

A UNIFIED THEORY OF LIFE VOL. IV

Littoral Theory III *Littoral Double Niche Transition Theory-LDNT*

Transition-theory in the mirror of the present critical discussion about Evolutionary Epistemology

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Translation by the author in 2013 with additions from the translation process in italics. This translation is dedicated to Prof. Michael R. A. Chance, University of Birmingham, Fellow of the Royal Anthropological Institute, Visiting Professor in Ethology and Anthropology at the Department of Anthropology, Berkeley and Irvine Campus U.C. and Rutgers, New Jersey, U.S.A. The full hearted support of Prof. Michael R. A. Chance who reviewed the research report of “A Unified Theory of Life” for the Austrian Ministry of Science and published with me the salient points in the ASCAP- Newsletter is most gratefully acknowledged in this commemoration of the 20th anniversary of the publication (Bujatti & Chance 1993).

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4. A Special Theory of Creativity is concerned at present, by building up from indispensable epistemological foundations, with *four* boundary conditions *necessary* for the unfolding of the *very* specific form of human creative intelligence. In it, speech functions as the first tool in the sense of Wittgenstein. Those *four* boundary conditions were derived on the one hand from the physiological analysis of the cultural dive-initiation and naming-rituals (*e.g. baptising, shirodhara, mikwe-twila, water rituals of purification*) and on the other hand from the physiological analysis of the Transcendental Meditation practice as *e.g. underlying the Ayur Veda, as a mantra or “name” utilising meditation.*

Both *lines of traditions* were demystified as being *one*, since based biologically and phylogenetically on *one system* (1.) the inborn, *for oxygen conservation deeply calming, hypo-metabolic diving-reflex-drive* (2.) in sound-symbol (3.) cortical conditioning (4.) by the name given. *Speech and its naming is respiratory-diving-cycle-phonemes derived, for diving response release, that is now released aerobically, without submersion, ritually, by the name-process, the mantra, as the origin of speech, as the first tool for relaxed condition stabilisation for self-induced proto-play (meta-play: ritual play retrieve and self-repair processes), allowing for relaxed problem solving in extreme emergency.*

This appetitive *diving* drive as *inborn* instinct behaviour is the primordial condition for human spirituality (*teleonomy*), creativity and intelligence. The “terminal reward” of this self-induced, vegetative, self-rewarding, *diving drive* consummatory act, as the objective, the simplest, the *human-biological* “hydrogen atom” for the study of creative intelligence, goes along with the vegetative “Rest and Fulfilment”. *This is the “Rest And Fulfilment (Play-Trance)-Transition” (RAFT) to the “relaxed field” play condition, basic to and inclusive of the “fight or flight” and stress reactions (Bujatti & Riederer; 1976), away from the oxygen depleting suffocation-panic, to the meta-play competence of relaxed problem solving even in greatest emergency.*

Furthermore it goes along with a prolonged and stabilised experience of a simplest form of consciousness, the “transcendental consciousness” as the subjective *complement to the above objective human biological* “hydrogen atom” for the *physical* study of consciousness as an *isokinetic* quantum field - phenomenon, manifested by the *very specifically* brain activating, but otherwise *for the body* hypo-metabolic, *oxygen conserving*, psychophysiology of the diving-drive phenomenon.

With the above, (*the findings of 1. the diving response, 2. the respiratory diving-cycle phonemes as logic-syntactic algorithmic sound-symbol (toy-tool), 3. the cortically conditioned RAFT-transition, 4. in aerobic, non-aquatic, meta-play release*, those in Vienna, Austria (Bujatti, 1985 a, b, c; 1991) completely independent discovered boundary conditions (1-4) of *teleonomic* spirituality and creative intelligence, come into the vicinity of the Aquatic Theory. It started in *Italy Sera (1918) and in Germany (Max Westenhöfer, 1922) and was developed further by Max Westenhöfer (1942) from the comparative anatomy of inner organs in aquatic animals and ma. That lead to, his “progonic triade” of kidney, spleen and appendix and it was again independently discovered in England by Sir Alister Hardy (1960) from the comparative anatomy of aquatic animals and primate versus human skin and expanded by Desmond Morris (1967, 1977), De La Lumiere (1981), Elaine Morgan (1982), Marc Verhaegen (1987).*

5. These three independent lines of origin are unified in an Eco-Transition-theory of hominids (Bujatti 1985 a, b, c; Bujatti-Narbeshuber 1991). Its concept lays the foundation for the (*speech tool based*) technological shaping of the ecology as the then *man* selecting *cultural* environment *starting* by evolutionary adaptation, *then* by behavioural choice of the selecting environment and *finally* by the specialisation of humans for passive and active mastery of fast, *but invariant dual littoral (play-dive, material-spiritual) terr-aquatic, ecological change that comes from this “paignio-kolymbetic” (greek “with a toy-diving”, symbolic- creative play inducing dive-economy-intelligence) behaviour of the material-spiritual double culture of teleonomic creative intelligence.*

The long sought “missing link” for the self-understanding of the “Homo ceremonialis ritualis”, or “Homo ludens transcendens” as now “Homo litoralis transcendens” is this psycho-physiologic living fossil of the diving drive with *rest and fulfilment* experience, including biochemistry, physiology, psychology, ethology and live saving in *hypoxic* emergency and *live saving* in the conditioned cultural enhancement of human creative intelligence.

The *well developed human* diving drive, as ethological basis of the species-specific, initiatory form of human socialisation in the *spiritual* initiation cultures and in the *ritual* religions of *civilisations* seen as the *respective co-evolving novel* extensions of the primates Hedonic and Agonic socialisation (Chance & Jolly 1970, Chance 1988), is through the uniqueness of its connection with the psycho-physiological study of creativity *in the diving response of Transcendental Meditation (Bujatti-Narbeshuber 1991, Bujatti & Chance 1993) and the evolutionary study of comparative morphology (Westenhöfer-Hardy-Morgan Aquatic*

Theory), proof for the eco-psycho-physiological adaptation to the shore-water-(= *littoral terr-aquatic double-*) niche as the critical detail of psychological and morphological human evolution.

Genetic isolation of Tethys-shore- primates *in the Danakil horst* at the Afar-Isthmus of Africa, part of a triple-junction of three spreading axes with rifting, is *highly* probable from the new theory of plate tectonics there by Bischoff (1985) and Pavoni (1985). From this can be furthermore derived the forced loss of their previous ecological niche through the climate driven deforestation at the end of the Miocene, that is 5,6 million years ago, another veritable expulsion from paradise.

This Tethyan-shore was comparable to the contemporary indo-malayan mangrove biotope of Borneo. It contains for the behavioural comparison with humans the highly interesting, vicinity of water seeking, very good swimming and longer dives enjoying, *Nasalis larvatus*. A primate overspecialised in mangrove-plant *and fruit* nutrition and *this littoral double niche contains* also the highly specialised, in the perspective of nutrition for hominid evolution equally behaviourally relevant, other extreme nutritional position of this biotope, *namely* the crab-eating macaque, *utilising stone tools to open nuts, oysters and other bivalves and various types of sea snails*.

A progressive loss of these mangrove forests led, inevitable for the *inhabitants of the* concerned islands, to an evolutionary pressure for eco-morphological supra-littoral, littoral and sub-littoral shore-water- (= *littoral terr-aquatic double niche*) adaptation. It went along with the eco-physiological challenges of multiple land-water transitions leading to the ethological adaptation of the diving response to the diving drive.

On the basis of this ecological niche, the further mechanisms of human evolution could to some degree correspond with the concepts of Owen Lovejoy (1981).

6. The origin of “proto-logic” in the field of syntactic language is given from (A-G-N-I) the four “primal sound symbols” (*respiratory tract wide open is phoneme A = 1; respiratory tract totally closed is phoneme G = 0; negation, the prerequisite for logic, is during dive the filling of the nasal cavity for caisson effect associated with no (!) respiration for negation phoneme N = NOR-logic; return to inspiration after surfacing with Bernoulli effect self-affirmation phoneme I = NAND-logic*).

These four correspond to the bipolar, four, cybernetic command necessities of voluntary respiratory control already available to primates *and all together executed when diving* in the respiratory diving cycle sequence.

According to Prof. Unruh, Germany, the 16 functions of Boolean logic can all be derived with mathematical rigor from such a cycle.

A-G-N-I, as the very first word in human speech evolution was discovered by me as cogently emerging from the respiration control cycle of diving phonemes. Through symbol conditioning of the diving response elicitation central in the littoral-transition-theory for the evolution of 1. symbol syntactic human speech to stabilise 2. proto-play behaviour even in emergency, by 3. the most economic hypometabolic diving response symbol elicitation in emergency as fitness advantage providing 4. (ad 1). logic-syntactic, (ad 2.) creative, (ad 3.) intelligence.

This cycle results *both in NOR and NAND logic* in relation to the cybernetics of the bipolar regulated continuous closure of the respiratory tract *in submersion-transition* - from AA wide open via closing AG to complete closure GG - as well as in relation to the complementary discrete Negation (*nasal cavity air filling for no, njet, nein*) as N = STOP of the breathing activity, on the Meta-level of respiratory control the N = NOR-Logic (*impossible without negation developed from N = NO more breathing*) as well as in relation to the second half of the respiratory cycle of airway opening from complete closure GG via opening GA to wide

open AA with its discrete affirmative I of Bernoulli effect of surfacing deep Inspiration I = GO on the Meta-level of respiratory control the I = NAND-Logic.

Through this the logical functions of syntactic speech can be developed by iterations through the creativity process (M.Bujatti-Narbeshuber, Sprach- und Kulturevolution. Kongress Abstracts, Editor Armin Eschbach, Int. Kongress der deutschen Gesellschaft für Semiotik, 1987). With this composed (*logic-syntactic-toy-play-dive*) sound-symbol (of sanskr. = AGNI, lat. = IGNIS, germ. = Licht, engl. light, the first god fire, of creative spark,) it is possible without water *by cortical conditioning* to elicit the diving drive –activation of the brain for *proto-play-creativity*. *This dive-activation is only the sufficient condition allowing even in emergency for the alert Rest And Fulfillment (play-field) Transition (RAFT) for the necessary condition and that is the creative proto-play behaviour.*

Furthermore, with this the *littoral insular* hominid returning via land bridges into the life of the African continent became comprehensible as by necessity “ceremonial animal” according to Wittgenstein (Wittgenstein, Lecture on Ethics: Vortrag über Ethik, Suhrkamp, 1989, p 35). In this *savannah* environment he stands under the initiatory condition, the release of the diving reflex via its conditioning for the tradition and the maintenance of an intact, now from the *littoral* environment independent, physiology of creativity. For “an inner process stands in need of outward criteria” (Wittgenstein, PU 580); not to exist, but to be grasped, communicated and passed on and to be finally studied scientifically today. For this question of the origins of creativity *on increasingly complex levels of integration, culminating in the teleonomy-culture co-evolution of speech*, the trans-culturally identifiable, water related initiation and meditation ceremonies offer themselves as a path. So covering truly global dimensions, a *worldwide* relationship also of the dive myth was pointed out, on the one hand between the people of northern Eurasia and northern America and on the other hand of the australo-asiatic people (Schmidt P. Wilhelm, “Das Mutterrecht”, Studia Instituti Anthropos X, 1955, p 40-42).

7. In the time since then, it has become already a theme for the media, that preferably inhabitants of water like the dolphins, but also sharks, *or cephalopods*, have a highly developed mind. Already in the sixties, then seventies and eighties numerous scientists, among them the Soviet researcher Prof. Nicolai Mjagkow, came to the conclusion, that in jumps, possibly “high brain achievements originated in the oceans and a large potential of man lies still untapped.” (Gehirnentwicklung in Sprüngen. Hohes Potential liegt brach. Die Presse, Wissenschaft 16/17. Sept. 1989).

This is supportive for the evolutionary position of the eco-transition theory, that because of the *diving associated* high demands of hypometabolic-cybernetic regulation *favouring the brain*, symbol conditioned diving response elicitation, *aerobic without oxygen constraints, and without nutritional PUFA constraints provided from the marine food web* must be held responsible for the growth of both brain size and human linguistic creative intelligence.

Furthermore this model takes in account the so far miraculous fact that cetaceans, according to the experiments of the cognitive psychologist Luis Herman at the University of Hawaii, are far superior to apes also in the use of symbols, in addition to their far superior brain size. The *ultimate* cause is, as in the case of the so far unexplained large and developed forebrain of the most primitive mammals, the Monotreme anatinus, their ecological dependence (*being strictly linked to their equally littoral terr-aquatic double-niche changes and as proximate cause dependent*) upon the diving reflex in conjunction with a most highly developed, specialised sensory apparatus *for the aquatic niche aspect*. In the case of the dolphin that is the *aquatic* sonar orientation and communication system and in the case of anatinus the *aquatic* electrical field sensor and in the case of Hominids the differentiated sensory motor communication *demand of both play and dive integrating littoral terr-aquatic double niche reality*

construction even in emergency by creative and intelligent speech-communication manifesting in the terrestrial niche aspect.

Thereby now the systematic *and unified* mechanism for cognitive psychology and brain physiology concerning past, present and also future evolutionary scenarios of the human brain is provided, that forms the basis for the *play-creativity* deficit theory of human *socio-psychiatric* disease (Bujatti 1985 b). The observations of Igor Tscharkowsky (E. Sidenbladh, Water Babies, St. Martin Press, New York, 1982) and Michel Odent (Birth under Water, The Lancet, December 24/31, 1983, 1476-1477) are brought onto a common evolutionary and very essential preventive and pedagogic denominator by the author through his practical diving response training for newborns, babies and children, *thus bridging their high vulnerability gap* up to the age of about 4 when they can start to meditate *while playing*.

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