

The Laboratory of Intelligence Culture - working paper

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'The mind is soft, plastic and in becoming'

We are searching for a sleeve, a corridor, hunting for a different angle via which to navigate anew the concept of mind. Most of the well-known metaphors do approach the mind either from a *transcendental* perspective – for example as an ideal that transcends matter, as a manifestation of the divine nature, a soul - or from an *instrumental* kind of notion - such as a mirror, a computing machine or a control center.



Wishing to extend the frame of contact, we choose to approach mind as open and malleable 'matter'. Matter has a set of qualities and textures, and thus is experience, before it is defined in terms of instrumental capacities or transcendental belonging.

A term taken from the Tibetan tradition - '*Rigpa*' means roughly 'spontaneous presence' or primal existence. It is used in that tradition to refer to the ground experience of being, and it allows to make a temporary distinction between the instrumental aspects of awareness or intelligence, and the singular nature of mind. Singular nature relates here for example to the subjective experience of the 'phenomena' having no clear borders that can be perceived and having no localized time of origin, so that a singular nature of mind is beyond 'true' conceptualization and representation paradigms.

Following from that, in those line of traditions 'unmediated experience' is higher in value than any representation and conceptualization of mind. Here the terms and its pointing to the ground experience of being serves us as a door of entry and of immediate accessibility to exploration.

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With this set of notions in the background, and with a wide spectrum of possible descriptions, we are thus entering our navigation upon unfamiliar grounds. A

shifting is required from the 'grasping of specific knowledge' to the practice of knowing. The sleeve used as our point of view, as if a keyhole to look through, aggregating sense as we go, is the following:

proposition:

The Mind is Soft, Plastic and in Becoming

Cosmology

● **Soft:**

Words: soft contour, no clear separation, no linear causality, lack of stable grounds, liquid, emptiness, between, emergence, transitory, event, open-ended

Language: interpenetration, interdependence, interconnectedness,

Mythology: numerous mythologies root their story of origination in a Liquid World: for example both Egyptian and Greek mythology do not attribute the creation of the world directly to the willful work of the gods, but rather leaves a gap between a 'beginning' - emerging out of liquid 'chaos' - and the rising of the gods performing their acts of creation upon it.

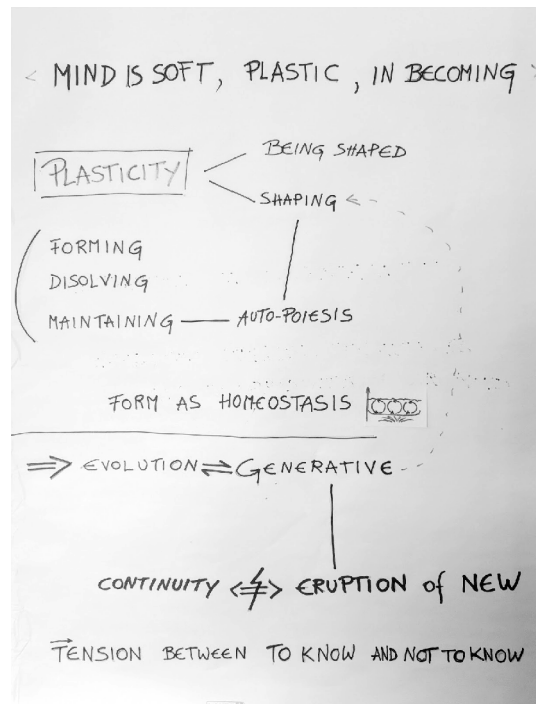
Theme: no fixed orders; no beginning and no end; no a-priori set distance between points

● **Plasticity:**

Words: malleability, no rigid form, formable, being shaped, shaping, to mold, creation, annihilation, re-writing, re-creating, tension, gradient, organization, plastic medium, adaptation, evolution,

Language: drift, taking form, giving form, interplay, doing, undoing, trans-formation, transgression.

Mythology: In hindu mythology, Shiva is the Supreme being who creates, protects and transforms the universe. Shiva is a repository for high order (organization)



where creation (forming), destruction (dissolving) and protection (maintenance) are the codes of a same phenomenon.

In numerous other mythologies the human is initially being shaped out of mud, taking its shape from the divine breath, hands, dreams...

Theme: interplay of Forming, Dissolving and Maintaining form. Tension between self-preservation/continuity and the eruption of the new.

- **In Becoming:**

Words: change, process, difference, individuation, flow, incompleteness, approximation, iteration, relational, transitory, subjectivity, inter-subjective,

Language: Work in Progress, Process of individuation, Becoming, liquid identity, desire as gradient that reflects intensities, co-authoring, co-dependence.

Mythology: Some asian mythologies tell how at the beginning, there was nothing in the universe except a formless chaos. This chaos coalesced into a cosmic egg for about 18,000 years. Within it, the perfectly opposed principles of Yin and Yang became balanced/united, and Pangu emerged (or woke up) from the egg. Pangu "the first man, who opened up heaven and earth" is usually depicted as a primitive giant who wears fur. Pangu began creating the world: he separated Yin from Yang, creating the Earth and the Sky. To keep them separated, Pangu stood between them and pushed up the Sky. With each day, the sky grew higher, the Earth grew thicker, and Pangu grew taller. This task took yet another 18,000 years. Then Pangu died. His breath became the wind, mist and clouds; his voice, thunder; his left eye, the sun; his right eye, the moon; his head, the mountains and extremes of the world; his blood, rivers; his muscles, fertile land; his facial hair, the stars and Milky Way; his fur, bushes and forests; his bones, valuable minerals; his bone marrow, sacred diamonds; his sweat, rain; and the fleas on his fur carried by the wind became animals. A drop of rain from the sky and a drop from the earth united and the humans were born.

A somehow similar process is described in ancient Egyptian myths of Heliopolis, where the universe evolved from the body of the god Atum. Atum existed in a primordial sea of nothingness. Atum succeeded in uniting with his own feminine energy and manifested Shu, god of the air, and Tefnut, goddess of rain. Tefnut and Shu then united to create the Earth and Sky, Geb and Nut. Geb and Nut then united, creating the principle deities Isis, Osiris, Nephthys, and Set, who created or gave birth to everything else. In this system, humans, among all other things, are direct descendants of the body of Atum.

Theme: Process and difference precede (come before) identity and representation. Individuation is faster than the subject, to upturn this the individual must raise itself to the level of becoming.

Form as Homeostasis

Homeostasis is the way form is maintained in a plastic medium. The form that we see is a process, it is not a rigid form, and because it is a process it continuously adjust to its circumstances and surroundings. The concept is taken from the biology of living organisms.

The definition of Homeostasis: any self-regulating process by which biological systems tend to maintain some stability, while adjusting to conditions that are optimal for survival. If homeostasis is successful, life continues; if unsuccessful, disaster or death ensues. The stability obtained is actually a *dynamic dis-equilibrium, in which continuous change occurs, yet relatively uniform conditions prevail*. The balance needs to be constantly and actively recreated by manipulating the inner variables and surrounding circumstances.

The control of body temperature in humans is a good example of homeostasis in a biological system. In humans, normal body temperature fluctuates around the value of 37 °C (98.6 °F), but various factors can affect this value, including exposure, hormones, metabolic rate, and disease, leading to excessively high or low temperatures. The range between high and low body temperature levels constitutes the homeostatic plateau—the “normal” range that sustains life. As either of the two extremes is approached, corrective action (through negative feedback - ex. Sweating or shivering) returns the system to the normal range.

From Schrodinger¹ - ‘Life seems to be orderly and lawful behavior of matter, not based on matter tendency to go over from order to disorder, quite the contrary, it is based on existing order that is ‘kept up’. Life is the opposite of equilibrium or balance, rather than permanent states where no observable events occur, life is always in ‘doing’ something’.

Yet the apparent ‘continuity’ aspect of homeostasis in itself is not enough to understand the persistence of form. Perturbations are an intrinsic part of the process, and when a significant perturbation - unpredictable - arises, a new solution will have to be introduced to keep the basic order going. Thus the ‘**eruption of the new**’ is a fundamental aspect in the maintenance of form, for it (the form) not to become obsolete - this is the place where evolution comes in. And when evolution is thought in this terms - eruption of the new - it is not only about biological organisms, but it is also about the way we think and the way we think of ourselves. We are driven to overcome anything which is continuous, that we may not become obsolete. It would be more correct to speak of homeodynamics.

¹ Schrodinger, ‘What is Life?’, 1944. Quite a seminal little book.

Though the tendency when interacting with the world and with others, for predictive purposes, will always be to project fixed images/identities this is not inherently built in our system. This means that if we understand plasticity unique logic we can get past the assumption of fixed identities and operate differently. We re-occupy the space of describing ourselves for a more adaptive journey.

Eruption of the new in a world of 'solid objects' is catastrophic, it is completely destructive - Eruption of the new in a world of 'processes' is still catastrophic but it is not a fatal catastrophe, processes are 'more ready' to change.

Eruption of the new, can also be said, correlates to the explosive aspect of 'plastic', and at time, in order to generate a disruption in something which is fluid, and too quick at reabsorbing any attempt of difference, you need an eruption/ discontinuity of sort.

Another important aspect of becoming is that changing form also means to dissolve the form which was there before. There is no creation without annihilation, there is no doing without undoing, there is no knowing without 'unknowing'.

Homeodynamics, Autopoiesis and Plasticity

Looking at 'form' as homeodynamics is at the basis of plasticity. Form in a plastic medium continuously needs to recreate itself. Maintenance in this sense is the outcome of a continuous auto-poiesis².

There is a connection to the red queen principle as well - the red queen principle is based on the observation made to Alice by the Red Queen that "in this place it takes all the running you can do, just to keep in the same place". In this case the "running" is an outcome of the continuous advancement of circumstances that surround the emerging form (in a plastic medium grounds are not immovable, they change and shift and drift), the dynamic equilibrium constantly needs to redefine itself.

Plasticity opens three main vectors: the shaping of form; the undoing of form; the maintenance of form or autopoiesis - the self-maintenance as mode of existence. These three principles are mirrored in the architecture of what we call Reflective Coordination (tbd).

The other side of Plasticity

² Maturana & Varela, the Tree of Knowledge, 1992.

Direct influence in a plastic medium is mostly not effective. We have to devise keys that works with plasticity, you cannot linearly impose a shape upon yourself.

Gradients: If we look at a wave of heat, a fire, what we are actually observing is a gradient, a radical difference in the distribution of temperature in the space. A distributed difference, a tension among different points in the landscape, of temperatures around the fire (i.e. peaks and valleys), when this is created then the medium adapts to the tension, generating form (for example materials will bend, liquids will move, or in a very different example people will organize themselves around a fire,). This landscape of gradients, rather than specific objects, is what moves us in a plastic medium. No difference means no movement.

As in the asian mythology, the original gap in the nothing needs to be stretched and expanded to gargantuan proportion, to create difference, before anything can begin.

Would we call it intensity? would we call it passion, interest desire? would we call it speed?

References

*The role of Feelings - according to A. Damasio*³

All living creatures share the imperative of regulating their life processes such that life can persist, - this functional imperative is known as “homeostasis” or even better homeodynamics. In complex organisms (such as humans) homeostasis is partly managed by feelings/affective processes which allow to extend homeostasis beyond automatic physiological mechanisms - ex. we dress when feeling cold / we shower when feeling hot.

Feelings in physiological terms, are experiences that accompany body-states, they accompany physiological conditions correlated with *regulating the organism internal environment*, they require subjectivity, in fact they are at the basis of subjectivity - they are ‘private’. They are reflecting the state of one’s life in that moment and nobody else shares them. Feelings ultimately depends on how body-states are represented in the brain. There are multiple representations of feelings in the brain in different areas, from simpler to more complex and eventually integrated maps of body states that can interact with other processes such as reasoning, language, and memory.

³ Damasio - Descartes' Error: Emotion, Reason, and the Human Brain, 1994.

Feelings can also emerge in response to sensory stimuli/triggers and to regulatory needs - then they are provoked feelings – most of the time these are ‘action programs’ (mediated by ‘brain structures’/ automated devices that serve the purpose of staying alive) largely superimposed on ongoing physiological regulations and often prompted by external conditions.

Action programs (Damasio calls them emotions) - a succession of things that your brain will ‘make you do’ (actions - from expressions and gestures to hormones and modification of metabolic rate). There is no a-priori guarantee that emotional responses will become conscious, unless one is equipped with the system that produces subjectivity and thus becomes aware of the corresponding feelings associated with action programs. Action-programs are mediated by structures in the brain, which are quite older than the cortex.

Feelings open the way for a higher homeostatic regulation driven by conscious deliberation. A good part of this regulation, the instruments and the practices are what we have called over time cultures - systems of beliefs or moral behavior, science or technology, the arts.

Plasticity versus a ‘Hard’ Culture - C. Malabou⁴

Our culture is mostly ‘hard’ as it used to think or to be ruled by representation, instrumentalism, being, fixed identity, hierarchy, zero sum game and one all-encompassing story of origination. It is the line, the contour, the noun, the borders and formation, which take over, forcing hard tendencies upon a game whose dynamics are otherwise poietic.

The Philosopher Catherine Malabou brings a fresh approach as she displays plasticity in the ‘middle’ of the brain, here is a quote from an interview with her:

“I am investing in the concept of plasticity, which, in Hegel, means less the interplay between matter and form than the interplay between form and itself, that is, the relationship between form and form. In the *Phenomenology of Spirit*, Hegel show that the subject is plastic in the sense that she or he is able to receive form (passivity) and to give form (activity). (...) With plasticity, we are not facing a pre-given difference, but a process of Metamorphosis. In other words, the Hegelian subjects trans-subjects itself constantly. Its form is its matter.”⁵

Mark Jeannerod, a neurologist, a neurophysiologist and an internationally recognized expert in cognitive neuroscience and experimental psychology writes⁶ :

⁴ C. Malabou - *What should we do with our brain?*, 2008.

⁵ Link - <https://www.scribd.com/document/144329934/Conversation-With-Catherine-Malabou>

⁶ Malabou “what should we do with our brain”, preface

“Brain Plasticity shatters the concept of brain as machine that works top down, that order movements, that control behavior. The machine learns, differentiate itself, reconstruct itself. Briefly put, it privileges the event over the law.”

In the 1920s, researcher Karl Lashley provided evidence of changes in the neural pathways of rhesus monkeys. By the 1960s, researchers began to explore cases in which older adults who had suffered massive strokes were able to regain functioning, demonstrating that the brain was much more malleable than previously believed. Modern researchers have also found evidence that the brain is able to rewire itself following damage.

What is the ‘object’ in a plastic medium? - Deleuze & Guattari

In 1969 Félix Guattari went to meet for the first time the philosopher Gilles Deleuze and from then till the end of their lives they unpacked into the world of thought a creative storm. Guattari said it was necessary to ‘build a new form of subjectivity that no longer relies on the individual, and together they claim that the individual was a deception summoned up to obscure the nature of reality. Guattari said it was necessary to ‘build a new form of subjectivity that no longer relies on the individual.

Link:

<https://aeon.co/essays/a-creative-multiplicity-the-philosophy-of-deleuze-and-guattari>

“Deleuze argued that the history of Western thought, at least since Plato, was enthralled by a number of illusions about the nature of thought itself. First, contrary to the assumptions of most philosophers, thought [isn't representational](#) – which is to say, it doesn't function by making pictures of the world, which can subsequently be judged as true or false depending on their degree of accuracy. By contrast, said Deleuze, thought is creative, and always connected to that which it thinks about. Second, Deleuze claimed that because the canon of Western philosophy has judged thought on its ability to represent the world, it has taken sameness and accuracy to be paramount. Plato and Descartes provide two good examples. In his philosophy of *forms*, Plato said that any particular entity gains its qualities by reflecting its idealised, abstracted form. This form – which is identical *only* with respect to itself – is taken as the ground of knowledge. A man is a man only insofar as he represents his own ideal form; and to know what a man is, is to know the form of ‘man’. Similarly, Descartes’ ‘I think, therefore I am’ championed the

centrality of identity and the individual. A person's ability to know herself is what facilitates all further knowledge, the argument goes. In both cases, the basis of understanding arises from something unique, individuated and unchanging. In other words, the individual is the paradigm for truth.

Not so for Deleuze. He argued instead that thought is not grounded in identity; rather, it is generated out of difference. 'Representation fails to capture the affirmed world of difference,' he wrote – so we need to find a new way to think, a new way to philosophise, that does not take identity as its foundation. In fact, what appears to us in experience as an individual – be it a single stone or an individual person – gains its identity only as an effect of diverse forces that are in constant tension with one another. There is no such thing as an abstracted notion of a 'stone', only multiple stones that are arguably as different from one another as a bird is from a tree. The world is composed of differences, not individuals, even though representational thought can make it appear otherwise."

The historical notion of individual is 'hard', a something, an undivided, an object and noun, while all changes are subject of the axis - the invariant called the individual. But life does not provide much support to this notion that we are so good at holding and the systems (political, economical and religion) do use and exploit this notion and belief in endless ways.

We do think in terms of Form or in terms of Process but those separate notions are not separated at all, not in life... The 'object' in a plastic medium, or in life must be correlated to the nature of the medium, they co-emerge, it must echo with the medium or not be. Plasticity means that a form is entwined with the continuous process of rewriting. And moreover rewriting does not negate the continuity of the subject but it suggests a different form of subjectivity. One that emerges in correspondence with the live intersection of form & process, a subjectivity which is not locked-in but rather 'soft', hence, playful borders, or eventful subjectivity.