Alflora's Gift

Ecosystem ecology needs to overcome four "conceptual obstacles" before it may be counted as a successful part of ecological science:

· it should provide a definition of the concept of an 'ecosystem' that makes it possible to unambiguously demarcate ecosystems, classify different types of ecosystems, and track changes in the state of an ecosystem;

. it should identify criteria for testing ecosystem theories and models, and implement these criteria in the ecosystem research;

· it should provide a plausible account of the causes of ecosystem structure and organization;

. it should be effective in helping to solve pressing environmental problems.

Ecosystem ecology fails in the four charges Mark Sagoff

There is no direct access to ecosystem ecology, but through phenomenology. Having no idea of systems makes easier the access. Science charges big stones on both eyes. *FJA*

*Estuarial thermodynamic phenomenology**

Common definition of word Phenomenon points to: remarkable development; any state or process known through our senses, rather than by intuition or reasoning. Sustained phenomenon or euristic fall marked by gradual changes through a series of states.

In phenomenology, the expression"euristic phenomenon" is a clear pleonasm pointing to senses as first tools in its perception; that will be followed through intuition and deductive work searching the images and words for constitutive transmission.

Paying more attention to phenomenal frames when confronting with ideas

While fame impedes and constricts, obscurity wraps about a man like a mist; obscurity is dark, ample, and free; obscurity lets the mind take its way unimpeded. Over the obscure man is poured the merciful suffusion of darkness. None knows where he goes or comes. He may seek the truth and speak it; he alone is free; he alone is truthful, he alone is at peace. -Virginia Woolf, writer (1882-1941)

Füsis loves encriptation. Heráclito (600 AC)

Φυσις κρυπτεσθαι φιλει

Blooming loving encriptation only in face of Love reveals itself in fecundation.
Alflora (1956-2004)

There is no law in that, there is only Love.

Founding appreciations to natural resources: internal convective flows, thermal boundary layer, tributary's outputs and littoral drift. *CII . GMI . Agua . 35*

Francisco Javier de Amorrortu

A full century to accept complexities that the second law ignored and thermodynamic phenomenology through shocking images renewing sights of fully interrelated natural systems, were able to recognize minimal stability structures in energy conservation, reaching conprehension that only through complexity could escape from the wastes he credited, risked their delicate solar eternity.

The second law of thermodynamic insists that the entropy of a closed system should be maximized. Living systems, however, are the antithesis of this law , displaying amazing levels of order created from a "dis- order "or "difficult order", rich in flows and energetic and materials exchanges, whose complexity by far exceeds our conceptual frames.

Thermodynamic phenomenology approachs closer deductive supports, still not modelizable, from the meeting of two or more "systems"; looking at their behaviours on what appears to be keeping some distance from equilibrium because of some gradient.
Recognizes non-living organized systems (like convection cells, tornadoes and lasers) and living systems (from cells to ecosystems), which imagines dependent on external energy flows to maintain their organization and dissipation of energetic gradient associated with self-organizing processes; without entering criteria such as the relationship between "internal and external" that in Nature do not apply as such.

The dissection between matter and energy is ours. Nature, even in stratified waters, makes no difference when it comes to fertilize Life. Anyway, Eddington, Ulanowicz and hundred of second law fellows insist that this organization is maintained at the cost of an increase in entropy of the "global" system, in which the structure is immersed, recognizing encompassing immersion.

The cost in conscience of BP plattform accident at Mexican Gulf is less than nothing in comparison with the plattform of conscience derived from second law, promoting or at least justifying all sorts of abuses in applied thermodynamic on tool resources.

The word "dissipate" responds to mechanical deductive way travelling a parcel of rich interaction. Convection cells, hurricanes, autocatalytic chemical reactions and living systems are examples of dissipative structures "far from equilibrium" exhibiting consistent behaviour. Contrasted and mated expressions key to open sights; no matter how difficult could be for logic this expected time.

The transition in a fluid heated from conduction to convection, the same as from inner to external convection, are striking examples of the emergence of a coherent organization in response to an "external" power input . "Entry, exit, mutual invitation"? Man dictates, but, could be there and here, by any chance, any "not consistent" heat transfer in Nature?! Wouldn't be better to speak of more and less complex?

Indescriptible complexities discover sensitivity of second law at the bottom of thousand abysses. The present of euristic phenomena opening new sights are waiting to be hosted in our happy little boxes, in our systems, tools, etos and logics.

Already a century ago solar energy gradient was interviewed driving the processes of living systems, growing, gaining complexity and thus, evolving. Our knowledges and tools are following as they can, these ways.

Still remains in us the greatest challenge to move forward in integrity of behaviour making us sensitive to cultivate that original concept of entropy forwarding infinite exchanges between matter and energy through the first stimulus of Sun's energy warming the cold earth in a huge menu of transitions.

I bring Indo-European root *trep- return, turn on; in Sanskrit, *trápate* changing of place; in Greek *entropy , amount remaining constant in a body after its different transformations,* as an expression that points to the perpetual motion in Nature's arms, evident everywhere and impossible from isolated model to be considered viable.

Thermodynamic phenomenology, not looking through adiabatic closed boxes, states that the only way by which a living system remains alive, is by continual extraction of negative entropy of environment"…

Sensitivity of internal convective flux corridors to thermal boundary layer profits. New sights on sedimentology and natural shoreland accretions. Littoral drift interdependence on tributary flowing efficiency.

The terms "negative","remove","external and internal" , are part of the efforts to penetrate this complexity, translating primary deductive paths in simple and contrasted words. Thus, the concept of "dissipative structure" is part of that effort trying to string together what appears as "closed and open" in primary images prefigured at conscience.

The phenomenons of fertility trying to be described with verbs such as "dissipate, shoot, opening, contrast", do not approach our sight to the suspected pleasing game between matter and energy.

The suggestion that "the system" will reduce the intense gradient imposed by the Sun using all physical and chemical processes at its disposal, remains with the crutch of the second law without installation in those exchanges that give impetus to the old Greek concept of entropy; as in the case of tributaries being coupled to the littoral drift, not precisely following the paths of Boltzmann's concept of entropy.

What is the advantage ot intalling our sights on wastes related to conventional entropy,?, if it is more surprising the miracle of fertility that hosts the poor tributary reaching the littoral drift shoulders? Additionally, when seeing how, at the same time, the
little tributary powers littoral drift hypertidal sinchronicity making it possible the rescue of the first one from its confinement along 24 hours a day. Let's then look with new eyes so rich routes of Nature when talking about energy gradients.

To those who suggest that living systems are dissipative dynamic systems with encoded memories -genes-, that allow the continuation of dissipative processes, I remind them that genes do not

like to be taken as sillies; they appreciate instead, to open themselves to the links of Love that will transcend them. If some people want to focuse on "dissipative" process, let them do it. However, the need to enrich the gene by opening links through Love is much deeper than what transcends from word " dissipate".

To those who argue that life is a response to the thermodynamic imperative of dissipating gradients I ask them: how many thousands or millions of years the Gulf Stream is running dissipating its gradient? How could ocean currents evolve, surviving glaciation? Have we collected data around these transformations? It does not seems to be better to rest on second law certainties.

Even warning ecosystems as biotic, physical and chemical natural components acting together, still are pointing to them as non-equilibrium dissipative processes. They relate about stressed ecosystems as resembling early stages of ecological succession, settled closer to the thermodynamic equilibrium.

Let us approach a touch of what we use to call "reality" and bring some charity to home. What purpose follows who still talks about "thermodynamic equilibrium" without first stopping in the area of approx. 80 km2 in face to the great metropolis that stretches from the delta to the Dock Sud recognizing less than 0.80 m average depth and flows in catatonic state, while everybody is still modelling with closed systems well away from the predictable carnage whose body foul quagmire we will ensure over 200 years.

What purpose could be pursued by talking about thermodynamic equilibrium if we are not able to diagnose at Riachuelo river a body that 224 years ago confessed dead flows and today, annual losses of 0,80 m in deep? Discernments on "energy input" can lead us to the heavens of the greatest discoveries, but I doubt this will happen without previous confession that the incoming energies of reflows from the false mouth open 224 years ago, are hoping for a bit more sincere and deep sights. Matter and energy have deep springs to be discovered only after forging in our behaviours much higher integrity.

Some argue that if a group of ecosystems receive the same incident energy, is expected that the more mature ecosystem will radiate its energy at a lower exergy; in other words, the more mature ecosystem would also have a lower black body temperature.

However, the Maldonado tunnels promise to attend urban occupied paleobeds system storing the tunnel liquids at 30 m depth, with a temperature that will freeze the most deluded dreamer; and to whom the use of this principle of mature ecosystems would become as a pearl in gift. What sort of structure could develop the estuarine ecosystem and these tributary tunnels to "downgrade" the huge thermal gradient imposed by the designers, avoiding in the output mouth and in its environment, fierce sedimentations?

Complex systems appear classified within a continuum that goes from ordinary complex systems (Prigogine, tornadoes, Bénard cells, autocatalytic reactions) to emergent complexity, with the possible inclusion of human socioeconomic systems.

Thus, it is argued that the super-system imposes a set of behavioural constraints and that evolutionary successful living systems are those who have learned to live with them . What imposition puts the ocean to the Gulf Stream?, or what imposition puts the warm Gulf Stream to the ocean? " big, small? Too simple deductive inertia.

They also suggest that genes are a record of successful self-organization.

Of what sort of self-organization do they speak about? if the enrichment needs of gene targets the highest possible disparity, the highest possible link contrast, to generate by means of inner sincerity the miracles of fertility.

It's much better to go over the mysteries of Eros and Poverty, living experiences of living beings, than talking around these subjects of thermodynamic meetings in the body, in the soul, in the spirit that cohabitate in us and in the silent roots that our efforts raise.

They still presume that life arises because thermodynamic dictates the generation of order from disorder, there where thermodynamic gradient were sufficient and right conditions will be given. Thermodynamic does not dictate anything. Who dictates is man and almost, the least sincere of them. In this way they resume that life is a balance between the imperatives of survival and energy degradation.

Thermodynamic phenomenology lanes are not to be translated in safety terms, but to open sensitivity to heuristic gaze, the gateway to all phenomena.

Maxwell recalls: *"The order is not a property of material things in themselves, but only a relationship to the mind that perceives it".*

Curiously, the observation that the universe creates increasingly complex structures has not led to an immediate search for a law to explain this trend. Simple at the same time to understand how confortable is for many people to rest on second law.

Biological evolution has generated for four thousand million years ever more complex organisms, one would say, at an exponential rate.

2500 years ago the Greek concept of *entropy* related *the amount that remains constant in a body after its different transformations*. This does not speak of any disorder and we have no suspicion of how the Greeks reach to express this statement. They weren't resting on second laws and probably their sights, not their tools, were richer than ours. They nominate and were more concient than we are, of how to be prepared without previous ideas to phenomenal experience. They did not need to forget values. And in values they settled equilibrium that never was an obstacle to reach evolution as award.

A proof of our sensitivity comes from the hand of this sentence: *"When a system exchanges energy, entropy increases and a part of this exchange is always in the form of heat"*. What for this sentence if we do not appreciatte that this exchange is characterized by extremely subtle gradients?

How many tenths of a degree define translations of internal into external convection? Perhaps one tenth could be too much. What is veiled to us in evaluating this exchange? How many tenths of a degree in Patagonian waters change the meeting point between territorial drift and Malvinas drift?, and how does the location of these meetings influentiate the climates in the pampas? Do mathematical models follow in sensitivity these paths? Before they reach to approach these paths, the fact of meeting is the present that points thermodynamic phenomenal support.

Many are who insist that life is being watched over and over again in a permanent struggle against entropy and disorder - not just in the Greek sense. A battle at the end lost when death comes.

If we perceive the vital and surounding impulse of all *füsis*, perhaps would caution that death is a step forward in a framework of transformations that no doubt most criatures don't imagine. Perhaps negative entropy is the imagination load when thinking around death. A single living experience in an instant clears and even mournfulness in an instant heals.

The debate entropy versus Life, was partially resolved saying that life is a guest of our star. At least it's something to start perceiving that deepness of meaning of Greek entropy.

Not only the complex is composed of interacting elements, but Life itself interests as such from the moment that transcends in relationship. In conjunction, in the interface appears the miracle; and for meeting of relations, miracles are given. In that sense miracles are the most generous proof of relationship's value by which Life transcends here and there.

They appreciate to say that Life, which seemed a miracle of a fortune's goddess, is not but a simply consequence of probability's law. Life, and more generally, complex systems, are formed with high probability, since they allow the most likely path for energy transformations.

Even matter, coming to "death", points to it: to renew energy. Death is the most surprising of all transformations. The word "death "recognizes different meanings. Death in Life is one of them. Resurrection to Life is another. And both have to do with matter and energy. In this type of living experiences that so difficult are to translate as communicable experiences, body and soul speaks around the same thing.

Freedom express the miracle and the joy of meeting. "Joy, freedom, responsibility, integrity, opportunity", are they all from the same source? "external, internal"?, "dissipation"? ! What belongs to Meeting's Nature? What sort of help could approach to us deeper recognition of word *füsis*?

What intended to express Heraclitus by saying: " *füsis* loves to encriptate". Do any of these words help to reveal it? Tendency to enhance the complex, no matter how hard the road could be, is divine invention promoting enrichment and confidence on deeper inner sincerity.

The energy's flow to gradient due, is sufficient condition for increasing complexity. This gradient is, among other things, determining thermal boundary layer, expressing sedimentary transfer along the same line of decoupled matter and energy.

On extreme plains we can not be looking primarily at any gradient, but to the accumulation of energy in meanders and soft borders that will allow system to change comfortable "laminar" downhill flows, for the most complex inner natural positive convective flows with "vertical" climbing abilities.

The gradient of course, will decide the place and particular way of meeting with littoral drift in shallow waters up flowing. Far then are these meetings to be understood by tributary outputs at 90 º.

Complex systems allow us, invite us, to cultivate the highest degree of responsible freedom. This is not teleology but simple law of Life that does not require statement because it is too simple, natural and easy to understand, even and especially for the less "intelligent" ones.

The chocolates that saturate our coastal shallow waters, there, where is decided the output's fate of all sort of natural and urban tributaries, in the thermal and hydrochemical boundary layer

whose Nature anyone can imagine unimaginable; where the whole ecosistemic tributary-estuarial interface is at play; where no researcher ever put a spoon; where all our miseries end up; where no stranded cuspate bars are no longer formed but the most disordered sedimentations, and littoral drifts recognize increased 20 times its normal widths; there, to that mixture of unlucky fates go to end the karats of assurances that still are far to identify littoral drift as one of the most vital natural resource.

To view a frame is not the same as being surprised by the way it was contrived. This is the difference that points phenomenal experience.

It is natural that one hundred years ago were easier to see a barrier island or stranded bar and relate it to an oblique wave visibly walking in neighbourhood. Positive internal natural convective flows, although extraordinaries, have not yet being achieved to remove from the corset of their vulgar "turbulent" catalogation. Turbulent and scrambled have been puzzled our systems after falling in perplexity.

Fairness, balance, order! Terminologies around subjects we just begin to recognize in its extraordinary complexity. We only accede to quantum *füsis* from integrity. There is no access from speculative thought to its fertility, bringing matter and energy into one bit. For that reason we appreciatte to refer to a “relation's or meeting's phenomenology”; and not to a mechanicist “falling down or pushing's phenomenology”.

Conclusions

Littoral drift is the sum of tidal advections operated on the narrow riparian corridors of hot and shallow waters, hosting tributary outputs, keeping memory and hence, promoting its tidal hyper sinchronicity. Overlapping on its shoulders and fulfiling rescue job on all tributaries requesting unavoidable help; exchanging and fertilizing both, their matters and energies, 24 hours a day.

This memory is based on the quality of *positive natural inner convective flows*, also called "vertical turbulent" by mechanicists Such “inner”qualification comes to mind for keeping along tens of kilometers extended and living output systems And the “positive” one is related to his perseverance accepting to move only when tempted by a flow's corridor of similar temperature and increased advective inertia, which is not being required to run in a given direction. At this removing action or lateral transfer they call “negative”, because gradually, the corridor, through horizontal and vertical interchanges accepts to hide identity; that is not loss, but fertility.

Once in the hosting water body, at the outer margin of the narrow hot outflow's corridor, a *thermal boundary layer* that inevitably exhibit its contrasts with the immediate external and lightly coldest flows, promotes that delicate sedimentary edge we call *stranded cuspate bar*; coming it in addition, to protect memory and output`s characteristics.

Paths and frame findings in thermodynamic phenomenology that to my *Dear Muse Alflora* I will always thank.

Francisco Javier de Amorrortu, Del Viso, June 28, 2010

References are given at the end of the following work

"The lasting time spent by a typical wetland appears to be in the order of a few hundred to several thousand years; if geological conditions permit, the wetlands will be formed in the same region repeatedly along tens of millions of years, what is of great evolutionary importance "

"Flood plains should be interpreted overall (Basin + river course + plateau) in long series of time (centuries). In this context of space and time they are very stable systems with their own characteristics, unique".

In remembrance of Ana Inés Malvárez and Pablo Canevari

Cultural and natural resources in relation to estuarial ecosystems and tributary outputs on extreme plains under urban boders pressure *CII . GMI . Agua . 35* *Francisco Javier de Amorrortu*

The struggle for new areas.

The ancient limits. How to open sight to new scales? How to assume an unavoidable future?

Tensions in cities whose political limits have decided fates without reserve and transitional fringes, -not only peri-urban, but also inner fringes-, playing roles much more complex than those simple market's planning last frontiers based on simple rural-urban dichotomies.

Looking for vital infrastructure recreation. Urban hydrology claiming for planning around urban paleo channel recovery, might be an example.

Prospectives around an unavoidable Mediterranean fate: a) looking for development in ecosystemic frames; b) managing care of an estuarial area of approx. 80 Km2 with less than 0,80 m in deepness; c) projecting new territories beyond Emilio Mitre Channel where to accrete with sanitary fillings and dredging a sustainable marginal area assisted in dispersion by powerful flux corridors. New port and airport areas and access to clean waters for bathing resorts.

How to communicate these areas? Where and when to project these dreams?

The extensive proposal of this work forces me with extreme brevity only to overcome statements. Achieving options to greater appreciations in intercalated links to open horizons and bring encouragement to countless veiled tasks.

All my work was constructed from these hard realities, whose present seems not to be appreciated for being exhibited at an International Congress. But my mind is nurtured by them. And putting sights on them, my Muse began to speak. These two facts: my Muse and these natural ruins are all that I have to thank, and for them, I repeat, I move to work. The origin of artwork is usually supported by these two realities. The most discreet than I can do is to express them briefly, leaving the door open for whoever feeling the desire to enter.

The tools employed in the previous work will help to discover here, in each one, how sincere and personal interest is appreciated to devote on watching and perhaps one day, in acting. In the few minutes of easy reading, nothing will change except the scenery. Shall be this form of briefness a way to discretion, that once given to look at the targeted hypertext, there will be no way to hide. FJA

Considering the difficulties that loads the (MR) Matanzas-Riachuelo Recovery Plan I would appreciate to differentiate: a) the cultural resources related with discharges and b1) the natural resources related to the dynamic of the tributary body and b2) the more complex dynamics of the estuarial body receiver hosting the former. Both, complicated in shallow waters and extreme plains with clear but still not confessed difficulties. Thus, only those tributaries that have retained their soft borders and meanders, go flowing. These are primary and irreplaceable resources feeding the natural positive convective processes, unique responsible of these water bodies dynamics; in an interface where the former receives the support of littoral drift flows, joining and extending its entropy. These are shared profits that point at meeting details which have never been identified despite its irreplaceable importance of radical founding effectiveness.

First observation: in extreme plains tributary dynamic is only assisted, in normal conditions, thanks to positive natural internal convective flows, whose energies are enriched in meanders, shallow waters and "soft" borders. Fluid mechanics has always ignored these details because its laboratories do not accept their modelling, not even the deductive present assisting thermodynamic phenomenology.

Second observation: positive natural inner convective flows of littoral drift and its tidal hyper synchronicity are fundamental for all tributary exits, reaching its waters the appropriate thermal gradient to capture their attention, determinant of assistance along 24-hours and also of advection.

Third observation: the highest temperature of tributary waters feedback littoral drift positive entropy, that profits increasing temperature to enrich its gradient in order to sustain advection.

Fourth observation: sediments transported by hot tributary waters are discharged on the external margin under thermal boundary layer dispositions in the outgoing interface towards the NW, resulting in the development of that stranded cuspate bars that for centuries "mechanicists" attributed to oblique waves.

Fifth observation: littoral drift's health depends on extremely delicate cares regarding the natural coastal profiles, both, edge as submerged profiles .

Sixth observation: This is why we talk about pressure on urban edge ecosystems; including hard shore borders in architectural finery, fishing docks and channels that cross it without regard of its extremely delicate management.

Seventh observation: no attention is paid to urban drain's outputs, neither in respect to their exit directions coupling to littoral drift, nor even to the need of looking at the huge and never pointed problems of hydrochemical and thermal boundary layers in that cold waters coming through deep emissaries in order to avoid picnal brakes to ingoing and outgoing flows resulting in aditional unwanted sedimentation in critical places.

Eighth observation: This poverty of ecosystem ecology in tributary and estuarial riparian interface is universal. Thus, it is clear that the crux of veiled problems on estuarine ecosystems and tributary outputs in extreme plains under all sort of additional pressures, at least in our city, is eminently scientific, touching a huge amount of sensitivity troubles in the proper conceptual core of science.

The need to separate, to discern, to split, the need of exciting happy little boxes to modelize, consubstantials to the same remembering essence present in word "science"; consubstantial to discerments between body and soul, consubstantial to anthropocentrism, looking for easy transmis-

sible certainties, structurating conceptual frames like 2nd law in justified benefit of industries, and all sort of fast moving tools, and thus, giving support to a very complicated present when intending to reach simple and more direct perception of Nature, or *füsis*, as flows and meetings of matter and energy, and how we imagine or expect to express our own relations on them.

A simple evaluation of word "ecosystem" as well as "ecology" make me doubt about what we express with these words nowadays; looking how they intend to cross Life trough abyss opened by etos, traditional science, submitted logic and experiential tools. Accepted facts that I would like to contrast with primigenial sense of ancient Greek word *empeiria*, pointing not to empirical experience but to inner transport; not precisely what we point as reality, as ex-perience. Πειρω means transport and εξ means outside, contrary to εμ inside.

This inner transport, needing decades before reaching external ways of transmission, is nutrient to phenomenology so intimate as the meeting ways thermodynamic is looking for in order to inspire comprehension of blooming, fecundity, transcendence, as well as immanence; supporting fields consubstantial to Life.

The oldest Greek voice *füsis* points to these patterns. Not to mere Nature, but to all these connotative fruitful supports of Life we appreciate to discover in Nature. Our dogmas and working tools must be unusually subtle in order to help descent to these abyss, accepting to remain a long time with confidence on them. Fruit of spirit is all the way: bottom up and top down.

Sagoff contrast methodological strategies as mutually exclusive: inductive vs. deductive; observational vs. theoretical; smallscale vs. largescale; specific cases vs. general cases. I feel the abyss we want to embrace ask for transits in far more sensitive ways than these contrasts reach to express. We need before enhancement of logic and conceptions around closed systems. Analogical reasoning seems to be the first place to look at, if we wait for large transformation in thinking procedures. Does *füsis* follows these extremely poor thinking ways? Does spirit feels the need to follow these ways of thinking? Meanwhile, phenomenon is in charge of shocking us. The ways of phenomenology always ask to descend and learn before to live in abyss; making our sights free from guaranted ideas and laws; and there and then opening our souls to phenomenal patterns whose solar limits are far from being apprehended within a superb mixture of closed systems, mathematical supports without sincere field work and etos assisting welfare economics. Anyway, the spirit in us is able to send inductive dreams to open deductive thoughts. Phenomenal euristic has nothing to do with critical heuristic.

Much transformation is necesary to open soul for hosting phenomenal sight; and many are the transformations that need to be noticed in extreme social conflicts, behaviours and their progress to open sights to phenomenologycal aids.

Returning to Fluid Mechanic laboratories and their limited tools, I would like to insist they are unable to free their sights to an interrelated world of convective energies. And without accepting or even perceiving so higher complexity, needing to let aside for a while the limits settled on primary laws, laboratory technicians and mathematical models will remain trapped in dogmas, unable to accept or intuit review.

In addition, our researchers have never studied flows in these extremely poor coastal areas where littoral drift runs; and for that they never solved any of the huge problems of sedimentation around any tributary mouth that lost its stranded output bar; and in particular, they never look at, nor even mentioned the extraordinary internal sedimentation of 8 cm per year in the Riachuelo, direct result of revenues from cold tidal waters that until April 1786 remained naturally resolved, protected by its stranded bar.

Along the last 224 years, researchers never exhibit a simple diagnosis around the problem, nor wrong, nor right. Mechanicist imaginary is not disposed to look at these natural situations injured by human presence with all types of terminals calamities.

My recommendation to these Lives is to apply to a pair of urgent specificities that may be implemented in their labs inmediately. Also, I recommend to determine with extreme care the outlet temperatures of waters at the mouths of emissaries proposed for the MR plan. The same task should be exercised at the exit of the Maldonado's tunnels. Here they have specific tasks where to begin airing dreams around this subject so fundamental to the estuary health and Life that I point as thermal boundary layer.

The evidence of the tremendous energy that builds up the estuary in these areas so poor in deepness and increasingly committed flows, suggests prospectives to find some other task introductory to thermodynamic phenomenology more simple, more concrete and urged of implementation than this,.

The word "estuary" points to what is burning, what is hot, what is on fire. This is pointed out by Indo-European root * aidh, burn . Words related to "estuary": ebb tide, drought: minimum flow of a river, stream or pond; estuante: boiling, setting fire to, inflaming, too hot. From here as well: estío and estero: summer and land inundated by tide.

The opinions that Jirka or Roberts could bring to us will be of little use, because in their experiences the weight of differences in water temperatures at the outlet of their emissaries does not reachs the strong contrast as it does here, in this committed area of the vast estuary, plainly disposed to promote sediment's discharges in the worst place that we should be able with basic prospectives to anticipate.

Moreover, for those who start looking with interest these matters, it will be time to take initiatives, exploring specificities and projecting how to model these advances in the way of looking, accepting paths of intimacy, poverty and discretion, to sustain austerity in this treasured fire. Something will start to happen in open sights.

All Matanzas-Riachuelo plan points today to cultural resources having to do with dumping and human behaviour; but nothing in it points to the natural resource. Not a single line on tributarial and estuarial flows in the compromised interface and littoral drift was outlined in the presentations made by universities, public and private consultants and World Bank to assist the cause of MR . Not a single field work. Only with mathematical modelling of illusory masic charge they intend to deny natural fertility waiting for deep comprehension of how to promote water flows blooming on shallow water in extreme plains full of compromises.

This situation has just been formulated in a constitutional claim presented at Supreme Court - see (1) (2) in April 2010, trying to sow awareness of the major difficulties that weigh as unutterable; in face to a panorama of desestructurations that were never outlined, nor imagined.

In this lonely landscape I distinguish Environmental Management Units UAG, imagining the differential cares they need. Thus, according to estuarial areas and intermetropolitan deltarial areas I went outlining these issues (3) (4) (5)

The more committed UAG C, treading the threshold of their imminent death, will bring untold suffering to the big metropolis that for 200 years shall attend the wake of a foul body in an area

of about 80 km2. Nobody is looking at their abysmal transcendences and imaginable prospectives. The link between MR cause and the survival of this UAG C is impossible to hide.

The 4 million m3 of effluent to pour into the NE ridge of the access channel and the overturning of dredged muds at the SO of the same channel, are both unavoidable sentence that will officiate as sedimentary cap to the already catatonic flows in that sector concerned. See (6) and 8 following

These warnings as a matter of formal complaint were officiated at the Environmental Secretary, before the Production Minister, before the Secretary of Hydric Resources, before the Secretary of Ports and Navigable Ways, before World Bank representatives, and never received the slightest response from anyone. (7) and 11 following .

Let us put aside the huge progress of deltarian accretions on the central front (8) (9) (10), for we should first start looking around the fateful caps that emmisary exits will generate; whatever the resolution of the diffuser openings could be (11)

These texts pointing to environmental local urgencies: (12) (13) (14) (15) (16)

also relate to scientific views: (17) (18) (19) (20) (21) (22)

Therefore, the paths of unsustainability of the whole ecosystem need to be correlated to academic enclosures. In the previous work I emphasized the need to clear the crutch on 2nd law. Having felt for years the pleasure of watching with other tools, the task of conceptualizing has softened the abyss where all of us will enjoy waking up.

Even if the scale of my contributions is less than trivial, I work with joy. My energy has been nurtured for decades by two Muses: Stella and Alflora to whom I attribute all my animus and guides. My eremitic status promotes application in all areas, including judicial ones. (23) (24) (25)

Persistence, specificity of action and direct communication, help me to avoid feeling myself as a marginal. I was impelled to live in abyss sustained for decades just with my hands applying to poetic work, (26).
At the orchard, at the waters, here and there I am; nurturing myself by simple looking at the waters that I sailed when child; cherishing by both ways my closest lands.

Scientific, technical and legal applications to fill the absent descriptions of natural resources in law 26.168, prove my insistence targeting all areas, not circumventing any effort, while feeling pleasure (27) (28) (29).

The history of the Riachuelo's mouth through introduction in Enrique de Gandía's work, opened doors to transit an unthinkable amount of conflicts (30) (31)

The contrast between the mechanical and convective sights has been a great stimulant to consider radical changes. Changes that will also reach to sedimentology. (32) to J.B., Father of the MR Plan

As an example , the still unsolved problem of the coldest waters inside the Maldonado's tunnels intending to go out through hot estuarine shallow waters without ever having imagined how to avoid confronting monstrous sedimentation. (33) and 25 hypertexts

The crazy project of a thousand meters high tower projecting shadows on its 400 Has. starting platform and complete lack of criteria to imagine, before they put a single brick, an incredible process of vertiginous sedimentation under it. (34)

A similar test is proving to be projected in the same areas for a daily 4 millions m3 of effluents reaching the estuarial waters through emissary assistance, without the slightest prospective in regard to the 80 Km2 area whose catatonic fluxes claim for terminal cares. We continue keeping silence on these terrorific matters. (35) and 8 following.

The Mediterranean fate of Buenos Aires remains absent to any sight. (36)

The MR claim is paralyzed confronting cultural resources and letting aside even the most minimal mention to the exhausted dynamic of natural resource. An attitude discovering the huge conflicts of Fluid Mechanic with these energies, quite easy to prove. Anyway, efforts that in other times would have felt the futility of speaking in the wilderness, today find comfort in the web, coming to transcend feelings and emotions. (37) (38) (39) (40)

Far more painful is to remain clunging to the rocks. The spirit that helps to free the hidden fire in the soul of the stone, is found in everyone with genuine vocation to overcome these issues, rooted in tradition, in higher education and works that will endure anyway, painful transition (41) (42).

Works in defense of floodplains were introducing my vocation in administrative fronts; and after eight years and more than 15,000 pages of submissions, found its place in judicial spheres (43).

Tasks extended to the great intertidal plains at the North of Buenos Aires, reaching wetlands and tributary outputs conflicts (44) (45).

Their conflicts led me, by satellital high resolution image and the guide of contamination plumes, to consider the delicate functionality that fulfils littoral drift in extraordinary dynamic interoperability assisting and complementing the interface of these tributaries and estuarine ecosystems .
Hundreds of hypertexts, thousands of images uploaded to internet, referring in particular to littoral drifts, to stranded bars, to problems in tributary outputs, Estuarine Environmental Management Units UAG, new areas, flow charts, thermodynamic corridors (46) (47) (48) and sketches of the value of encounters in thermodynamic phenomenology, are all debts that always enjoy expressing gratitude to my ***Dear Muse Alflora Montiel***.

Francisco Javier de Amorrortu , Del Viso, June 28, 2010

Alflora Montiel*, Oceanic Muse, melanesic aboriginal, paraguayan woman that never in her Life imagined that the delicate inner stream in her field were Parana's basin tributary. Today she remains looking with Love for its exits to the sea. From last year discovering gift of that powerful flux corridor at the haline front crossing litterally the whole estuarial mouth from Punta Piedras to Montevideo, up to that extraordinary extreme plain shallow water's thermodynamic phenomenology, all my animus and inspiration comes from her.*

If it is written, what for reading even a single time. Albert Einstein

For recognition of that one who nothing reach to understand, or just doubts or usually likes to start by the end I conclude with my first Introduction to this work .

Holistic approaches to quite an amount of difficulties, not usually related when talking about estuarial ecosystems and urban tributaries, move me to outline three relations which contribute to them: cold, heat and soul; the first two relations are represented by the close portion of the electromagnetic spectrum that we point visible and extended from UV to IR. The third relation, the most representative in us, are: work, reason, imagination and living experience. Although we are in fact involved with our customs and etos, feeding all sort of disorders always in increasing progress.

If you choose between this descriptive path that never takes less than 10 minutes to expose and one simple question to encourage your interest and sketched in 15 seconds, this would be: how can you conceive that under normal conditions a water molecule in extreme plains reachs movement without paying attention to the many obstacles to be found on the road? If you have an answer, then submit which could be these obstacles according to your criteria. We are only referring to the natural resource, without mentioning the problems human beings add.
http://www.alestuariodelplata.com.ar/uag.html http://www.alestuariodelplata.com.ar/uag2.html

The answers that we envision from our mechanicist sights are so outsiders, that usually understood as barriers, they reach in ecosystem ecology an irreplaceable intermediary condition. Such is the case of meanders, soft costs and shallow waters, all equally neglected. So, the luck to define the problems comes from the hand of the tools with which we look.
http://www.alestuariodelplata.com.ar/uag3.html

Flows and floods, the subjects that compel us, discover their conflicts in ancient paleobeds that were occupied by unstoppable urban development left to individual appetites outside any public interest. In 1911 Military Geographical Institute altimetries, the urban platform recognizes primary respects to these areas. These respects will be perhaps recovered after having detected depleted speculative resources and projects assuming basic parameters supporting urban hydrology. Useful recommendations given by the UNESCO in 1983 established minimum appreciation recurrences of 100-500 years. Achieving these appreciations and rearranging our territory with long-term arrangements to vacate paleochannels, goes from the same hand.

But while the speculative problem that seems to bring us together, is given on the mainland, the main problem to reveal is, -even with evacuated paleobeds-, the tributary outputs to the estuary; to an estuary that right under our noses begins to reveal as a wetland. However, forget for a moment the wetland and the Mediterranean fate of Buenos Aires from which no one speaks, and start thinking how relates a tributary in extreme plains to its estuarial body receiver. Here is the problem demanding us to spend 10 minutes in holistic blast to these three relations targeted at the beginning. http://www.alestuariodelplata.com.ar/termodinamica.html

Let's start with the spectral ones.

Before applying to the metabolism of nutrients we need to consider the primary dispersal agents and sedimentary processes founded in the interface of tributary outputs at extreme plains; In particular, to our extreme plains. And in an unspoiled natural resource, without extreme loads such as those running down from the Bermejo River, these are inner convective flows and thermal boundary layer.

Tributary output streams and coastal flows fulfilling hosting task at the interface, were matters that never fluid mechanic researchers accepted to study in relation to heat and access to its work with thermodynamic criteria; are subjects not possible to be consider at their laboratories. Thus, the fate of Fluid Mechanic to host these news, appears closed.

In order not to make more fuss, I abbreviate the two categories they briefly assume in the diagrams of flows are laminar and turbulents. The latter are discovered as vertical and lateral. In thermodynamic, the first one is related as inner convective positive and the second one as convective external negative. I abbreviate an older intellective category of hydrochemical character that points to picnal differences (density). Differences that I will approach later when talking about hydrochemical boundary layer . http://www.alestuariodelplata.com.ar/evaluacion.html

Returning to turbulent flows, they never had the chance to look with proper tools to uncover an order within that chaos so complicated to be translated into physical models and to extrapolate further on mathematical models. However, Jaime Menendez and Natale in that beautiful work which formed the basis of the Matanzas-Riachuelo's Environmental Impact Study, involve through wasp5 model external convective flows (laterals) in their appreciations, and even more: assigning them to be the start of dispersion processes

In respect to internal convective flows they just do simple mention, while leaving an self-critic trail of great value. A trail that I emphasized on numerous occasions. In that trail I welcome settle, for she is in extreme plains the Mother of all outputs, of all cares and solutions. http://www.alestuariodelplata.com.ar/termodinamica2.html

This trail was started to unravel in 1900 by Henri Bénard and is still open to surprise. In this revealing we accept the word "heat" being translated as work. And this subtle work, enriched in meanders, soft coasts and shallow waters, is what allows water molecules deign to go, even uphill if it were the case, way to Mother "littoral drift"; not only hosting its outputs carrying them on her delicate shoulders, but receiving award for this job building up their own resources for extended entropies. Extended entropies, that feeding tidal hyper sinchronicity, kept tributary exits alive the whole day. http://www.alestuariodelplata.com.ar/epiola1.html

This quite ignored wonderful fact, officiant on extreme plains of natural tributary outflows, is finally constituted by thermal boundary layer; which, in bands whose synchronies -on healthy estuarine shores, which is not the case-, normally average 150 to 180 meters, appears embroidening on the external edge the sedimentary precipitation of that delicate stranded cuspate bar that goes patiently and neatly forming the ancient littoral bar whose original root, sedimentology, taken by the hand of Fluid Mechanic, has ignored; giving themselves with mechanical eye to measure an oblique wave absorbing their attention. Both, never considered what particular auxiliary function fulfil stranded cuspate bars to make all tributary outputs efficiently viable.
http://www.alestuariodelplata.com.ar/cordones0.htm

The third dimension that seeks to enrich a holistic look at these processes, is assisted in visible proximity by contamination plumes present in high-resolution satellital images. They trigger the euristic phenomenon. Primary creative support of imagination that we should not confuse with critical heuristics or other critical creative developments. These will later help communicational transfer in pursue of conceptualization.

Outsiders to non expectable phenomena some people may appreciate to discern on these living experiential fields as metaphysical intangible media attending our imagination. But I must confess that is an intraphysical support, fruit of Love interlacing Poverty and Wealth; fruit of our or-

phanage and Thank's capital amassed in afflictions by creatures who already have their existence left, and for 30 years at the beginning of each day made me feel with ecstasy being caressed.

25 years ago Estela Livingston moved his granddaughter to Love and his pen to my comfort. In the last 5 years Alflora Montiel led me to look at our extreme plains and their waters and to move communication in the need of preservation. All the wit and eros comes from them to this gardener in addition hosted by a four centuries old garden harmonizing his efforts and joys.

Finally to close this brief work, an appreciation of a Bernard Shaw's fellow, Professor of Coastal Dynamics with classic look at these topics:

Dear Francisco Javier

You are an infidel ... Everyone knows that something happens between the wind and waves, ... and You want to ignore it, ... Well done, ... it is detestable to agree on everything, ... a real horror. J.O.C.B.

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Phenomenal fields in communication, in animus and in human couple, remains in desire waiting the time for their expression; meanwhile devoted to those looking for Nature and to those shining in behaviours relating public and private persons.

Francisco Javier de Amorrortu, Del Viso, 28 June 2010

Vladimir Kush drawing at left a mechanicist sight constitutive of traditional entropy. At right, through a highly contrasted picture a way to express the fate of non-attainable convectivist sights, scented in their integrity by unavoidable traditional scientific procedures. Intending to modelize on closed boxes what at present is just offered through euristic phenomenal fields, followed by azarous deductive ways to phenomenology.