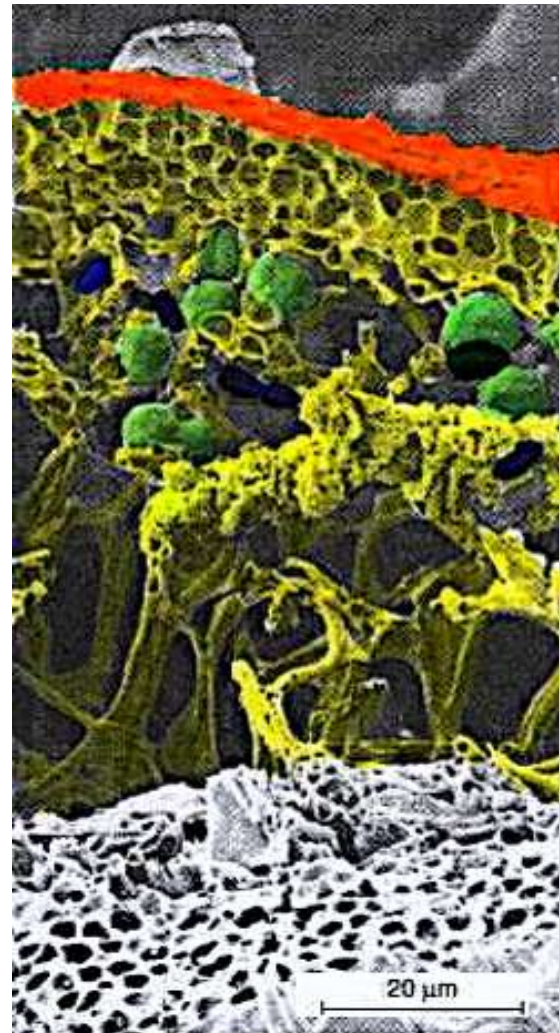
AFSCET



World
Organisation
of Systems and
Cybernetics
WOSC



1.1. A LICHEN is NOT a WIN-WIN association BUT AN ARMSADA

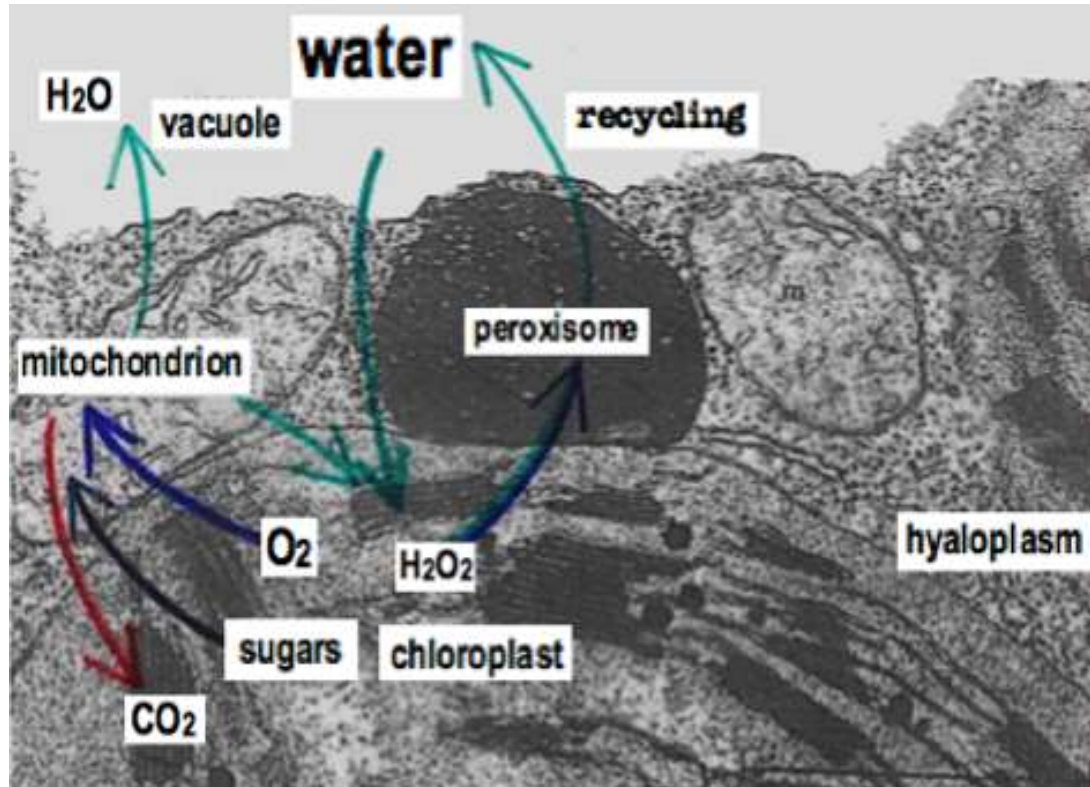


ECO-EXO-TOPE
ENDO-PHYSIO-TOPE
1998

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Atelier fondateur MCX20 "Prendre soin de l'homme"
Centre Hospitalier Général de Pau

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

1.2. A CELL IS AN ENDOSYNCENOSIS, AN ECOSYSTEM of ORGANISMS

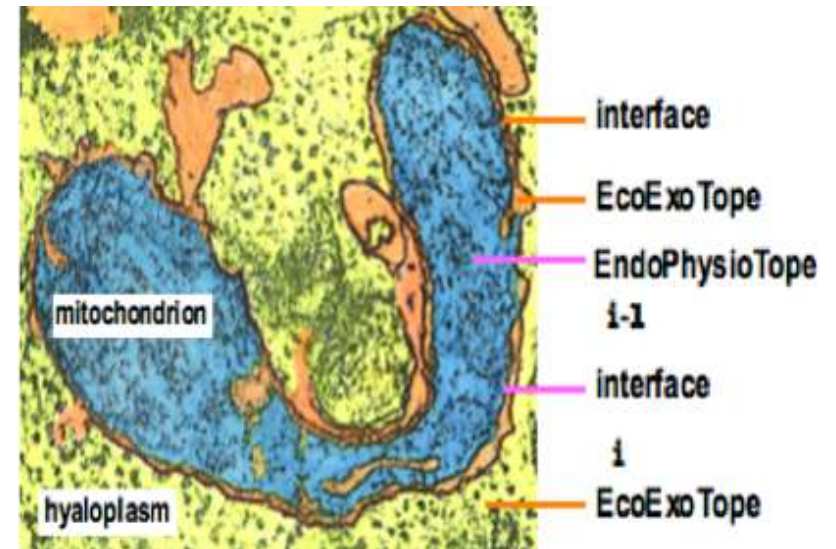


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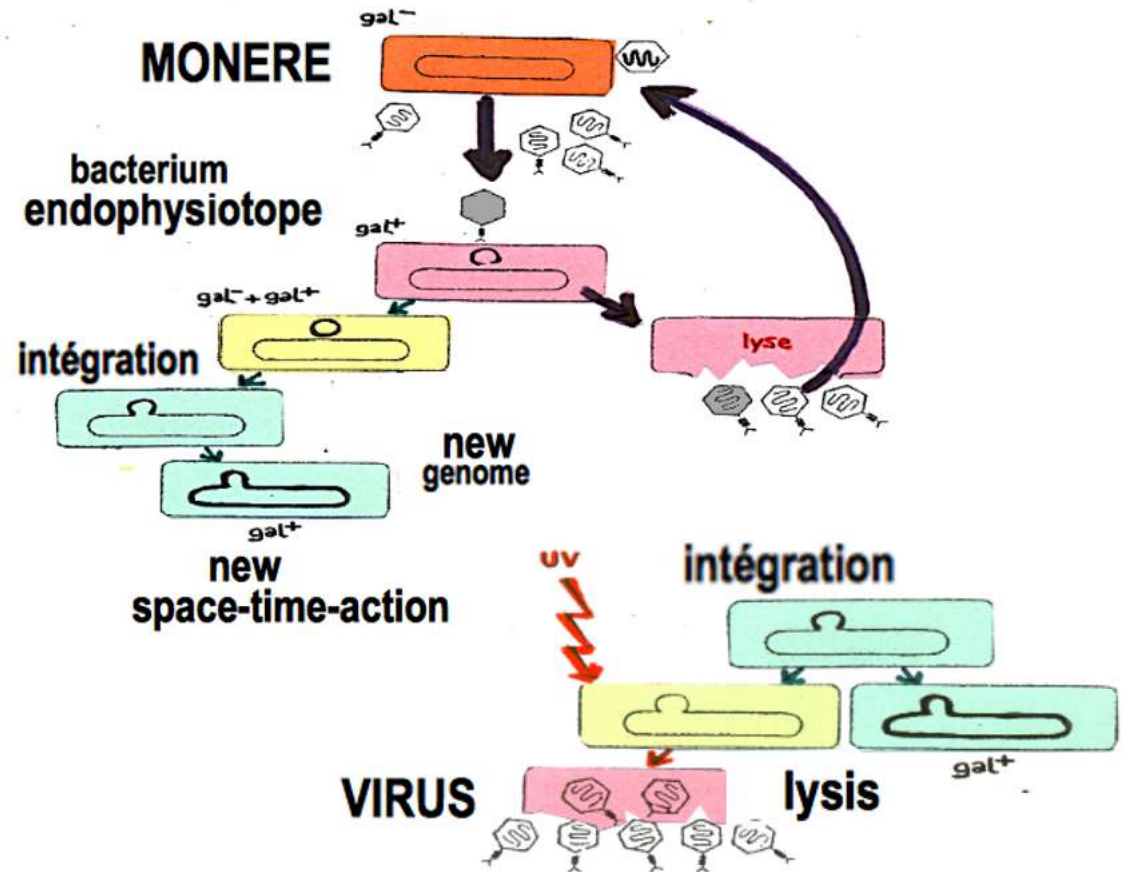
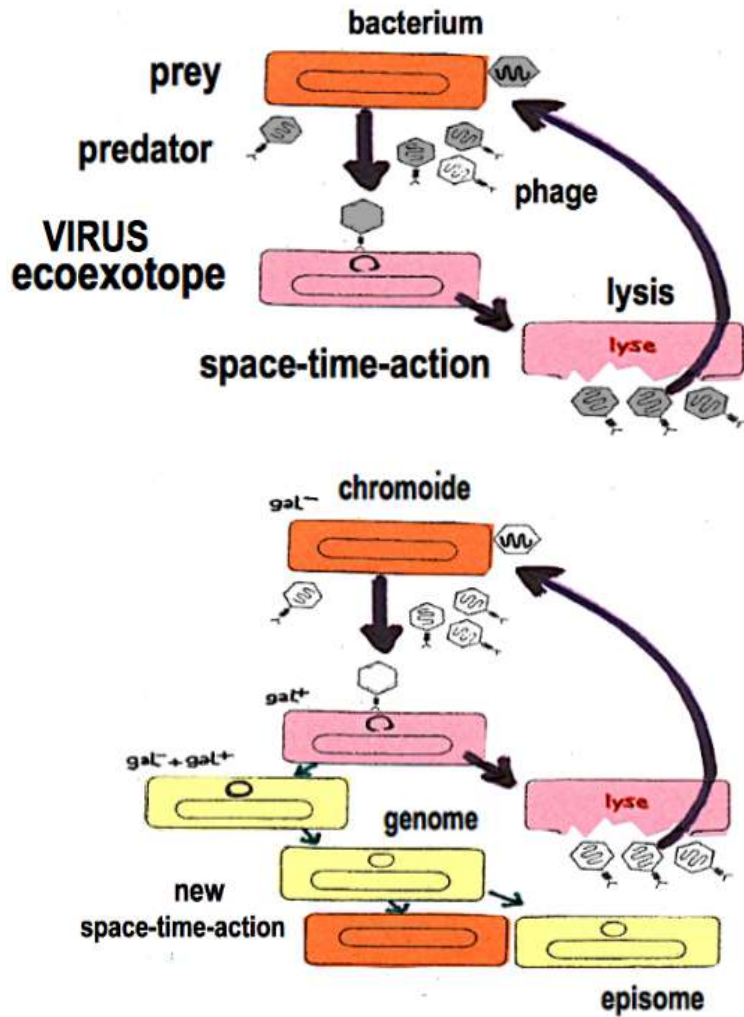
E PLURIBUS
UNUM
IN VARIETATE
CONCORDIA

UNUS PRO OMNIBUS
OMNES PRO UNO
UN POUR TOUS
TOUS POUR UN



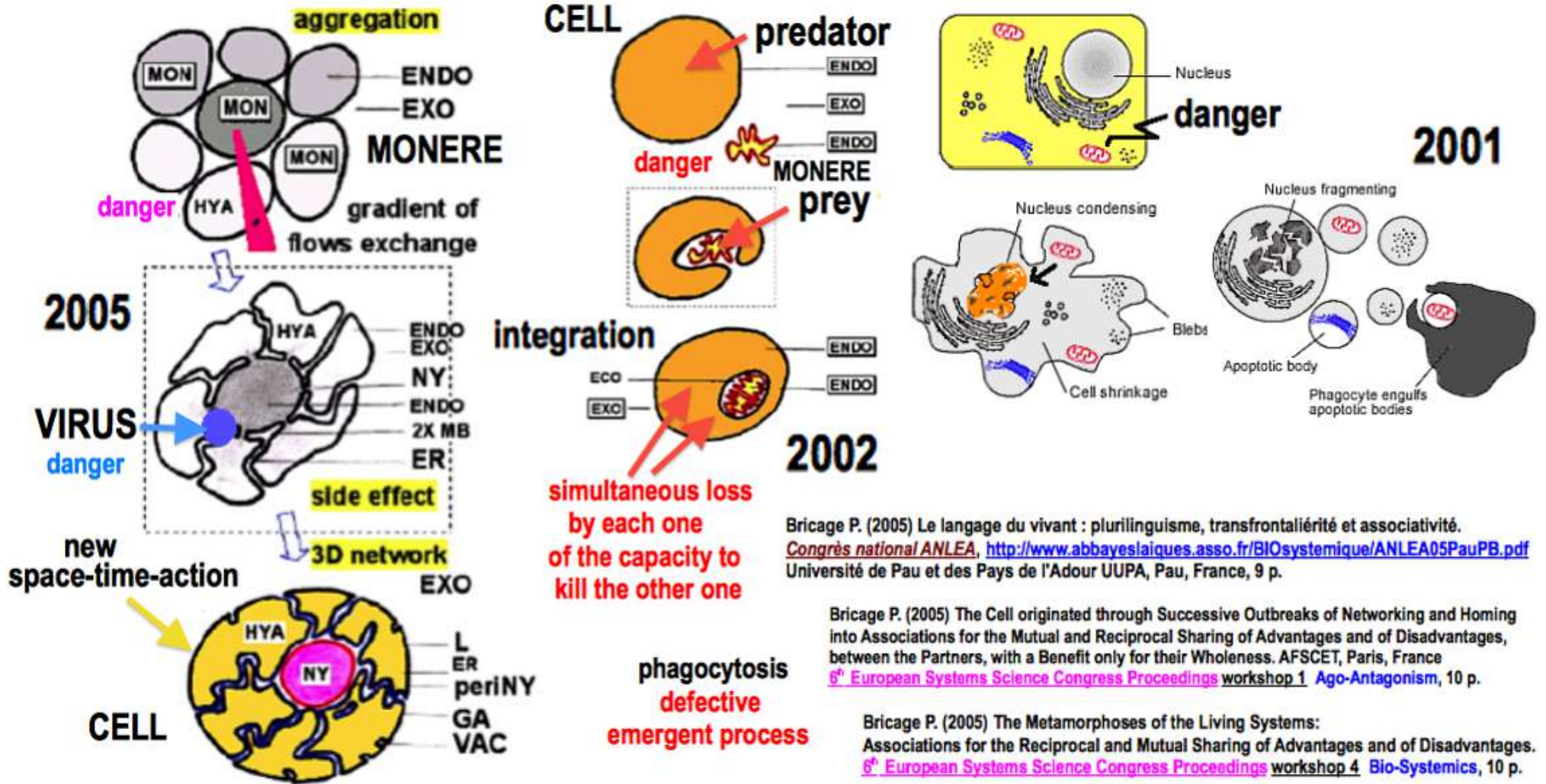
**FOR THE ONE TO SURVIVE
THE OTHER ONE MUST SURVIVE FIRST
AND RECIPROCALLY 2000**

1.3. PREDATOR-PREY INTERACTION: BACTERIOPHAGES AND BACTERIA

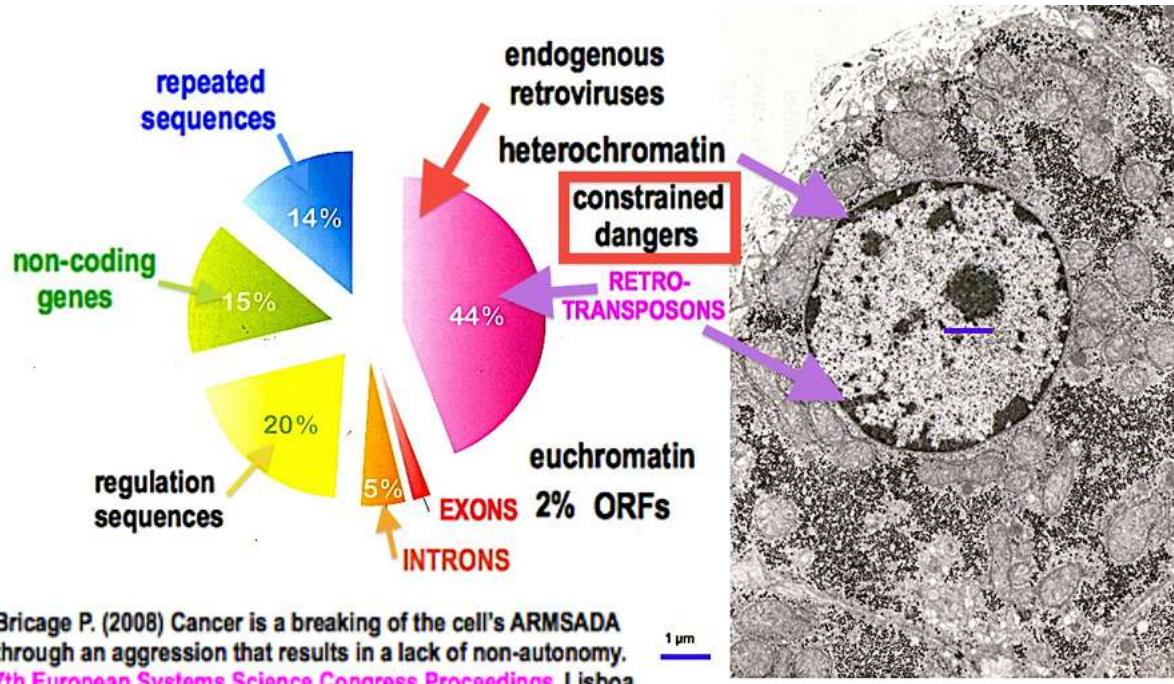


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 Bricage P. (2003) Organisation, intégration et espace-temps des systèmes vivants. Journées AFCSET, Andé

2.1. CELL: ORIGIN AND APOPTOSIS



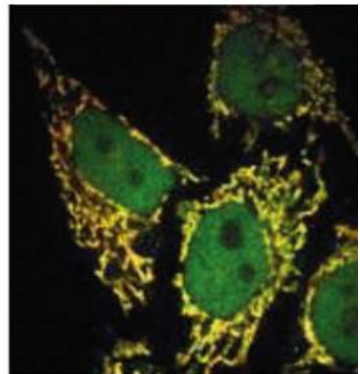
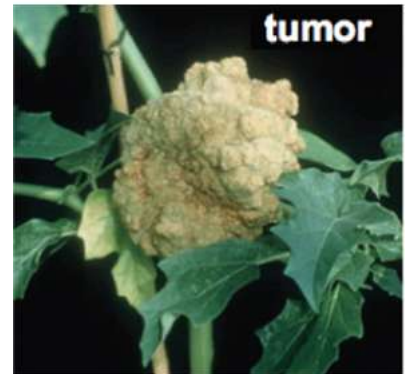
2.2. CELL: GENOMES CONSTRAINED DANGERS AND CANCERISATION



Bricage P. (2008) Cancer is a breaking of the cell's ARMSADA through an aggression that results in a lack of non-autonomy. 7th European Systems Science Congress Proceedings, Lisboa

un-controlled de-constrained dangers

abnormal cell compartments



2008 virus

cell uncontrolled proliferation

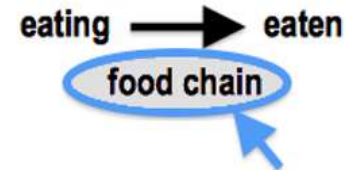
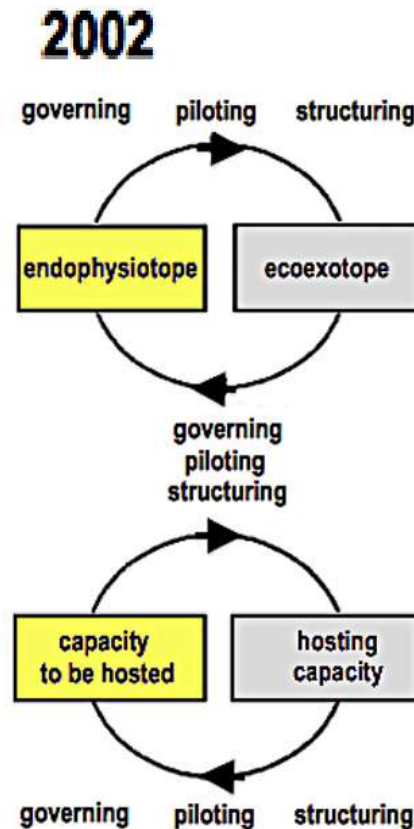
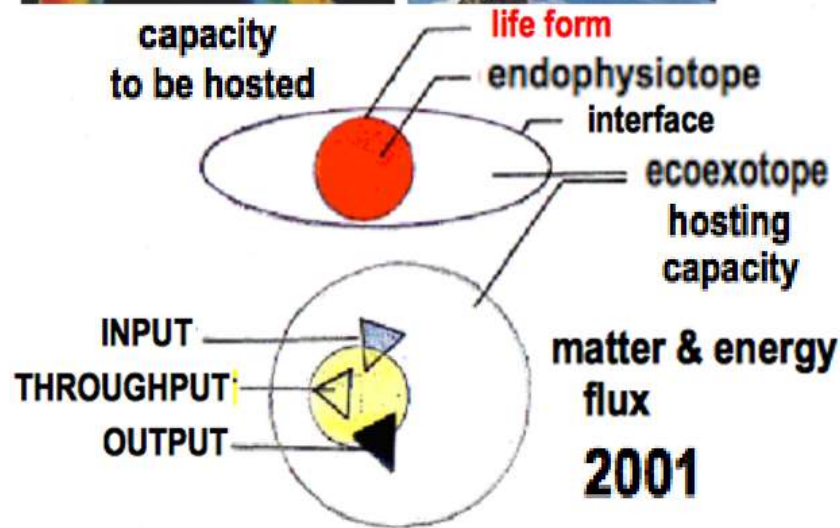
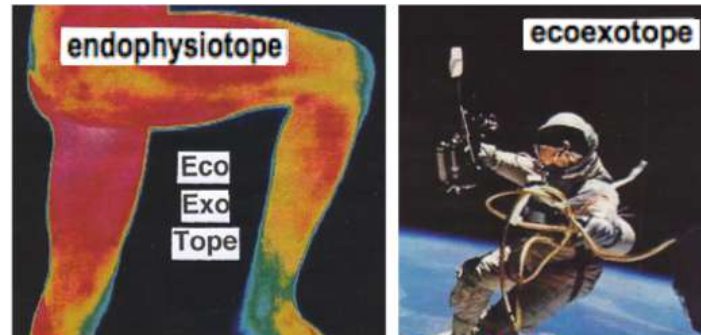
THE DECONTROLLED PROLIFERATION OF CANCER CELLS IS THE RESULT OF THEIR **LACK OF NON-AUTONOMY**. HEALTHY CELLS CANNOT SURVIVE IF THEY ARE FREED. CANCER CELLS CANNOT SURVIVE IF THEY ARE NOT FREE. AUTONOMOUS CANCER CELLS MIGRATE AND INVADE ALL THE ORGANISM WHICH IS THEIR ECOEXOTOPE OF SURVIVAL.

WHAT ARE CANCER CELLS?

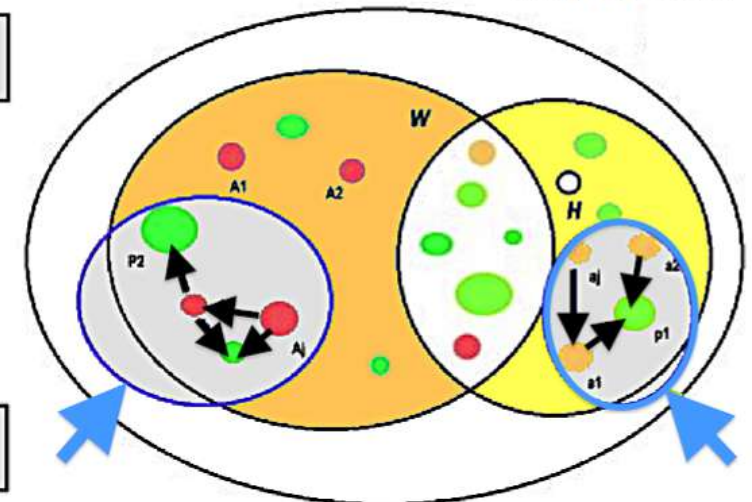
THEY ARE CELLS THAT SHOULD HAVE DIE BUT THAT DID NOT. AND THE ONLY WAY FOR THEM TO SURVIVE WAS TO BECOME CANCER CELLS THROUGH A RETROGRESSION PROCESS.

ISBN: 978-972-9059-05-6

2.3. FOOD CHAIN: KEYSTONE SPECIES AND BIODIVERSITY



TO SURVIVE that is
TO EAT and
NOT TO BE EATEN
soon or late
it is impossible
not to be eaten



keystone species

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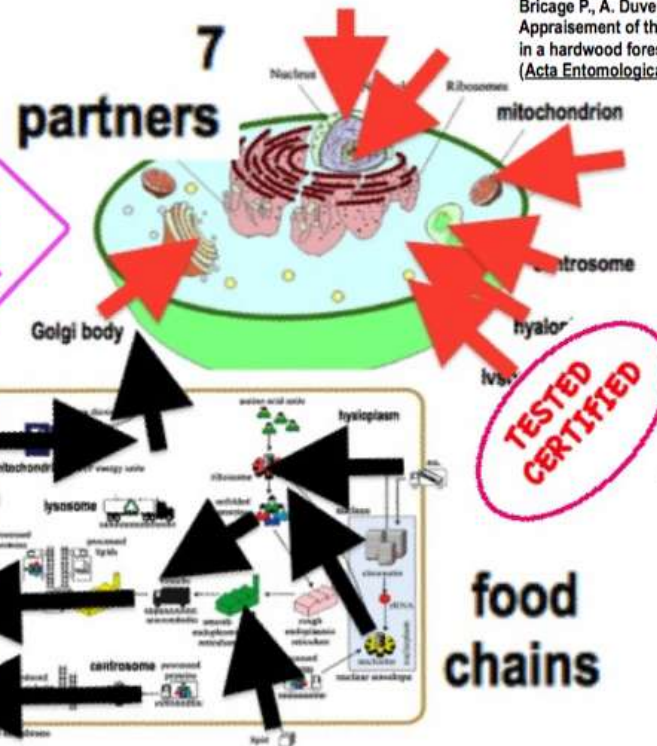
Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

a lichen
AN ORGANISM MADE OF
A MULTICELL ORGANISM
A CELL ORGANISM POPULATION
A BACTERIAL POPULATION



AN ECOSYSTEM
WITH A FOOD CHAIN

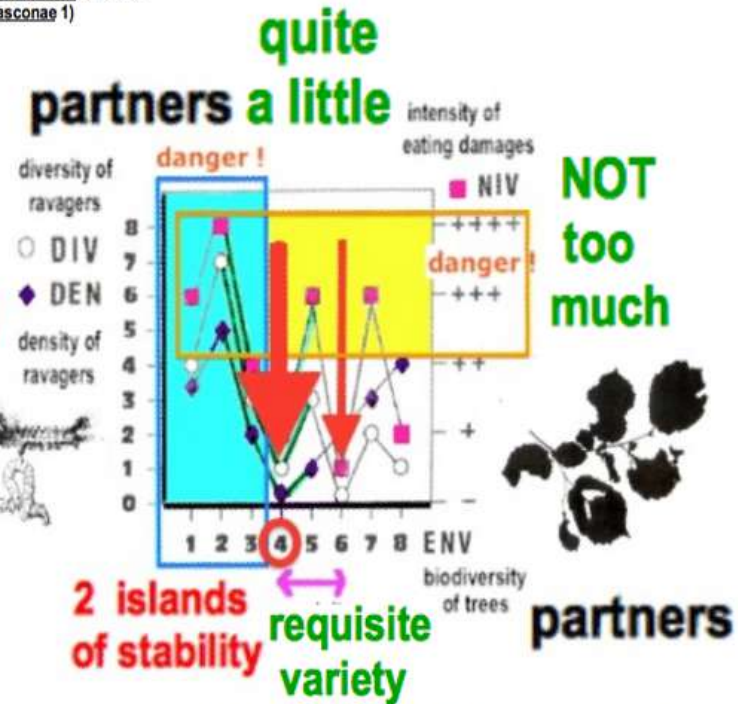
a cell
AN ORGANISM MADE OF
POPULATIONS OF DIFFERENT
BACTERIAL ORGANISMS SPECIES



AN ECOSYSTEM OF INTERACTIVE
RECYCLING WASTE PRODUCTS FOOD CHAINS

a forest
AN ORGANISM MADE OF
POPULATIONS OF DIFFERENT
MULTICELL ORGANISMS SPECIES

Bricage P., A. Duverger-Nedellec & D. Larroche (1990)
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 in a hardwood forest. *Ikartzaleak* 13: 5-26.
 (*Acta Entomologica Vasconae* 1)

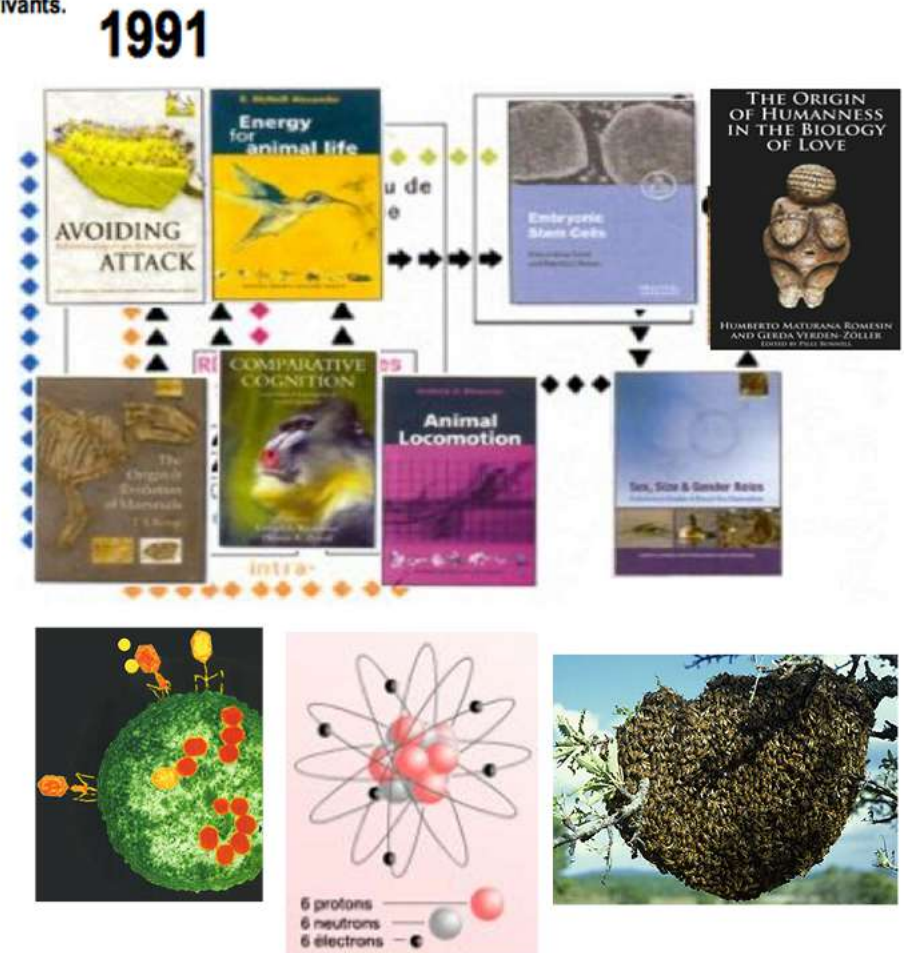
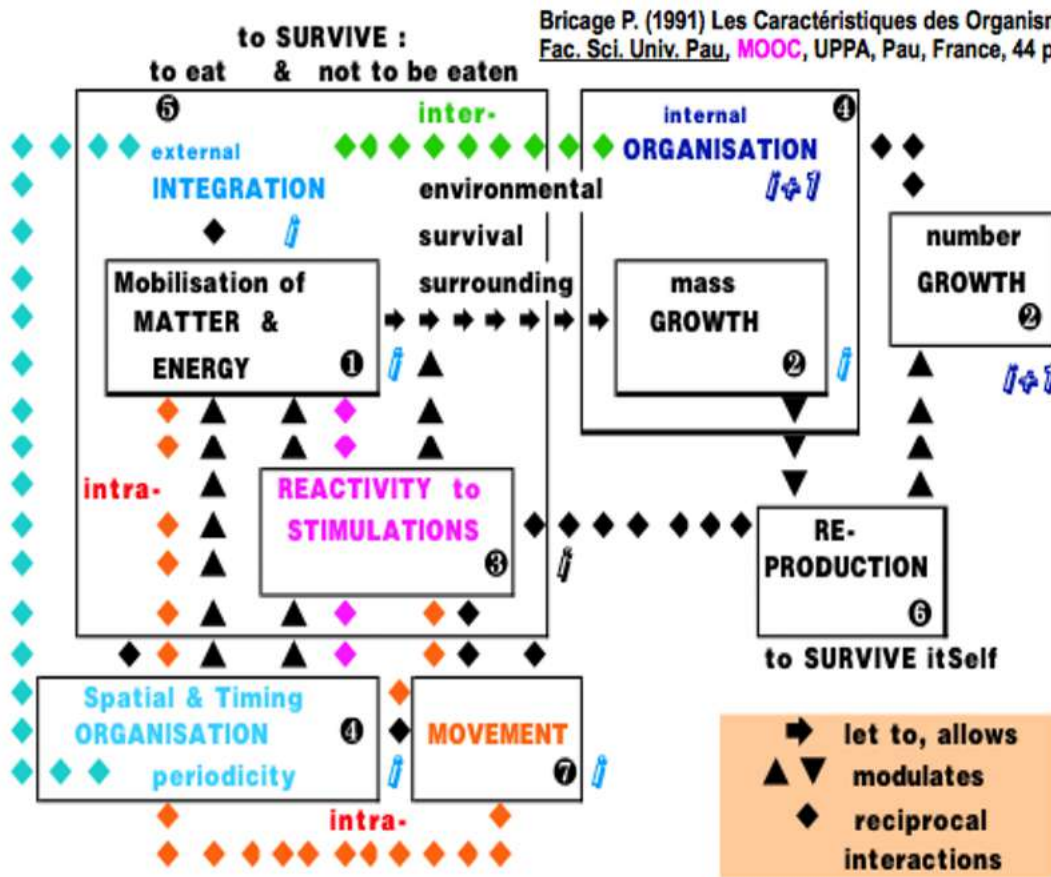


AN ECOSYSTEM
OF ECOSYSTEMS

1991

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

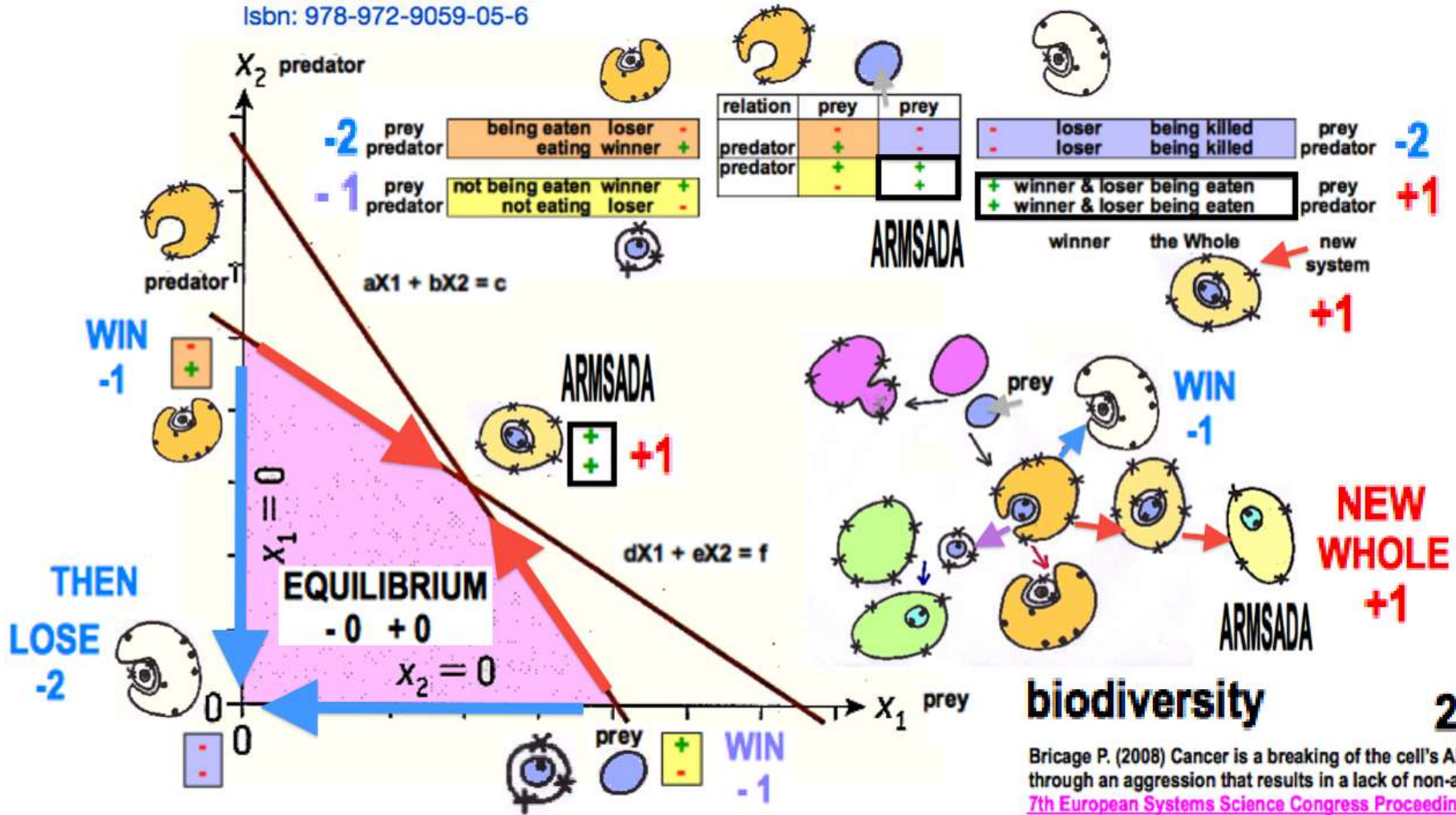
3.1. LIVING SYSTEMS 7 CAPABILITIES: GAUGE INVARIANCE OF LIFE



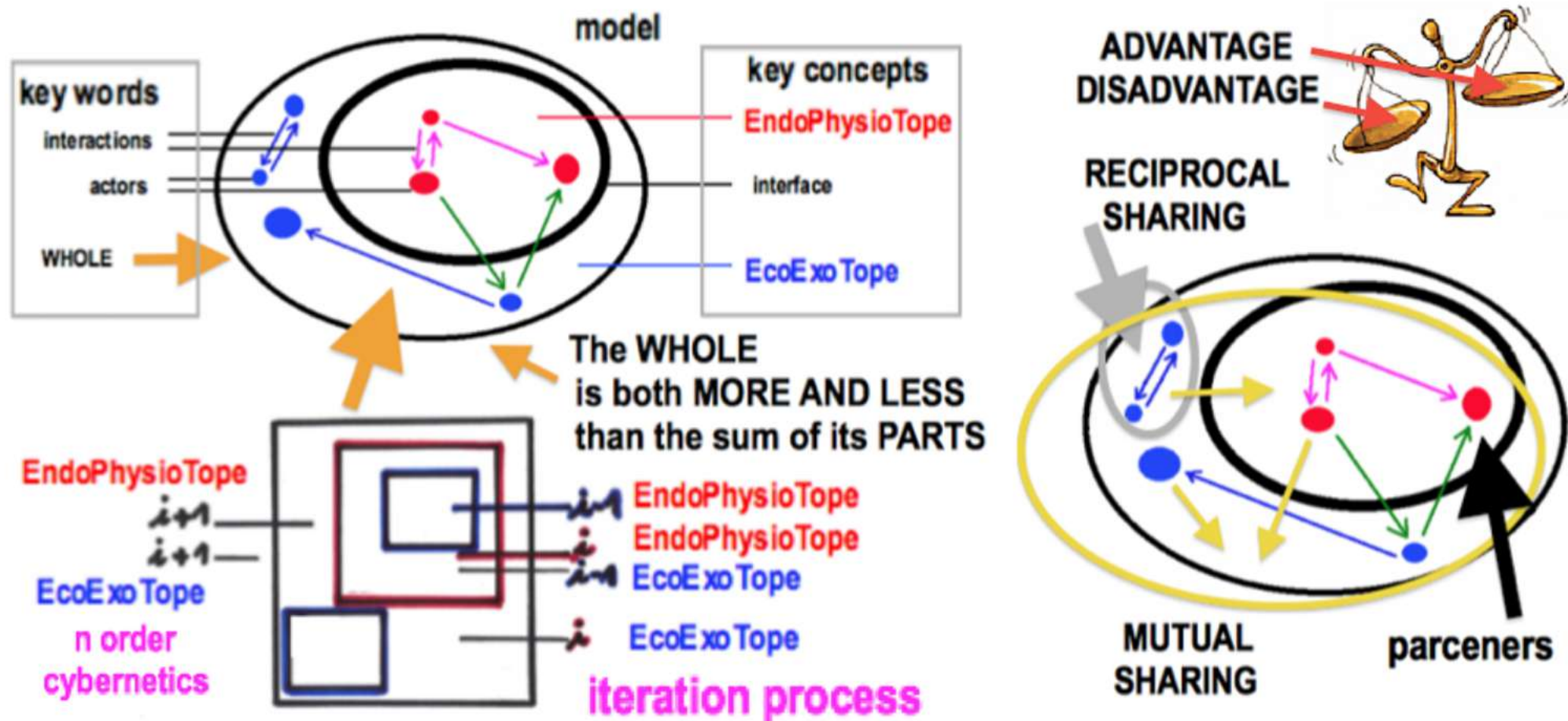
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<http://www.afscet.asso.fr/resSystemica/Crete02/Bricage.pdf>

TO SURVIVE THAT IS TO EAT AND NOT TO BE EATEN: PRISONERS' DILEMMA

ISBN: 978-972-9059-05-6



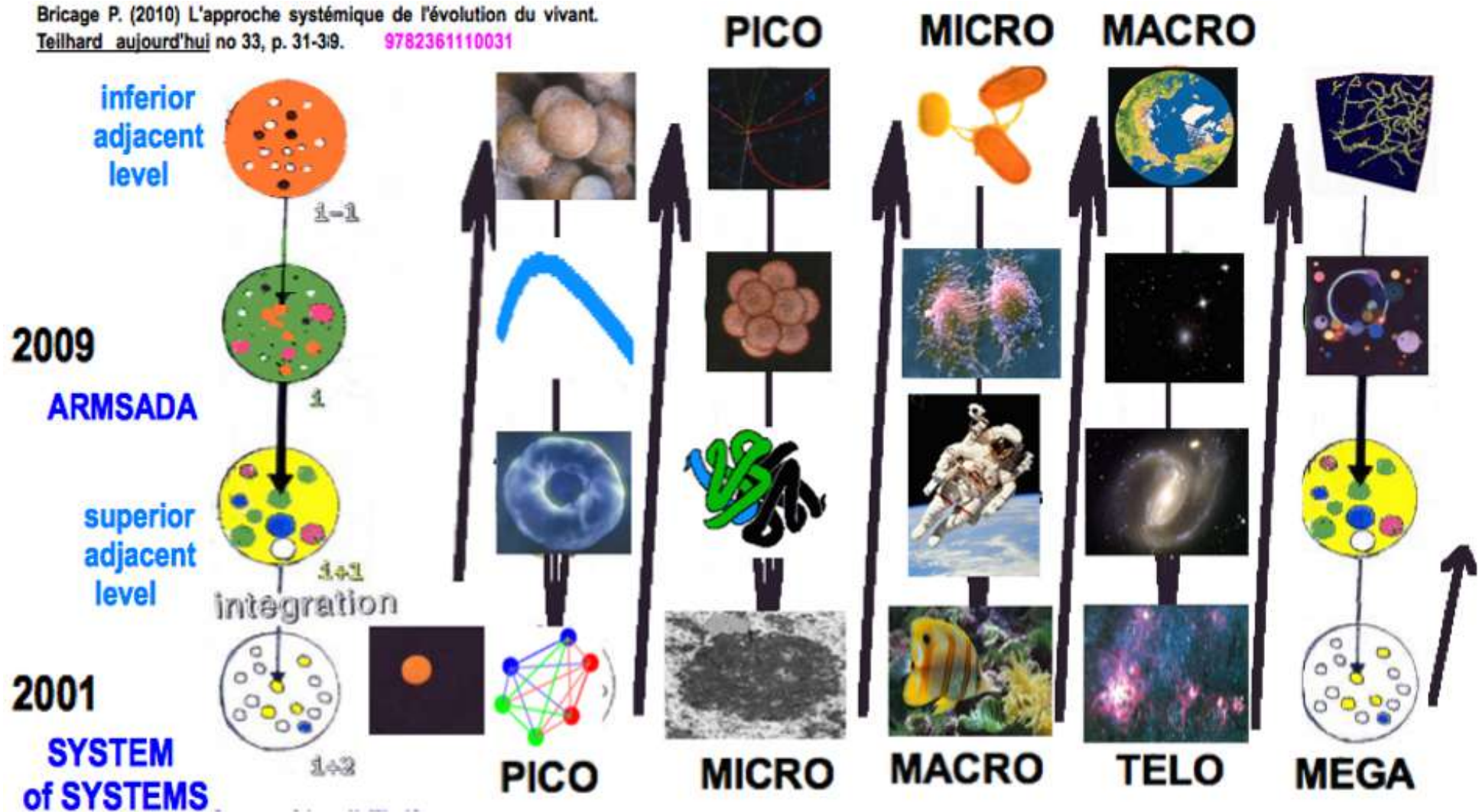
SYSTEM OF SYSTEMS: JUXTAPOSITION AND EMBEDMENT



Bricage P. (2001) Les caractéristiques du vivant biologique et sociétal ? Pour survivre et se survivre, la vie est d'abord un flux, ergodique, fractal et contingent, vers des macro-états organisés de micro-états, à la suite de brisures de symétrie., I.I.A.P., Paris, <http://www.afscet.asso.fr/ergodiqW.pdf>

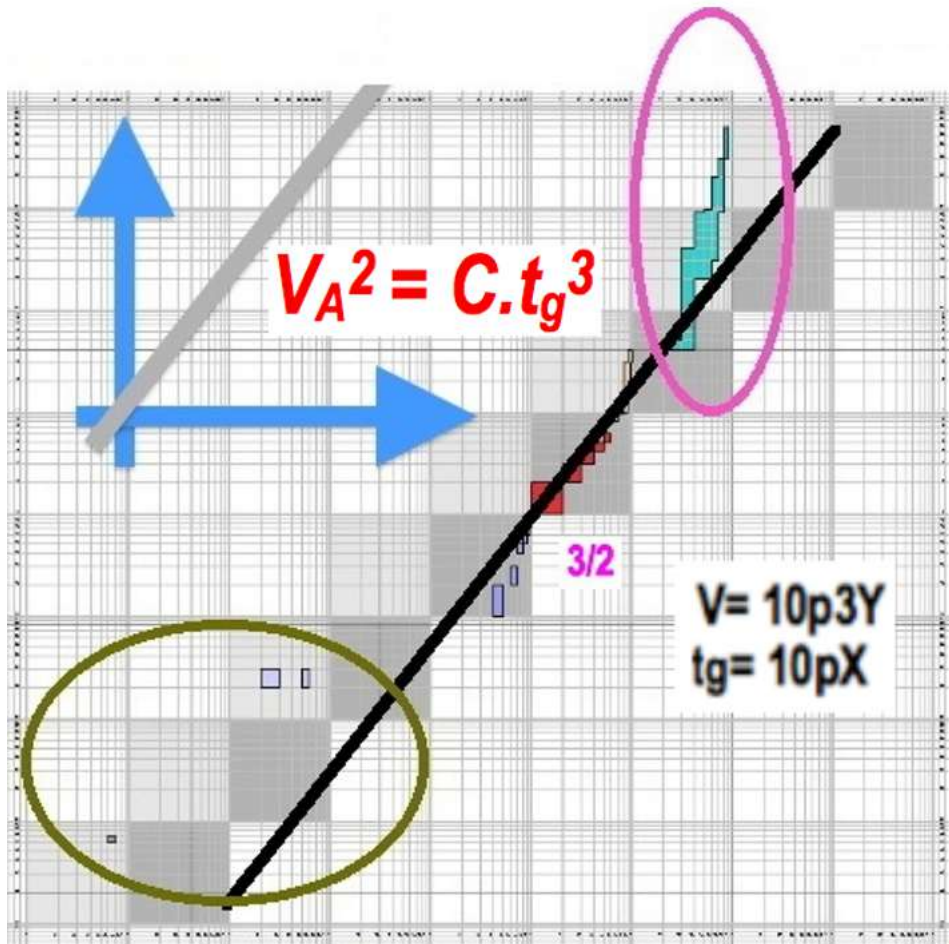
3.2. ORGANISATION LEVELS: PERIODIC CLASSIFICATION CHART

Bricage P. (2010) L'approche systémique de l'évolution du vivant.
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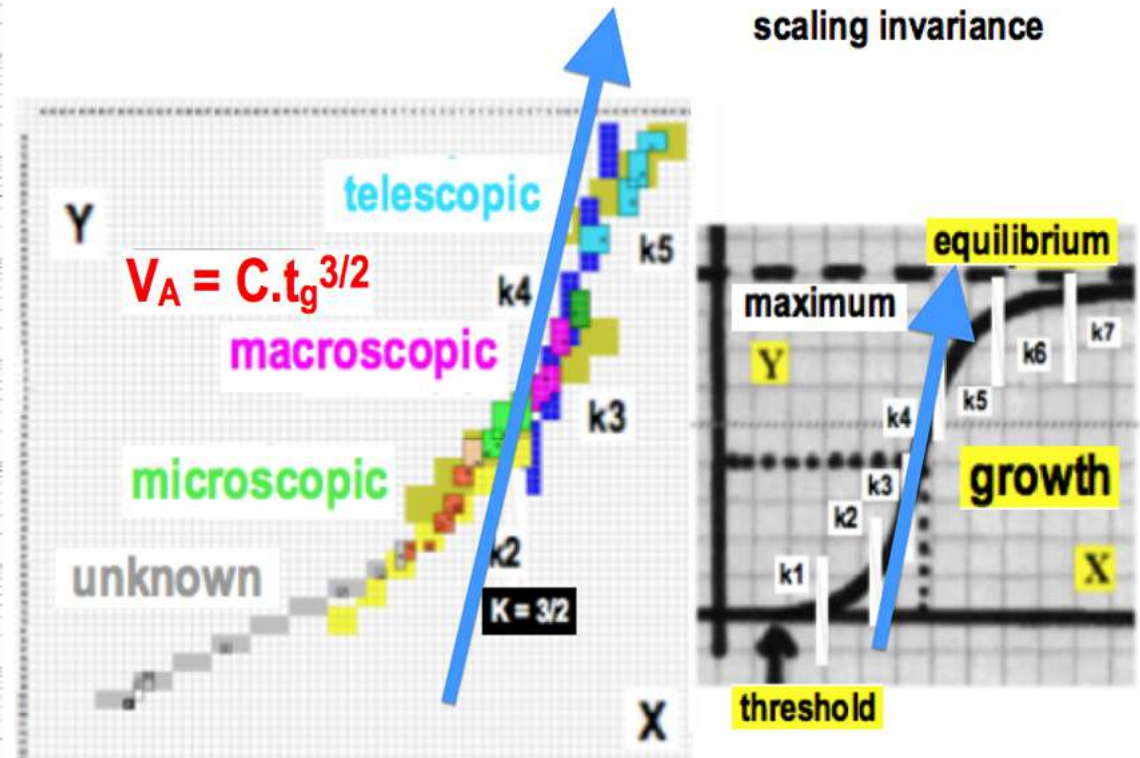
Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

3.3. KEPLER THIRD LAW LIKE



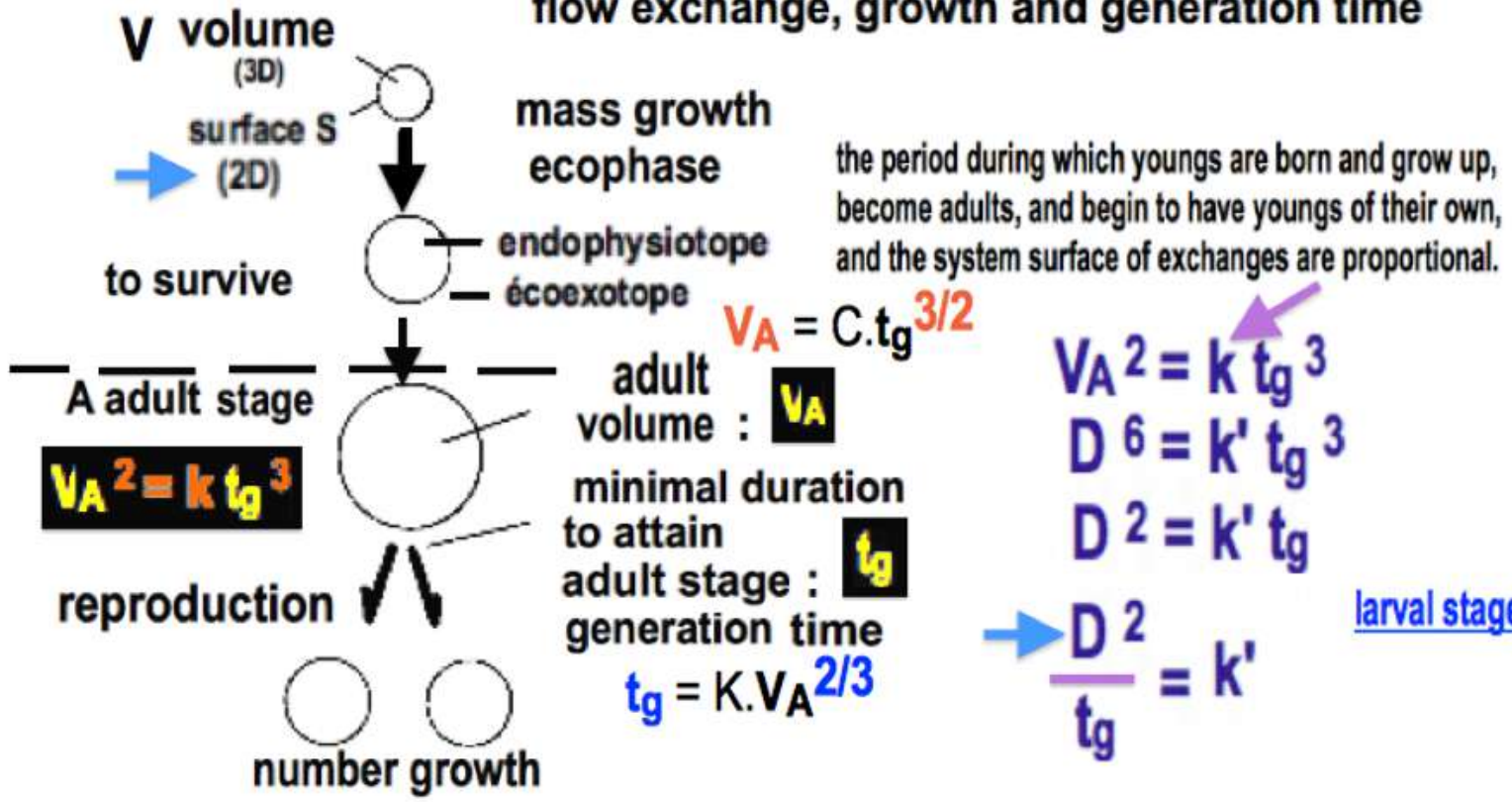
GROWTH CURVE

Bricage P. (2009) L'évolution créatrice :
Métamorphoses et "phylotagmotaphologie" du vivant. 2009
Amis de Pierre Teilhard de Chardin, Centre de Sèvres, Paris, 109 p.
<http://hal.archives-ouvertes.fr/docs/00/42/37/30/PDF/phylotagmotaphologie.pdf>

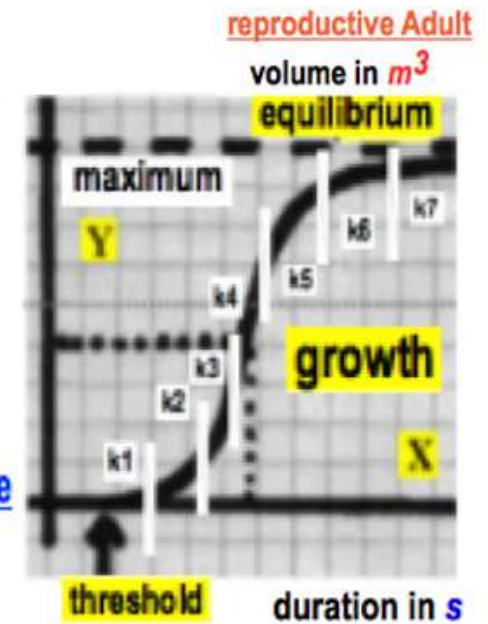


Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

from mass growth to number growth
 from larval stage to adult stage :
 flow exchange, growth and generation time



the period during which youngs are born and grow up, become adults, and begin to have youngs of their own, and the system surface of exchanges are proportional.



« La complexification ne peut se poursuivre indéfiniment, car c'est par la surface que se réalisent les échanges. » (Laborit, 1985).

PLACENTA, LEGUMES NODES, PLAGUE: ARMSADA ARE EVERYWHERE

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Isbn: 978-972-9059-05-6

Bricage P. (2008) Cancer is a breaking of the cell's ARMSADA through an aggression that results in a lack of non-autonomy. 7th European Systems Science Congress Proceedings, Lisboa

4.1. HIV CURATIVE VACCINE

La technologie du prélèvement in vivo de cellules souches, de leur culture in vitro, puis de leur réimplantation in situ*, au même individu, est maintenant maîtrisée.* Cultivons une grande quantité, renouvelée, de cellules mères de la lignée lymphocytaire, saines, prélevées chez un individu contaminé (mais en dessous du seuil de contamination assurant l'existence de cellules viables* intactes, non infectées*), en présence d'une quantité limitée, contrôlée, de virions HIV. Tôt ou tard, les seules cellules survivantes, sélectionnées in vitro, seront des cellules souches modifiées génétiquement*, ayant intégré le virus (état 4, Figure 2) sous une forme endogène stable (état E, Figure 1). Réimplantées, chez le même individu contaminé*, elles donneront naissance à une lignée résistante* à la lyse par le même virus.*



19th Sept **2005**, PARIS



Bricage P. (2005) The Metamorphoses of the Living Systems:

Associations for the Reciprocal and Mutual Sharing of Advantages and of Disadvantages.

6^e European Systems Science Congress Proceedings workshop 4 Bio-Systemics, 10 p.

<http://abbayeslaiques.asso.fr/BIOsystemique/bibliographie/METAreferencesPB.pdf>

<http://abbayeslaiques.asso.fr/BIOsystemique/bibliographie/PBmetamorphoses.pdf>

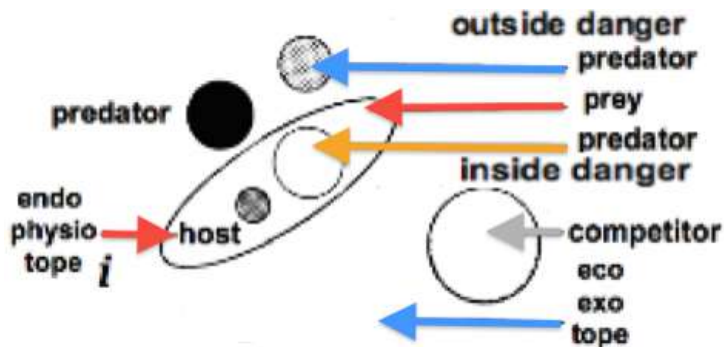
4.2. CANCER CURATIVE VACCINE

Bricage P. (2008) ARMSADA: Applicative Insights in Prevention or Cure of (HIV induced) AIDS. Complementary Data, Figures & References.

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ISBN: 978-972-9059-05-6

2008



TO SURVIVE IT IS "TO EAT AND NOT TO BE EATEN".

THE RELATIONSHIP BETWEEN HIV AND CELLS ARE THE SAME THAT THE ONES BETWEEN A PREDATOR AND ITS PREYS. HIV POPULATIONS EVOLVE AS DO OTHER BLOOD CELLS PREDATORS (LIKE IN TRYPANOSOMES DISEASES), WITH THE 4 FATES:

- THE PREY WINS, - THE PREDATOR WINS, - THE 2 LOSE, - NO ONE WINS OR LOSES AND THE 2 TOGETHER WIN AND LOSE.

A STEADY-STATE MUST INSTALL BETWEEN THE PREDATOR AND ITS PREY, LIKE IT HAPPENS BETWEEN A BACTERIOPHAGE AND ITS BACTERIAL HOST, FOR THE MERGING OF AN ARMSADA, WHICH IS A NEW BLUEPRINT.

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages



APOCOSIS - Associação Portuguesa de Complexidade Sistémica
 FCT - Campus de Caparica
 2825-516 CAPARICA
 Portugal
www.apocosis.org



IN SOME ASPECTS AIDS AND CANCER ARE SIMILAR: THE VIRUS/HOST FIGHT IS AN ARMS RACE.

IN THE CASE OF BACTERIOPHAGES, USUALLY VIRUSES OF THE ECOEXOTOPE KILL THE BACTERIAL HOST: PROBABILITY 1.

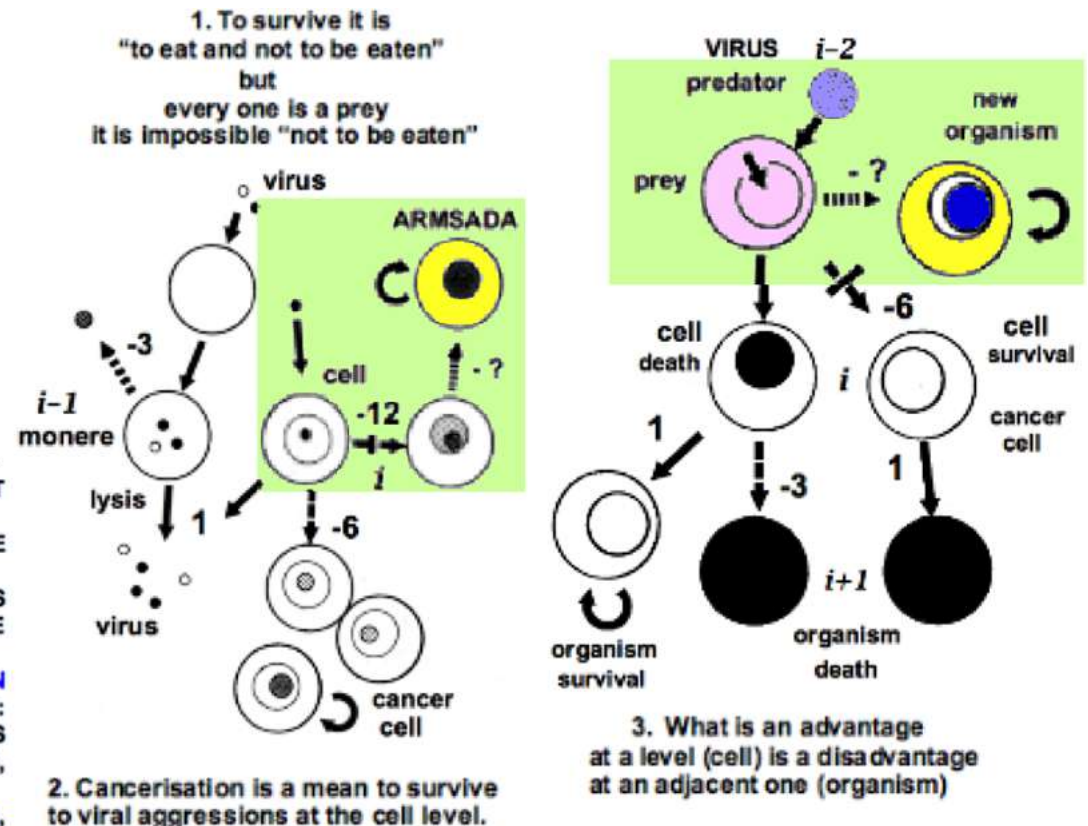
RARELY (PROBABILITY $10^{\text{exponent}-3}$), THE PHAGE DOES NOT KILL ITS HOST AND THE 2 SURVIVE TOGETHER. BUT THEIR ASSOCIATION MAY BE DISRUPT BY THERMAL, RADIATIVE OR CHEMICAL STRESSES, LIKE IN CANCER.

"THE SAME" WHEN AN EXOGENOUS VIRUS ENTERS A CELL, OR WHEN AN ENDOGENOUS ONE EVADES INTO THE CELL. THE CELL USUALLY IS KILLED: PROBABILITY 1. BUT, VERY RARELY, PROBABILITY $10^{\text{exponent}-6}$, IT SURVIVES AND NO VIRUS IS PRODUCED, BECAUSE, THE 2, THE CELL AND THE VIRUS, SURVIVE TOGETHER GIVING RISE TO A CANCER CELL.

EXCEPTIONNALLY, THE VIRUS AND THE CELL GIVE RISE TO A NEW WHOLE, AN ARMSADA IN WHICH THE VIRUS IS DEFINITELY INTEGRATED INTO THE CELL'S ENDOPHYSIOTOPE: PROBABILITY SUPPOSED TO BE $10^{\text{exponent}-12}$. NO VIRUS IS PRODUCED, NO MORE CANCER CELL.

THAT IS THE PARADIGM OF ARMSADA MERGING, EVEN IF THIS EVENT IS AN EXCEPTION, SOON OR LATE IT BURSTS.

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THE EX-VIVO HIV CURATIVE VACCINE TECHNOLOGY I PROPOSED IN SEPTEMBER 2005 IS THE APPLICATION OF THAT ARMSADA PARADIGM.

THE PARADIGM: THE CONSTRAINED DANGERS ARE ADVANTAGES;

THE PROCEDURE: AFTER IN VIVO TAKING UP OF STEM CELLS INTO A SICK PATIENT AND THEIR IN VITRO CULTURE, THEIR PROGENY IS CONFRONTED WITH HIV TO ALLOW THE SELECTION OF CELLS THAT ARE STILL ALIVE, VIRUS FREE AND RESISTANT TO HIV KILLING, BECAUSE OF THEIR METAMORPHOSIS THROUGH HIV INTEGRATION.

AFTER THE TEST OF THEIR NON-CANCEROUS STATE, ENGRAFTED INTO THE DONOR THEY WILL CURE THE DISEASE.

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages



"pierre bricage" "curative vaccine"

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Pierre BRICAGE ... **CANCER CURATIVE VACCINE** site AFSCET : CD UES Congress Proceedings (ISBN: 978-972-9059-05-6) ... **AIDS CURATIVE VACCINE** sur Res-Systemica www.afscet.asso.fr/resSystemica/Lisboa08/pbdiscussion.pdf - [Pages similaires](#)

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Pierre BRICAGE l'autonomie cancéreuse page 2/2 hal-00351226, version 1 - 8 Jan 2009 .. Key words: cancer, **curative vaccine**, hosted viruses, ...

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16 Feb 2009 ... Keyword(s) : cancer – **curative vaccine** – HIV – Mycobacterium – ...

Pierre Bricage <>. Submitted on: Tuesday, 13 January 2009 13:18:31 ...

hal.archives-ouvertes.fr/hal-00352578/en/ - [En cache](#)

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[team building & networking into groupwares](#)

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homologues simiens des 3 groupes (M, N, O) du virus du **SIDA (VIH)** viennent Mise au point d'un **vaccin curatif anti-SIDA** : *ibid* Bricage P. (2005) *The ...*

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[Stem Cells - News - HIGH HOPES FOR AIDS THERAPY / Experimental ...](#)

7 Apr 2006 ... **Stem cell HIV treatment** 1 Aphoresis Blood is removed from the body, filtered to remove stem cells and returned to the body. ...

www.stemcellnews.com/articles/stem-cells-aids-virus.htm - 15k -

[Stem Cells: Progress Towards "the Cure"? - The Body -](#)

These tests remain negative out to nearly 300 days (285 days as of CROI), despite the absence of any **HIV** drug treatment since the **stem cell** transplant. ...

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[Stem-cell 'cure' for HIV patient - The Irish Times - Mon, Nov 24, 2008 -](#)

24 Nov 2008 ... Madam, — It is immensely exciting to read of an Aids patient in Berlin who appears to be **HIV-free** after a **stem-cell** transplant procedure ...

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Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

Sequential Therapy With JX-594, A Targeted Oncolytic Poxvirus, Followed by Sorafenib in Hepatocellular Carcinoma: Preclinical and Clinical Demonstration of Combination Efficacy
Molecular Therapy | 22 Mar 2011

Efficacy and Safety/Toxicity Study of Recombinant Vaccinia Virus JX-594 in Two Immunocompetent Animal Models of Glioma
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The Oncolytic Poxvirus JX-594 Selectively Replicates in and Destroys Cancer Cells Driven by Genetic Pathways Commonly Activated in Cancers
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p. 42/45 – les articles originaux :

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- méthodologie (suppléments) : *“the paradigm and the procedure”*

<http://www.abbayeslaiques.asso.fr/BIOsystemique/bibliographie/UESlisboaPBcancerRef.pdf>

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p. 41/45 – *Assuming the paradigm of ARMSADA we can propose a cancer curative vaccine procedure which is similar to that previously proposed, 3 years ago, during the last European Systems Science congress, for the curation of AIDS :*

- time 1. First let's pick up stem cells and cancer cells from a patient.,
- time 2. Then, *in vitro*, using chemicals or physical stresses let's induce the liberation of endogenous viruses that eventually may kill cancer cells but not healthy ones.,
- time 3. If they do exist, these freed endogenous cancer cells killing viruses are then engrafted into the cancer parts of the donor where they **will specifically only kill the cancer cells.**,
- time 4. Then, the mix of the surviving, healthy and cancerous stem cells, **with their freed viruses** are mass cultivated.,
- time 5. This *ex-vivo* population is then treated with different “libraries” of exogenous killing viruses. When only normal healthy cells, without cancerous ones, survive, the survival ones are both not only not cancer cells but also resistant ones to both evading and invading viruses.,
- time 6. Thus they can be propagated.,
- time 7. And their mix, when engrafted into the donor sich organism, will contribute not only to kill cancer cells but also to replace them with resistant no-cancerous cells.

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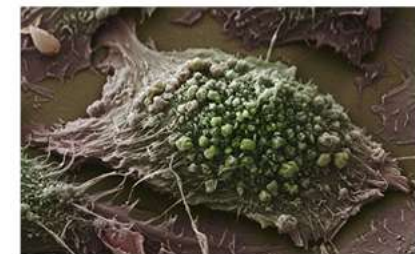


2005

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www.jennerex.com



en.wikipedia.org/wiki/JX-594

Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages

CURATIVE VACCINES

2 NEW WORDS: ECOEXOTOPE & ENDOPHYSIOTOPE

2 “TRIVIAL” CONCEPTS:

- * TO SURVIVE IT IS “TO EAT” & “NOT TO BE EATEN“
- * THERE ARE NEVER ADVANTAGES WITHOUT DISADVANTAGES

1 NEW PARADIGM:

ALL THE LIVING SYSTEMS MERGED FROM AN ARMSADA
ASSOCIATION for the RECIPROCAL and MUTUAL
SHARING OF ADVANTAGES and DISADVANTAGES

2 “EVIDENT“ FACTS: MODULARITY & ERGODICITY

2 NEW IDEAS:

- * DANGERS HOSTED IN CELLS, ARE NECESSARY FOR THE SURVIVAL
- * VIRUSES ARE REGULATORS & PROTECTORS OF LIFE THROUGH
THEIR CONTROL OF THE CAPACITY OF HOSTING OF THE ECOEXOTOPES
& OF THE CAPACITY OF TO BE HOSTED OF THE ENDOPHYSIOTOPES.

Associations for the **R**eciprocal and **M**utual **S**haring of **A**dvantages and **D**is**A**dvantages

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<http://www.afscet.asso.fr/interventions.html>

<http://www.afscet.asso.fr/pagesperso/Bricage.html>

Associations for the **R**eciprocal and **M**utual **S**haring of **A**dvantages and **D**is**A**dvantages

<http://www.armsada.eu/ARMSADAsystemics.html>

[The Metamorphoses of the Living Systems: The Associations for the ...](#)

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de P Bricage - 2005 - Cité 5 fois - Autres articles

<http://ccsd.cnrs.fr>

concepts <http://hal.archives-ouvertes.fr/hal-00130218>

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AIDS curative vaccine <http://hal.archives-ouvertes.fr/hal-00351226/fr>

cancer curative vaccine <http://hal.archives-ouvertes.fr/hal-00352578/fr>

2014 IEEE **World Conference on Complex Systems** (Agadir, Morocco)
WCCS14

Prof. Pierre Bricage, Université de Pau & des Pays de l'Adour, Pau, France, Europe

Keynote Talk: **Survival Management by Living Systems: ARMSADA**

**'Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages'.
A General System Theory of the Space-Time Modularity and Evolution of Living Systems.**

Abstract: To survive that is 'to eat and not to be eaten'. Any alive system, within its **ecoexotope** of survival, is integrated into a **food chain**: it eats and is eaten! To survive and live on, whatever its spatial and temporal organisation, it owns 7 invariant capacities (**gauge invariance**). The system is built by embedments and juxtapositions of preexisting ones in a new whole (**endophysiotope**). Whatever the level of organisation, the ecoexotope has always a limited **capacity of hosting**. To survive and live on, the system needs a **capacity to be hosted** but it has 'to be lucky' for 'to be at the right place at the right time'. Soon or late it is impossible not to be eaten. Man is not an exception. The modularity of alive systems allows both a partial **allocation** and a **global recycling** of matter and energy. The **pleiotropy** of the structures and functions, allowing 'to make of a stone several knocks', is the mechanism of **exaptation**. Within any ecoexotope, the **agoantagonistic balance** ends soon or late with the disappearance of predators, resulting in a reduction of biodiversity. The merging into 'Associations for the Reciprocal and Mutual Sharing of Advantages and DisAdvantages' allows the emergence of a new **biodiversity**.

These fruitful paradigm of **ARMSADA** is independent from the dimensional **scaling**: the local and global quantitative **laws of space-time structuring and functioning** are the same. Depending on how they become mutually integrated into their global whole, the local actors are more and less dependent from the new global level of organisation. Reversely (**systemic constructal law**) is the global whole reciprocally integrating the local parcerers? The evolution of living systems is often seen as a “cooperative evolution”. Resulting from altruist behaviours it could be modelled and simulated using games like the **prisoners' dilemma game**. Is the same true for Man's artefacts like banking systems? In what manner is the prisoners' dilemma game justifying extrusion? What can we learn from **Reinforcement Learning Dynamics** in Social Dilemmas? In reality, humans display a **systemic bias towards cooperative behaviour**, much more so than predicted by models of "rational" self-interested action. Models based on different kinds of payoffs and driving forces, where people forecast how the game would be played if they formed **coalitions to maximise their gains**, are shown to make better predictions that resemble reality. How are the laws of spatial-temporal structuring and functioning of banking systems associated with the basic law of survival of living systems? How do local actors become mutually integrated into their global whole? And reversely, why and how is the global whole reciprocally integrating the local parcerers? **Is victory a strategic success?** What are the roots for interdependence, conflicts and strategic order challenges? How is emerging a new power balance? Can banking systems survive as parasitic systems? Is a “money chain“ a way of violence escalate, like a “food chain“ is?

Is not the **ARMSADA** paradigm the best way to improve the survival of our societies?