

Thoughts on the future of human evolution

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Abstract

The Noetic perspective (from Greek: *noetikos- mental; nous- mind*) identifies the [human] mind as the nexus of the future evolution of humanity. At present, human evolution is a mental process rather than biological or technological process.

The Noetic model describes mind as a relation generating complex system arising as a product of biological evolution and manifesting certain defining characteristics such as systemic closure, self reference, plasticity, etc. This model aims to integrate a systemic view with the mental constructs of the subjective plane. According to the Noetic model, human identity is a dynamic constructive process that brings forth the human observer as the subject of its perceptive and mental states. This process is identified as mind. Images and narratives are the elements encompassing the experiential and mental aspects of the identity process as they appear to the human observer.

The idea of mind as the theater of evolutionary processes is further explored: Mind as a complex system can essentially be disassociated from the historical conditions of its emergence; therefore it is virtually unbound in its evolutionary potential. This has deep implications on the understanding of human nature and the human condition. Finally, the ideas of openness and freedom beyond utility are proposed as futuristic directives of consciously guided evolution of mind.

Introduction

A few years ago I had this idea/realization that though we are physically and biologically embodied, we are actually born, live our lives and die in our minds. The mind is the ultimate realm of our existence individually and collectively; we never leave the mind, in fact we *are* the mind.

In the modern thinking about evolution, about possible transformation, especially as it pertains to humanity, we always think in terms of biological processes, and recently in terms of technological convergence. Though somewhere, in the back of our minds, we know that everything we experience, think, know or aspire to is taking place in our minds, we rarely engage in serious thinking about evolution as the evolution of mind. Here, by evolution of mind

I do not mean the evolution of brains and nervous systems, I do not even mean neural Darwinism a la Gerald Edelman, nor am I referring to augmentation of mental capacities by technological means. What I mean by 'evolution of the mind' has to do with the stuff of mind and mental processes; with the images, concepts and stories that make up the only realm we can know in an unmediated fashion. I would like therefore to propose here that the mind is the nexus of the future human evolution. It is, I believe, the only effective, all encompassing, integrated approach to thinking about the future of human evolution in all its dimensions and scales.

I believe that once we understand the mind as the playground where human evolution takes place, our thinking about the future of humanity will become clearer and more coherent. We need to think about the condition of human individuals, institutions, societies and the whole of human civilization as products of the complex relations of images, concepts and the stories they engage in their self description in the dynamic process of identity. This will be shortly explained.... I call this proposition the Noetic perspective derived from the Greek word *noetikos* from *nous* which means mind. The Noetic perspective is a viable alternative to the contemporary view that technological advancements are the driving force of human evolution at present and in the future.

In 1993 Vernor Vinge wrote in his paper "The Singularity":

"Within thirty years, we will have the technological means to create superhuman intelligence. Shortly after, the human era will be ended." [The Singularity, Vernor Vinge, 1993]

By "human era" Vinge means of course the era of the human as we know it today. But when we try to clarify that which was seemingly obvious only a few decades ago, the nature of the human phenomenon, we realize that this is not a trivial question. Not that it ever was if one would have approached it with impartial scrutiny. In any case, Vinge reflects that it is technological progress that will bring to an end the human era.

Here is an interesting alternative reflection written by the American novelist J.C. Oats back in 1974:

"What appears to be the breaking down of civilization may well be simply the breaking up of old forms by life itself (not an eruption of madness or self destruction), a process that is entirely natural and inevitable..."

What we must avoid is the paranoia of history's "true believers", who have always misinterpreted a natural, evolutionary transformation of consciousness as being the violent conclusion of all history. [Ref: New Heaven, New Earth: The Visionary Experience in Literature, 1974]"

Oats' emphasize here is on transformation of consciousness and mind as the significant change humanity is going through.

Human identity – the very concept of what a human is, is apparently at a transformative junction. Among the significant processes that mark this junction I can mention:

- Accelerating change, information explosion and hyper connectivity.
- The dissolution of the uniqueness of human existence starting with the Copernican revolution, the Darwinian/genetic revolution and the neuro-scientific revolution taking place over the last two decades.
- The dissolution of human unique characteristics resulting from advances in human behavioral science in conjunction with discoveries regarding animal behavior and animal intelligence. The prospects of machine intelligence and machine cognition.
- The prospects of radical enhancement and modification of the human biological system – Genetic modification, body and brain enhancements, man –machine convergence, radical life extension and more.

These processes are not anymore mere arbitrary evolutionary pressures imposed by the environment. These processes originate in our minds, in our perception and thought processes, in the manner we interact with the environment and with each other, in our visions, dreams and aspirations. Human evolution nowadays is not a biological process anymore it is a mental process. It is the evolution of our minds and our consciousness being self-propelled and catalyzed by our own minds.

The Noetic perspective, in a nutshell, is the mind being the nexus of future human evolution. A successful development of this perspective will at least:

1. Propose a clear and distinct concept of mind (and of consciousness)
2. Explain the emergence of mind from its neural biological substratum.
3. Propose useful model(s) of mind and its dynamics.
4. Integrate the various planes of human mental phenomena; the individual, the communal (small groups dynamics), the cultural and the collective pan human plane, into one framework.
5. Provide clear models of evolutionary and developmental processes of the mind and allow the understanding of the self generative nature of such processes (the role of reflective consciousness).

The mind - the human realm

As I said, though the human is conventionally considered a biologically embodied social organism, I would like to propose here that the human phenomenon is best described as belonging to the realm of mind. What is mind? What are the conceptual and descriptive tools by which we can think about mind being the nexus of future evolution? These are perhaps the most significant transdisciplinary questions we can possibly ask as human beings. They clearly resonate with the mythical age old aphorism 'Know thyself'. These are questions I am going to briefly address here:

Mind is a relation generating system.

Mind is an open ended, multidimensional complex self generating system. As such it is the subject of system theory in its widest sense.

The basis of mind is biological, but as an emergent system it extends beyond the biological and the physical in manners that are still not fully understood.

Fundamental to the human mind are the underlying biological mechanisms that give rise to a conscious observer as the subject of his mental states. Cybernetic theories of human cognition have offered models of the human central nervous system as a complex system that constructs self referential representations of both the organism and its environment. Important theoretical contributions to a systemic theory of mind were made by philosophers and system theoreticians such as Gregory Bateson, Heinz von Foerster, Humberto Maturana and Francisco Varela and more recently by Thomas Metzinger and Douglas Hofstadter to name just a few. The cybernetic/systemic approach to mind tries to distill those structure independent characteristics of the central nervous system that give rise to mind.

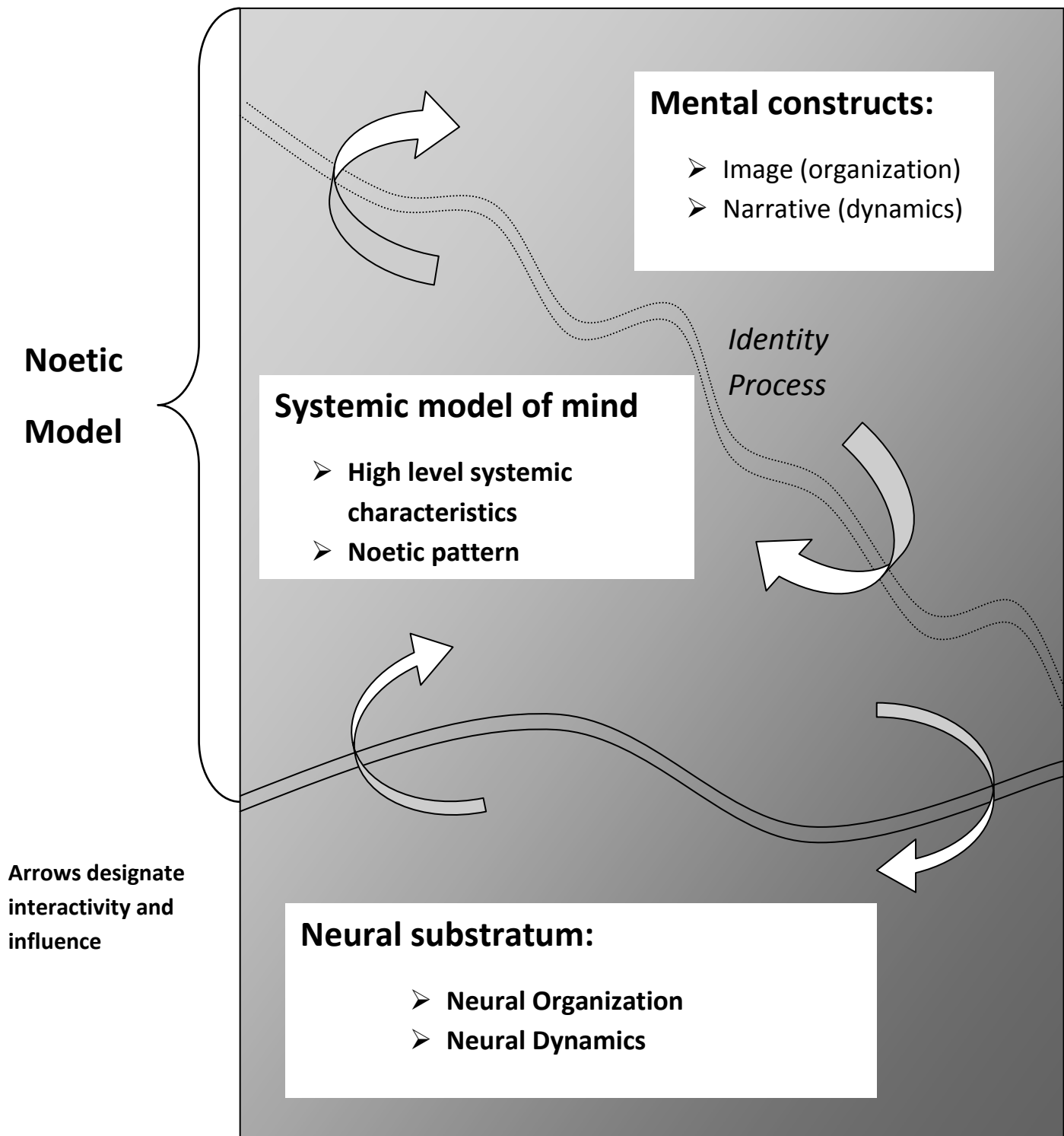
A short and certainly non-conclusive list of these abstract systemic characteristics would include:

- Systemic closure
- Feedback dynamics
- Multiple order recursion and self reference
- Plasticity and adaptability
- Extended coordinated interactivity
- Open self organizing hierarchy

It seems evident that from neural structures organized in such manner that brings forth these systemic properties, the human mind emerges as a complex dynamic phenomenon. These general systemic properties seem, if so, to be necessary (but not sufficient) to the emergence of minds.

The Noetic model comes to describe the overall qualities and dynamics of the mind and its contents. It is a domain of descriptions that aims to integrate a systemic model of mind with the subjective contents of the mental/cognitive plane. The Noetic model is constructivist in the sense that it accepts the fundamental self generative nature of the mind and, therefore, does not accept an a priori ontological reality. Instead, it embraces a constructed reality – The appearance of a world to a conscious observer, both, world and observer, emerging from organized systemic interactions embodied by the nervous system.

Noetic pattern (definition): An abstract construct that corresponds, on one hand to a correlated neural activity pattern and, on the other hand, to a definite mental construction as it appears to, or affects, human observers in the course of their recursive self description.



Mental constructions arise as products of the co-emergence of an observer and the world that appears to her. This co-emergence is the continuous process of recursive self description/representation which brings forth human identity – the knowledge of being someone. This is what I call the human identity process. Mental constructs and their associated Noetic patterns can also be understood as the Eigen values of the complex dynamic system a mind is [Von Foerster].

The mental constructs constitutive to human identity, appear in two major generic species: image and narrative.

Image (definition): An image is a Gestalt perception of a human, both individual and collective, in relation to the self, others, society, and the cosmos. It may contain many organizational levels and face apparent contradictions and paradoxes – as does the living human being – and still be experienced as an integrated whole. Image elements may be perceptions, thoughts, beliefs, symbols, models, concepts, behavioral patterns, descriptive patterns and more.

In the ongoing process of self description, images are related associatively and the associative links between images codify their relative meaning for the observer. The dynamic universe spawn by images is the Noetic theatre, the identity space, the state space of mental constructs and human-constructed reality.

“image of man” (or of mankind-in-the-universe) refer to the set of assumptions held about the human being’s origin, nature, abilities and characteristics, relationships with others, and place in the universe. A coherent image might be held by any individual or group, a political system, a church, or a civilization. It would consist of beliefs as to whether we are basically good or evil, whether we are cooperative or competitive, whether we are essentially equal, and so on. It includes both what man/woman “is” and what he/she “ought to be”. Most societies have a reasonably coherent image of what it means to be “human”, defining, for example, the ideal social nature of a person.

These images are held at varying degrees of awareness by persons and by societies. For some, images are likely to be in the forefront of awareness, perceived as reality and used consciously

in perceiving the world and in making decisions. For most, however, assumptions about the nature of human beings are held beneath the conscious level of awareness. Only when these hidden assumptions are recognized and brought into awareness is an “image of man” discovered and/or constructed. Then the image can be examined carefully and with perspective, to be retained, discarded, or changed. [Adopted in part from SRI paper “Changing the image of man”]

Narrative (definition): Narrative derives from the Latin verb narrare, which means "to recount" and is related to the adjective gnarus, meaning "knowing" or "skilled". Narrative is a concept complementary to image. While image highlights the organizational features of mental constructs, narrative highlights their temporal and causative unfoldment in the process of identity. Human describe themselves by telling stories (and recursively, stories about stories). In telling stories they create images of themselves. These images realize the very praxis of human existence – the human existential narrative. In many instances image and narrative can be used interchangeably.

The concepts of image and narrative were explored by many philosophers and psychologists. Among the most significant contributors I would mention C. G. Jung (archetypes and the collective memory), Joseph Campbell (myth theory), George Lakoff (metaphor theory of language), Alvin Toffler, and an SRI research paper titled “Changing the images of man” (1972) and of course many others.

Before exploring a few examples, it is worthwhile to note the following:

1. Our very conception of mind is a complex dynamic image. Mind therefore is a self generative and self referential construct.
2. Mind as the dynamic process of identity modulates and is modulated by the interactions of the human organism with its environment (including other minds). Mind, therefore, cannot be located in the brain. It is rather a holistic and all pervading happening that transgresses the common objective/subjective dichotomy.
3. From the standpoint of a human observer, images and narratives constitute a fully immersive space of existence. As observers we never leave this space.

Examples

There is of course a great wealth of examples of how we understand human identity in terms of images and the mental constructs they correspond to. Images, after all, are the very elements of our self description at all levels. What would be interesting is to explore a few examples of images that are standing at the foundation of contemporary human identity and note A. How deeply we are immersed in such images, B. How we discover that such images do not reflect a universal truth but are, rather, constructed descriptions and, therefore, subject to transformation or even disappearance from human identity space, and C. The battleground of human identity: how Noetic dynamics bring forth rival images and alternative descriptions that compete, like virtual organisms, on the resources of our individual and collective mind space. In fact, much of psychology and politics reflect the drama of the Noetic theater and the human identity process. Just recently, in her book “What should we do with our brains?” French Philosopher Catherine Malabou reflects:

“Hence there is a thin line between the organization of the nervous system and the political and social organization that both condition and is conditioned by human experience. Looking carefully at contemporary neuroscience, it is hard not to notice that the new way of talking about the brain mirrors the management discourse of the neo-liberal capitalist world in which we now live, with its talk of decentralization, networks, and flexibility.”

I have chosen here a few contemporary examples that seem to support the view that human evolution (or non evolution) takes place first and foremost in the human mind - in the transformation of identity through changes in image and narrative and their corresponding Noetic patterns.

1. Free will – Take for example the idea of free will - the image of the human agent as a free agent, in the world and society, who has the capability to intervene in the world and choose in a manner which is independent from every conceivable condition. Free will stands at the basis of our understanding moral behavior and moral responsibility. The mental construct “free will” and its organizing function both in human relations and individual identity, is persistent and strongly rooted in human identity in spite of many sound philosophical arguments and empirical facts that call to question its validity. The

reason why this image is so persistent has to do with its essential function in social organization and with the way humans understand their agency. The social and psychological functions of free will are so essential that even if we do not factually have free will, presently, in many aspects we are better off describing ourselves as if we did.

2. Death – One of the deepest and most rooted images of human identity is the finitude of life and certitude of death. Moreover, the image of death is that of being an immanent aspect of existence and of life. The fact of death an important part of our human identity, of our psychological makeup, of the value and meaning we assign to our lives and much more. The certainty of death was so uncontested that it became a metaphor to any irrefutable fact: “as certain as death”. Recently, however, cracks seem to appear in this image, exposing its fundamental constructivist nature. Death no longer seems to be the universal fact it used to be. Based on progress in life sciences, visionaries such as Aubrey de Grey dare to question our deepest rooted images and offer an alternative: death is *not* an immanent aspect of life, death is merely a health condition (not the result of health condition) and, as such, death is treatable. Given a deep enough understanding of life processes, death might become entirely avoidable and life could possibly be extended indefinitely. Moreover, even the process of aging is undergoing a gradual conceptual change from a natural process to a health condition that can possibly be reversed with future achievable technologies.

For the purpose of this discussion it is entirely irrelevant whether or not death can be cured. The remarkable fact is that the change in image changes profoundly our worldview and affects our choices and life style way before this prospect becomes in any way realistic. The proof for this effect is that insurance companies are already updating their premium calculations to include significant increase in life expectancy. Think about the possibility of radical life extension and its impact on individuals, on human relations and on social organization. Think about the concept of afterlife that fueled and still fuels religious sentiments and beliefs and guides the way many people live their lives. Think about ‘forever’ becoming literally so in human relations. Think about the moral problems involved in death becoming an informed choice and the taking of life becoming of a

completely different meaning. Think about time enough for us to mature, to understand, or too much time spent in utter boredom...

It is also important to remark that once such change of image emerges, it affects the amount of resources society is willing to invest to pursue the actuation of such image.

Due to the recursive and self generative nature of mental constructs, images conceived first as imaginary farfetched visions have the power to catalyze their own actuation.

3. The understanding of evolution – Darwin's theory of evolution is no doubt at the center of one of the most profound changes in the human image of himself. From a creature created in the image of god to yet another product in a 4.5 billion years long blind process of selection. But even after the accommodation of this radical idea, the way people understand the meaning of evolution as a process is a matter of images that emerged in the human identity process to fit certain descriptive needs.

The immense complexity of evolution was oversimplified to a set of images in the light of which general concepts, such as the survival of the fittest, is being misinterpreted to be a bloody, cruel and inexhaustible competition between species and individuals within a species, where self interest is the only guiding principle. This image fitted certain other theories about human nature and the dynamics of human relations. Recently, however, this image starts to change. In his new book "The Age of Empathy", a Dutch psychologist and primatologist, Frans de Waal, offers an alternative: Based on the idea of group selection, he argues that the evolution of empathy is the end product of natural selection's promotion of advantageous altruistic groups. He writes:

"The nasty, brutish existence dominated by "savage competition, ruthless exploitation, and deceit" that Dawkins describes is far from the norm for animals that live in social groups. They thrive because of the cooperation, conciliation, and, above all, the empathy that they display towards fellow members. The support and protection they receive from living in a group more than compensates for any selfish advantage they might have achieved on their own. In other words, the "selfish gene" has discovered that the most successful approach is to behave unselfishly. De Waal thus argues that the age of empathy is far older than our own species and that we must keep this in mind as we try to apply these lessons ourselves."

Again, this example is not about a scientific truth or empirical observations. Animals did not start to behave empathically in the last few decades. What we can possibly observe in nature and understand from nature has everything to do with the narratives and images we highlight in our general process of identity. These modifications, or potential modifications, in our images hint towards how human identity can evolve through the emergence of more complex images and narratives. It seems also that our capacity to observe and understand the world is deeply connected to the kind of images we can accommodate into our self description.

4. Economy is not a natural science – This is one of the most interesting examples I have recently came by. In his article “Economy is not a natural science”, published in EDGE magazine, Douglas Rushkoff writes:

“We must stop perpetuating the fiction that existence itself is dictated by the immutable laws of economics. These so-called laws are, in actuality, the economic mechanisms of 13th Century monarchs. Some of us analyzing digital culture and its impact on business must reveal economics as the artificial construction it really is. Although it may be subjected to the scientific method and mathematical scrutiny, it is not a natural science; it is game theory, with a set of underlying assumptions that have little to do with anything resembling genetics, neurology, evolution, or natural systems.”

...

“Whether it's being done in honest ignorance, blind obedience, or cynical exploitation of the market, the result is the same: our ability to envision new solutions to the latest challenges is stunted by a dependence on market-driven and market-compatible answers. Instead, we are encouraged to apply the rules of genetics, neuroscience, or systems theory to the economy, and to do so in a dangerously determinist fashion.”

Again, it is interesting why and how a set of mental constructs that organizes the economical transactions within society has entrenched itself so deeply in our collective identity that we tend to believe it to be an immutable natural law. Why do we overlook, or altogether dismiss, creative alternatives of managing and producing wealth? Indeed, recently, alternatives, such as the open source movement and ideas such as alternative decentralized currencies, start to gain traction. Still, in the light of the narratives we are used to identify with and the self referential nature of our observations, these

progressive ideas seem to defy 'objective' reason or even natural law. And, again, it seems that if we will accept that current economic theory is mostly rooted in modifiable mental constructs, very interesting future horizons can open in our understanding of wealth and our capacity to generate it.

5. Environmentalism – Concepts such as interconnectivity of all life, the holistic nature of the biosphere and the value of balance and sustainability replace the Judeo-Christian image of the human as being removed from nature and, by godly mandate, being the master of nature. The Judeo Christian image mandates and allows the exploitation and abuse of nature because the human does not belong to nature and is not accountable for nature. The environmentalist movement is an example to a shift in the image describing the relation of man and nature. It is part of a deeper process that started with the Copernican revolution and continued with Darwin's theory.
6. The phenomenon of branding - Image as an independent value. In a consumerist society where differences in material and quality are not enough to differentiate value of competing products, images are become means to differentiate very similar products and create value which is independent from the cost of work and materials invested in a product. Branding is possible only because images are ultimately significant to human identity process. Branding is, in fact, the economic exploitation of this fact. Brands are images which are mental constructs with very small correspondence to any material object. Branding is one example that demonstrates the power of abstract images to influence the material domain by creating economic and material value.
7. The image of individual selfhood – This is of course one of the most important, if not the most important and powerful image that organize contemporary human identity. There is no doubt that individual selfhood is a mental construct per se. Like the idea of free will, it is an important organizing principle of the human psyche and of human society. Its validity is in its utility. Quite a few philosophic approaches refute the existence of self. From Buddhist philosophy to contemporary works such as Thomas Metzinger's "Being no one". I believe that, in certain futuristic scenarios of human evolution, the image of

individual selfhood may undergo radical transformations and might even disappear altogether.

8. Human nature - Is there such a thing? What are the images and narratives we apply to our own identity process? What is our evolutionary potential and how to think about it? Are we free or bound by blind forces that shape who and what we are? Some of these questions I will try to address. As an introductory note I would like to Quote Pico Della Mirandola, one of the harbingers of the renaissance movement, who wrote more than 500 years ago:

"We have made you a creature neither of heaven nor of earth, neither mortal nor immortal, in order that you may, as the free and proud shaper of your own being, fashion yourself in the form you may prefer." (from: "Oration on the Dignity of Man", (1486))

Mind and evolution

The Noetic perspective proposed here does not offer a new theory or new observations. It rather offers an alternative view, or interpretation, of what being human is all about. It seems to me that many of the deeper existential riddles that we encounter at this point of human history need a fresh perspective. John Brockman the founder of EDGE once said that new technologies equal new perceptions. Well, this is, I think a very partial observation. In the light of tremendous advances in science and technology and in the light of deepening understanding of human psychology, of social dynamics and complex systems, one would expect that no human being would walk hungry or deprived of the basic needs for a decent life. One would expect conflicts to be resolved peacefully and no mass murders to take place. One would expect that human beings will not be enslaved by fellow humans. One would expect that our planet would not be systematically abused and destroyed. One would expect a sensible (though not necessarily equal) distribution of wealth. One would expect knowledge to be free. One would expect tolerance and empathy to become primary in human relations. One would expect many things. Yet the realization of all these expectations still eludes us, perhaps because we fail to address the source of all human activity – the human mind. Technology might provide us

with unlimited resources, health, longevity and knowledge. But the primal patterns of our identity, the images and stories through which we know ourselves, may not change in any interesting manner. We might well become super augmented post humans while still holding to Neolithic sensibilities. Regretfully, in view of the last hundred years of human history, this wouldn't come as a surprise. This is why I believe that the Noetic perspective is one worth pursuing, especially in regards to the future of human evolution. The mind is certainly the nexus of our humanity, and, still in an almost mystical way, it encompasses much more than our humanity; as if it also enwombs the vastness of our potential humanity and not only the humanity that is. I would like to share here a few of my (admittedly preliminary) thoughts on the subject.

What is evolution and what is evolution of mind?

Evolution (working definition): a systemic process of semi organized (semi deterministic) and open-ended variation taking place under given sets of constraints and degrees of freedom. The constraints are generally self imposed safeguarding the persistence of the organizational unity of the system. What distinguishes evolution from general processes of change is A. That it is neither an entirely random nor entirely deterministic (computationally tractable) variation. B. That it is open ended in the sense that it follows no a priori goal or end result (no design) as long as the constraints are satisfied. [This definition departs from the more conventional understanding of evolution having optimized utility as a goal.] C. That it 'discovers' interesting unexpected variations within the system's state space or expands the state space of the system.

Evolution of mind if so can be described as the process of variation of identity that results in either the discovery of interesting images, concepts or narratives in the course of self description, or the expansion of identity - a significant expansion of the repertoire of states and interactions available to the mind.

The 'units' of mind evolution

A unit of evolution is a descriptive term that comes to answer the questions what are the systemic components that are the subject of the evolutionary process? What are the items being selected, varied, or eliminated? According to the Noetic perspective, in the ongoing identity process which is mind, the units of evolution are mental constructs namely the images and narratives which populate our dynamic identity space and their corresponding Noetic patterns.

Images and narratives are both selective and reductive in relation to both the organism's interactions with the environment and the ongoing process of identity. Images are selective because they unfold through association and similarity in pattern. An active image selects, therefore, together with the perturbations of the environment, what mental constructs might be activated next. Images are also reductive because they are in fact simplified representations of complex states of affairs. Images are reductive in highlighting certain aspects of a state of affairs while hiding other aspects (example).

The selective nature of images is also effective in that that they are emotionally engaging: it defines attitudes and dispositions and drives the motivational system by selecting patterns of action and interaction of the organism in its environment. The selective nature of images is the source of the inherent bias associated with subjective states, and is also the guiding force of the identity process as an evolutionary process.

As images and narratives are organized in hierarchical complex patterns, the evolutionary process of mind can be described as taking place on multiple planes such as the individual plane, communal plane, institutional plane, cultural plane, civilization plane etc. On each plane evolution can be further categorized: the evolution of political systems, wealth creation systems, the evolution of conceptual systems, belief systems, world views etc. Nevertheless, it is plausible that certain general principles govern the evolutionary processes of mind at all scales and categories. If we get to discover these principles we might be able to better guide our future evolution.

The evolutionary potential of the mind

Once the unique combination of systemic characteristics that distinguishes mind, i.e.: self reference, plasticity, extended coordinated interactivity etc., have evolved in the neural substratum, the mind, as a complex dynamic system, appears to present a very unique evolutionary potential. In distinction to biological evolution, which is constrained by its history and is governed by a survival imperative, the mind, as an ecology for evolution, seems to be only locally constrained by its history and not entirely bound by the constraints of survival. It seems theoretically possible and even plausible that the mind is capable of augmenting its own organic substratum, modify its architecture and perhaps even become entirely independent from it. The self generative nature of mind systems allows the generation of virtual identity domains which bear only a weak association, if at all, with the underlying biological embodiment. Abstract mathematics and fantastic or surrealistic literature are just two examples of such domains. A mathematician can be entirely absorbed most of his waking life, within an abstract dimension, while his physical existence bears very little significance for him.

Embracing the self referential constructivist approach offered by the Noetic perspective implies that the mind (in the sense of the on going process of identity) can, at least by potential, evolve to become free of most, or even all, the constraints imposed by the biological evolution of the organism. We can understand mind as a new evolutionary vehicle: by evolving beyond the constraints imposed by its own evolution as a system, it demonstrates a capability to evolve beyond any set of constraints that transitorily shapes it. By that, the mind demonstrates a new category of freedom!

Accepting the proposition that the core of being human is being a mind, a dynamic identity process, also implies that there is no a priori given set of images, concepts, narratives, beliefs, views or values that constitute a constant core identity that we may recognize as human nature. The nature of the human therefore is being an open ended dynamic process of self description. Forever it is a work in progress, realizing a new kind of evolutionary freedom. It is a view with a hope that we can leave behind the deeply rooted and brutal patterns imposed by

our biological evolution. I find this both an inspiring and 'dangerous' idea that resonates with the 500 years old words of Pico della Mirandola.

The future direction of evolution

Openness

At present, with our recent scientific and systemic understanding, we start to grasp the evolutionary potential of the mind. Simultaneously, we realize that this potential is still highly constrained by images and narratives that arise from the imperatives of biological evolution. Territoriality, possession and self interest are good examples to organizational patterns that were shaped by biological evolution and still govern human identity. It would seem that realizing the evolutionary potential of humanity has to do with realizing the freedom inherent in the mind.

How can we pursue this freedom? By consciously guiding the identity process at all scales towards expansion – redesigning our collective identity space towards openness.

Openness is a design strategy for our individual and collective identity space. It is applied by consciously reforming our images and narratives. Openness is achieved in the elimination of constraints, in admitting no closed contours and giving up complete, final distinctions. In openness, endpoints and borders are always provisional.

Openness tolerates and encourages maximum diversity. Openness will eliminate the need to diminish or reject the different as means of affirming one's own identity. Openness will eliminate territoriality and possession as primary organizing patterns of human identity.

We need to gain insight into the complex organization of images and narratives and progressively guide it towards less constrained and less constraining variations to achieve a kind of open ended fluid identity. With the Noetic perspective, every single human mind, capable of reflective consciousness, is a potential laboratory towards that end.

Beyond utility

In biological evolution fitness means the probability of survival. Initially, the configuration of human identity is strongly conditioned to safeguard physical survival and continuation and by deep associations it is biased towards stability and continuation of identity. Our biological imperatives made us goal oriented and conditioned our mental processes to prioritize utility over almost anything else. Goal oriented narratives are governing the human identity process at all scales, from individual identity up to the levels of social institutions, whole societies and human civilization at large. It would not be an understatement to say that humans are in fact obsessed with utility. But utility is always defined in terms of the pattern that is already established and therefore the strong bias towards utility is by definition a hindrance to human potential evolution. (In the golden era of Greece, Greek philosophers were much less occupied with utility, probably because their society was sustained by a slave economy. It is plausible that the immense burst of creativity and philosophical insight that marks that era and influence western civilization to this day, is connected to this diminished value of utility.)

In a future world, where existential risks might become moderate or perhaps non-existent, I envision an interesting and perhaps a necessary phase shift in the evolution of humanity: the human identity process will be departing from the narrow path of utility, allowing the human mind to expand beyond the ever recurrent themes of safeguarding survival and goal orientation. This phase shift is already taking place to a limited degree in art and in philosophy – in those creations of the human mind that are deemed useless...

What might we do with freedom beyond utility? The very framing of the question is of course paradoxical within the contemporary narrative of being human. Yet, I think there is a beginning of a resolution to this riddle. My understanding is that the image of freedom emerging from the Noetic perspective is of a kind of freedom that is continuously realized in conscious aesthetic choices made in the unfoldment/expansion of self description. We will realize our freedom by becoming fluid aesthetic beings, our very identity becoming an ongoing artistic creation.

Let me try to clarify what I mean by aesthetic choice. At the moment, this is a concept in its preliminary phase of forming and perhaps its name is somewhat misleading. My understanding of aesthetic choice finds its roots in Kant's requirement that aesthetic pleasure arises through the engagement of reflective contemplation. But in aesthetic choice I do not mean the application of already given value judgment to objects, images or situations. Aesthetic choice emerges in openness – in freedom, in the absence of significant guiding constraints and their associated value gradation systems. Even the biologically evolved reward system in the brain that associates the experience of pleasure or pain to mental constructs, cannot be considered as facilitating aesthetic choice.

What if so drives an aesthetic choice? It is the tension at the edge of our identity – our mental event horizon, our reality limit, where there are no images and narratives discontinue. This edge, usually entirely hidden, is discovered only through reflective consciousness. An aesthetic choice is an emergence taking place at those rare moments when the edge of one's identity is exposed. It is ultimately a creative act – the setting of a path into the yet unknowable and, by that, the expansion of identity. In other words, it is the emergence of a new Noetic attractor, a fountainhead of new descriptions.

An aesthetic choice is not compliant to the currently ongoing narrative. Often it would be an act of departure, distinction, even rebellion, against the order at play. As such, it would not be necessarily perceived as an intelligent or reasonable choice. A true aesthetic choice will be unique and unpredictable in its uniqueness, even in retrospective, and since it is not supported by, or coherent with existing images, it invites a special kind of sensibility (and responsibility) to be associated with the freedom that allows it. I would call this special sensibility commitment. One does not simply identify with an aesthetic choice, one becomes consciously committed to it and by that brings forth a new kind of identity. This brings me to a few concluding notes regarding the role of consciousness.

On the role of consciousness

By consciousness I relate here to that aspect of consciousness described as reflective consciousness – the voluntary directing of attention towards the subject – the human observer

while observing, or in other words the introduction of a guided self referential element into the ongoing process of identity.

I believe reflective consciousness holds a pivotal function in the evolution of mind. Describing ourselves as beings capable of reflective consciousness is that part of our collective narrative that allows us to escape the immersive closure imposed by our images and thus to expand our identity. There is no inherent truth in us being conscious. Also the value of conscious reflection to survival is dubious. Self reflection seems to be itself a product of an aesthetic choice taken at some point along human evolution. At that very point in our history emerged a new potential for freedom and, with it, a new image of being human. With reflective consciousness we carve new spaces for our mind. When our thought processes gain extra freedom, it is the view provided by conscious reflection that guides the realization of this freedom in our aesthetic choices. What are the exact mechanisms by which reflective consciousness participates in the variation of image is of course a subject for further investigation.