THE BASIC CONCEPTS OF THEORETICAL ECONOMICS –
DEVELOPING SYSTEMATICALLY THE CONTENT OF THE LAW OF
REAL VALUE

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Abstract
Holistically securing the foundation of a theory – as for theoretical economics, in the preceding article – does not yet yield the systematic development of concepts for practical applicability. Here we present this additional endeavor. We avoid the traditional static 'factors of production' (nature, labor, capital) for instead proceeding integrally and dynamically in the hierarchy of intrinsic laws and their instantiations, from a universal grasp of process (change) to work (in general), labor (human work in economic respect), value (real value as opposed to imaginary value, polarized by intelligence), price (as a principle, and in the practical opposition of need by producing vs. need in consuming), money (as a principle, with a secure basis in real value), etc. In this way, the core concepts are differentiated step by step from the global to the particular level, in conceptual oscillations between the respective law and its materialization. The result is a structure allowing universal applicability, i.e. to any possible form of economy. Past forms can become clear as specific deviations from conceptual clarity.

Keywords: categories, certainty, complete self-reference, integral methodology, transdisciplinarity, systematization, uncompromising approach

1. The Situation in the Social Sciences, Our Objective, and its Potential

In the corpus of the sciences, those concerned with the human condition and social interaction occupy a particular position due to their necessity to encompass all of what concerns humanity; this covers everything known and knowable and can thus not be limited a priori, as in specific sciences such as physics, while the capacities of philosophical and scientific ascertainment are increasingly being believed to be limited on principle. The resulting balancing act bedevils also the humanities and contemporary social sciences.

presented in principle that allows traditional self-limitations to be overcome. Our sequel proposes an application of the new approach, developing systematically a conceptual matrix for the humanities and social sciences—first in general, probing the roots of life and human social life, for then focusing particularly on the socio-economic aspect. This is the subject matter of theoretical economics: the material conditions for human life and adequate ways of handling them. But we will approach the issue in its widest sense, covering also the conceptual means as one type of materiality, relevant especially in mental economy. After all, doing philosophy and science implies steering the mind by means of concepts for finding related concepts—while the mind makes all distinctions, including the fundamental ones, and forms subsequently possible concepts. The art of optimizing this mental process in terms of relevant content can be called 'mental economy' (of which 'attention economics' can cover only a part by remaining in information theory). In social interaction the same type of order is effective, albeit in a transposed mode: the cultural process is always one of forming the concepts by which a culture abides in its specific confrontation with reality as a whole—which is not only 'out there', but also in the way of approaching total reality. The individual finds its way in self-aware mental life, which can remain implicit to some extent (at the expense of a complete understanding), but can also lead to clarity beyond the reach of language (think for instance of artists, or mystics). In contrast, social life requires explicit linguistic interaction. On both levels the point is in achieving sensible control of the crucial conceptual challenge, which finally always implies self-referentiality since the system of meaning (conceptual system) that steers the attention must be applicable to itself without producing problems—a feature that formalized systems can on principle not offer (as has variously been proved; see e.g. "provability logic" in the Stanford Encyclopedia of Philosophy). Policy makers and decision makers can of course neglect the issue of self-referentiality in their operations—until side-effects are decisive and sidestepping becomes impossible; then they are forced to worry about the sustainability of further development. We propose a methodology that operates on a conceptual basis that allows universal applicability under specific conditions (see GM08 section VII); then it is applicable also to itself, offering a secure heuristics via a type of concepts that are qualified for self-referential use. In this way, the proposed methodology covers in a conceptually homogenous way mental materiality (conceptual means for steering the mind), as analyzed by the humanities and social sciences, and overtly palpable materiality (physical means for steering external processes), as analyzed by the natural sciences.

The proposed approach offers a sound method for overcoming the fears that make believe there is no alternative to the self-limited and yet commonly accepted views, and it offers criteria for coming to terms with the unintended and yet inevitably resulting short-sightedness in deciding which presently burdens the socio-political process—consider for instance the observations of strategist Peter Robejsek (2009). Instead of considering thinking to be the formal administration of information, which is ultimately a mechanistic process, we emphasize the capacity of finding a fitting synthesis, integral and organic by doing justice to all the relevant interconnections. There are vast advantages in being able to think actions, situations, and implied interconnections beforehand—rather than being reprehended by surprising side-effects of one's doings.

In this essay, first some essential forms of order (in certain respects: laws of nature) will be exposed that govern human and social processes, clarifying human and social causality on the way. In a second step the conditions will be considered that must be fulfilled for causality to become operative in actual life, i.e. for not remaining—as Aristotle might have said—potential (dynamis), but becoming actual (energeia) beyond mechanics. The mental path proposed for conceptualizing
the overall structure is one of swinging dialectically from concepts of overall order to concepts of its actualization, which lead to new conditions, whose being understood requires concepts of more detailed pure order, leading to new conditions, requiring concepts for more detailed action, *et cetera* until consuming the posed questions. Instead of setting out from the traditional conceptual basis (static 'factors of production': nature, labor, capital) we proceed integrally and dynamically in the hierarchy of intrinsic laws and their instantiations. We set out from a universal comprehension of *process* (change), continuing through *work* (willed change in general) to *labor* (human activity in economic respect) and *value* (real value as opposed to imaginary value, polarized by intelligence), *price* (as a theoretical principle of opposing need by producing and need in consuming), *money* (as a principle, with a secure basis in overall real value), etc. In this way, a conceptual structure depicting the hierarchy of relevant laws can coherently be differentiated from the global to the particular level, in conceptual oscillations between the respective form of order and its materialization, which gives rise to new needs of differentiation, etc. Since the foundation is rooted in concepts of strictly general cover, which are then developed systematically, the result is a structure that allows universal applicability, i.e. for any possible form of economy.

At first sight it might seem that the stringency of the proposed conceptual systematization needlessly nails down the possible forms and developments of economy. This impression stems from interpreting the proposed approach in an erroneous way – which is, however, practically inevitable in traditional approaches to reality. Our proposal addresses directly the types of order that determine the phenomena; for doing so, it uses 'law' and 'force' as analytic concepts in the processual view. It is no coincidence that these two concepts remain highly controversial in traditional approaches, in spite of the fact that phenomena ultimately become intelligible only upon grasping the relevant laws and forces: that which describes the order and that which actualizes it. The point of analytic concepts is to allow seamless intelligibility. Only after having understood a principle one can actualize it adequately, i.e. in a way that corresponds to the respective subject matter. Thinking too is a form of practice – in fact, considered in complete awareness, the activity of thinking is the only complete form of practice, because only its actuality embodies strictly all the relevant elements (a point made by Hannah Arendt; see section A 2). In a thought all of its content is evident, it has no 'backside' as in viewing a thing; where this is not the case, one is not thinking, but dreaming, fantasizing, etc. – allowing something else to penetrate the mental scene. In perceiving, something is always hidden by the perspective – making inevitable an interpretation. Many troubles in seeking to understand stem from an excessive reliance on empirical data in the face of the fact that neither laws nor forces are observable; only their effects can be observed. This fact is itself a form of order, something effective irrespective of whether one is aware of it or not. In the traditional view one is compelled to mix up *types of order* (structures of law-cum-actualizing force) and the *forces* (in matter: forces as discussed in physics; in the psyche: will) required for allowing laws to become manifest. Once this fundamental difference is clear, the conceptual stringency of concepts of strictly general coverage, as offered here, allows – contrary to habitual expectations – a more complete understanding of the types of conceptual neglect that led, in considering the eco-social process, to the historically known one-sided forms of economy and development. And it shows how a fully organic, strictly complete and non-contradictory system can be thought.

This essay offers the possibility of disentangling on principle some old nebulosities and of eliminating some theoretical neglects, but makes no claim to have covered them all. There are many knowledgeable specialists who are able and hopefully ready to point out further interconnections, possible improvements in details, or maybe even flaws. Nevertheless, the *methodological type of*
procedure offered here should in principle be viable, paving the way for much more thorough work towards a truly satisfying way of securing the material needs for developing in humane ways.

A. Addressing society and its developmental potential

For being able to talk reasonably about society and its development – a result of interacting human beings – it is useful to consider first life as a principle (of which appearing beings are examples). This implies a difference between the organic qualities of life and the inorganic matrix on which it depends for actualizing its processes. Clarifying the relevant types of order – in the proposed categorial approach: as structures of laws-cum-actualizing forces – allows an adequate understanding of the complete scope of life, right up to human interaction towards sociality with the individual and social organization of ideas and material needs. For a more detailed account of this approach to the principle of life including death see Schaerer (2002).

A1. Conceptualizing mechanisms and organisms

In the proposed approach, all action and movement, organic as well as inorganic and on all levels, can be approached in one conceptually homogenous way, thereby displaying the hierarchical orderliness of laws and forces in the manifold of the universe. As long as an organic law-cum-force structure is operative which keeps its cell metabolism from degrading into overall necrosis – the generative force field which Aristotle discusses as eidos and ousia, and modern biology in genetic terms – a being can handle its body (the mastered physical law-cum-force structure) and act on others. When the generative force field separates from the physical structure, the subsequent processes obey the laws described by today’s physics and chemistry. This is the difference in principle between states of being alive and being dead. Being dead is not just "not to be at all" (Ivan Soll in Malpas / Solomon (1998:38), as one example of a widespread belief), which is an unreal idea, born out of mere abstraction. Arising as a discrete entity requires materiality. Death is the state in which the generative force field is separate from the material substrate required for existing; dying is the process inducing the separation, and inversely birth is the process that amalgamates that force field with materiality. The orderliness in this field (law-cum-force) is not observable, but this does not mean that it is nothing. Do laws and forces exist? The answer depends on the categorial structure of the system through which reality is being interpreted.

The view proposed here is wider than what the use of the words 'organism' and 'mechanism' usually implies. The core issues of the debate can be summed up as shown in Fig. 1 (derived from a seminar with Christoph Rehmann-Sutter at the University of Basel). The main problems of today’s debate stem from differences of interpretation in the links 3, 1, and 2 between the theoretical positions.
In link 1, the 'bottom-up' approach leads to a need for conceptual stopgaps such as the 'emergence' or 'supervenience' of features, for grasping properties on an overall level. Even the function of a piece of DNA can be clarified only by referring to the whole of the cell, and summing up all the processes in such parts of organisms can explain only non-autonomous aspects. While it is admitted in theory that natural science can not explain actual autonomous aspects such as chemotaxis or other directed action (but at best some material structures as necessary conditions for enabling these), in practice terms such as supervenience or emergence are still often used in ways suggesting some ontological validity; the lack of clarity produces misunderstandings and thereby inefficiency.

Hence organisms are admitted to be alive besides having other properties, but the principle or quality of being alive can as such not be grasped. Thus 'organism' as what sums up explanations of parts in interaction became the scientifically respectable term for approaching what is alive. It is not synonymous with the older and more complete term 'living being'. Such beings are scientifically seen as organisms, whose ontological status must be left open. This appears also in link 2.

The full scope of being alive as an organism is therefore defined only in a negative way: (a) the properties of the whole being are not fully reducible to the properties of the parts, and (b) the tradeoff of not requiring the supposition of any force aspect beyond physics and chemistry for defining the specificity of 'organism' is that it allows an explanation of 'being alive' only to a limited degree. This leaves open a wide scope of possible interpretations between 'organism' and 'mechanism'. The approach proposed here aims at closing this conceptual gap between on the one hand a being that is alive in its full sense, and on the other hand a mere organism, and simultaneously it aims at clarifying the role of the term 'mechanism'.

These points become important in link 3, where the perspective of natural science offers two possible views of organisms: they can either be viewed in the same way as machines or mechanisms (in an ontological identity or an ontological reductionism, which is however not to be confused with an epistemic reductionism), or they can be approached as something ontologically different from mechanisms, taking mechanistic models as something that can offer certain advantages (this is a position of ontological difference in epistemic analogy; there are no explicit ontological assertions). The first position faces the problem that mechanisms have an aim, they exist to a certain end, which defines their structure – but nature has no aims. So where do the specificities of organisms come from? The thesis of the present proposal is that the different desires to live are the forming basis for these specificities.

Conceived integrally and yet in a conceptually clear way, the difference in principle between organism and mechanism can be said to reside in the location of the generative force field relative to the body (this idea has been developed long ago; compare e.g. Steiner (1988: ch. 15 and 16)):

- In a mechanism, the regulating field (cause) must act from the outside, as observed in physics and chemistry, where external dispositions and acts are required to get going the desired kind of reaction: without an external inventor and a material manufacturer there is no ordered structure (analogy: no coffee machine) and without an externally, forcefully induced process there is no alive process, whether in vivo or in vitro (no coffee to drink). A full-fledged...
mechanism is therefore always constituted by material matter according to a structural law applied from outside on the structural law of material matter as such.

- In an organism, the regulating field can act from within a differentiated structure with a specific degree of autonomy; substructures (organs) are determined by their dynamic relation to the whole within the overall process equilibration, and the whole displays its specific degree of autonomy, achieved by means of its organs. In an integral point of view, an organism is not an isolated 'thing', but must be approached on more than one level at once: it appears on the one hand as a hen or an egg, but must always also be seen on the backdrop of a complete self-regulatory (and hence self-referential) cycle of organically subsisting in its own way of organizing its relatedness to the rest of the cosmos (hen and egg and rooster ...).

The said two perspectives – mechanism and organism – are thus complementary. As a result of the precise basic concepts in the proposed approach, the traditional idea of hylemorphism can become useful to a degree that traditional concepts do not allow. In trying to understand material matter, the idea of complementarity on the quantum level surfaces only after heuristically having presupposed 'parts' as being constitutive for material matter as such – while empirical evidence does not prove that matter ultimately consists only of parts. The idea of discrete parts is justified in the realm of the living only, which indeed appears in entities of gathered material matter while being alive. That idea does not correspond totally to the nature of life's one constituent, physical matter itself, and after death alive beings dissolve again into the amorphous state of being inanimate. The types of life – of generative force fields – organize their matter so as to become animated, but such an organizational field cannot be observable as such because the alive being follows it. These fields can become intelligible only to pure forms of thinking, i.e. to beings that address all interconnections in a rational way and are thus interested in conceiving 'metaphysical' ideas such as the proposed transcendental tetradic concepts.

Organisms relate in principle to the whole universe, explicitly via their material and mental metabolism. When considering all interconnections, inorganic (mineral) totality also has the characteristics of an organism: it interrelates absolutely, as physics reveals for instance in the immediacy of \( \text{actio} = \text{reactio} \) (Newton's third law), or quantum non-locality.

Relating to totality is the cue for addressing an old bone of contention: creation. One of the prevailing ideas is that some instance created the (living and other) beings in the way one would manufacture something. But this idea is naive. The overall reality is that the overall interconnections in the universe – which thinking beings can address for example in terms of laws and forces – allows desires of all sorts to move around and evolve in this web of all interconnections. Where desires of addressing totality, universality, are organized in a way that does justice to the claim, they develop as human beings; lesser desires develop as lesser beings. The web of overall interconnections offers complete freedom at the outset, and it allows all interrelations, but in the last resort no being can reckon without the host. The same goes for mental life. There are no a priori limits to mental movements, but at the very end of thinking a subject matter there is something like a limit: reality cannot adequately be mastered when not considering the implied totality, logical coherence, etc. That is where being human – not something lesser – aspires to its prime.

A 2. Forms of life in their actual process

No living being ever fears the principle of death, because being born and dying are part of its organizational entity. But living beings must fear the process of dying when caused by incompetent
influences – be it of others, in injuring up to killing, be it of the alive being itself, imposing unhealthy influences on its own body. The process of dying is of utmost beauty when resulting from complete self-fulfillment; in humans the ideal case is known as 'enlightenment', documented in all cultures where one can relate in a fully conscious way to the universe as a whole ('spiritual life').

The point is to encompass the process of life in its full range of birth, existence, death, and procreation, in the disequilibria and equilibrations it engenders in matter and mind. Understanding death as the absolute equilibrium of all force structures – which include those of mental representation – removes unnecessary fears that subconsciously shape many moves, right up to research programs. Fig. 2 illustrates the conceptual structure.

Fig. 2 Conceptualizing the biological process

Neither life as such (the principle that appears as oscillations between birth and death) nor for instance the aim of medical understanding (disease and health) can be found in the categories of natural science: no mechanism of a natural process is as such alive, dead, ill or healthy, but only an organism. And an organism is not just a constructional state ('hen-or-egg'), a 'photo' in the 'film' of a specific type of process, but all of that process ('hen-and-rooster-and-egg-and-environment-and-births-and-deaths'), which must thus be differentiated conceptually for not having to cut it up into material 'constituents' by having misunderstood its intrinsic coherence.

Orderly social life requires responsible acts, which for their part require conscious motives – also for handling preconscious and unconscious mental elements. Choosing adequately from the set of produced concepts is therefore essential. For adequately handling social life, this processual complex should securely be understandable – which traditional methods cannot offer, as they remain in perspectives. One possible path towards the required universality is shown in Fig. 3.
Motives follow from types of irritation; an integral approach includes those from 'inside' (feelings etc.). There is fundamental polarity (materiality vs. its intrinsic order) and a mediating element (awareness and activity in individual and social life). This condition concerns everything organic (including society).

The 'lower' end shows the 'matter' aspect, while the 'upper' end shows the 'form' aspect of the organism (here the 'social body', implying no naïve anthropomorphism). At the 'lower' end the motives adjoin the causal realm. We are determined by natural causes and gain freedom by direct reaction: 'now I am satiated' ('X is free of Y', dyadic relation). This is the area of negative freedom. At the 'upper' end we adjoin the realm of ideals; but there is no point in saying merely 'I should do Z', because this still lacks the explanation, the reference to overall reason: 'because... (aim, Y)'. Motives here liberate for something ('X is free for Y by Z', triadic relation). This is the area of positive freedom. While causes define effects in the causal realm, the inverse holds in the realm of ideals: for adequately choosing a causal motive (for acting rationally in pursuing a desire), one must first know the effect. Hence directed action – which can be discussed as teleology – can be called temporally inverted causality. (Time follows from intrinsic action; in a universe with no change at all, there can be no time. External action requires organized multitude and hence more structure.)

The three levels correspond to the three basic forms of human activity as made explicit by Hannah Arendt on an Aristotelian basis: to toil in labor ('arbeiten'), to make or produce ('herstellen') and to act ('handeln'). Of these, only action ('handeln') is of praxis quality and hence of organic nature, whose purest form or apotheosis is in thinking; with this remarkable reflection and quoting Cato, Arendt closes her investigation in (1958), exposed more in detail in Arendt (1981). The other two types of activity in her typology, 'herstellen' and 'arbeiten', represent forms of poiesis only – which always retains a mechanical aspect. Fig. 3 mirrors also the three levels of science that Max Weber (1972, 1988) outlined as fields of human activity, where social science occupies mainly the mediating stratum. Becoming aware of the ideas shows in the historical line of evolving from bartering economies via monetary economies to economies of personal capabilities.

The order of the organic social body manifests a hierarchy in the motives and an intrinsic dependency in its levels: a 'higher' level can be operative only once its 'lower' ones are well-ordered. For example, for morals to be well thought of, basic needs must have been taken care of; for actualizing true ideals together, basic social strife must have been overcome. The level of naturally
satisfying needs is where economy qualifies, while culture is required for overall assessments. The element mediating between them is the free agreement of all sorts, the moral idea, where a partner is given the chance to decide freely, i.e. without being pressured (this need not remain 'utopia'). We can see that our state of mind – the result of presuppositions we chose to adopt – is the law we gave to ourselves (a topic which Kant famously developed). To formulate legal law as nothing but the limit for punishment is a distortion of truly human ways of being, born out of considering not the principle of existing, but fears and partial truths, often out of some empirical approach.

The future will look different depending on the choices we enact at every moment. A first point to become aware of is whether one chooses to rely on ideas in which one believes (this attitude might be tagged as 'confessio'), where the outcome is ultimately of static character and can thus only be of provisional value, or on a quest for ever wider understanding of totality ('re-ligio'), which is unfettered by presuppositions and hence a dynamically incorruptible principle. The latter path fosters personal integrity – which can as such not yet warrant moral flawlessness, because by pursuing an equilibrium of personal representations it embodies a static aspect, while personal integrity is still the best (in the sense of: most efficient) condition for the dynamics of openness as proposed systematically in this essay, since the integral personality is unified in its encounter with the 'other', the unknown, thus encountering and overcoming contradictions more quickly.

Personal integrity does not necessarily imply any need for moralizing. It is interesting that babies strive for personal integrity – and are ever so often dissuaded from doing so, by forceful reactions of their social environment. The vast majority of psychic disorders arise in the earliest period of life and are thus imposed by inadequate dispositions and reactions of adults on infants – see for instance Schore (1994), Stern (1985, 1992), Trevarthen (1998), Dornes (2001). A fussy environment diverts babies from their integrity – and they lovingly adapt themselves to the treatment, often to the point of becoming convinced that interfering is the only real way of life. Beyond psychology and psychoanalysis, authors such as Liedloff (1986), Donaldson (1993), or Field (2003, 2006) – investigating domains which 'normal science' must tend to neglect, due to its basic beliefs – offer solid insights on the constitutive level into the dynamics of touch and dynamics of fear: an insensitive approach induces fears, which in turn give rise to compensatory aggression. Infants growing up in a regime of non-coercion develop a robust constructiveness in relationships. Non-coercion does not mean having to adapt to their whims, but responding adequately to their extremely intense relational needs. Even though this level of reality escapes habitual awareness, it determines much more than the widely debated normative elements whether the future adult interaction will have a tendency to produce more 'tame' situations (in which solutions can be found) or more 'wicked' ones (where any attempt at a solution produces new problems) – a distinction coined by Horst Rittel and Melvin Webber (1973) for planning issues –, thereby making sustainable or temperamental the development of a social order. Being profoundly adequate to infant development is concretely the most efficient path because it avoids the merely corrective influence of ethics and morals, for instead handling competently the dynamic reality of the full cycle of being human (in a corrective view it appears as preventive). At rock bottom, the best 'oil in the social gearbox' is and remains the capacity to sense and think fully oneself – the competence that allows non-conflictual autonomy on all levels.

B. From organizing ideas to organizing material needs

The art of organizing goods for the satisfaction of needs – the economy, the system for securing the material conditions for existence – should be thought over clearly in a socio-dynamic process
which excludes nobody in the sense of Rousseau’s *social contract* while motivating everybody to devote themselves to Max Weber’s *value-free analysis of ideas of values* with respect to the reality of needs. Such a socio-dynamic process must necessarily be explicit, since every person must (among others) know what economic activity is about in principle, so as to place herself in an adequate way. The locus of this debate is the *cultural* level. If the focusing activity fails or is impeded, some stagnation or other impediment is inevitable (it can appear as an ideational suffocation, as for example in naively socialist countries, or as a material over-dynamization, for instance in being blinded when falling prey to consumerism), throwing back the overall development.

Which concepts are fundamental for strictly all of economics? The classical production factors: nature, labor, capital? Or some underlying concepts like ‘law’, ‘idea’, ‘matter’, or ‘energy’? Or even more basic ideas such as ‘object’, ‘subject’, ‘action’? The body of contemporary economics evolved in a historical process out of many premises (such as ‘scarcity’, ‘competition’, or ‘rational agent’) that were not reflected systematically in a *really complete* view of the economic process, but only for some pragmatically relevant aspects. In the processes between the ‘self-organizing’ features of the market and boundary conditions (ecological, institutional, etc.), today’s economics can cover many aspects, but cannot clarify securely the intrinsic hierarchy in its theoretical structure. Today’s usual way of theorizing does not allow to situate for instance the position on principle of intelligence required for avoiding or overcoming pointless strife.

The point of the proposed methodology is to allow a solid integration of unequal viewpoints, in this case of schools of economic thought. It achieves this in bypassing perspectivity, focusing instead on structures of universally applicable concepts. In presenting the features of this new methodology, first the web of overall interconnections is approached, in a non-predicative way and without any conceptual *a priori*, for characterizing the creative moves in conceptualizing the said web, step by step down in ever more detailed sub-differentiations. As developed in GM08, totality can not be approached directly in predicative approaches, because these are self-limited by their perspectivity. Generalizing types of query and analyzing the conceptual consequences for intelligibility of the query’s content has been shown to be a reasonable path for addressing totality.

**B 1. The law of nature that governs all forms of economy**

There are many laws relevant to the economic process, but there is an overarching one which does not appear adequately in economic theory and merits thus being taken more into consideration. For a relatively detailed exposition of this law, see GM08 section VII. Here some additional remarks might be useful.

In seeking an overview over global social development, the eco-social process must adequately be approached in socio-economic theory. Thinking about life in general, a particularly interesting point is in how existential features of alive beings can be passed on for warranting a constancy in structure, while in fact life is continuous change. This feature is called *heredity* – an essential point in thinking about evolution. It is viewed differently depending on the habits in thinking. In the 18th and 19th century with its mechanistic fantasies, preformationism was an influential theory. Darwin started to conceive evolutionary change as a result of natural selection acting upon inherited traits, producing variations in them. In his experiments concerning the laws in dominant and recessive traits of peas and bees, Mendel addressed – without really knowing it – the units of heredity. The modern view combines these two lines: mutation-cum-selection operating through
units of heredity (presently seen in the genes). While the modern view allows many insights into changes arising in lineages of beings that already exist, it cannot reach securely the rock bottom, the origin of life as such. The reason is in thinking in terms of 'things': specific features, traits of beings – while the process becomes fully comprehensible only upon thinking generally in terms of the real bottleneck: death and (re)birth. Carrying organic life through the death point becomes possible when 'cutting up' the life carrier, the diploid organic cell, into haploid germ cells, which later reunite, permitting new life to arise. In the same way, carrying human existence through the death point confronts these thinking beings with the fact that there is a split-up between nature out there and a need to think adequately the situation. Living beings discover that they are one side, the other side being the rest of the world; they discover having senses for perceiving, and they are compelled to ingest and digest parts of it in a compulsion to participate in the rest of the world. For achieving adequate material conditions for survival, human beings need to pick up nature and transform the materials. This step can considerably be optimized by coordinating it, making it into a social act. In social life, nature must be taken up by human beings for giving birth to their economy: nature (resources) is one half; the human activity of picking up a natural resource and making it available as a product (thereby setting it into value) is the other half. Any one side alone leads nowhere, but together they constitute the birth process of economy as a principle. The fact that this specific performance of elevating material to the status of a value carries materially the total 'body' or process of any given economy escaped adequate attention in most of economic theory, because this performance mirrors an 'essentialist' and totally processual sort of law, which falls thus through the meshes of empiricist queries and expectations, thinking in terms of 'things'.

B 2. Theoretical implications of this law of nature

In the light of this law, basic concepts in economics such as nature, labor, or capital, can take a truly complete meaning – which traditional economics cannot confer to them. The closedness in itself (the self-referential aspect) of the relations between human being and nature becomes more accessible too – beyond the dimensions that Nicholas Georgescu-Roegen has established by applying the thermodynamic perspective to the eco-social process in a remarkably complete coverage of the material processes. In contrast and as a complement, the conceptual instrumentation proposed here encompasses also immaterial, purely ideational types of process – for instance cognition, or valuation, which are defined by their principles in a formal sense but on the level of content need to be open beyond what the usual approaches with holistic ambitions (for instance systems theory, chaos theory, or quantum theory) can reach on principle by thinking in terms of 'things'. The mode of thinking proposed here identifies other concepts than the 'production factors' as adequate to complete reality and hence as dynamically primal, especially concepts implying genuine valuation (e.g. 'value', 'price', 'barter', 'market', 'control'). The habitual narrow and cramped character of such concepts, which moreover varies depending on the assumptions of the respective theory, can then be overcome. It can for example become clear that 'value' need not directly have to do with 'money' (accountancy of labor performance) or with 'price' (comparison of values, the principle of 'market'). As the proposed conceptual system offers a clear distinction between mandatory real values and fantasized imaginary values, it could liberate the debate on value creation of (imaginary) coercions as they shine for instance through the ostensive argument of 'job creation', in which the debate ended up only because the necessary complete conceptual transparency in addressing the system of value creation is not available in the mainstream. There is enough to do, and there are enough people willing to do it – there is only a shortage of means for compensating labor performance since the medium of exchange is being pressed to obtain high returns on investment.
As a matter of principle, the material basis of the law of real value, the human population, constitutes the maximum value of physical labor; it would be utilized for carrying economically the population if there were no division of labor. By population here we mean all humans – including thus babies and elderly people – in a specified area. Any division of labor is possible only by dint of organizational labor and values, which in turn is possible only when being carried by physical labor and values. This dialectical relationship is seamlessly understandable only dynamically and hence processually. Dividing the totality of natural resources by the population yields the calculational average of per capita allocability. This unit of account is the necessary real value – and insofar capital, in its original sense – for setting free one person. This unit determines thus as an average the real value of the product of this person, because this is really required for indemnifying her. Hence the unit of account is the real quantum that permits to balance the values of physical labor that were economized by dint of the values of organizational labor.

This does not imply any new version of Physiocracy or of Marxism. The Physiocrats held nature to be the supplier of values, while we consider – with modernity and against a labor theory of value – human labor to be the agency that confers value. Labor theory of value cannot qualify, because it sets out 'bottom up' from the cost of labor for the considered commodity, while we emphasize the need to think 'top down' (conceptualizing the path from the whole to its aspects). This does not preclude discussing change, labor and performance in categories that encompass also the natural processes. Considering the intrinsic law of the eco-social process merely indicates that the Physiocrats had a certain flair for one of the real dependencies of this process. Adam Smith still had this intuition; it gradually got lost in the views of David Ricardo, for completely being abandoned in neoclassical and neoliberal ways of thinking. These modern mind-sets have one trait in common with Marxist economics, namely the belief that the decisive economic basis of a society resides in its power of control (via politics, capital, etc.) over the means of production. We reject this belief as naive because it stems from a cecity for the dimensions of mental production. Once these are understood in their foundational potential of originality, any mechanistic desire of leveling and egalitarianism fades away.

In combination with the unit of account, the maximum value of physical labor allows a correlation of the circulating amount of money and the ultimately secure economic reality, the quotient of human population per total of material resources made available as goods. This view does not entail the huge monetary disproportion – coercions to returns on investment, to growth, to debt, etc. – which the currently practiced conceptualization inevitably must produce.

Even the concept of capital, this man-made 'factor of production' – which is not given by nature and can therefore not embody exactly the same valency as the other two, the natural matrix and the inevitability of labor – can be conceived as a law: the point of capital in its complete sense is in setting free people for other activities (for industry, services, or pure consumers such as infants, etc.) than the basic ones one would be forced to engage in if there were no division of labor. For understanding (i.e. mastering conceptually) the fact that setting free is possible at all, the category of 'physical labor, applied to the natural matrix', must be conceived. But in material practice, setting free can never occur in this pure way, because it can materialize only on condition of 'labor, organized by intelligence' – which must be conceived as a second category, diametrically opposed to the former. Even simply picking a berry implies knowing which one to choose, and even simple hoeing requires some intelligence – while on the other hand even the most etheric artist must move something material: a pencil, computer, and at least her own body. Conceptually, any
labor always is a compound of these two poles: bodily (physical labor) and mental (organizational labor). But only the result constitutes economy as a practice: Without organizational labor, physical labor remains troublesome, while forms of organization can not be actualized without physical labor. The two sides have no ontic existence, they are analytic concepts (the conceptual symmetry is similar to Aristotle's 'form' and 'matter' for analyzing 'change'). This polar relation, developed philosophically by J.G. Fichte in the chapter Rechtslehre of (1921), was received at best marginally in the debate on rationalization and labor value – even though the dually related two sides encompass all aspects of economically relevant work, including non-remunerated ones. The value of setting free is exactly the real value of what it economizes in direct physical labor on the natural matrix. Orthodox theory mixes up these forms of value: up to Marx it has a tendency to measure labor in terms of time, as if it consisted only of physical labor values.

Contrary to the beliefs in the modern doctrine, which covers only part of the subject matter that it is aiming at, any type of industrialization (secondary and tertiary etc. sectors: labor that is emancipated from the natural matrix, utilizing artificial means of production) is carried completely by the surplus of primal production (i.e. by the setting-free that rationalization permits). After all, no industry can supply itself with capital in the primal and complete sense of labor economized directly in labor on the natural matrix. This fundamental capital – which has nothing to do with money – must continuously be supplied by primal production. The accepted theories today grasp this point in too narrow a way; the surplus aspect, which was once aimed at it and got it halfway, was canceled without introducing much of a substitute. The mind-set of the dominating economic theory has no integral aim, it is oriented essentially towards trading, thinking in terms of products to be exchanged; extensions into production, consumption etc. were gradually added. It spurred an idea of money creation where the amount of circulating money is defined as the equivalent of the amount of produced goods (social product) – but reality dishonors this idea since money got a price for being used. Applying the idea induces a dynamics that distorts the relation in practice between prices of primal production and secondary industrial products. Why? Because augmenting the amount of circulating money according to increases of organizational values – inevitable when wanting economic growth and choosing the social product as a basis for valuating money and goods – 'subsidizes' conveniences, being endlessly refineable, to the disadvantage of relatively constant primal products (material set into value). As a result, money must seek high returns on investment and prices in the resource sector must deteriorate, needlessly squeezing that sector. This stealthy inflation must be compensated by redistributions; these look complicated because this inflation, being immanent to the system, is inevitable. The 'monetary dilution' deprives the primary sector of capital. Positing money as the equivalent of goods can occur only by human decision – which can be erroneous. As long as the eco-social process is tinted by the traditional presuppositions, the conclusion is inevitable – as mentioned in any textbook – that the amount of circulating money must constantly be augmented for warranting the necessary supply of capital. As an effect of this circular way of thinking, the 'higher' sectors are functionally demoted to the role of the primary sector, which in reality is primal nevertheless by carrying materially the whole system (real value). The 'higher' sectors – especially services – are then compelled to raise their capital by constantly augmenting the production of their goods, consuming resources at higher speed than is necessary and increasingly becoming dependent on efforts such as sales promotion, innovation, and rationalization – which seem to "create jobs", but in fact make the system ever more unreal. Traditional theory can not encourage perceiving – as an effect of neglecting real value, although it is in actual fact the basis – that supplying the medium of exchange can processually be organic and conceptually transparent only when tying the total amount of circulating money to the maximum value of
physical labor which contains conceptually no organizational labor yet. The habitually produced disparity burdens and complicates needlessly the organic structure of nature and society.

B 3. Implications for conceptualizing value and the medium of exchange

The usual way of valuating money – formally defining the social product by money, while money has its content in the social product – constitutes a circularity that confers to money an imaginary actuality and estranges it from total reality. Tying money to goods only seems to anchor the system securely in reality; the real gauge is given by the dependency on resources, which does not appear adequately in today’s dominating theories. This is why for instance financial markets can drift off into virtuality. Instead of acknowledging that real value capital allows all ways of setting free humans for other activities, it was narrowly posited as money or means of production. A logical consequence of this view is that income is tied directly to the remuneration for performance; wages are then paid from the monetary capital. In such an economy, the resulting incentive is not in needs and their true satisfaction, but in returns of performance. Labor then is merely the occasion of attaining income. This leads to the seeming need of unnecessary work and thereby of superfluous products – which explains the occurrence of markets with junk goods that consumers do not really want; these markets are merely system-induced, but badly needed as trading centers for procuring income. In this way an abrasive economy has evolved, which has no alternative but to burden the ecology in its widest sense – the body of nature and humans – for as long as it takes to correct the error in reasoning (when failing to correct it: until the collapse of the system). It is difficult to reverse this trend, because nowadays prices (oppositions of values in markets) are not being considered in the sense of economics as values, but – in a way that is valid only for the trading aspect – as amounts of money.

Regulated by supply and demand, a pure market economy imposes on everything the character of a commodity; capital and labor too appear in it as a commodity. With capital and labor as a commodity, any pricing can only be based on the antagonism between them and a pressure of profitability. As long as capital as means of production – which then includes the natural matrix – can be a commodity in the same sense as consumer goods, and as long as labor can be bought like any other commodity, the incentive for conducting the economy can only consist in increasing production for obtaining more income. In the dominant system of capital and wages, labor has acquired two aspects leading to two problems that cannot be resolved within this system. Being paid out of the monetary capital, labor is a costly commodity and must therefore be reduced or preferably eliminated – but this can never succeed completely, as already David Ricardo had discovered (1821). Simultaneously, labor being the only occasion of attaining income, monetary capital and labor are compelled to acquire the maximum of what can be squeezed out of the social order – which is limited too, as the contemporary problems and debates show. The officially promoted structure can indeed on principle never become really sustainable.

When labor itself has a price, prices of goods mirror the amount of necessary labor and paid wages. Then it is impossible to bring the prices of goods as determined by need non-coercively into accordance with the prices as determined by the production of the goods, i.e. mainly with income from labor – contrary to assertions of market fetishists, who regularly omit boundary conditions. As long as the economic value of a performance cannot be conceived independently of labor, humans will continue to be doomed to exploitation, unnecessary work and overproduction: there
must be consumption – whether needed or not – for occupation to arise – whether needed or not – that leads to income. And income must be generated for allowing consumption.

B 4. Implications on the level of social interaction ('ethics')

No amount of business ethics can solve these problems, but at best alleviate some symptoms, because the problems are a consequence of a widely accepted frame of mind. No overall system is securely possible without a fundamental conceptual clarification. Specialists in ethics relevant to economics such as Peter Ulrich reach the same conclusion (Ulrich (1997)); here his approach is radicalized. A basic clarification can avoid problems by allowing an adequate systemic structuration from the outset that otherwise must be found by trial-and-error – which is never an optimized process and sometimes is extremely costly. Still in search of a radical clarification, for instance enthusiastic ecologists might object that the author of this essay does not clearly mention ecological problems, let alone propose a solution. Or psychologists and sociologists might miss a blueprint in the sense of social science. Or politicians might ask on what basis taxes would be levied in the new perspective. Such reproaches stem from an unquestioned acceptance of the ruling system – and then wondering about problems it implicates. We maintain that revealing general possibilities of avoiding a problem – in the sense of a 'lean management' of society, and in opposition to the tenseness induced by the New Public Management – is more interesting than piecemeal procedures. Good prophylaxis is better than any therapy. The mind-frame proposed here encourages other and less conflictual forms of self-fulfillment in professional, economic and civic respect than what usual systems can afford. Setting out in a commitment to openness fosters an integral reach in theory and organic adjustment in practice. It offers to any scientific discipline the space required for unfolding its form of truth – without needing to fear erstwhile frictions with other disciplines that were due to differences in fundamental beliefs. In the conceptual deduction proposed in the next chapter, every step determines the strict minimum. Seeking to do this as exactly as possible is the aim of our project – which immediately implies that the account offered here certainly merits a more detailed elaboration. Here we will proceed to some implications of our approach for social interaction.

Contemporary economics tries to sound urbane and seems to foster the division of labor, but in fact it can offer to economic agents only the perspective of the self-supporter. The idea of property with absolute disposability, which is effective in this view, is a derivative of Roman law. It is useful for self-supporting structures, but not justified in modern division of labor. The way of thinking remains peasantish in the sense of presupposing *homo oeconomicus* – the single agent / enterprise, stand-alone in the 'social landscape' – as the structural nucleus whose decisions then are aggregated by means of statistics, game theory, etc. Maybe this is why the idea of globalization fascinates so many – even though the networking is being performed in the old paradigm. The premises governing traditional considerations on nature, labor, and capital entail viewing all accomplishments of labor (results of having worked) in the same way, namely as products that can be used as resources for subsequent steps. In today's usual view, values of physical labor and organizational labor are equated via today's type of money, whose meaning roots in mere abstraction. This induces a deceptive belief whereby generating any performance can be considered as a version of primal production – fostering the idea that the values of setting free (organizational values) can be hoarded indefinitely and individually in the form of monetary capital, in the same way as self-supporters pile up their produce. But in a society based on the division of labor and on capital-forming, all agents – as much those in the production as the pure consumers (public servants, scientists, teachers, doctors, mothers, children, artists, elderly people, sick persons, etc.)
– must be considered integrally, in the network of overall interrelations. This means that setting free (increasing productivity) makes sense only when setting free gives rise to new activities that correspond to a real need. Those who are set free need a cross-link to producers for knowing their needs, since otherwise the division of labor and the process of capital-forming grinds on occasion to a halt. In principle an economy based on the division of labor, networking and capital-forming, is interested in reducing values resulting from physical labor as long as it makes sense in the cultural process. Networking and setting free is always possible, as demonstrated by the ‘forgotten’ law outlined above (I B 1), which locates what ultimately carries the eco-social process. Yet this correlation must be recognized by the individuals and then willed by them for stepping towards a social organization; all on its own, no law can ever become manifest.

For regulating socially these processes, it is not sufficient to invent a system in the ivory tower and to impose it on the populace, because systems can reliably be sustainable only when they can authentically be carried by the population. Functions in a social structure stand or fall with the meaning that individuals can find in them. This does not necessarily imply an excessive demand: any thinking person can understand for instance the principle of the economy – just like she can understand what physics, chemistry, biology, sociology, or theology is about. In contrast, setting up a consistent theory and implementing technically the systems certainly requires many specialists. In the same way as an adequate business location is characterized by people with an appropriate education, an adequate social alliance distinguishes itself by its members manifesting an appropriate knowledge of the relevant order. This is what conveys significance to political activity and allows the individual to find its appropriate place. As rioting and terrorism reveal, but also abuses of powerful leaders, quite a small minority suffices for considerably disturbing public order. As for instance Ulrich (1998) notes, shaping the economy as a complex institution for organizing the division of labor is essentially a concern of the citizen and hence a matter of democratically forming the political will. This steering process is less utopian and has more of a chance when being based on insight into the basic laws of the eco-social process than when it merely expresses a moral point of view, which finally has only an emotional foundation, is not really compelling (who wants to obey others?), and can therefore offer no reliable stability.

As long as political economy is being thought in terms of business administration – viewing for example nations as firms, e.g in Porter (1990) – it floats in grandiose abstractness and can obviously not attain processual stability: today’s practical tensions are, as outlined above, merely a logical consequence of theoretical assumptions. Processual stability in practice can be achieved only by means of social self-organization on a sound theoretical basis. As a result of proceeding in descriptive terms, the current state of the theory of self-organization is compelled to miss the essence – the overall intrinsic law – of the process it aims at. The lack is rarely being noticed because this law is of little interest to most researchers. They seek methods of manipulation, and for that the current theory of self-organization is perfect. Yet it does not allow to know what exactly it is the ‘self’ that ‘organizes’ what – but only observe that it somehow does, describe the process in detail (many believe a detailed description is already an explanation), and that some results are predictable. Due to its gaps this type of theory cannot cover for instance mental self-organization in a purely conceptual synthesis, or the self-organizing personal growth process that leads to autonomy. The overall level of the subject matter must on principle elude the current state of the theory of self-organization.

In contrast, but in the same aim of explaining social self-organization so processual stability can be secured, the conceptual framework pursued here proposes the concept of ‘associations’ in
the sense of groups of people who *unite freely* (without coercion) by virtue of sharing common interests and *mediate continuously* between partners in the process – like work councils, advisory boards, commissions, committees, local and regional councils, etc. The *medium* for steering is not, as today, to leave others out in the rain because that is what the rules of the game impose, but to *transfer and rearrange labor between sectors of production*. This possibility is not part of the instrumentation in today's policy and control systems. This steering process can be carried by referring to the law of primal producing, for managing material production by means of the unit of account, according to criteria for all eco-social functions. In principle this way of structuring the facts provides also a sound basis for legitimizing and calculating concretely an unconditional basic income – without imposing this path, however, because choosing it requires additional choices and criteria, which pertain more to the political than to the economic realm.

**B 5. Practical relevance**

Practice has taken a huge importance in our empirically minded times – often forgetting that intelligent acts are based on coherent ideas, while not much intelligence emerges from emotionally based activity. Having problems in theory due to problematic assumptions does not deliver us from the necessity to think through all facts and interconnections. Not only for theorizing, but also for practical efforts it is important to know the *ultimate basis* of any economy (which should be the topic of political economy). The approach proposed in this essay is based on the *real needs* – not demand (*vs.*) as much of consumers as of producers. And what does the presented "law of nature that governs all forms of economy" mean in practice? It makes evident the *dependency* of any population on the natural matrix of resources and the material production, for being able to set free the other sectors of production by virtue of rationalization in the first sector – which is being considered, in the theory of today's mainstream, to be little more than a 'quantité négligeable', while in practice the investors are increasingly placing their bets on the 'production' of raw materials.

Whoever understands this point also realizes that what matters is *how good* rationalization is in the primary production – or in other words how many *other* people one person in primary production can set free by her activity. After all, this ratio – that fluctuates around 1:50 and 1:60 in the West (U.S. and Europe) – determines the potential civilizational and cultural performance of the respective society. An example: how did the United States bring the Union of Soviet Socialist Republics to its knees? With this ratio! In Russia it was about 1:15. For America it was sufficient to involve Russia into a 'cold war' (imposing a need for ever more armament), and soon Russia was indebted enough in terms of real value that it fell from the tree like a ripe fruit. But how many people were able to notice this reason? The decision-makers in the U.S. do know about it (it was mentioned, but not too overtly); this explains also the GATT/WTO policy and the efforts in the U.S. of making agriculture and other resource retrievals technologically as productive as possible and protecting them massively, while making dependent other countries on U.S. production and systems. The connection also shows how dangerous the politically operative tendency is of ideas in the European Union to outsource provisioning – with all the consequences, which include dependencies and thereby blackmail potentials, and a gigantomanic transportism that is hoped to contribute to 'growth' in spite of detrimental side effects.

Another example for the practical relevance of abstract concepts addressing laws of nature is offered by the current debate on sustainability. There is a radical difference between agriculture and industry, which is rarely considered in the 'official' discussion of the primary versus secondary
tertiary sector – in spite of numerous contributions of people such as Nicholas Georgescu-Roegen for conceptualizing the difference. The neglect has practical effects.

Any *industrial* production is based on using up a *stock* of *non-renewable* resources (coal, oil, etc.) and on operating via *mechanical* processes. The *speed* of this use of resources depends only on the *capital goods* and the available *technology*. This structure has allowed using up a huge amount of supplies for an *exponential* growth of the economy during a *limited* historical period only (because all materiality is limited). In industrial production, a throughput is possible in which all factors of production operate *continuously at full capacity*.

In contrast, any *agrarian* production is characterized by a *flow* of *renewable* resources (plants and animals), proceeding in biological and therefore *organic* processes. The *speed* of this use of resources depends on the implied *cycles of renewal* that cannot appreciably be influenced by technology. The involved organisms have a physical limit and allow being used only *to their degree*; here the economic growth is *organic* and has an upper limit too. The throughput here can never compete with an industrial one; here the invested assets are *never* charged to full capacity (this is the well-known need to over-invest into the agrarian sector). One can always proceed more or less sustainably, but properly speaking the concept of sustainability is reserved for the agrarian sector, because the reproduction of resources is impossible in the industrial sector. In the agrarian sector, plants and animals perform the production themselves, humans can only modify and at best optimize the conditions; properly speaking humans can produce only the roads and stables.

The different characteristics of the two sectors imply that the two perspectives should not be mixed up in the way the neoclassical school has been trying, imposing industrial conditions on the agrarian sector. In theorizing, administering abstractions without clarifying completely their content, is a dangerous habit.

There is another aspect of practical activity in economic respect that merits more attention than usual. It is relatively well-known in social science, but is being addressed only lately, while economically speaking it is highly relevant for the efficiency of the eco-social process: the way of handling the source of self-reproduction of human beings as a biological species – the material counterpart to mental self-reproduction, which is cultivated in mental or intellectual life, in the cultural realm. When humans do not feel loved – especially during primary socialization – they develop destructive traits despite all their aspirations to constructiveness. The reason is that uncertainty drives them into psychic disorientation. They do not know any more why they were 'called' and can only mirror the experienced way of being. Psychologists know that experiences shape personalities the more deeply the earlier they occur. Corrective attempts by normative means – as in ethics, morality, law, etc. – can never reach as deeply as the originating impulse did. Normative influence may at first sight look like achieving some of the desired effects, but the actually causative forces remain under the skin of the appearances. Some symptoms may have been avoided by some measures in the past, but the real problem is rarely really solved, as the ongoing historical process shows. The most economical way of securing freedom of conflict – and thereby the most sustainable perspective – materializes upon realizing the significance of the development in the weakest members of society: the neonates, the disoriented, the handicapped, the incapacitated, etc. This does not call for becoming sentimental, but for operating through a fully adequate idea of what human beings are. The way of handling people co-determines quite generally the resulting social graces and is partially effective even on the ecological level.
C. The necessity of humanity's structuring its forms of economy

What will be presented here is not a theory in the presently usual sense, because it is not an abstract conceptual structure whose formation is intransparent, calling for empirical 'verification'. The disadvantage of the usual conception is that it cannot warrant any truly complete theories, since no empirical basis would be able to cover that. Insofar, the usual conception can be useful only for clearly delimited subject matters. In contrast, our way of proceeding is to set out on clear concepts allowing universal applicability by referring to laws imposed by nature, and then to remain clear in the deductions on this basis. Alluding to Spinoza it might be called a deduction 'more geometrico' of the laws and sub-laws that regulate all economies. This fact is difficult to recognize because man-made decisions intervene with those laws, disarranging the appearances. The most massive intervention consists in superposing imaginary values over the real values that structure objectively the eco-social process. The possibility of distinguishing clearly between laws that are 'given by nature' and others that are 'man-made' offers an important conceptual instrument for valuating the actually arising and disappearing economic systems.

By dint of their knowledge, human beings are increasingly capable of turning their subjective value targets and standards into actual conditions – often favoring ideas far from the objective regularities we expose. But they should not be astonished when neglected aspects give rise to some backlash or other, especially in the long run. Acting out deeply into reality out of arbitrary desires has its price. Since imposing abstractly invented systems on populations belongs to this kind of (mis)-treatment, the implementation of reasonable alternatives will not be the result of decrees, but of achieving a broad agreement and cooperation after having understood among others the intrinsic law of the eco-social process. Part of this is the lore whereby having attained a specific situation is not the end of the story, because reality needs to be mastered processually, in which something new arises at every moment and must adequately be incorporated – even if the specific situation might be nirvana, because even then real life continues afterwards. An integral kind of knowledge – or at least the effort of grappling with totality – is the substance of a sustainable culture. Much of what is being called culture these days has attained only the merit of decoration. The challenge remains of being able to distinguish between appearance and reality on all levels.

D. What can be achieved with our systematic development of concepts?

Let us be precise: what is achievable in the sense of 'materially producing something' is only a conceptual structure – which is adequate, as an intervention on the physical level would hamper a debate on how to act concertedly; it would be an arbitrary interference. What can be achieved here is also a set of signs in a medium, aiming at communication – the rest is what readers make of it. Signs never being the message itself, but the means for conveying it, this presentation of signs can as such not be claimed to be valid in an objective sense. Only what it refers to can be perfect – like pi can never completely be enumerated, but is perfect as a form of order. Readers must think on their own what is being referred to, and can express themselves. Both sides can only try to be responsive to each other. But what can then become thinkable in the process of reading this essay?

In terms relevant to theory, it is the laws imposed by nature to which all forms of economy conform, whether they like them or not, whether their theory 'knows' about them or not. But at each step there is the possibility of superposing additional human values; depending on which ones are being introduced, the result leads to one or the other of the manifest economic systems, with its particular advantages and conflict structures. All systems root in work (section II B) based on
nature, while only humans produce values (II C). Due to its characteristics, labor as a human activity requires a polarized conceptualization (V A). All economic systems are rooted in primal producing (III C, III D), in a connection with reality that the physiocrats addressed 'intuitively', but one-sidedly (because farming is not the only resource domain, and value is not produced by nature); its result, primal product, constitutes a real value, while human choice is a superposition of imaginary values. All economic systems depend on a quota of nature per population (IV A), made intransparent in today's habitual considerations. All systems are based on value (III C, V B - V D) and price (V F); the latter does not require money for materializing, because 'price' is the principle of qualitatively opposing value against value (law of 'market'). Indeed, not all economies need a monetary system (VII B), but where the money supply is not equated to the act in material production, conflicts inevitably result. All economic systems are social organizations, but not all follow the organic principle conceptualized in our proposal as a polarization into intrinsic law versus materiality, with a mediating element (III A). Not understanding organically an economic system has the effect of not being able to provide non-conflictually a social balance between performance and income (VI C), i.e. between price as determined by need (mirroring income) and price as determined by having to manufacture (mirroring performance). – Etcetera.

An insight into these laws is relevant as much for theorizing as a practice (seeking to verify theoretical structures) as for applying theories (directly for example in debating allocation, which should conform more to reality). Even though the reputedly authoritative theories are presented as cogent, by not conceiving real versus imaginary value they remain imaginary constructs – think for instance of the conceptual deficiencies which determine the Millennium Ecosystem Assessment (World Resources Institute (2005)), depicting ecosystems as something that performs services in the traditional economic sense. Securely penetrating this situation is possible only in considering the actually irreducible and therefore indubitable laws imposed by nature.

II. Concepts of Pure Processuality

The eco-social process is one of the many instantiations of the principle of change. For conceptually grasping change one needs to understand what it occurs against, i.e. what allows it to arise on principle. We set out conceptually from the grand total of all possible change in the universe (concepts of pure processuality); it contains as a subset all changes relevant to economies. This order of determinations on principle yields the relevant criteria for quantifying economies. While qualities are intrinsic forms of order (e.g. the law of any circle being round, or of a thing being a rose, not a rabbit), quantities arise only in materializations of qualities. In doing so, they manifest new relations and conditions. Their structure is determined by the superordinate intrinsic law (in Aristotelian terms: 'form'), but is co-determined by the specific properties of the implied 'matter' (while 'form' and 'matter' are pure concepts, certainly necessary for understanding, but not something existing materially 'out there'). Rational order requires being aware of 'form'. Conforming to the nature of what is at stake, we reach iteratively ever more deeply into the substance relevant to any form of economy – the relations between society, activity, and nature, under the auspices of producing, trading, consuming, and disposing of the refuses.

Quite generally one can question – for instance with evolutionary or institutional economics – what evolves at all when economic systems arise and vanish in space and time. The laws can not evolve, they are the immutable basis that cognizing subjects must refer to for being able first to
distinguish phenomena, and then systematically to make sense of them. The widespread habit of repudiating the insistence of laws – immutable qualities – only proves the absence of awareness of all mental elements in those who use and yet deny them; these are subjective limits, not objective ones, even if occurring collectively. The materiality on the diverse levels of enabling cannot evolve either. Whoever attributes – for instance in a hylozoistic or panpsychic vein – an awareness to materiality and considers its compounds as something 'evolving', gets into trouble when not making the 'form'-'matter'-distinction. And whoever hopes awareness to 'evolve' from materiality can of course imagine and believe all sorts of things, but not detect in materiality itself the crossover from the third-person perspective to the first-person perspective ('I'-perspective), or at best reductive forms of this crossover – for example neuroscience can arrest an 'I'-ness only in an animalistic mode, not in a fully human one, and cannot notice the difference. What actually evolves is the awareness of regularities (laws) imposed by reality. For encouraging this awareness, learning must be stimulated – which calls for referring to the intrinsic law of cognizing (aiming at the process, not its results). Only cognizing allows detecting the combination of laws actualized in a situation. The process of cognizing condenses in conceptual structures ('having conceived') and then in linguistic signs; these then evoke social communication resulting in material changes and institutions ('rules of the game'). The location of actually evolving awareness can thus be conceived and perceived: it is the individual with its intrinsic law of being able to devote itself freely to whatever is interesting for it, thereby producing – by having conceived – its capacity of handling new and unknown situations, and to communicate. This type of growth occurs on the level of purely qualitative relations. The location of the process is the single person as a non-interchangeable individuality. As might have become more clear, intrinsic laws and freedom, or order and life, do not contradict each other. They seem to do so only under premises that do not stem from the subject matter as such.

A. The principle of change

Seeking to encompass conceptually strictly all types of change is an endeavor that Aristotle is well-known for: if everything were the same – whether it would be called 'material' or 'mental' or whatever – the possibility of something modifying something else would remain inexplicable. Since in any change the modified aspect must be the opposite of the modifying aspect, a conceptual polarization into 'form' and 'matter' is on principle inevitable: the capacity of something to modify something else ('form') versus the capacity of allowing a modification of itself ('matter'). In modern terminology, 'form' is what shapes, understandable as a compound of a law and associated force, while 'matter' is what allows being shaped, understandable as something allowing new equilibria by dint of retaining its basic quality (or: equilibrium) through all changes (see GM08 section VII and Schaerer (2002), (2003) for a more detailed exposition). This conceptualization remains relevant also in cases of self-modification – 'self-organization' and 'autopoiesis', including in 'dissipative systems', where the 'self' must differentiate itself in some respect, since otherwise its alterations would neither be executable nor assertible. Changes relevant for any economy – because economic acts have an effect upon them, or also because they are a necessary condition for it – can appear in the complete scope between mental matter and the gross materiality of physics. It includes thus thermodynamic change as made accessible physicalistically by Georgescu-Roegen (1999), but encompasses also the relevant immaterial changes, which are not approachable physicalistically. Strictly all of this can be grasped conceptually in terms of 'matter' between 'equilibrium' and 'dis-equilibriability', 'law' and 'force'. In today's economics only subsets of this grand total are being considered, even when taking explicitly Georgescu-Roegen as a basis (see e.g. Mayumi / Gowdy (1999), Mayumi (2001)). One result of this flaw is the 'need' in theory to split up the object of economics, in the hope of reconquering the lost terrain, into ever more sub-disciplines – ecological,
institutional, and evolutionary economics, bio-economics, etc. – but this re-union will truly be possible only upon knowing in a strict way what the grand total embodies.

B. The principle of work as a necessary condition for any economy

In very general terms, work is changing matter (including in the Aristotelian sense) by means of forming force (force and deflection, according to a resistance). Accumulated work is called energy. The result of work invariably is performance (usually seen as work per time unit). At this point of developing the conceptualization, the concept of 'work' is thus not yet differentiated between for instance changes in material matter in a production process and changes in mental matter caused when somebody performs an intellectual task. Such differentiations require additional criteria. Covering all processes, from physical to mental, entropic as well as negentropic, the categorization of work at the present stage constitutes only the 'background' of labor. Conceiving the conceptual realm as a specific domain of materiality allows including in a homogenous way the negentropic processes. The agency in work has briefly been discussed, grasped conceptually as the existential principle in organisms that actively structures their existence on the mineral, vegetal, animal and human level, fulfilling the necessary conditions for any economy to become possible.

In natural processes, design or creation are not fully adequate terms; the progression of these processes must be called accidental or anonymous as long as usual conceptualizations do not make cognizable the corresponding operative instance. Talking about composing, designing, or creating, makes sense only when being able to attribute the rule or law, which rules the process, to the deliberate implementation by a personal instance. Yet in both cases, structurally the same conjunction must be stated: there is an intrinsic law of the conformation (understood in a wider and more exact way than usual; the 'form' aspect in the respective process) interlocked with force or will affecting something changeable (the 'matter' aspect in the respective process). By the way, the four basic forces identified in today's physics do not allow an explanation of the strict totality of processes, but mainly the subset concerning decomposition that is interwoven into all levels of what occurs. The structure that is vectorially effective on all existential levels by fostering degrees of autonomy in phases of material emergence (orderly growth, vegetal level), preventing materiality from lapsing into a mere corpse, cannot become comprehensible in terms of today's physics. And even if it were understandable in those terms, the other relational levels of alive order could not be arrived at: sensing and feeling (sensory way of being, level of animals) and self-referentiality in content, or in other words the mental dimension, a capacity to think (human level), where additional categories in relating can be materialized by activating the potential of self-referentiality. This is the graduation that ranges from physical cause to sensory impulse to available motive for ending in autonomous initiative – where initially the cause precedes effects and finally effects must precede the cause, as otherwise events could only be heteronomous (as most of the debate on causality makes believe, not allowing to account for actual thinking; the medium in which it is operative – remember Fig. 3).

Converging on the research of Helmuth Plessner (1928 / 1965), the levels of organic being can be conceived as logical classes of types of effectively relating vectoriality. In the mineral realm, the effectivenesses rest in themselves (they remain in an equilibrium); on the vegetal level the vectors affect what rests in itself (inviting minerality to be transmuted into something that is alive); in the animal realm, the vectors affect other vectors (emergence of sensation); and on the mental level the vectors can affect themselves by means of other vectors (a process resulting in self-awareness). On the whole, some kind of spiral is identifiable, evolving from a static 'dead' (physically...
material) closedness in itself to a dynamically-alive self-enclosedness (the human dimension) – or the other way around, self-containment concentrating itself involutively towards what might look like a death. Both these views are possible and have their specific point.

The cyclic completeness of processes becomes clearer when read dialectically with respect to the possible gain in our consciousness, passing from potential to real when met by understanding:

![Fig. 4 A dialectical reading of the constituents in the economic process](image)

This approach encompasses therefore strictly all forms of work, from those in the natural basis of the eco-social process to the superposed human activities, including those in the mind.

C. The principle of labor in political economy: producing values

Labor becomes relevant in political economy, as opposed for instance to work in physics, when resulting performance is exchanged socially. Its effect is availability, to be produced and used up. As an economic principle the result is called value (with Marx: exchange value vs. use value, for instance of coal), in materialized form goods and commodities; it includes mental performance, where materiality is not of the physical type. In contrast, if distortions in the system are to be avoided, the traditional ‘factors of production’ – nature, labor and capital – can not fall under the category of ‘goods and commodities’: nature and labor because they can neither be produced nor used up, and also labor because it is not just a good, but also an object of law; and capital is not a primal factor of production, because it is a result of labor. – Another difference in the way of producing values is discussed in chapter VI.

The formal conditions needing to be fulfilled for bringing about economy, such as education, reproduction, etc., constitute a different class of facts: they do not directly determine the economic act itself, in the same way as our body is a necessary condition for our being able to think, but nevertheless is not a sufficient condition for determining our specific thoughts (unless there is a problem in our overall equilibrium). The formal conditions are a totally indispensable prerequisite, but not causal. Such facts and 'non-value-goods' are underrated in today's paradigm, as nature still is providing them for free – a situation that now makes believe some economists that by valuating these 'goods', and putting them on the market, crucial problems will be solved. Yet this induces new problems, because the mixing-up gesture of general monetarization hides more than ever their totally real value. Conceptually speaking, determining the economic act with regard to content (in the sense of Kant's 'condition of possibility') is an additional step – but which would be impossible (in the sense of Kant's 'condition of reality') if the formal-material conditions were not fulfilled.
D. The conditions for labor to make its appearance

There must be a potential to initiate the act: just existing between 'individuality' and 'materiality', 'form' and 'matter' cannot be sufficient. An idea must become the motive to an economic act, thus breaking the static symmetry (see Fig. 4). This trigger can come either from 'inside' as a desire or need, or from 'outside' by encountering an object that is useful as a good or commodity. Therefore, economy's 'stream' can flow in two directions: from the idea (out of a desire or need) towards the product, as well as from the product (by finding, or offering) towards the need. In the theories in economics this shows in Alfred Marshall's denoting the mutual dependency of supply and demand, or in the polarization between neoclassical theory following Say's theorem (roughly: 'all supply will find its demand') and Keynes' axiom (roughly: 'demand is decisive, the corresponding supply will follow'). In fact these are the polar concepts to this query perspective, so any practical situation will always contain a mix of both aspects, none of the two can operate strictly for itself – but for understanding, the concepts as such must be distinguished very clearly.

The asymmetry between given conditions and the man-made situation have an interesting consequence on the structure of values (see V F). There is first nature and only then 'homo faber' putting something at humanity's disposal. The habitual discourse, holding that need and scarcity are foundational elements of the eco-social process – see for example: Kathryn Sutherland's introduction in Adam Smith (1993:xxv), new edition of his Wealth of Nations – is conceptually one-sided and led to the habitual way of isolating the socio-economic process from the rest of the universe (a problem expressed clearly for instance by Daly (1996:1-26)).

Here we should address also the idea of scarcity, highly influential since David Ricardo, in a complete way. In terms of principles, Aristotle called stéresis the 'kick-off' leading to any process between 'form' and 'matter', locating it ultimately in the 'unmoved mover' – which arises concretely (in Kant's sense) in autonomous beings, in the initiative of mentally choosing a motive; one cannot live without motives, but under normal conditions there is a choice among several. Considered in detail, scarcity cannot qualify as a principle at all. It is only an arbitrary and emotive idea, a fear often elevated to a collective belief, expressing hopes of remaining parasitic like a baby, ungrateful to a planet that offers all the necessary materials – not only for bare survival, but for a comfortable life. Usual economic theory leaves the origin of scarcity to anthropology – while it is far more a result of world-views, of prejudices based on fear and anxiety rather than a clear view of existence. The tragedy of the usual idea of scarcity is that it aggravates the conditions that induce it – think of real estate, which became scarce only after subjecting it to trade; or think of intellectual property, producing monopolies, a public scarcity of goods in favor of an arbitrary minority. The problem has the logical structure of a vicious circle, and the sociological effect of a self-fulfilling prophecy.

In a complete view, need and scarcity are conceptually not necessary on the foundational level of economics, and relevant only at more differentiated levels – and even then, viewing all of the economic process, only as imaginary values, because the structure of distribution (relevant for the way of tackling need and scarcity) is the problem of the given society with its specific values and rules, but not the problem of the natural law governing the economic process as a whole.

E. Upshot in the realm of pure processuality (II A - II D)

On the level of assessing the relevant laws, these steps have allowed a grasp of the intrinsic law of change, quite generally, which we then narrowed down to the eco-social process. The Aristotelian
principles of ‘form’ and ‘matter’ lent themselves to its assessment in a categorically adequate way. Any occurrence of change implies work and its result, performance, which we were able to comprehend in their economic relevance. The potential that triggers change needed also to be determined.

By applying in practice the developed concepts we can encompass the basis of the economic process not only as work in economic respect, labor, but all types of change relevant to all forms of economy – which should therefore appear in an overall conceptualization and the corresponding balance sheets. For assessing what triggers economic change we do not need to rely on need and scarcity, as is deemed sufficient in the widely favored ‘theory of subjective value’. Our basis seems to revive physiocratic ideas of nature as source of economic value (de Quesnay and successors) – but this is not the case, as is now to be shown in detail.

III. Concepts of Qualitative Processuality

In contrast to chapter II (pure processuality), where we considered laws concerning change quite generally, beyond the specifically human economic relations, here we address the level of any actual eco-social process, implying a transition to the qualities that define this level.

A. The substratum for the exchange of values

Exchanging values requires socialization. For configuring a sustainable social order with its economic assistance, all relevant aspects must be considered. With today's specialization, no single science can perform this. In this context, necessary conditions resulting from anthropological laws must be questioned. It is even questionable whether the corpus of all sciences together would be up to the task, because to date no strictly integral methodology can uncompromisingly be agreed upon. A crucial point is that humans, when wanting to act in a rational way, can do so only by means of clear motives (e.g. Johnson-Laird on formal vs. mental models, in Sternberg (1999:587-624)). In their need to clarify the motivational basis of action, most of today's theories in social science draw from two main sources: symbolic interactionism and rational choice (Turner (1996)).

In contemporary theories of symbolic interactionism, as much as those of rational choice, the encompassed scope is limited to what the pursued ideas need, which are usually pragmatic. These theories take essential characteristics too little into account, which thwarts aspirations to universal validity (for instance Bunge offers a detailed critique (1998:79-90, 175-180)). A conceptually different approach to the overall structure of motives can therefore be useful. One possibility towards such an universality is proposed above (I A 2, Fig. 3). The three levels result conceptually from the fact that all beings are existentially clamped between the realm of materiality and the realm of order that organizes materiality. Insofar as alive beings organize themselves under these conditions, they need an element for mediating by themselves between the two poles. The conceptual triad arises quite naturally from the actually given conditions. Any reasonable order can originate only from the ideational side, not from materiality on its own. Reason is at first expressed individually, and the individual can mold it into signs for communicating and sharing goals. Where the collective seems to manifest some autonomy, as for instance in systems theory, it is important to note that these are mere descriptions – images, not reality as such.
B. The fundamental vector in exchanging values

Development does not necessarily imply material growth, as the main perspective in today's economy suggests; it could just as well mean materializing truly integral and fully organic aims: after all, only cognizing and knowledge is factually unlimited (any material structure can only be finite). As Georgescu-Roegen (1999) shows, the economic process inevitably produces entropic degradation. Death is inevitable; only its incidence can be deferred a bit. The meaning of a person's life lies therefore in whether living it was worthwhile, and if the form of dying was in harmony with her personality. Georgescu-Roegen calls this immaterial counter-flux to the material entropy flux the "enjoyment of life" (e.g. in (1999:18, 282)). The meaning in this mental process cannot be enhanced by any way of pretending that physical death can be avoidable.

In society, the problem is different and yet shares a point: as associated mankind, the death of the individual is transcended to the degree of carrying on the essence of what the individual has contributed. This is what culture is about – down to its most elementary level, from the ideational to the material. Any culture's birth and death has two levels: that of the mental transformations (with a choice of evolution and revolution) and that of physical extinction (as when a person's body dies). But any individual life has both aspects too: the side of the personality's evolutions and revolutions, which made its life more or less worth while living, and the side of the body wilting away. We encounter here again the 'upper' and 'lower' end of Fig. 3 in I A 2. The question is not whether deaths – on both levels – are preventable or not, but whether the understanding required for adequate transformations is achieved or not, whether consciousness was gained or not, within the period allotted by reality. Even physical death can be understood – more so than the average person is inclined to believe nowadays (while such beliefs depend only on what type of knowledge is promoted). The same goes for understanding the rise and decline, life and death, of civilizations. The topic of sustainability is only one of the essentials in the socio-cultural debate.

C. The principal safeguard for being able to exchange values

Strictly all goods and commodities can be manufactured only once the necessary raw material has been set into value. It ranges from much resource with little intelligence to much intelligence with little resource. The activity of taking up resources and setting them into value is a sufficient condition for allowing the economic process to originate – but it is also a necessary condition, it must be fulfilled for the process actually to emerge. As a necessary and sufficient condition, it is a law proper – fundamental to any economic theory and practice, albeit rarely ever being considered.

The result of this first threshold act is a value – moreover an utterly real one, because it is what really allows for all the rest, irrespective of any other step in determining, be it qualitative or quantitative. For a detailed account of this law, please refer to the fairly extensive discussion in GM08, section VII. On the level of pure order, actually fulfilling the said condition constitutes the principal safeguard against being doomed to inexistence, or inversely for being able to survive socially by means of producing and exchanging values.

D. The material form of the safeguard for being able to exchange values

The yield resulting from primal producing can be called primal product. It is achieved by actualizing materially the law of necessary primal producing. For carrying the economic process, nothing material is needed additionally. An econometric account must cover all of this material perfor-
mance. At one end of the spectrum it is natural produce, agricultural and other raw materials, including generated energy. At the other end it is highly refined industrial performance – high-tech gear, luxury goods, and so on (alert readers might note the need for polar concepts). In terms of political economy, the material product must be taken into account as its grand total, because logically it constitutes a class in its own, since materially it carries the whole eco-social process.

At this point the concept of property needs a look. It has two aspects: on the one hand as possession, permission to manage, and on the other hand as ownership, a shadow of old Roman law fostering the idea of absolute availability (not entitlement to use in the sense of production ownership). The traditional concept was justified by the need of self-sufficiency in that epoch, requiring consumption property. But with division of labor, where new forms of organizing the means of production arose and income was no more a direct result of labor, but had to be mediated through goods or money as an equivalent, the old concept became obsolete. A secure concept of property was amazingly absent for a long time in economics – and not every version is beneficial. For instance the proposal of Heinsohn / Steiger (2004) is still one-sided and follows moreover a naturalistic fallacy: since property proves to be (descriptively) important in structuring today's economy, the authors believe it must (normatively) be installed as a foundational element.

An interesting point is the common unit for measuring all material product. In the traditional paradigm this issue looks like needing to measure the energy-matter that has been made available. Besides being a problematic endeavor in physics, for economics the really relevant measure is not in MJ or kWh or whatever, but in the amount of labor needed for making available the material product. Even this quantification is not strictly necessary, but only of relative interest as long as qualitative clarifications – and hence the institutional guidance of the social complex – have not sufficiently penetrated awareness. After all, measuring never is the initial step in quantifying, because in any case first the relation to the referential unit (that must be posited by humans) needs to be clarified; the possibility of wrongly attributing an element of comparison is not excluded.

E. The medium for safeguarding the exchange of values

Any process of actualizing a law is co-determined by the conditions of the materiality within which it is being instantiated. In the case of materializing the law of primal producing, the 'material' is the social structure of which we touched the substratum in III A. This structure is the result of society's self-assessment, because society develops – like any individual – through the rules that it gives to itself. They are active within the framework of life's essential principles of for-itselfness mentioned in I A 2: ideal-typically (in Max Weber's sense) aspiring to complete non-contradiction in complete self-reference. Hence the combination of these two principles, as the ultimate horizon of functionality in all manifestations of alive units, is constitutive also for processes within the body of society as a whole; this is relevant for instance concerning sustainability.

It is worth mentioning that the two sides of labor mentioned above, 'physical labor' and 'mental labor' (discussed in V A), never appear materially in pure form, because they are analytic concepts, two sides of a polarity. All actual forms of labor embody both aspects, to different degrees. Setting matter into value always requires some means of production, which for their part already embody also 'mental labor'; the original and very first means of production is our own body, this most versatile of all tools, permitting to produce all the other tools of mankind.
E. Upshot in the realm of qualitative processuality (III A - III D)

Using the systematically developed concepts for pure processuality, we have conceived the necessary and sufficient conditions that have to be met for any type of economy to become actual. These new concepts are determined by processes of human relationality: only socialization as culturality can permit – analogously to individual self-awareness and reasonable action – to clarify dependably the location of generally possible growth. This in turn allows a secure understanding of setting resources into value as intrinsic law (producing materially) and as performance (primal product), and also of the necessary conditions to be fulfilled for this real value to become actual.

Implementing these concepts in practice actualizes the step of seeking the relational basis for an integral economy in the general existence of the complete population – not only in the subsistence of a fraction, for instance what appears under relative assumptions as the productive part, with the rest as appendage. Determining the relation between primally producing and gain in resources unfolds its stringency only in considering the global population; something close to autarchy is possible only in very large parts of the globe. Contrary to physiocratic assumptions we perceive the origin of value not in nature, but in human transformation into a concrete availability of resources. As long as rationalization and division of labor are not conceptualized, the whole population must participate in this primal activity (it is the phase of conceptual development actualized in subsistence economies). This is why systematically relating to the complete population and the totality of delivered resources is justified in any case; whatever differentiation makes sense only as a subsequent internal procedure.

IV. Concepts of Quantitative Processuality

For political economy assessing the step of setting matter into value, the quantitative ratio of total primal product divided by the population (number of people in society) is important, as it represents the statistical average of transformed raw materials that is necessary for ensuring the livelihood of one person during one production cycle, under the given circumstances. The point is in understanding adequately the respective concepts and managing the distribution in detail.

A. The ratio of material product and population

In the eco-social process, every producer needs exactly as much real value as necessary for him and those belonging socially to him, to be able to produce another unit of the same type. The imaginary values promoted by the theory of subjective value mix up some facts; this situation is widespread and calls for a profound analysis. The proposed quantum, the ‘material social quota’, is not static: it varies with the degree of productivity – or in other words: considerably.

Understood in a complete way, this ratio does not require being measured numerically. This might astonish some econometricians. But the astonishment has more to do with their expectation, whereby operative entities must be numeric, than with the facts of economic interaction, which first need to be fully conceived in their qualitative dimension. The art of counting too has its root in its purely qualitative dimension: orderly relationships of preceding and following; actual numbers are not yet required for this. On the contrary, introducing numbers too early – when the necessary qualitative considerations have not yet been followed to their end, then giving rise to the actually corresponding quantities – produces fictitious precision only.
The point here is the principle of a quantitative relation between the material matrix (nature) and population (total number of people in the society), which varies with the actually operative degree of productivity. The more advanced it is by dint of an increasingly differentiated division of labor and a corresponding input of intelligent ideas, the more products become available for the same unit of value, the social quota. In other words: prices for goods are ever lower (see Annex).

B. The unit of account

In analogy to the 'material social quota' (necessary average amount of primal product for one person to exist in one production cycle, IV A), the 'value-oriented social quota' as the equivalent in real value, lends itself as a unit of account in the economic process. It can be measured in money (VII C), for easing its use. But monetary quantification is not mandatory: as a concept, the value-oriented social quota is useful on a purely qualitative level already, for understanding adequately the interconnections.

C. Upshot in the realm of quantitative processuality (IV A - IV B)

Understanding the qualitative conditions for any type of economy to arise has allowed the correct quantitative determinations: the ratio of primal production per complete population defines the material exchange potential; the principle of primal producing and its tangible counterpart, the primal product, constitute together an unchallengeably secure foundation for determining all real values. It substantiates, as a reasonable unit of account, the equivalent to the per capita quota in terms of real value, as an average to be differentiated in further steps.

In practice, the principle of pure primal productiveness can of course not directly be applied – just like the principle of pure perception, because any perception holds an interpretation. They are analytic concepts – and should not be taken for something else. For this reason we choose, for determining the real value which constitutes the basis of any economic process, the cogent relation between population and primal product. This conceptual foundation does not contradict the possibility of additional values to seep in, which may be covered by the theory of subjective value. It is important to realize that subjective values (rooting in human imagination) are not the same as objective values (imposed by nature). It is not a problem of nature that subjective ones have massively been prevailing – with corresponding effects. The indicators and units of account proposed here are meant to convey ideational transparency. Considering the dynamically stabilized equilibria of fluxes – independently of any additional elements such as money – liberates from unnecessary attributions and fantasies of primal debt or similar unrealities. The relevance of purely qualitative considerations even in today's economy is revealed through the fact that even multinational corporations often trade goods in a bartering arrangement, when it suits them in terms of transaction costs.

V. Concepts of Processuality in the Compound of Mineral, Plant, Animal, and Human Being

The possibility of raising natural resources and setting up an economy is not only subject to the condition of being carried by the world (second aspect in II C), and cannot be fulfilled only by
means of materiality (III D): putting it into practice logically requires also the intelligence of beings capable of directing adequately the material flows. Therefore the intrinsic law of this intelligence needs to be grasped. In the dominating theories, this aspect of labor is not accurately taken into account, because the different types of labor are too strongly paralleled by equating them all to money. Through this non-differentiation, an important conceptual element of appreciation is lost.

A. The polarity in human labor

Labor can be understood qualitatively in a precise way, beyond a quantitative grasp by measuring performance (as is usual); section II B introduced into the topic. A purely qualitative view allows differentiating labor as the active principle, polarized into physical intervention in materials for gaining resources (setting into value) on the one hand, and on the other hand mental intervention in physical acts for producing goods and commodities (in producing and increasing productivity). Since conceptually this is conceptually a polar structure, the two sides must be considered differently, each in a way that corresponds to its own nature, and yet both together.

Fig. 5 The dual appearance of economic value

<table>
<thead>
<tr>
<th>artificially producing</th>
<th>area of validity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTELLIGENCE, MIND</td>
<td>human economy</td>
</tr>
<tr>
<td>force of organizing:</td>
<td></td>
</tr>
<tr>
<td>ideas</td>
<td></td>
</tr>
<tr>
<td>mental labour on</td>
<td></td>
</tr>
<tr>
<td>creating second value</td>
<td></td>
</tr>
<tr>
<td>V2</td>
<td></td>
</tr>
<tr>
<td>directly on the soil,</td>
<td></td>
</tr>
<tr>
<td>elevating</td>
<td></td>
</tr>
<tr>
<td>physical labour on</td>
<td></td>
</tr>
<tr>
<td>creating first value</td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td></td>
</tr>
<tr>
<td>resources</td>
<td></td>
</tr>
<tr>
<td>Tangible only as &quot;negative value&quot;: as savings in physical labour</td>
<td></td>
</tr>
<tr>
<td>Setting free labour force emancipation from natural matrix</td>
<td></td>
</tr>
<tr>
<td>Generalities, law-like, essential qualities (on principle continuous conditions)</td>
<td></td>
</tr>
<tr>
<td>Specific attributes, appearances, 'things' (on principle discontinuous conditions)</td>
<td></td>
</tr>
</tbody>
</table>

This complex can be illustrated as in Fig. 5; structural analogies with Fig. 4 in II B are not a mere coincidence. Physical intervention in matter for gaining resources (value V1) can be grasped by methods of natural science: counting, measuring, weighing. But this is not possible (or only in distorting the coherence) with mental intervention in physical acts for producing goods (value V2), because the effect of the latter shows only in rendering unnecessary (saving) a certain amount of physical intervention. In economics this effect is known as 'increase in productivity' or 'rationalization'. But it is not appreciated in its real sense, because in its ultimate consequence the value of constructive mental intervention would only be measurable in negative numbers, in what had been made non-necessary by easing labor situations. Yet constructive mental intervention has the positive effect of making possible a transformation of raw materials into goods and means of production, thereby setting free labor force for other than only basic activities. Sociologically speaking, this leads to an emancipation from the natural matrix, or, – on the level of values – to building up capital in the sense of 'allowing future action'. This concept encompasses therefore capital goods and monetary capital, as is usual, but includes also primal production as the 'original version' of
capital, to which other forms must relate in a transparent way. We should hesitate, however, to talk for instance about 'human capital', since this is a way of encroaching on people, moreover an unnecessary one, as the effectiveness in dealing with the facts is not improved.

The 'raison d'être' of capital in all its forms is to set free labor force, and is made possible by values V2. This basis is, as can now clearly be understood, not at all of monetary quality, but is the general basis on which any monetary version of capital can also be materialized.

B. Real increase of efficiency through conceptual non-contradiction

In most economic theories discussed now, forms of labor are assessed through money as the equating principle; integrating over the total population of a nation, this leads to one side of the concept of gross national product (GNP); its other side is defined as the total monetary value of all produced goods and commodities. The GNP is then adopted as the basis for defining the money supply for circulation. So on the one hand there is a formal definition of GNP by means of money, and on the other hand money obtains its actual meaning through the GNP. In comparison, if a mathematician were to say that in one of his formalisms A is a function of B, and simultaneously B is a function of A, he would not get very far. But economic theories did get astonishingly far with this approach. The sheer number of complications in practice has the effect of hiding the idea that produced them, but the basic fact that in this way money was made into the measure for itself is and remains a sore point, because it leads from one problem to the next. The laudable intention of wanting to trace total value (as a measure for the money supply) back to some non-anthropogenic reality can not be fulfilled in a non-contradictory way by taking the GNP as a point of reference. This is not merely academic hair-splitting: in its final effects, out of qualitative (conceptual) self-contradiction, the presently operating system causes inefficiency and unnecessary conflict (VI B) within the compound of mineral, plant, animal and human being, and thus with reality as a whole. One of the sore side-effects is that then wages must be payed from the capital. This leads to the paradox, noticed already by David Ricardo but which remains insoluble even in today's capitalism, that on the one hand (from the point of view of producing) wages become primarily a question of cost (thus needing to be minimized), while on the other hand (seen by the population having to exist) wages are precisely what it needs for doing so (thus needing to be maximized). This paradox is the result of not understanding the integral functions in economy. It forces the social body to lose energy, finally to no avail (except to enrich some more the rich). This contradicts the essential aim of economics, which is: to organize socially the material existence of human beings. A system avoiding the conceptual self-contradiction, as proposed here, can lead to a very real increase of overall efficiency. Upon clarifying the hierarchy of the laws and thus the required concepts, the said loss of energy does not arise. It is the result of additional ideas of value, superimposed over the intrinsic law of real value.

C Real increase of efficiency through conceptual completeness

In the approach we propose, the value of human performance is comprehended in a strictly complete way and can be traced back at any point to the real value, embodied in primal production and realized through primal producing. The numerical quantity of total primal production will vary according to the degree of rationalization, while the per capita amount is relatively constant and in harmony with actual requirements. This second correlation is mirrored in the ratio of population per natural matrix (chapter IV).
Any system following this rationale avoids pointless burdens (see V B) and is thus highly efficient as the overall process. In contrast, in following the dominating theory, which reduces the concept of value to human whim and makes real net output only partially transparent, problems cannot cease to multiply: in practice this system is strutted up on the seeming real net output in the secondary and tertiary sectors, which compels it to an extraction of capital out of the process, for its self-preservation – but being a system that can by principle not preserve correctly the matrix on which it depends, the result is deplorable. Its actual cause eludes the theory producing it.

– The connections between the relevant elements are illustrated in Fig. 6.
1983: 20%; 1990: 25%; 1995: 41% (source: INWO Switzerland). The curve is interesting. Another example: agriculture in civilized countries was productive in terms of produced energy until about 1950: the energy input was lower than the gain. With technical means becoming decisive, the 'gray energy' in machines inverted this relation: 1996 the input was more than four times the gain. This escalating phenomenon is not new. What crops up in edge cases is usually a war or a catastrophe that briefly diverts the attention, and then the same game starts all over again. – All these losses are goods and commodities that are not accessible, or at a higher price than what reality justifies.

E. Real price in terms of political economy – or, the law of socially producing

As already hinted at in IV A, in terms of political economy – viewed at the level of real value, as developed up to here – the specific real cost of a given unit is what a producer and those belonging socially to him need for being able to produce another unit of the same kind. This real cost (not monetary cost) of pure reproduction can be determined by means of the unit of account.

It is remarkable that all these assessments are still feasible on the level of pure qualities. No quantities and no money are needed. These laws – purely qualitative structures – are valid for any economic system, with or without monetary means for trading goods, with or without additional ideas about value applied to the process.

A further point needs maybe more elucidation. Some might fear that this talk about a unit of account that represents an average of real need, valid for all people, implies some kind of secretly communist ideology. This is not the case. Any population always is composed of a large section of pure consumers; only about half of the population is in the production process. And what is produced – in a large sense – is by far not only products that can explicitly be exchanged. Essential elements of the process are not exchanged – namely things done in a barely palpable way, but which ensure the future in an ultimately strong way: the child growing up, its mother smiling at it, the patient at the hospital, the nurse, the teacher at school, the professor dreaming the formula he could not find in his algebra, etc. All these seemingly non-productive persons can be called 'pure consumers', to their degree. The solution to this side of life is not to monetarize all and sundry, as is still fashionable, hoping to create new markets – which leads straight into resource plundering and market saturation. The real solution is to understand firstly that the whole population – including all pure consumers – is always carried by primal producing actually taking place. Secondly the pure consumers are precisely the element that liberates the economy from the dictate of physical labor: this element renders organic the process. If only physical labor would exist, it would be a mechanism and all performances would have to be equaled. The individual value of the nurse's care or the professor's formula is what they save in physical labor, in primal producing. The real price of their labor in terms of political economy is determined by the activity of the associations, whose task is to equilibrate the economic process in practice, stabilizing its overall effects (see Fig. 8, Fig. 9, and Fig. 10, in section VII B). Adaptations to specific situations are not at all impeded.

F. Real price in terms of business administration – or, the law of the market

Exchanging goods and therefore values – the exchange in economic terms – means as a law the process of opposing one value to another value and making explicit their relationship. This relation is the price; a priori it has nothing to do with money, but only with value. The law of opposing values and freely letting the price develop dynamically is the law of the free market. Wherever a system does not liberate its markets towards empowering participants to a coercion-free dialogue,
but institutionalizes pressure or allows pressures to build up (secretly or overtly, through whatever channels – as e.g. today in the way the monetary system is constructed and imposes its rule), it has already sealed its long-term fate. It is true, as neoliberals maintain, that on the material level sustainability starts on the market place – but precisely not according to their view.

Since economic value has a polar structure (II D) – arising on the one hand out of need and on the other hand out of the conditions of production – each side must be considered in its own right. In terms of value, the conditions for producing something are given by requiring palpable performance; in opposition to this, need has no firm basis in any objective value, it appears in consciousness – not as a direct compulsion, at the very least leaving an interval permitting to react – and thus as something that can be thought about (remember Fig. 3 in I A 2 and Fig. 4 in II A).

G. Upshot in the realm of the organic compound (VA - VF)

Having understood the point of principles and their actualization has paved our way towards a grasp of the intrinsic law of intelligence, whose role is to direct adequately the exchange of materials and values in the complete texture of material events. The (polar) principles for this task are physical labor and organizational labor. They are hierarchical only upon deciding to implement order instead of chaos; where this determination is absent, some disequilibrium is the consequence: some conflict, 'social disease' (such as biases in the structure of value, price and distributability) must arise where the principle of capital accumulation for allowing future activities is not being understood in a really integral way.

Practically applying the art of thinking in strict polarities – for instance ideational versus physical level concerning appearances, or perceptual versus conceptual level in cognizing, or physical labor and organizational labor in economics – is not yet very common, since it cannot be achieved in technically managing 'information'. It requires getting involved oneself with the relevant content, actively participating in the respective quest. Then strict polarities – chosen adequately and distinguished from simple semantic oppositions (dually criticized as logocentrism) – have the advantage of offering a universal grasp. Values V1 and V2 ought to be thought of like the positive and negative numbers in number theory, which ceased to pose problems in calculating, or like the Archimedean principle of buoyancy, where the process also features a 'subtraction'. Adequately applying these methods requires having understood the respective principle – calling for a self-aware way of thinking, an intrinsically participative first-person perspective ('I'-activity); any manipulative third-person perspective such as a formal logic will not do. Strictly speaking, that would allow assessing correctly only V1.

VI. Concepts of Processuality Within Social Totality

At this point in developing the concepts, a question is appropriate concerning the necessary institutions for granting in principle the non-conflictual settlement between the two sides of price: as appearing in consumer need and as necessary for allowing production. This must be considered not only in the relatively open individual market situation, but within the system of social totality, closed in itself in the sense of a feedback loop.
A. 'Mental breathing': investment and gain

Today's majoritarian view is reductive by neglecting the portion of the population that is not directly productive, and simultaneously believing the overall economic rationality can be captured by means of imaginary postulates like 'homo oeconomicus' causing the required overall intelligence in 'the market'. This conceptual foible can of course not accommodate all of reality, and mainstream theory sought to adapt its ideas through auxiliary hypotheses such as 'incomplete information' and a rationality increasingly being recognized as 'bounded' – in a procedure that never really become adequate to all of economic reality. Instead of invigorating a complete form of political economics, the habitual view generalizes business administration in a perspective of feared 'scarcity' – which produces real scarcities for instance of capital in sectors that look 'useless' in the narrow perspective, and of resources needed to feed the avid system. In this way, agents are isolated and kept in a mentality of mere self-support, according to ancient (Roman) concepts of property and 'need' of domination – despite the fact that division of labor and new structures have changed the situation since many centuries (III D). Under the man-made law of making the market into an absolute, everything must be made into goods and commodities, even the so-called factors of production themselves: nature, labor, and capital (in the sense of real value) – although they can neither be produced nor used up, and defy thus the category of 'good'. The results of this theory are contentious, and many people are becoming aware of the dubiety; complete thinking avoids it beforehand.

Of course we all want to go to the market for gaining something. We want to 'breathe in and out', giving something for getting something. What triggers economic acts has a wider basis (II D) than the idea of material scarcity suggests; the whole issue must be considered. It is no coincidence that asserting 'scarcity' arose in the 18th century, when the natural sciences, born out of positivistic reductionism, set out for triumphant progress. Then David Ricardo felt the same nature to be stingy which little before Adam Smith had still perceived as generous. Why would we want to 'breathe out', giving something, if not out of knowing that we are carried in this step by our surroundings? Today's economy has the opposite effect: hidden levies, wage slavery and pressures to join the craze are leaving their marks; the stock exchange can seem promising only to the shortsighted. The game can continue only by promoting overall virtualization as a new religion, making plastic look like candy. All this is the effect of having become dependent on a certain type of return on investment, like a junkie is addicted to dope. It is true that mankind's productivity can make material affluence become real to an incredible degree – much more so, in fact, than what is now staged because a lot of energy is siphoned off the system (see Fig. 6) profiting from loopholes and under the impression that "there is no alternative". A big question in economics is the origin of innovation – and the expectation is that this can only be something technical such as making faster chips for computers. Yet an extremely effective innovation would consist in fundamentally thinking through the system. This starts with simple things such as: we have been conditioned to thinking in money, not in value. This relativity leads us astray. Basing the institutions – the 'rules of the game' – on the real value instead of imaginary values, would ensure the required efficiency. Compared with now – where much value is being extracted by people profiting from theoretical gaps, existing institutions, and widespread ignorance – prices would be incredibly low.

We invest gladly into a system where we know that all others also know that what we all get is the result of what all others have contributed. This is the core problem – a socio-cultural one. The concept to develop here is the final inevitability of transparent intrinsic networking.
B. The link between performance and income

In the majority of today's theories, performance and income are equated, using money as a universalizer. This link must seem inevitable in a system where wages have to be paid out of the (monetary) capital – which makes labor into a problem, as on the one hand it is a cost factor in production and thus calls for being eliminated, and on the other hand is the only means for ensuring income. But this perspective does not address all connections: first of all, the implied concept of capital is too narrow (V A). From a qualitative point of view, performance cannot be equated with income, since the point in performance is to do what is necessary in an objective way, contributing to the world at large, while the point in income is to ensure the subjective livelihood of a person. Where income is valuated according to performance, the latter will contribute ever less to objectivity ('whose money I get, his song I sing'). When an economic system creates pressure on survival (instead of enabling the satisfaction of true need), the agent becomes dependent for his income on estranging others. Exploiting their weaknesses then becomes the law – making precisely the weak points into the pillars of the system. This leads to a wide range of effects can now be perceived, from one-sided forms of science and politics to social atomization. Adam Smith's "invisible hand" can give the impression of being constructive only as long as no massive problems arise. But now these are continuously being created. One capacity to be developed is awareness of differences.

C. Separating performance from income

So the possibility of separating income from performance is worth an inquiry. As we saw, economics today requires extremely complex additional constructions for transferring performances and rewards towards overall equity (see e.g. Le Monde Diplomatique, series 'Manières de voir' No. 41). In contrast, the perspective proposed here allows quite self-evidently to actualize this possibility. The mysterious 'hypomochlion' lies in the mentioned fact that all forms of labor can be traced back to the law of primal producing, materialized in the primal product. The technical basis for administration is the unit of account (IV B): the portion of primal product for one individual, the 'social quota'. It serves as a conceptual (not a material) basis for starting to equilibrate the system. This work needs to be done in specific groups of people, which we might call 'associations' (to be discussed in VII B; Caspar (1996) contains helpful illustrations showing the steps of associative optimization). The trade unions are not suitable for this activity, since they are based on the idea – to which our economy conditions, as discussed above – that there is an immanent cleavage between employers and workers, having the trade unions maintain a mentality of strife. But precisely this abyss needs to be overcome.

This essay aims at showing that setting free labor force, a separation which historically was reached on the material level through intelligence in increasing productivity, now can be attained conceptually too, as a complete and non-contradictory distinction on the systematic level of socio-economy. The ensuing completely transparent mental structure allows separating income from performance in a precise way and without having to get lost in any 'complex constructions'. The question of whether a unconditional basic income would corrupt mental investment into the social order by eliminating competition, as many political leaders express in their fears, is of quite another type and only a logical consequence of basic assumptions which are not broadly clarified yet. – Utopia is less a question of some alleged reality than of the categories in which real reality is being perceived!
The distinction between performance and income permits us to grasp an important aspect of social life, which the predominant view has cornered – mainly by exaggerated fears of 'free riding' in many theories, as summed up e.g. in Bunge (1998:321ff), while applying the currently dominating theoretical system is the most formidable 'free rider' –, so that aspect can now become more relaxed on the theoretical level: the situation of the 'pure consumers' (V E).

D. Upshot of processuality in social totality (VI A - VI C)

Having understood the structure on the level of principles and on the level of materiality has allowed a differentiation of the sub-concepts that characterize the secondary forms of order that influence social existence. On this basis, the intrinsic law can easily be found of cross-social balancing prices as determined by need (mirroring income, among others) and prices as determined by producing (mirroring performance). Achieving conflict-free social life calls for decoupling performance from income – at least conceptually; whether materially too, is a question of additional criteria (other than economic). The distinction can adequately be achieved via the original value, which we have apprehended through the concepts of material production and the unit of account – opening a path for non-conflictual action in the sense of society as a whole.

Need can practically be experienced in the self-enclosedness of the body, its regulation on the individual level implying sensory organs given by nature, but whose sensitivity results from personal development. The social matrix requires a kind of organization analogous to 'senses' and 'muscles' that is 'artificial' in the sense of a polarity between nature and nurture, arising in humans when experiencing the difference between perception and conceptual activity. The point in using these metaphors is not in some naive analogy 'from outside' according to mere hunches, but in recognizing the structural qualities that are relevant for all of organic being. This concerns topics that were addressed by many from Plato and Aristotle to Rousseau, Kant and Rawls (to name some prominent authors). In a system with one-eyed perceptual institutions and autocratic forms of agency, not much can be expected that is worth being sustained. By neglecting the need of balancing socially the need-based and production-based prices, pointless conflict is being imposed. Then society lurches from one pain to the next. Assuming this instability to be normal is rash cynicism – even when many achieve a good income on this basis. Since the conceptualization proposed here is valid for all forms of economy, real improvements require no compensatory revolution or the like, but only a deep insight and then the move of quietly leaving away the erroneous elements of the past.

VII. Concepts of Qualitative Processuality Within Conceptual Totality

While on the material level of the individual the necessary elements for her livelihood are allocated by the economic activity of the whole rest of the community (III A and VI A) in a set-up called division of labor, on the conceptual level the mental activity of the individual is the nourishing aspect of the community: no community can actually think, but its individual members can communicate their thoughts through diverse channels (languages). Simultaneously, the framework of insights, ideals and methods on the conceptual level of the individual is what ultimately determines the material form of the collective's economy (in this respect, aggregating individual acts has a point indeed). In short: on the collective level, economic life is carried by the contents of mental life, while mental life is carried by economic life only on the material level. This complex merits a closer look.
A. Materiality and conceptuality between individual and society

Human economic life entails using up resources, and therefore a certain form of death of the planet that is carrying humanity. This death of the carrying instance makes sense only as long as its material sacrifice is counterbalanced (‘equilibrated!’) by really having understood the universal coherence and differentiation. Cultivating awareness in this direction liberates increasingly the content of thought from the bodily states and compulsions. This tendency towards a dynamic equilibration can only be achieved by human beings, by actually thinking in a truly complete way (i.e. in actively seeking to exclude no aspect of reality, including all of their own).

The 'inversion' of material and mental aspects between individual and society, or 'turning inside out', is not recognized in the presently debated theories. It can be illustrated as follows:

<table>
<thead>
<tr>
<th>INDIVIDUAL</th>
<th>SOCIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>sensory-nervous system (sensory-mental activity)</td>
<td>mental life (conceptional nutrition for developing)</td>
</tr>
<tr>
<td>rhythmic system (mediation, harmonizing)</td>
<td>juridical life (mediating in the social process)</td>
</tr>
<tr>
<td>metabolic system (nutrition, satisfaction)</td>
<td>economic life (perceptiveness for true need)</td>
</tr>
</tbody>
</table>

In comparison with the intrinsic law of the economic process as such, today's mainstream economics create an overdetermined system by introducing imaginary values. This makes the intrinsic dynamism of the economic process become distorted instead of well-guided (as shown in V F, VI A, VII C). Imaginary values may pay off for a while, but the resulting process can not really be sustained for a long time: such 'tampering' has corresponding dynamic effects, ranging from superfluous complication (producing a system that can allegedly only be 'complex') to downright damage (erosion of its own substrate), inducing corresponding backlashes and limits. The induced strain and stress goes into the implied 'matter' (in the Aristotelian sense), which on the materialized level is nature (in its complete width: the bodies of minerals, plants, animals, and human being). The feedback between society and individual is therefore crucial (III A, VI C).

B. The principle and the organs of social regulation to economic ends

The material means for regulating the economic process must therefore be some kind of social organization, born out of the relevant concepts. As is known since classical antiquity in Plato and Aristotle, the first authors of the politological 'catalogue', there are many possibilities, displaying a rich dynamism. For grasping totality, humans would like to have an overview, also in the social field. This is the reason why 'the state' became a structure that the ruling class has always tried to centralize – sometimes in explicit ways (as in France), more often implicitly by means of monodimensional mind frames (like humanism, materialism, capitalism, socialism, etc.). But it can only be maintained in centralization by applying power, because many social aspects do not follow the same characteristic (I A 2 and III A). The point is not only whether to have democracy or not, but whether the social members are recognized in their own right. Authoritative systems with their decrees – irrespectively of whether they are more of a secret or an overt type – inevitably produce conflict to the degree of structuring the reality of lower hierarchies in ways not suitable for them. Is
this merely a truism already taken care of, or does the problem reside in recognizing for-itself-nesses? The monodimensional mind frame of the modern state is object-orientation, propositionality. This emphasizes formalisms and reduces structures to the legal aspect – which made arise debates like those between libertarian and communitarian ideas. We are not 'through the tunnel' yet, since this debate can not encompass all of the distress either, and also because both sides operate mainly within propositionality, each in its specific conceptual limitation. To put it very roughly: libertarians promote acting out, even if arbitrarily, while communitarians recall the role of social conditioning in humans beings until becoming what they finally are. The synthesis (Aristotle’s fair middle) of fully autonomous individuality, capable of sound integrity, is not reached yet, in spite of thoughtful approaches such as Charles Taylor’s Sources of the Self (Taylor (1989)), where he discusses the beliefs in which modern man is swimming, if not drowning. But even Taylor does not reach terra firma, a secure intrinsic law of this seemingly fleeting thing called human individuality. Psychological analyses in depth, such as Peterson (1999), deliciously differentiated as it is, can barely lead us any further either, but they expose the ‘mental lens’ that makes so many subjective judgments look like universal truths, general values, thereby contributing to the perspective that has made the theory of subjective value look like the only possible one.

This present investigation aims at covering essentially the economic process, knowing well that the corresponding problems cannot be separated from those of the overall structure. The solution does not reside in separating parts, but in differentiating conceptually so as not to have to separate (a principle explained in I A 2 and III A). All of the social texture is alive, it is not just a framework of more or less rigid institutions. The more this liveliness can be accommodated in organic structural principles, certifying that expressing oneself in a true way does make sense and is appreciated – instead of seeking security in rigid compartmentalization – the more the conflict potential can be transformed into creativity. The tendencies of the three organic aspects outlined in
I A 2 and III A can be brought together in clear thinking, but not by material coercion, because there is a polarity at its origin. The French revolution manifested an attempt at understanding these diverging qualities as 'freedom', 'equality' and 'fraternity'. In later state theory the terms 'legislative', 'judicatory' and 'executive' became usual, but their meaning differs considerably as they are less complete, emphasizing mainly the legal aspect, even if within this limit they follow the same basic lines.

Fig. 9  

<table>
<thead>
<tr>
<th>The elements of the social organism</th>
<th>and the principles operating in them, viewed under the perspective of economics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economy</strong></td>
<td>Division of labour and emancipation of labour from the natural matrix (technology, natural sciences)</td>
</tr>
<tr>
<td><strong>Fraternity</strong></td>
<td>as an independent agency for finding the correct price in mediating between human need and the value of human performance</td>
</tr>
<tr>
<td><strong>Association</strong></td>
<td>as an independent agency for finding the correct price in mediating between human need and the value of human performance</td>
</tr>
<tr>
<td><strong>Contract</strong></td>
<td>Labour Nature Value 1 Product of nature connected to human work, in particular physical labour Measure for economic values: positive attribution of value basis of creation of value result of physical labour on the soil; dependent on the ratio of population size and usable land area</td>
</tr>
<tr>
<td><strong>Law</strong></td>
<td>Labour Price Value 2 Industrial product or purely mental performance, for whose production a specific amount of direct labour on the natural matrix was not performed, but saved insofar as mental labour was connected to the industrial product: negative attribution of value value can be assessed only as equivalent of saved physical labour</td>
</tr>
<tr>
<td><strong>Culture / Education</strong></td>
<td>Philosophy / Science in its widest sense</td>
</tr>
<tr>
<td><strong>State / Law</strong></td>
<td>Democratization</td>
</tr>
<tr>
<td><strong>Equality</strong></td>
<td>as a representation and impersonal regulator of legal and political interests</td>
</tr>
<tr>
<td><strong>Parliament</strong></td>
<td>as a representation and impersonal regulator of legal and political interests</td>
</tr>
<tr>
<td><strong>Freedom</strong></td>
<td>as free cooperation of concerned citizens for sustaining • schools • churches • judges • health care</td>
</tr>
<tr>
<td><strong>Alliance</strong></td>
<td>as free cooperation of concerned citizens for sustaining • schools • churches • judges • health care</td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
<td>Capital / Mind (Spirit)</td>
</tr>
<tr>
<td><strong>Philosophy / Science in its widest sense</strong></td>
<td>Philosophy / Science in its widest sense</td>
</tr>
</tbody>
</table>

For regulating the economic process, with its foundation requiring fraternity and executive endeavors, the necessary organ must freely be composed of all concerned people – employers and workers alike, and if necessary also mediators. Here we will call these organs 'associations', but this is only a name; at the end of I B 4 some institutional forms have been mentioned – work councils, advisory boards, commissions, committees, local and regional councils, etc. To get a picture of the interconnections in associative economics, the illustrations in Caspar (1996: annex) can be useful. Solving these problems requires no administration-style decrees, but cooperating towards mutual understanding beyond old presuppositions. The means for solving the problems are not of a hire-and-fire type; on the contrary, knowing where the ultimate carrying capacity is (this Keynesian term is used in a wider sense here) allows humane solutions without getting sentimental. – Let us consider some examples:

When a price rises more than proportionally, this means that there is more demand than available offer (and inversely). Consequently, more (or less, respectively) of these goods ought to be produced. This can be achieved through different measures; within 'associative economics' it can always be done in a non-injuring way (contrary to what the entrepreneur is pushed into in today's economy by additional ideas of value): labor can be shifted (from an activity or company in the secondary sector to some other one); or shifted back (from an activity or company in secondary...
production to one in the primary sector); or set free (from an activity or company in the primary sector to one in the secondary sector); or people dependent on gift money (for this term refer to VIII C) and pure consumers can be newly attributed (between companies in the secondary sector or free ones). Such transfers are illustrated in Caspar (1996: annex). The point is to place people in positions that are adequate for them; then the economy quite naturally becomes efficient.

<table>
<thead>
<tr>
<th>Types of business</th>
<th>Phase 1 Starting point</th>
<th>Phase 2 One possible first harmonization</th>
<th>Phase 3 Possibilities for further development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agriculture</td>
<td>Industry and Services</td>
<td>Agriculture</td>
</tr>
<tr>
<td>people working in pos. value attribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pure consumers: Treasury (compulsory gifts) Old age pension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dependent on gift money (education, health care, churches, etc) produced units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>obtained price: as a quotient * decimal notation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>calculatory units to be obtained (for +, as well as depending on + and ~)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>obtained calculatory units – excess</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>obtained calculatory units – shortcoming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible associative regulation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transferring labour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transferring labour back to its origin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting free labour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New attribution of pure consumers and people dependent on gift money</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Individuals constituting an association need a secure overview. They must thus understand the intrinsic laws of the economic process – which are not difficult to understand, but not located where today's economists expect them – and should not be hindered in exercising their autonomy and integrity. Ultimately this means combining highbrow insight with work at grass roots level.

Certainly some will fear that such favorable circumstances would encourage humdrum ways of life. This idea is understandable, especially under the social conditions which today's economy is producing, where precisely by fulfilment of economic activity the true desires cannot be fulfilled. But the experiences of social workers and social scientists of all shades prove the contrary: under miserable conditions, no-future, mugging and racket are strongly on the rise, up to readiness for war. Where there is no meaningful subsistence, it is difficult to become socially constructive. These tensions can be felt every day: there is enough to do (reasonable work is around, for instance in the social sector, in education or in agriculture) and there are enough people willing to do the job, but what is lacking – by obeying what has been made into the law of the system – is the money, because elsewhere it gets more return on investment. This cannot be solved by 'official' cosmetics where they stem from adding ever more imaginary ideas of value in a mechanistic vein.

In the light of the tetradic structure as proposed here, the question of 'free riding' appears in a new perspective, since it reveals the intrinsic law of what carries the total of any type of
economy (and offers thus a 'ride') in its dynamic equilibrium of local equilibria and disequilibria-

bilities. When presupposing ideas such as "homo oeconomicus" as the only possible perspective of 
sane human judgment, and making labor pressure into wage slavery (VI A), 'free riding' turns into 
something that must be feared, as for instance in 'rational choice' theory, which is not designed to 
differentiate adequately between natural law and man-made law. And even for the freest of all 
trades, Art, there must be a demand, a need – otherwise the production gradually vanishes.

For an ideational basis it seems therefore preferable to take the intrinsic differences in the 
three thrusts in organisms – intrinsic law, limits of matter, and the mediating movements –, that are 
particularly explicit in human beings and their social network. The three thrusts must be organized 
adequately, consciously. Caspar (1996) presents a possibility, with illustrations in the annex.

C. The qualitative relationship between value and money

It is maybe useful to emphasize once more that there is no need of a monetary system for systematically developing the intrinsic laws of the economic process, right up to here in developing the laws and hence the concepts. The proof for this lies in the fact that economies without money do work – hence the laws cannot depend on having translated the idea into physical matter; accordingly, in developing the concepts, all market functions can be assessed in full precision without needing the principle of money. Money eases the movements, like oil in a gearbox; totally precise gears grind less. In this difference against habitual economics, the salient point is that the idea of value as such was mixed up so thoroughly with the idea of money that now even official specialists cannot see much of a difference any more – which massively estranges them from integral reality.

Nevertheless, once the necessary qualitative considerations are really mastered, the step of 
introducing the universalizing principle of an abstract exchange medium, money, is very adequate 
(introducing it without this mastery has the effects that can now be observed on the planet).

The basis for doing so has been hinted at already: primal production invariably constitutes, 
qualitatively and quantitatively, the basis for the totality of the economic process, since it covers all 
its steps (from setting into value through all of production, distribution and consumption, up to 
waste management). In virtue of this quality it is the reasonable platform to step from the level of 
materials to the level of values: in terms of real value the primal product is the adequate material basis for equating the money supply. Any other equation logically entails consequences that irritate in the last resort the social compound. The point is not whether – for instance in Piero Sraffa's view – prices of sub-assemblies co-determine the price of a finished product, since these products are clearly not part of the primal product anymore, and the labor for producing them is clearly not primal producing. The point is also not whether nature is a limit to economic growth, but what the conceptual basis is for determining the value of money.

Interestingly enough, in the proposed approach the amount of money is not important at all, i.e. what number connects the total amount of money with the total primal product, since changes in numbers influence only the average per capita amount of available exchange medium, but not the average amount of available exchange medium per unit of raw materials and subsequent goods that determines the constancy of value assessment in the process. This is why also this assignation is a qualitative one; systematically, it precedes the quantitative ones, to be developed further down.
Our equation allows setting free all processes within the total economic process. Inklings of this possibility are haunting economics since it exists. But conceptually they cannot be developed stringently unless the concept of law, of concept and of reality or actuality is clear. The fact that our proposal offers this should make it interesting also for neoclassical and neoliberal economists, as much as for representatives of evolutionary, institutional and ecological economics. – The way of approaching the basic problems conceptually, as proposed here, covers also much of the ethical aspect, but the solution is not where normative ethics expect it. In the approach proposed, seeking to understand the for-itselfness of the subject matter, going directly to its core and setting up fruitful relations with it, gradually eliminates a need for prescriptive elements, normative structures, deontological ethics – which may be useful, nevertheless, as a provisional means in organizing the social structures, on the path of awakening the intrinsic capabilities.

In terms of total exchange medium equated to total real value, the cost of any basic good enters the books only to the extent corresponding to integral reality, exempt from any influence of necessities for additional efforts or mechanisms for siphoning off profits. Following the intrinsic laws of the economic process has the effect of needing to produce only what is really needed – all additional loads fall away, for instance those out of having to augment production and productivity for generating the necessary income to compensate the losses, inevitable in today's framework of economics (as discussed in V B to V E). Not to mention that this suffocates markets and makes ecological efforts into a farce.

For being conceptually exact concerning the attribution of an exchange medium, it is worth while to have an even closer look at the relation between the intrinsic law and the process of primal producing, and its material result, primal production. Money can be set up in many ways, as is well known. Depending on the premises it shows very different characteristics as a consequence. If the system is not fully thought through, some arise only long after having put it into practice. It became clear above that in wanting to follow real value only, the exchange medium ought to be the equivalent to the activity of crossing the threshold from an inert resource to one set into value, because this is what in real fact enables the economic process to get going. As in all actualizations of laws, a material result is only an effect. It is what originated out of 'law' and 'force' transforming resource 'matter' into available material. The real reality is the act in its combination of 'law' and 'force' (Aristotle's 'form' aspect); conceptually speaking, the 'matter' aspect is only the necessary condition for the economic process to occur. This is our human point of view of wanting to effect change; somebody wanting to provide for a sound basis would valuate the 'matter' aspect and its stability higher. In this sense the material result of primal producing has a point too: it is of particular importance for the non-thinking users, but not so much for the person having or wanting to think about the laws of the processes. For a thinking user, conceptual clarity means that money is the equivalent of what has made possible the process; for a non-thinking user, conceptual clarity means that money is the equivalent of what is made available for continuing in the process. In both cases the same concept is in mind, but in the second case it is not differentiated to the same degree yet. For thinking users, money is the equivalent of primal producing, while for non-thinking users it is the equivalent of what is available of the primal product. For thinking users the exchange medium must be equated to the population, the total number of people (because this is the total labor potential and insofar the reference point), while for non-thinking users it can only be equated to primal production. Note that at some moment we are thinkers and at others not. Here again we have the scintillating effect of a conceptual polarity, useful to envisage for attaining full clarity in the respective query. What money really is, even when being considered in an integral approach to
reality, is therefore a question of point of view: from 'inside' or 'outside' it is not at all the same. In this antagonistic situation we have a choice: do we want our monetary order to mirror the thinkers or the non-thinkers? This question merits some pondering – to be addressed in VIII A.

D. Upshot of qualitative processuality in conceptual totality (VII A - VII C)

The systematics of understanding the principles, and then the necessary levels of qualitative and quantitative conditions for actualizing them, has allowed secure general formulations of the interconnections between value, price, performance, and income, and subsequently also between materiality and ideality in the individual as much as in the social body. This has rendered intelligible a structure that can facilitate processually the balancing act; it might be called 'association'. Corresponding to the existential clamp between materiality and ideality, which alive beings continuously bridge in mediating activities, the associations can be classified into three socially foundational functions: the cultural, legal, and economic aspects of social life. Here we consider mainly the association to economic ends, which regulates the operations between labor and market. This type of association is responsible for allocating the social quota to all individuals and for optimizing production.

After having regulated the economic order in the overall context, the next level of the social body needs to be mastered: the details close to the citizen. While contract theory has its root in statecraft (government, aspect of totality, concert of the dialogically organized forces), the second type of practice is at the communal level (local council, partial aspects, forming the instinctive, dialogically not yet organized conformations). As a management tool, especially on the second level we propose the transfer of labor between the different sectors – but according to objectives that are debated and organized on the first level. As a tendency, a solid technique for achieving consensus would seem appropriate, as they are increasingly being introduced in management training (for example kaïzen).

VIII. Concepts of Quantitative Processuality Within Conceptual Totality

After having secured the regulation of the economic process in society, the question arises of how the technically assisting processes of emitting and deleting money have to be regulated: what is the adequate institutional structure for a monetarized economic process?

A. Quantitative relationship between value and money: the central bank

The qualitative basis, the equation of the exchange medium with primal production or the population, respectively, has been clarified in VII B. Wanting to materialize the monetary system in a non-contradictory way requires dealing with this scintillating conceptual polarity first. It is useful not to confuse the meaning of polarity, duality, and complementarity. By polarity we mean a semantically absolute opposite that can be found only purely conceptually (not just a semantic opposition like 'full vs. empty'); in contrast, duality is a materialized opposite (e.g. enantiomers in chemistry, or mental representations such as 'on'–'off'); and complementarity is a result of applying basic ideas (e.g. observation, or measurement) that entail the impossibility of an aspect appearing on a given structural level while its opposite is compelled to make its appearance on the same level (e.g. in the quantum approach: wave–particle, mass–impulse, etc.). The relation between primal production and population is a relation between the result of an activity and the activity itself. In
our own mind this corresponds to the difference between being in the sense of participating in the 'inside' (law, principle, idea of the subject matter) and having in the sense of being able to perceive an 'outside' only (result, actualization of the law). The quantum view in today's physics induces complementarities as a result of conceptual non-differentiation in approaching objects, imposing indecidabilities between pairs of 'outsides' (two forms of actualization of the same intrinsic law of the phenomenon). In contrast, 'being' and 'having' concern 'inner' objects in the conceptual realm, where law and realization appear only in 'mental matter'. In quantum physics, whether particle or wave, mass or impulse, bandwidth or frequency are to be measured, is up to an arbitrary decision of the experimenter; he must set up the experiment (measuring device) accordingly, for obtaining one or the other. Where personal involvement with a shared content is at stake, the choice is to get involved or not; this separates thinkers from non-thinkers. In dealing with 'inner' objects, the thinking person will be able to manage consciously the relation between law proper, conceptual representation, and materialization. Non-thinkers will be able to use the materialization out of their notional representation, and are in the position of physics. The two situations are complementary, but not exactly in the same sense. In principle, wanting to set up a monetary system in a complete and non-contradictory way, based on the relation between primal production and population, calls for the thinking person, because thinking is the only situation allowing an awareness of all elements and all steps. This person will develop integral conceptualizations and find that ultimately there need be no hiatus or contradiction, contrary to a view that invites complementarity. The physicist using such a conceptualization will not be constrained to complementarity in his scientific system; he will find a new, complete physics that can encompass life. The thinking person will not resign herself to any interstice or contradiction, but fully check through her conceptual instrumentation.

This is a worthwhile endeavor for a new monetary order, especially when thinking what the effect is in nature and in society of having left it for so long in a state of conceptual half-precision. The fact that debates in economics practically leave out the two sides which the now ruling system most depends on – nature, closed-up in ceteris-paribus clauses as if it were an inert thing, and the global monetary system, widely believed to be immutable – has its root to this day in the lack of an adequate conceptual foundation for dealing with these delicate questions.

The attribution of the money supply to real value can therefore be materialized in a complete and non-contradictory way by understanding that reality as such imposes no hiatus or contradiction between the act of primal producing, related directly to the population (total number of people), and its result, total primal product. The two represent – propositionally, but written into the book of integral reality, not only into human languages – the same law, materialized two times, but in different materials: in mental matter (as the motive) while directly acting, and in gross matter as a result of actualizing the motive. It is the two sides ('mind' and 'body') of the ongoing birth act of the economy. But these two aspects are not, as in physics' complementarity, two equivalent sides of the same coin. They have the same hierarchical relationship as that of labor, addressed in V A and shown in the illustrations in Caspar (1996): applying physical labor to material matter and applying mental labor to the necessary efforts on material matter. We can therefore recognize that an economy and especially economics merit acute awareness – which then opens doors to an astonishingly organic understanding of its object of inquiry.

The central bank is the institution for regulating the flow of the exchange medium and the principles of crediting. From what was exposed so abstractly above, it might seem that banks are eliminated. But they are not; on the contrary, the principle of banking deserves being much more
part of an everyday partnership than what is now the case, where firstly only a small minority is in touch with it, and where secondly the global situation makes rivals out of potential partners, a problem that is presently being 'solved' by aggressive elimination (extortion, buyout, takeover, fusion, etc.). In compliance with the qualitative approach proposed here, all existing banks could become branches and subsidiaries of the central bank that would in this way broaden its role – which is perfectly feasible, because many problems of today's central banks would simply cease to exist – think for instance how today's system imposes a 'need' to be competitive and exploitative, and then needing to stage corrective endeavors. Eliminating such spanners in the works would set free manpower. The transition could take place very softly: the possibility of change is a question of insight and hence 'software' by means of 'wetware', not of 'hardware'.

This view is a result of thinking in terms of political economy – not business administration, which has made selfishness even on collective levels into a norm and has led to a privatization even of the central banks in practically all countries. The standard view has produced a widespread limit in comprehending all of the eco-social process and must state its compatibility problems in linking macro- to micro-economy (compare e.g. Bresser-Pereira / Lima (1996)). The transparent deduction of systematic determinations that characterizes the proposed approach makes it clear that thinking the macro level in terms of business administration can only be the result of specifying steps that are superimposed over those resulting from the intrinsic law of the economic process itself. These additional steps in determining are the issue of personal representations (the domain of imaginary values), not of clearly understanding the intrinsic law. Such additional loads burden the monetary system in its process of generating and deleting money, changing the role of the exchange medium from 'sign-for-a-good' to – for example – 'sign-for-a-good-plus-bridge-toll-for-coinage', or 'sign-for-a-good-plus-cost-of-using-the-sign'.

B. The Principle of monetary functions

The meaning of the exchange medium is its basic function: to be 'sign-for-a-good', to stand for a something-else. Any other function of money – comparative unit of measure, means for storing value, etc. – is 'ulterior' on the systematical level, and stems from additional steps in determining its function; these other functions follow other values. As a 'sign-for-a-good', money has a function that appears vaguely in contemporary theory, but not really stringently: money has the function of a language in the social structure (the explanatory gap in this claim can be filled by comments on the intrinsic law of language in GM08, sections II and III). Money is the specific institution of society for allowing an exchange of all values (not only of goods, as the perspective of business administration could make believe) in a universalized way, liberated of the constraints of bartering. Perceived in complete way, bartering occurs through some sort of 'money' too, but it is materialized in mental matter only. The fact of not being able to refer consciously to the idea of universal money – which compels to remain in barter circuits – has the same reasons as remaining within object-orientation and hence propositionality: it is the effect of a difficulty in conceiving purely ideational content. Insofar our era is not so much more developed than 'primitive peoples' that many believe to be far behind. Just as in thinking we cannot avoid recurring to concepts, even if we are unaware of what our mind is doing, in the same way bartering processes would not lead to a satisfactory end if this (unconscious) reference did not take place. The point is that reference is made to value, not to explicit money – and it is value that lends money it's meaning, because value is (a specific) meaning. From this example we can also infer that making a difference between thinking and language has a point indeed, because without this differentiation the explanation of satisfying trade would be impossible, which then would make it look 'necessary' to transfer the question endlessly
into 'new' domains or entities (for instance economist's motivation research), or until it is pushed into disappearance out of the categories of expectation (in the constructivist manner) – without ever being able to touch bottom in a clear way, because the real origin (autonomy) is unfathomable in propositional terms.

The circulation of money does not have the same quality at all the points in the circuit. The differences can also be described as distinctive functions of money in the compound of society as a whole; this suggests designating them accordingly. As a matter of fact, the use of money differs quite characteristically, depending on whether it is

- **freshly emitted** in considering an agent concerning his position and potential in the production process (assessing achieved results and hence the *past*, relevant for the act of lending), or
- **transposed** in considering the value of goods (*present*, in the act of purchasing), or
- **placed at the disposal** of a worthwhile motive (dissolving it in the *future*, as is being done for instance in the act of sponsoring or donating).

Now we have been discussing money without addressing explicitly enough the transition from money as a *pure principle* to money as a *materialized structure*. We mentioned thinkers and non-thinkers, mental and physical matter, but we did not consider the fact that already a personal representation of money is a materialized structure, not the principle itself. The reality of personal representations – being implementations of the respective law, in this case in the mind – is to arise and to vanish, to come when they are reasonable and to go when they are outdated. Already Plato recalled – in *Republic*, especially in the allegory of the divided line – that a law can be implemented on many levels from ideas (mental matter) to external objects (physical matter). On principle, no personal representation can ever claim to be immortal. All the more, a money that became explicit in a social compound should be able to arise and to vanish – money is a *product*, it is being emitted, it can come of age and become mature, and should be able to wilt away at the appropriate moment. This aspect of reality has practically been faded out in the traditional ideas about money, in which actual money is conflated with the timelessness of a law – being misled by seduction, indulging in worshipping the golden calf. Once this point is acknowledged at all, the question arises of course of how to consider correctly the life-and-death process specifically of money. In spite of hopes behind the contemporary conceptualization of money, its value can vanish out of many reasons. The current financial crisis exposes some of them – and the fact that the deaths of money and value are presently not at all under rational control, but occur largely by accident. There is therefore a dear need for a less compromised view – of which one will be proposed below.

### C. The structure of monetary functions

Maybe for the average accountant the just mentioned differences do not make much sense: to him or her, money looks always the same, it is only numbers on paper. But this is mere mental imagery, not insight into the intrinsic law of money. An insight into the structure of this law (its qualitative features) does show considerable differences when observing the effects of money in the social tissue. It is interesting that the different effects are correlative to the three anthropological aspects of human being and social organization discussed in I A 2 and III A (including Fig. 3 with the three levels) and whose interaction was characterized more specifically in VII A.

Behind the functions of money is its general nature, which is being interpreted by humans and then appears in tangible monetary structures and functions. In a thorough conceptualization of
value and money, their birth and death is never out of sight or out of bounds, but on the contrary an essential consideration. The temporary character of money can become obvious when reflecting the bond between money and performance in the primal creation of value. The performance is a product and as such subject to decay. The money mirrors the value of the product and should thus have characteristics that are parallel to it. The emitted money is equated to the primal product (IV A). The money covers all uses of the primal product; in a contemplation of reality as a whole, the money becomes obsolete when these uses are terminated.

In actual practice, equating the money supply with the primal product is required only once – in a way that might be comparable to the monetary reform in Germany after the 2nd World War, masterminded by Ludwig Erhard. On June 20, 1948, every citizen was allowed to exchange 40 old inflationary Reichsmark against 40 new Deutsche Mark, the new currency. This was the basis for a miraculous start-up of the postwar German economy – the "Wirtschaftswunder", as some called it – with only a few bumpy events at the beginning. This is the basic act of crediting all agents with their social quota, the average income in one accounting period. This transaction can relatively easily be performed by the central bank with its local branches. After this basic commitment, the economic process can freely be left to its own resources – provided the institutionally arranged boundary conditions are adequate. Our proposal is the associations (I B 4, V E, as well as Fig. 9 and Fig. 10 in section VII B). Their completely being aware of the law of real value warrants the necessary adequacy in steering the course. Here a technical principle for doing so will briefly be exposed. This principle holds the ‘secret’ of how the real value in the eco-social process can relatively effortlessly be made to remain ‘parallel’ to the currency throughout the process and its institutional structuring in socio-economic theory, even though the amount of money is allowed to vary according to the actual development and is being amortized during the period of being useful for everybody. The complete transparency in this use of money might displease personalities who would like money to remain a means for storing value and a powerful tool for directing the course of events – the good old times of not distinguishing too clearly between money as a principle, a timelessly pure idea, and money as a perishable product like any other. Neglecting this distinction has the disadvantage of encouraging reckless people to take advantage of others. Must this effect be experienced some more? Sooner or later a clarification of the principles in the social structure is necessary – through insights comparable to those that have impelled a separation of the church from the state, or of the powers in the state.

The problem is in how to make sure technically that the money leaves the scene to the degree of products having been consumed. Our proposal is that all those who are initiatively engaged in production – as individual entrepreneurs, or as firms or corporations, etc. – (and who are therefore no pure consumers) keep two separate accounts in parallel: one for expenditures, and one for receipts, the latter as a blocked account. The entrepreneurs pay their liabilities and also the wages to their staff from the account of expenditures, while the account of receipts is fed by the revenues achieved with the assistance of the employed staff. The earnings of an enterprise stand in a quantitative relation to the structure of the respective society with its specific mix of performers and pure consumers. As an example let us consider a population of 1 million, of which 20% are working in the production of material goods (ranging from raw materials to high-tech goods), 30% in services and higher sectors, and 50% are pure consumers. The given mix is the standard to be considered by the associations in probing a specific enterprise. The material production carries the whole eco-social process – or in other words those 20% carry materially the other 80%, thereby setting them free for other types of performance than material production. Among specialists there
is a broad consensus concerning this 1:4 ratio. It is rarely being doubted, but it can be interpreted in very different ways. For people seeking command, a term coined by Zbigniew Brzezinski can look promising: ‘tittytainment’ as a mixture of intoxicating entertainment and sufficient nourishment that can tranquilize the frustrated minds of the globe’s population – a modern version of the Roman *panem et circenses*. The idea gained prominence at after the famous first State of the World Forum held at San Francisco's Fairmont Hotel in 1995 as a solution for handling the '20-80 society' of the 21st century. The implication for entrepreneurs believing in the current system was worded clearly for instance by Sun Corporation CEO Scott McNealy famously depicting the choice of people as 'eat lunch or be lunch', or if you're in academia, 'do lunch, or be lunch'.

Here we draw quite different conclusions from this ratio than many others did. Yes, a person producing material goods can indeed cover on average the existence of four other individuals. This relation can be translated into money: in terms of real value, and when the circulating money mirrors correctly the facts, the earnings of this person cover also the income of another four. There seems to be a difference: the producer presents products and the consumer presents money. But in a society based on the division of labor, this consumer offers also whatever he does: in other respects he is the giver and the producer is the taker. Beyond this, there still is the question of how money can adequately wear out. In a direct and logically clear view, it must become obsolete when the products were *actually bought* with it. This is the case when the producer sees the respective earnings in his account of receipts. A money that is true to its nature as a product itself must then leave the arena. For achieving this it is sufficient to carry forward, at the beginning of every new period (for instance one year), the deposit in the account of receipts of this producer to his account of expenditures, making this amount disposable for him as income from the just started period. The money then has served its purpose and reappears in its inverted function for again entering the scene. The idea is to avoid money to be used repeatedly, because then it gains an illegitimate advantage over the perishable goods. The transfers could be performed by the central bank.

The advantage of this way of proceeding is that it provides a very precise instrument for regulating associatively the economic situation without any danger of imposing social conflict. The point is in realizing than the prices mirror the situation – as long as the price of a good is defined by the necessary amount of labor, not by other criteria. The associations, investigating the price structure of an enterprise under these auspices, can see whether products became too expensive (revealing little demand) or too cheap (more demand than can be satisfied). There can be many reasons for this. Producing more requires more workers and hence more social quotas (IV), raising the price as needed for producers. Maybe the lack of demand is a result of competition, revealing a necessity of improving the quality of a product. The associations need to consider all parameters. Whatever findings may arise, they can be solved by an appropriate shift of labor or of capital (see Fig. 10). Where there is too little demand, labor can be shifted to enterprises experiencing more demand than they can satisfy, and vice-versa. Such corrective moves need not happen frantically, but can be conducted quite gently. In the system proposed here, the workforce does not have to fear losing its job, it can concentrate on improving the quality of activities. Where everything is fine and more income is being generated than the 1:4 ratio indicates (or whatever ratio the particular society may embody), surplus money can become money for lending or donating, amplifying the operation range of that enterprise. It can freely choose the sector it thinks merits some assistance – education, health care, art, research, etc.
Especially in today’s usual frame of mind, some might wonder why the enterprise should want to give away its generated surplus money for lending or donating. There are many reasons for doing so. First of all, the more a producer realizes the eco-social interconnections in terms of real value and an adequately corresponding monetary system, the more he or she is motivated for reasonable altruism. For a consumer, altruism does not make sense, but for a producer it does indeed, because his products will not be bought if the others do not have the means for doing so. Beyond this more general aspect, in a specific system as outlined with the central bank adopting a new and far more complete role, there is no point in hoarding money in that system – after all, at the end of the year (or whatever the accounting period may be) the surplus is transformed into money for lending or donating. Hoarding money is all the more absurd in this system as the division of labor reduces the prices to an unimaginably degree (see Fig. A1 - Fig. A5 in the annex). If debts were claimable in money, this would correspond to a rent without performance – an institution that fosters illusions. The effects of siphoning off value, which define strongly today's economic conditions, drop out – resulting in massive savings on all levels. Yet in the proposed system there is no limit to becoming rich. CEOs can set up their luxury, but on a different basis than now. They can have any number of villas and cars and private jets all over the planet. The art is in lending money. The difference against today is that the payback does not flow as money, but as goods. Yet on this path anything is possible – albeit in a more real way than now, where many people are seduced into drifting off into pointless abstractions. Lenders will think about what is important to them. The 'secret' of the proposed system – if there is any secret at all, since its principle is pure transparency – is that it operates on the parallelism of real value and money. For warranting the required dynamic stability of this system, the associations constitute a reasonable social instrument of assistance, whose perceptiveness is sharpened by their awareness of the principles of birth and death in the system.

The different functions of money imply different types of relation to the reality of the eco-social process. These might now merit a closer look.

In the realm of material economic acts, aspects of the past are decisive, since the bodily aspects on all levels (from physical body to mental body) – results of previous structuring efforts – embody a specific type of demand, a 'restorative' one. The carrying basis, material production, is also a result, an effort of the past. This shared structure of dealing with 'what-already-is' makes understandable the category of fraternity (see III A): here, everything is matter-oriented and hence connected with everything else, as quantum theory emphasizes in nonlocality. Fancy is of no use here: what is required is securing the structures; this is the realm of instinctive solidarity, without which structures drift off into fantasy (example: the economics of interest on interest that can 'forever' be operative only in abstract fantasy). The form of monetary act required for this domain is lending – also because it always is a question of 'payments in advance' out of primal producing through its result, primal production. This type of money can only flow from the type of thought that is called hypotheses, since in a first step we have to accept and suppose something; it is not a mere coincidence that 'credit' is derived from the Latin word 'credere', to believe.

Within the body of the state, understood as all forms of free mutual agreement that in their totality constitute the foundation for understanding each other without presuppositions (which are sources of misunderstanding and hence stress), the immediate direct act is relevant, also in formulating the agreements themselves: they cannot emerge properly when being mentally absent. These facts call for the principle of equality, because faced with (man-made) law all people must be able
to be themselves in an equal way. The type of money corresponding to this 'nowness', free from any mediation, is that of directly purchasing – which in fact has an intrinsic aspect of law, because in its ultimate consequence, in terms of physical matter, money is always an assignation to a slice of the primal product, a material 'remittance' in terms of real value to the corresponding part of primal producing. Money is the accountancy of the performances. In principle, purchasing money will flow out of directly perceiving and experiencing, as an effect of judgment in actuality. – The difference between equality and fraternity is interesting. Often the two are conflated to varying degrees. A logical consequence is that the concept of equality became "central but controversial" (Blackburn (1996:123)) in social philosophy and political theory. Maybe conceptual clarifications such as this one can be of some help.

The domain where thought is applied in the perspective of totality, of nature and society at large, for organizing development and keeping open the future, is the cultural realm. As shown in III A, this requires ideals and objectives, which – interestingly enough – cannot be pursued non-consciously like needs of the physical organism. Here the adequate mental structure is directly to be integrating, universalizing, 'digesting' the contents to the point of complete non-contradiction. For this process, only freedom can be the adequate principle: one cannot afford to be squeezed into presuppositions of any sort. The cosmos is an open-end venture. This might sound like an arbitrary opinion. But upon thinking through the fact that for instance π and e are principles with structural effects that translate only into irrational numbers, doubts concerning a hypothetical closedness of the universe should arise; physical finiteness is another question and not meant here.

The quality of openness – necessary if we don't want to suffocate mentally – does not allow mechanistic fixation, but promotes the integral potential; this is conceivable through the polarity of indefiniteness on the one hand, in individuals cultivating integrity on the other hand. This quality requires a form of money whose function is to be a gift, a donation, a gesture of setting free the appropriate motive – which may seem a strange thing to say in a civilization which concentrates its economic efforts on stimulating non-integrity and then invents theories whereby human beings cannot be trusted otherwise than in their selfishness. It is true that humans have at every moment the choice of doing the wrong thing, but why should we indulge in this side, thereby promoting it?

As a consequence of ultimately inevitable openness to the impalpable future, also the money on this third level can only flow from hypotheses. This does not contradict the fact that qualitative knowledge of intrinsic for-itselfness – for example knowing a person – allows a different kind of prediction than what we are used to through the prevailing habit of non-organic thought. The point is not in knowing what this person is going to do next, as if she were a mechanism, but whether she can be trusted in her way of judging reality, so she can be granted her freedom. Organic life – and finally even the mode of existence of inanimate matter – always has on the one hand its own principle, strict for-itselfness, and manifests on the other hand its flexible integration into the field of the others – in a traditional formulation one might say: eidos and ousia.

Differences in quality finally lead to corresponding institutions. Some exist already that can easily become functional under the proposed new auspices. Changes in the institutional tissue on a deeply ingrained level obviously imply a long historical process of development. Depending on the type of insight being sought or neglected, changes can as much induce life-enhancing effects as dis-integrative ones. If the current superficiality is allowed to persist, the overall social development in
the long run might easily tend towards a split-up between a progressive, integrative branch (more human-like) versus a self-destructive branch (more animal-like). The phenomena that are currently being witnessed can give a first impression of such a structural cleavage in the social compound.

D. Upshot of quantitative processuality in conceptual totality (VIII A - VIII C)

Now that the overall structure of society, economy and nature has been penetrated by secure qualitative determinations, the possibility is created of quantitatively introducing money as a universalizing medium of economic exchange. It renders monetarily tangible also the unit of account. For regulating administratively the money, a form of central bank makes sense, of which local institutes are 'mere' subsidiaries or departments. In a period of transition it might pragmatically be useful to take, as a reference magnitude for the total amount of money to be circulating, the material product. But when transparency is achieved in a system (more and more 'thinkers'), the grand total of money can be adjusted according to the population (the number of people). This assignment refers to the real value in the economy, it contains no additional (imaginary) valuations that can take effect – as any determinations in a logical system – only in a limiting and hence specializing manner, but not in a sense of adding to the options. It is obvious that these assignments entail structural consequences. And evidently such elements can be blown up to the point of paralyzing public control and/or the state. For avoiding victories of an evil sort, a seamless clarification along the purely systematic requirements is necessary. Its reward is an enormous increase in real value for all participants in society.

In the flow of the actual currency (medium of exchange), the money should 'die' after having fulfilled its function. The flux has different social functions depending on the purpose of the financial transactions or interventions. These finally mirror a temporal characteristic: the relevant aspect can concern the past, the present, or the future. These three functions of money are structurally important: they form a basis for further differentiations that can for their part also engender institutional consequences; for instance donating money calls for a different type of handling than lending money or purchasing money. It is necessary to verify whether the three types are closed in themselves or have connections to the other two; for example, in complete reality, money for lending could gradually merge into money for donating, because life had duly been taken care of in the meantime.

Applying concretely the exposed interconnections can be even more in conflict with existing institutional structures than the elements discussed in chapter VI, because they concern more inveterate forms of presuppositions and more deeply ingrained convictions 'in' or 'behind' the social structures. The reason for this state of affairs is that the currently operative system has been developed in assigning the primacy not to the qualities – as any full-fledged logic requires –, but to the quantities, of which a short-sighted view emphasized some ostensible advantages, making those quantities somewhat addictive. The friction is intensified also from the other side, the individual agent, since his day-to-day economic acts define – as a direct materialization of the ideational paradigms – the perceptible appearance of the system. Real systemic improvements require insights on this level and can therefore be expected only upon addressing adequately the population at large – in an endeavor that is clearly of transdisciplinary character. Here the difference between thinkers and non-thinkers is relevant – and the means for allowing non-thinking to become thinking. The thinking person will check through her conceptual instrumentation, thereby developing her insights and self-knowledge, while non-thinkers will remain passive observers, more or less victims of the
situation. A big question of responsibility then is whether the decision-makers are leaders or misleaders.

IX. Concepts of Quantitative Processuality Within Eco-social Totality

As shown in VII A, the guidelines of the individual show a 'crossover' with the devolution of society: content that seems relevant to the individual becomes the materially and hence formally shaping aspect on the collective level, while material influences that shape formally the individual existence grow into the relevant content that feeds the debates in society. Our indication in I B 4 that a sustainable system cannot be achieved in abstractly inventing something and imposing it on the populace, may sound like a postulate, but in fact originates in systematic considerations that are integral on principle. As much 'communist' as 'capitalist' experiments exemplify this point. The currently dominating system has seemingly been able to eliminate the problem by seducing agents with the mentioned short-term advantages, but now the believers are paying interest on their ideational investment. One of the prices being paid is the structural instability of the system that compels to sidestepping, for instance as a split-up into sub-systems (e.g. LETS, local exchange and trade systems) that compensate an excessive outflow of value to the 'global players' and become especially useful when the ruling system collapses. The problem does not become resolvable by central banks prohibiting auxiliary systems, as could still be done in the 1930s of the 20th century with local systems (Wörgl, WÄRA, Irving Fisher's attempts, etc.) that proved to be successful, thereby challenging the rigid structures defended by traditional powers.

Since globalizing effects have made the institutional cobweb ever more seamless, the artistry of authentic cooperation will become important – globally. In spite of formal differences, the old ideologies – capitalist as much as the socialist – are connected by a shared basic belief, whereby the power of control over the means of production is the decisive basis for being able to exist socially (as mentioned in I B 2). In both perspectives the fact has not yet been noticed that rational activity can be achieved only when ideational clarity is at the origin, not when material conditions impose the path. Of course material conditions must be fulfilled for organic beings to become reasonably operational, but the value of the material conditions resides precisely in not influencing mental activity, but on the contrary in setting it free by virtue of allowing organic equilibration. If at some locations of the system mafia-like activities can get the upper hand, this is precisely because the prevalence of the ideational aspect has not yet duly been recognized and full transparency has not sufficiently been sought: organized crime can thrive only in the dark. Counter-violence is finally less efficient than uncompromising transparency. Maybe the thirst for transparency still needs to grow. Where thinking fails, experiencing disadvantages can bring that about – under the condition of better ideas being available for avoiding unintended consequences of acts. Many things can be manufactured, but never an absence of effects.

A. Feeding currency into the system – in a life-enhancing form of credit structure

In section I A 2 the historical line of development was mentioned that illustrates the effect of increasingly becoming aware of the elements implied in the eco-social process. First people became aware of the objects, the goods, producing them relatively directly and trading them in bartering economies. In a second step, in becoming more intellectual, the idea of a mediating element arose, the exchange medium, leading to monetary economies. And now, in increasing self-awareness (at the price of a self-distanciation, self-objectivation: making oneself into the considered object), the
guideline is what one can actually learn and do, the operative capabilities of the individual – which may collectively be organized and aggregated into higher structures – in the process of discovering that the individual can do far better than merely to obey circumstances; the result is economies of personal capabilities (compare for instance Sen (1987), Nussbaum / Sen (1993), Nussbaum (2006), Herrmannstorfer (1997)).

In an economy of personal capabilities the awareness should include also the fact that such capabilities are not simply there, as in animals, but need an adequate social matrix for becoming actually operative. At first, the personal capabilities of a human being are a pure potential and require thus the appropriate education. Then the person applies her education in the aim of doing something, which requires means of production and sometimes is a risky affair. When performing properly, there is a useful result – a consumer good (e.g. a household gadget), or a capital good (e.g. means of production), or a good to be invested (e.g. research, teaching, healing).

The produced goods are consumed – in a process that is facilitated by a medium of exchange. But as we have seen, money has specific characteristics depending on its use, which define types of money that require – in a categorial consideration of money – specific administrative structures. In the realm of useful results (goods and commodities), using money for purchasing is the relevant gesture. Here credits do not make sense, because direct purchase implies already possessing the counterpart in value. This is the realm of im-mediacy, of spatiality: everything is simultaneously present. For structures of applying education – needing means of production – where a success is possible, but rarely warranted, using money for lending is the appropriate act, allowing capabilities to unfold. In lending, there are essentially two forms: credit proper, and participation. In credit proper, the applicant gets what he needs upon mortgaging his assets, so in case his initiative fails, the harm is limited by making other uses of the assets. But this can cover only part of his needs, as exploiting those assets is always limited. The rest can be covered by forms of participation – for instance through shares or bonds. Here a temporal aspect comes in through the obligation in special cases to pay back a credit; in initiatives of the participatory sort, time is not experienced passively any more, but engendered by one's own action (see the short remark in I A 2 concerning time). In the realm of education, constructively being open to the future is essential, avoiding fixations to past results. This open-end quality implies that no palpable return on investment can be expected; therefore here the appropriate use of money has the quality of a donation. Paying taxes is a way of donating – a mandatory gift, in this case for the community. Private initiatives often take form as a foundation or endowment. Here the existential characteristic is beyond the limit of time and space, it is renewal, life as such. Where a person has the initiative of being herself, by self-activation, the good to be invested – for instance in teaching or healing – the correlation of donation and alive immediacy can be quite evident. – A more detailed exposition of these interconnections and ideas, presented concisely by Paul Mackay, can be found at www.zukunft-der-menschenwuerde.net

B. Conceptualizing profit in a reconciliatory and hence life-enhancing way

In today's system, profit is being achieved by taking something away from something else or somebody else. First this occurred quite overtly, by brute force, but gradually disguised ways have evolved (think for example of the hidden burdens in prices, as mentioned in section V D). The attitude of taking away corresponds roughly to the notion of individual gain mentioned in VII A; it appears on the theoretical level as a primacy of business administration over political economy, the latter often being presented in terms of the former. The gesture of taking away stems from an
archaic way of thinking – in fact it should not really be called thinking, because it is not a way of seeking integral insight, but of letting oneself be enticed and carried away by dear illusions.

But economic action can achieve collective gain, corporate and even social profit, without the side-effects experienced under the presently dominating regime; some of this is outlined in VIII C. Yet the social role of collective profit merits some more attention. The essential point was that the system runs smoothly and efficiently when the associative techniques accomplish an equilibration of the social quotas across the whole society. This does not preclude collective gain at all – quite on the contrary, under such conditions the probability of it arising is high because then the people feel good and sociality is teeming with life, everybody creatively being motivated.

In the proposed system, achieved gains that exceed the quota become money for lending or for donating – and finally all money for donating is functionally the state's share, money for public spending. Traditionally, maintaining materially the social structure was accomplished essentially through the share of government expenditure in GDP – a result of many people working hard and rarely really knowing what for. In contrast, in the proposed system it is the gift offered freely by the people for their collective well-being. Upon deeper insight there is no need for any coercion.

The collective level needs means for being able to operate. In the presently usual case taxes are being levied – often in quite inconspicuous ways. Compulsory levies are so common that the common of mortals rarely even notices them as such. The tax office is not the only one to levy taxes. For example compulsory health insurance is a way of taxing, or a mandatory old age and survivors insurance, or needing a ticket in the bus, or having to paste stamps on a mail envelope, or even needing a ticket for visiting a museum. Many of these charges could be eliminated in a regime of the proposed sort – as a result of advisedly placing money for donating. And all of this would be a kind of collective gain. If ever it were absolutely necessary to levy some additional tax, the proper place to do so would be where goods are actually being consumed, burdening the system – as a sales tax, or value-added tax, of appropriate percentage.

In thinking the eco-social process in terms of real value, a positive idea concerning social profit is by far not as difficult as under traditional assumptions. Traditional beliefs on the nature of value cannot avoid perceiving value creation as a result of streamlining trade – where the corporate level capable of organizing it feels justified by theoretical beliefs (mixing up imaginary value and real value) in its activity of siphoning off profit into its own pockets, inducing corresponding loss for the other economic agents. The agents on the corporate level really believe they create value! In contrast, distinguishing clearly between real and imaginary value and considering gains in terms of real value (collectively as primal product), independent of imaginary values, is objectively helpful. It allows not only distortions of the past to be eliminated and complications to be disentangled, but also new structures to be conceived without any danger of inducing needless conflict.

The basic possibility of collective profit is in the possibility of being so well organized that the available means need not completely be used up at the end of the respective production cycle. In the proposed system, nobody is worse off when gains occur. Pareto can quietly go to sleep. The still available rest, which appears in the balance sheet of the ending cycle as a debit, then arises in the balance sheet of the starting new cycle as an asset that is added to the new allotment. This principle applies also in rather unimpressive cases. Think of all those professionals who now still need to raise their prices for achieving more income – for example doctor's fees – while salaries are
not being augmented, so then the health insurance becomes more expensive, and wage earners do not know where from to take what is missing. Others stage unnecessary work for achieving more income. In the proposed system, no such moves are necessary because it can become evident that there is really enough for everybody.

For a transition to noteworthy renewal to be successful, a necessary condition is an adequate training, for giving the chance of operating under collectively more fruitful premises and methods than those proposed by the traditional ways of working in theory and practice.

C. Upshot of quantitative processuality in social totality (IX A - IX B)

Having clarified the relationship between value and money, the possibilities of constructively applying money in the economic system can become a reasonable theoretical subject matter. The economy has developed into an economy of personal capabilities, which appear in three ways: as pure potential calling for education; as application of education calling for means of production; and as their final result: usable and tradable goods. These three forms call for different ways of being nourished with money. Directly buying goods requires purchasing money (forms of cash). Warranting means of production calls for forms of credit, which can be credit proper and forms of participation for instance via shares or bonds. Allowing for education calls for forms of donation because no direct return on investment can be expected. The basis for a social surplus, the possibility of collective profit, is in being well-organized in a production cycle, so as not having to use up completely the allocable primal product.

At first sight, concretely applying the idea of different types of money and of allocating monetary resources might look like an unnecessary complication. The advantage is in making transparent the functions, thereby avoiding costs which otherwise appear as social burdens at other points of the balance sheets (when explicitly being considered at all). In the same way as social interaction is eased when every person knows her mediating position between needs and ideals (Fig. 3 in I A 2), her knowing about the levels of economic action facilitates the social functions. This includes the corporate level management – in the associations, but also in firms and companies – whose members then can adequately assume responsibility for a collective profit (surplus).

X. Concluding Considerations – Especially Concerning Practical Applicability

Some of those who have commented on the present proposal have expressed concerns that it is very difficult to implement in contemporary reality, because it does not adopt the easy-going pragmatic jargon that sells easily; as if that could warrant a secure solution. It is astonishing how many jolts resulting from inadvertently incurred side-effects of traditional policies many decision-makers still need to experience – think for instance of the crisis in the global financial sector, or the global increase in tensions and aggressiveness – for eventually realizing that the presently effective policies need a serious overhaul in their foundation, which first of all means the theoretical basis. Believing there is no alternative to old habits is no dependable solution. The fashionable hope that some empirical orientation can warrant realistic knowledge is a way of forgetting than then also theoretical errors are finally compelled to surface empirically, as failures, for becoming noticeable. In that sense, jolts are necessarily part of the still fashionable set-up.
Our opinion is that pragmatic attempts at solving today's problems can be quite useful for immediate action, but cannot warrant long-term success. There is a need to pursue simultaneously a second line of absolutely uncompromising thought for securing the theoretical and methodological foundation. Using military jargon, one could say that tactics is fine but cannot replace strategy – while much of what is being called strategy these days is only blown-up tactics. Jolts arise where there is not enough devotion to the subject matter and too little listening to rational considerations.

So the question boils down to the capacity of devotion to a given subject matter and finally the nature of rationality. After having gone through the peculiarities of the eco-social process and the possibilities of grasping it theoretically, we can distinguish better the essentials and in this case appreciate the turning points, which are the same for all beings, whether arising out of their own or by dint of acts of others: life and death, being born and passing away – including the 'backside', the fact that beings of the same type arise again. This is the topic with which we had set out (ch. A), and with which we can conclude. The nature of a rational grasp is to assimilate oneself to the given subject matter, do 'die' to it by means of 'listening' objectively to it instead of polluting one's idea of it with one's own subjective beliefs. The resulting insights can then warrant ideas that survive the inevitable background process of having to die: whatever survives that passage through non-being, is sufficiently alive for being fit for life in its large sense, reaching beyond life in the sense of an ephemeral incarnation, an expression passing by. The nature of what can survive death cannot be material in the physical sense, because physical materiality is precisely not immortal (in spite of bold hopes of some physicists); yet the process of rational insight can forever be improved.

So whom for has this essay been written? Since the official lines, of which many still follow fashionable illusions, are not as dependable as would be appropriate, this proposal is addressed to whoever is really interested in insight and improvement. There is no patent on ways of thinking and nothing is violated in thinking things fully to the end. This concerns strictly everybody. What we try to approach here is an overview for optimizing and improving conceptual links and opening the horizon towards further differentiation. The idea of this proposal is not to expose a system to be obeyed blindly, but to offer mental incentives by means of coherent fundamental concepts, for enabling as many members of society as possible to participate freely and collaborate constructively in discussing fundamentally the socio-economic process, of which we all are a part anyway. The historical process of development evolves depending on how each of us performs – more towards insight and cooperation or more towards selfishly narrow views and disintegration.

The theoretical part of this endeavor is in modeling mathematically the eco-social process in terms of real value through all its conceptual stages for easing the dialogue between representatives of all economic theories. This is an effort yet to be undertaken, and might be the subject matter of a sequel to this sequel.

>>> See also the Annex – some complementing illustrations (in a separate file)
References


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