

Claude Rifat's concepts from "Conscious dreaming and controlled hallucinations" article

(The basics of memory organisation: the MHVs).



Claude Rifat (1 March 1952, Cairo - July 31, 2002)

was a French biologist, psychonaut, political activist, writer, and researcher.

This article is written mostly for people who have the basic knowledge of what conscious dreaming is. This means they have some experiences of conscious dreaming, daydreaming, imaginative visualisation, these and other relative concepts are considered known and understood.

To start with, I will list first some terms Claude Rifat used to describe phenomena related to dreams, conscious dreams and in general how our biological memory works. Below the list are parts from Claude's article [in blue text – everything with black text is my comments] which explain the concepts in the list. The study he made is based on scientific research and with personal observations inside dreams. This is important because until then very few scientists of the mind were exploring consciousness from inside, from the perspective of the dreamer. The study had been written since 1976 until 1989.

When we imagine something or having a memory of something, what we do in neurological level is that we activate a specific memory zone in the brain, and what an expert conscious dreamer do, when he build a scenery for example, is that he have learned to activate and stabilize specific memory zones at will.

The intensity of how vivid is the memory of something, means how much is metabolically active that zone. In comparison of exogenous imagination and endogenous [in a conscious dream] we soon discover that in exogenous, in our natural everyday state, we can imagine only to a certain point and in dreams we can have much stronger visualization to the level of materialization with many senses involved. This is controlled by some regulator mechanisms I will explain below, the attenuator, DRP and SBEM which are responsible for the normal function of our consciousness.

Why we see irrational scenes in dreams or without continuous time sequence? This can be explained with MHV, and MCV "box" concepts along with the previous mechanisms the Attenuator and DRP. So when we are awake, consciously or unconsciously we activate some memory zones, some more and some less intense [with different emotional impression and different meaning each-one so they make different connections

with different memory zones involved]. When they are activated they can remain active in the memory for some time [as we imprint in our memory the events some remain and some faint, so when we see a dream of something we would not expect we still remember that but for a reason had stayed in memory. Or we see things that are imprinted with our second unconscious attention]. Now, when we are sleeping the logical reasoning and other functions ceases [not completely and with variations in intensity] but the memory areas are still active and informational objects fall into the oneiric scene, somehow like a collection of unrelated events and objects interacting inside a portion of continuous time of an oneiric episode.

It is not so simple though, because maybe it can be with no logical explanation the sequence of images or the dream scenario, so to seem random but sometimes it follows some internal rules from the instincts or emotional centers, the drives or archetypes, to make some kind of coded symbolic message for our conscious self about a specific matter like a solution to a problem, like a different type of thought processor than everyday rational thinking. Even if usually consciousness or reasoning are not active but other mechanisms could be driving the dream or are active to involve with the dream.

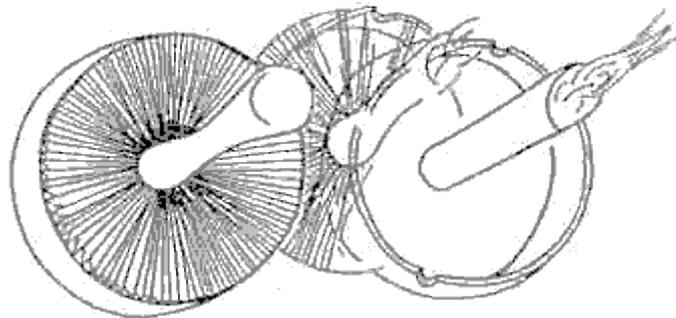
Claude Rifat was a biologist, his accomplishments include some early research into GHB (γ -Hydroxybutyric acid), including the thymoanaleptic/antidepressant and sociabilising effects of this molecule. So he is referring for examples about cannabinoid hallucinations, cholinergic, hallucinations by NMDA receptors, serotonergic, and other molecules or about regular state of mind, dreaming state, schizophrenic state etc. I wanted not to write anything about substances but this is his research and I can not just put them out. After all, every serious researcher on the subject who has a real interest to learn has to consider them also which are part of nature.

One last thing I want to mention is that I have not make any official studies on these subjects, I just like to study these concepts in my free time because it happened to have conscious dreams spontaneously and with time I started to interest about the mechanisms of it and finally about the mechanisms that produce our consciousness and our memory. If some of these are not right, if I have wrong ideas, at least I think this kind of concepts are very interesting and should be studied more. If I have understood Claude's ideas wrongly please send me a message to know.

Terminology:

- 1) **Endoreality:** The internal dimension of the world. All events which perceived from internal environment, thoughts, emotions, dream scenes, etc. Something to be considered is that many events from dreams we do not remember them because from our social education we have learned that dreams are not real so our mind classifies them as non existing and thus not important to remember. Many other dreams we find difficult to remember because they do not have the regular form we have used to experience, so it is difficult to make points of reference as our own experience.
- 2) **Exoreality:** The external dimension of the world. All events which perceived from the external environment. Note that when we perceive and name for example an object from the external environment, we do that by constant comparison with stored information in memory [the internal environment]. In dreams, we experience a virtual, generated by our mind, exoreality. We usually having the wrong intuition that it is real but we actually having a dream. Something which we have to question is what of the two is true? Do we first see an object in our perception and compare it with stored memory to understand what we see or do we project the memory first and we have the illusion of the event is happening before our object identification so the moment we know what we see is the moment we also materialize it?

- 3) **Extraordinarity:** A proficient conscious dreamer is in a world which is constantly extraordinary. This quality of endoreality is called extraordinarity (*extraordinaireté*, a quality of endoreality as opposed to non-extraordinarity, which is a quality of exoreality).
- 4) **Completely disattenuated image:** A clear and controlled hallucinated image.
- 5) **Partially disattenuated image:** A faint image.
- 6) **Attenuated image:** A normal visual thought in waking state.
- 7) **Informational object:** A stored image of an object perceived in exoreality or an object generated in a dream [endoreal informational object].
- 8) **Metastable:** Every informational object of a dream is continuously in a metastable state and can change to another metastable state though a "MHV jump". Endoreal informational objects are often relatively stable as long as the dreamer maintains his attention focused on them. Say if I have a watch on my wrist, this watch will tend to remain the same as long as I am looking at it. If I hide my oneiric arm with the oneiric watch for, say, 30 seconds of oneiric time and then look again at my wrist I will notice that a sudden MHV jump has occurred: my first watch would have transformed into another watch, different, but still a watch because in our memory all homologous informational objects are stored in a common place.
- 9) **TRANSFORMATIONS MOTIFIELLES (Homologous Pattern Transformations):** The process of transforming an informational object into something else through the use a common pattern which called intersection.



Drawing from Claude Rifat about Homologous pattern transformations

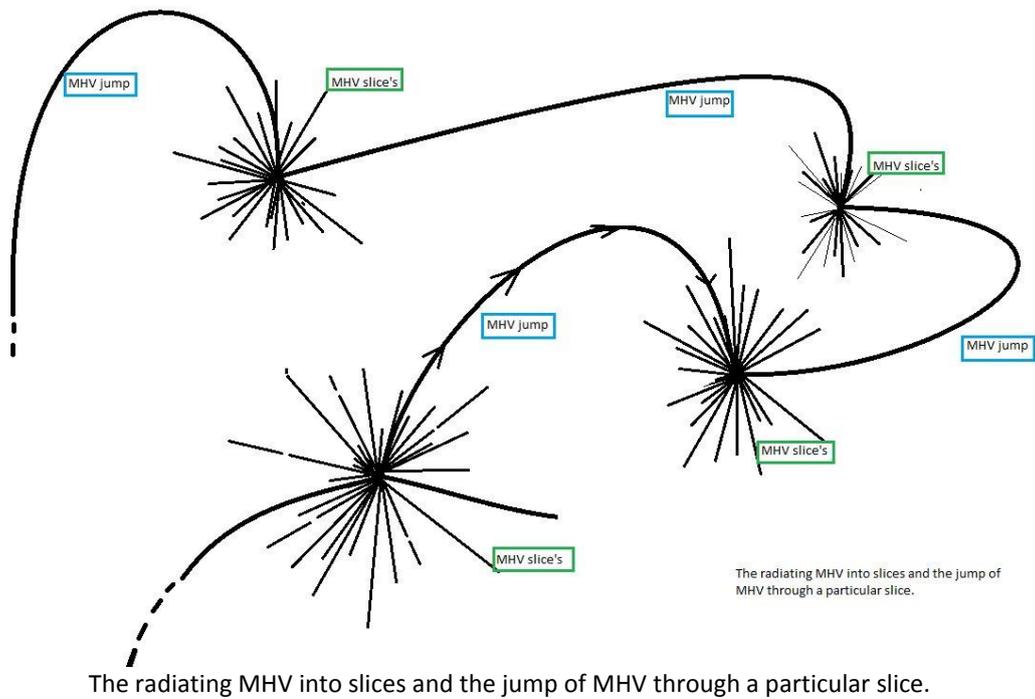
- 10) **Intersections:** An intersection is an informational place of memory where informational objects can transform into one another because they share a COMMON simple pattern. Cannabinoids make you enter a "creative zone" of the mind because they intensify the metabolism of the fabric of memory which are called "Intersections". Cannabinoids stimulate thought to "radiate" into the imaginary space-time of memory through those intersections. Through intersections your thought can spread into many different areas of your memory simultaneously thus giving you a higher perspective of things, inspirations and ideas.



Aspiring Acrobats – Rob Gonslaves.

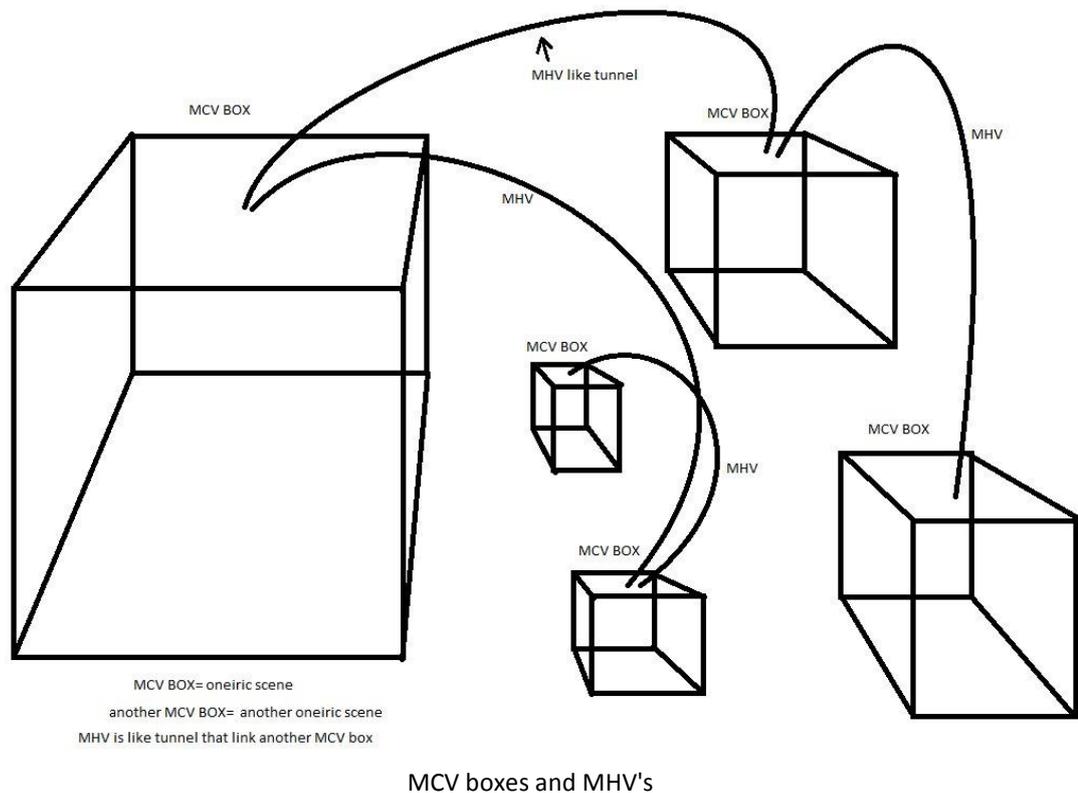
- 11) **Hypermnesia:** A state of mind in which ideas are forgotten nearly as soon as they are discovered from MHV radiation, induced for example by cannabinoids. An informational object radiates into a multitude of homologous pattern domains (these new ideas are visual in nature and one can learn to see his or her thoughts self-organising).
- 12) **Interaction/synthesis phenomenon:** The basis of creativity, the interaction between MHVs to create new information. Biological memories constantly create order, through interaction/synthesis in homologous pattern domains.
- 13) **Attenuator:** The purpose of the attenuator is to control the metabolism of memory during the waking state so as to block disattenuations and MHV radiation. As the attenuator consumes different neuromodulators, such as serotonin, during the waking state, it has to stop functioning periodically in order to replenish its reserves. So while it is "recharging", our brain metabolism becomes higher all of a sudden and we start to dream. The complex cycles of dream and non-dream periods during the night can also be understood within this basic framework.
- 14) **DRP (derepixelator):** It controls the informational structure of our consciousness and maintains the stability of this structure by preventing MHV radiation. The structure of consciousness is also called a "pixelation pattern" (*motif de pixélisation* in French). When metabolic activity becomes elevated, then our consciousness becomes metastable and dissolves into a mosaic of unrelated informational events. During our waking time, the DRP maintains a low metabolism in the areas of our brain responsible for consciousness. So the DRP (and also the attenuator) is a metabolic modulator responsible for the continuity of our consciousness during waking time. During dreaming, the DRP also stops functioning, thus introducing discontinuity in our thoughts which become fragmented (due to enhanced metabolism in MHVs).

- 15) **SBEM:** I do not understand what this mechanism is for. Claude writes “The SBEM is a neuronal system which blocks motor efferents during the onset of dreaming but which does not work during schizophrenic states, where it remains inactive.”
- 16) **MHV:** *Motif Homologiquement Variant* (MHV) or a homologously variable pattern. It stores information together according to a common homologous element.
- 17) **Hyper-complex MHVs:** Creative individuals, by continuously and nearly obsessively thinking of some ideas, enhance the metabolic status of the areas where their ideas are stored (these are hyper-complex MHVs) giving rise to a phenomenon of interaction/synthesis in homologous pattern domains. This interaction/synthesis is the **basis** of Creativity. So creative individuals learn to enhance the metabolic activity of hyper-complex MHVs. Interaction/synthesis is a phenomenon which continuously goes on in MHV domains. This process continuously generates order. Here is a simple example of interaction/synthesis. Let us take a MHV of mushrooms. Now let us take two sections (two slices) of this MHV like 2 particular mushrooms. It is very important to notice here that, most probably, these mushrooms were not stored at the same time. Maybe one would have been stored in September 1979 and the other one in October 1991. These 2 mushrooms can informationally interact and thus produce a new hybrid mushroom which was never observed in exoreality. This new mushroom will immediately be stored in the MHV of mushrooms. What is important to realize is that this hybridization process is the basis of the Imaginary. Without interaction/synthesis in MHVs men would never have imagined anything different from what they perceive in exoreality. Myths, religions, all these things arose through interaction/synthesis in MHV domains.
- 18) **MHV domain:** The place in our memory where the MHV is seated.
- 19) **MHV “slices”:** The parts of each MHV, for example all the “watches” I have imprinted in memory are inside the MHV of watches.
- 20) **MHV “jumps”:** A jump from one MHV slice to another slice, or from one oneiric scene to a another. Say if I have a watch on my wrist, this watch will tend to remain the same as long as I am looking at it. If I hide my oneiric arm with the oneiric watch for, say, 30 seconds of oneiric time and then look again at my wrist I will notice that a sudden MHV jump has occurred: my first watch would have transformed into another watch, different, but still a watch because in our memory all homologous informational objects are stored in a common place.
- 21) **MHV radiation:** When your thoughts are radiating through MHVs everything becomes a bit magic as you can nearly see shapes and patterns anywhere you turn your eyes! People's faces become very interesting, as under hashish, as watching one face makes your thoughts radiate into homologous facial patterns. The whole world around you becomes like a living crystal as all forms tend to become fluid through MHV jumps. Everywhere there are "connections", links in the form of MHVs! The air around you seems fuzzy (*vaporeux, éthéré*) and anything you can imagine appears with clarity in front of your eyes in a slightly disattenuated way. The exogenous world seems to reach the extraordinarity found only in endoreality. Everything becomes interesting to watch at because your consciousness can "travel" in those memorized homologous patterns associated with your real time perception.



22) **MCV memory:** From "*mémoire à motifs continûment variants*". Storage of information in a virtual continuous way. In fact, analysis seems to suggest that MCV memory is only an illusion and an expression of MHV memory where all stored patterns flow in the same time direction. So to each slice of MHV we can assign a time coordinate and when a set of slices of MHV have similar time coordinates then this produces continuity and the illusion of MCV memory.

23) **MCV "boxes":** An MCV box is a portion of continuous oneiric space-time. MCV boxes are visually represented as boxes which explain their naming! MCV boxes are continuously synthesized by the dreaming brain. They constitute the locus of endogenous reality where the oneiric consciousness travels. Any dream can be represented (see diagram) by a combination of radiating "stars" (MHVs) linked to different MCV boxes. The center of the star is a slice of an MHV domain while the radiations represent the links between different slices of the MHV domain. In an MCV box oneiric time is, roughly speaking, continuous, discontinuity being introduced by the radiating MHVs. Any pattern contained in an MCV can be a part of a "specific" MHV domain. As an MCV is a metastable structure the dreamer can notice, when he "walks", in an MCV box slight discontinuities such as, for instance, the transformation of a rose into a crystal or the transformation of a fish into a mouse! In a linear man-made memory time is stored sequentially while in a MHV domain time is, in a way, randomly stacked, because MHV slices organize through pattern homologies independently of time coordinates.



Here are the parts of Claude Rifat article in which his concepts are explained:

Practicing visualization.

This exercise is for better skill of selective focus of attention, better concentration in order to be able to have a conscious dream.

1. Before going to sleep, sit or lie in your bed for at least 30 minutes.
2. In total darkness, just focus your attention on darkness and try to visualize simple images, like the image of a triangle, a square, a leaf, or anything you like.

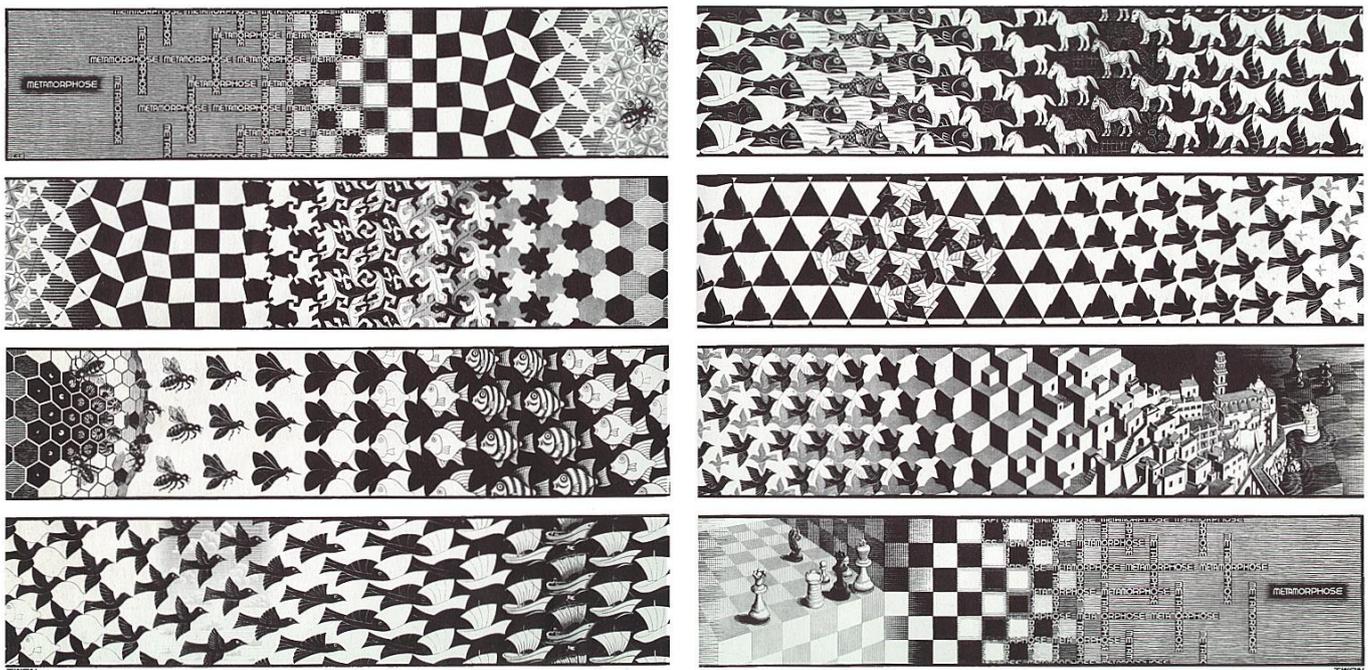
The purpose of this exercise is to teach you how to specifically activate some of your memory zones in order to achieve the generation of controlled hallucinations. This is a very difficult exercise but it will train your consciousness to control itself. Focussing your attention is extremely important in the discovery of your memory and consciousness. It should be accompanied by breathing regulation: you need to breathe slowly and regularly, as if you were sleeping. Apparently controlled breathing triggers hallucinations, as experienced by meditating monks.

In the beginning, if you focus your attention on, say, a triangle, you will observe the appearance of a faint triangular shape in the darkness and you will discover that this triangle will have a strong tendency to move, rotate, or simply disappear to be replaced by another faint image. Such faint images are called disattenuated images. A clear and controlled hallucinated image is called a **completely disattenuated image**, while faint images are called **partially disattenuated images**. We will explain this later. A normal visual thought is called an **attenuated image**.

To see a memorized image as clearly as a real image **means that you activate the metabolism of a memory zone where this image is stored. Selective metabolic activation of memory zones** gives you a lot of power in your dreams and, also, surprisingly, in the exoreality where we all live.

3. While focussing your attention on informational objects (a stored image of an object perceived in exoreality) try your best to forget the boundaries of your body.
4. Try not to move at all and breathe deeply and regularly, like someone who is sleeping.
5. When 30 minutes or more have elapsed, just go to sleep - but you still have to wake up in the early morning!
6. Wake up early in the morning, between 4 or 5, and just repeat the whole exercise.
7. When you next wake up write, as fast as possible, everything you can remember of your dreams. Slowly, slowly, you will discover that you remember more and more dreams in increasing detail.
8. During the day, when you have time, just focus your attention on complex objects such as flowers, the ripples of water in a river, the shape of trees, leaves, examine carefully the content of books, etc. This teaches you the same thing as before: how better to focus your consciousness on reality.

While doing these focusing exercises you will discover a lot of things like, for instance, the appearance of **reiterative rotating images** which is an invariant phenomenon preceding the emergence of complex disattenuations. Reiterative images are, probably, a prerequisite for synthesis of complex 3-D images. My intuition is that, in some ways, reiterative images mutually interact to form complex images. Reiterative images could be explained, I think, with a concept called **MHV and MHV metabolic activation**. Such images can also easily be seen with serotonergic hallucinogens and it seems that an artist such as Escher just drew such reiterative hallucinations... So it is my opinion that Escher had sub-hallucinations but that he did not mention it, for obvious reasons!..



Metamorphosis III, Excerpt 4-8, M.C. Escher - 1967-68

..Before **reiterations** appear you will notice that the darkness on which you are focussing becomes first 3-dimensional, then starts to "boil". By "boiling" I mean that you start to observe sub-hallucinations, constantly appearing and disappearing by **MHV transformations**. These sub-hallucinations are reminiscent of the surface of boiling water! Not only do these hallucinatory forms constantly change but they are very much *imbriqu e*, intertwined. The same step can be noticed by conventional serotonergic hallucinogens like *psilocine* which is, for me, the reference serotonergic hallucinogen. "Boiling" informational objects and reiterations are the sign of only slight metabolic activation. The same phenomena can be observed at the end of a dream period: if you wake up immediately from dreaming you can still observe (for up to 6 minutes or so) boiling and reiterative informational objects in slow rotation (often from right to left in my case). I call

this phenomenon the "**disattenuation closure**" (*fermeture de la désatteacutenuation*) [hypnopompia]. After some weeks or months of such training you will have your first conscious dream, in the second phase of your exercise, that is, in the early morning. You will remember it as an extraordinary experience as you will discover that reality is only made of perceptions. Reality for all of us is what we consciously perceive. It does not matter where the incoming information flows from: from exoreality or endoreality. ..

..This exploration establishes contacts between our conscious and unconscious selves. It is an extraordinary exploration from which you come back to exoreality with some sadness, as exoreality is so crude, so simple, in comparison to the beautiful complexity of your endoreality. ..

There are two ways to penetrate a conscious dream

1. In the first case, when you do your second round of exercises, while now lying in your bed, you will notice the following phenomena which will tell you that you are on the verge of crossing the frontier between exoreality and endoreality: you may notice a buzzing sound in your ears or, more often, you will suddenly feel that your body "becomes light" and moves upwards. Then you may, all of a sudden, see a very bright three-dimensional image just in front of your eyes. Do not become excited, do not panic! Stay very calm because if you become excited or even just move your finger, then the marvellous image will instantly disappear and you will have lost the opportunity to make your first exploration of your endoreality! Be tranquil, observe the image. Suddenly, you will become a part of this image and you will find yourself with an informational body, that is an oneiric body which is, exactly, like your exoreal body. Do not be too excited. Breathe slowly now that you are in your dream reality! Then go and explore.
2. In the second case, you will feel the same phenomena but no image will appear and you may just think you are still in your exoreal bed. Don't be so sure! Leave your bed and try to put on the light. If you fail, this may mean you actually penetrated your endoreality as, often, in conscious dreams lights do not turn on. If there is no light, just open your window. Then look at your room for details. Is everything in its correct place? If your room differs from your normal room then you can be sure you are in a dream and, of course, if you slept at, say, 4:30, and when you opened your window you discovered a full sunny day, with modifications of the surroundings, you will now know for sure that you successfully consciously penetrated your own memory! Then do the same as was explained before: go and explore, quietly. If you do not remain calm, you may just wake up.

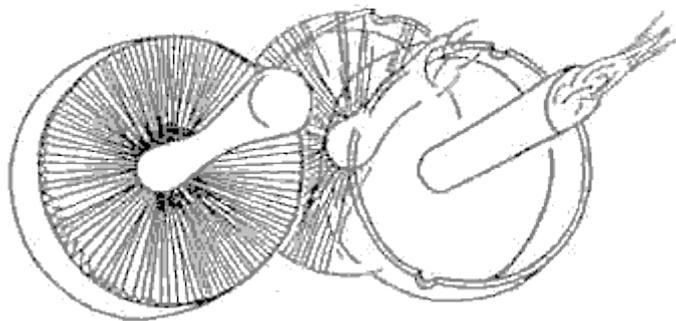
..Slowly, slowly you will also get a sense that exoreality is, perhaps, not as real as we think but that it might be just a part of an unknown hyper-reality of which we are totally unaware. Studying my endoreality guided me then to start to be interested in physics because physics teaches you about the nature of exoreality. Why is exoreality so rigid, so simple? Is the rigidity of the structure of exoreality real or only an appearance? Physics can start to give mind-boggling answers to these questions! As for me, now my opinion is that what we call our "universe" is only a small part of a much vaster hyper-reality. I believe much higher forms of intelligences should be able to create exorealities at will, for instance by setting physical constants and creating the forces they want... It is written nowhere that the 4 interactions we know are the only ones in existence in the Objective Reality (not to be confused with our "universe"). It is written nowhere that the values of the physical constants should always be as they are...

..I now believe intuitively that all this is only an appearance, like the shadows of Plato's cave, and that forces or constants can be modified at will, giving rise to an extraordinarily complex exoreality: Hyper-Reality. Intertwined but totally disconnected realities may exist, and a lot of other strange things! I think we are at the edge of a revolution in our understanding of the structure of exoreality. Already modern physicists can imagine such hyper-realities of which our own reality would only be a small, "illusory", part. For

instance, André Linde, a renowned physicist, described a model of the universe (called the inflationary fractal universe) which looks just like how we might imagine hyper-reality. ..

One important thing to do in conscious dreams, for scientists, is to analyse the oneiric reality first-hand, from inside, as this is the best way to study how a biological memory works. The first thing a scientist discovers in endoreality is that the oneiric environment is **metastable**. Every informational object of a dream is continuously in a metastable state and can change to another metastable state through a "**MHV jump**". Endoreal informational objects are often relatively stable as long as the dreamer maintains his attention focussed on them. Say if I have a watch on my wrist, this watch will tend to remain the same as long as I am looking at it. If I hide my oneiric arm with the oneiric watch for, say, 30 seconds of oneiric time and then look again at my wrist I will notice that **a sudden MHV jump has occurred**: my first watch would have transformed into another watch, different, but still a watch because in our memory all homologous informational objects are stored in a common place.

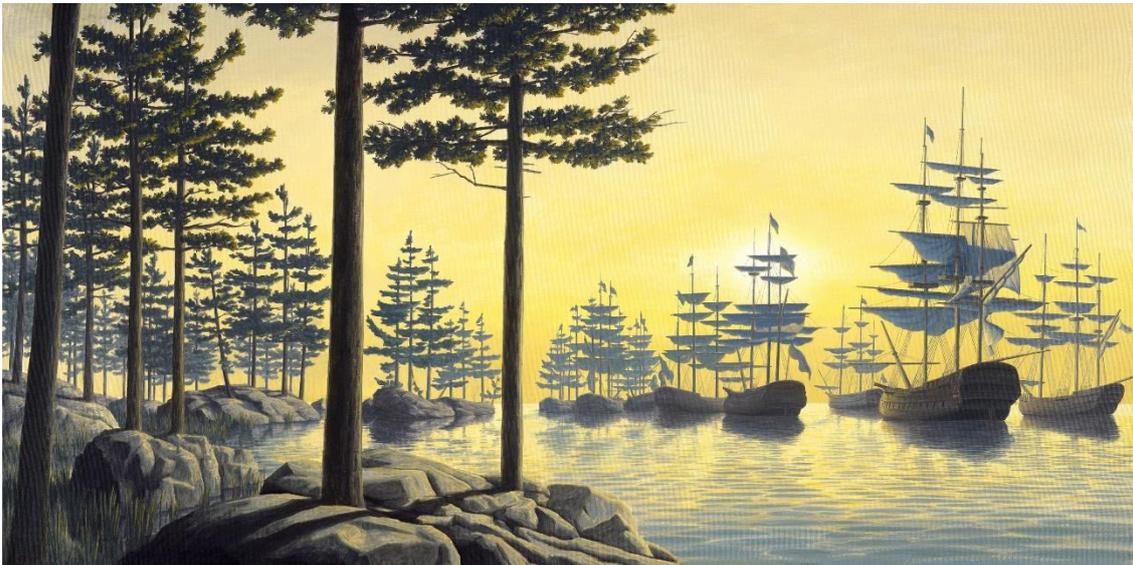
All homologous objects colocalised in a same domain are called, collectively, a **Motif Homologiquement Variant (MHV) or a homologically variable pattern**. For example, in this example, all the watches I have seen in my life constitute a "**single MHV**" and a single watch extracted from this MHV is called a "**slice of the MHV**". The memory area where an MHV is stored is called a **MHV domain**. Any MHV can contain a huge amount of informational objects which are extracted into consciousness with metabolic energy. To illustrate this with a simple familiar example just consider a game with soap which has been played, for generations, everywhere by children: in this game, children plunge an annular piece of plastic in liquid soap then blow inside and what happens? Lots of bubbles, with different sizes, sprout out! In the same way, when you inject energy in a MHV (you "heat" the MHV) this MHV starts to "bubble" its slices out into consciousness! A bubbling MHV is called a **radiating MHV**. The MHV are the shortcuts of dreams and, often, an oneiric scene will change to another oneiric scene through an MHV jump, that is a transformation obeying a law of homologous patterns. MHVs contain enormous quantities of informational objects which have a similar pattern in common. For example, a mushroom and an ashtray with a candle in its middle are very close in shape (pattern) and they are, thus, **colocalised**. This is why if I observe one visual thought (see drawing) consisting of an upside-down mushroom, for example, and if, all a sudden, this mushroom disappears and is replaced by an ashtray with a candle inside this is because their patterns are very similar and it needs only a small amount of metabolic energy to shift consciousness from the first informational object (the mushroom) to the second informational object (the ashtray with the candle).



Drawing from Claude Rifat about Homologous pattern transformations

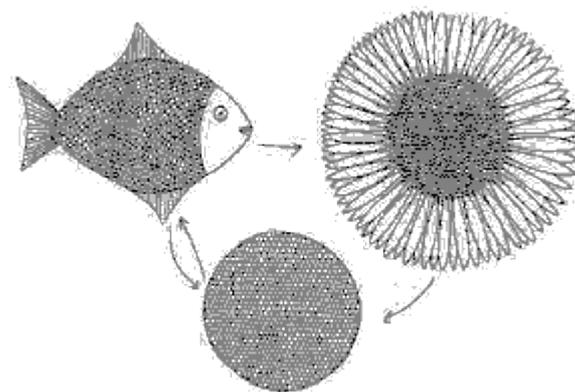
TRANSFORMATIONS MOTIFIELLES (Homologous Pattern Transformations)

In this drawing [1] we can observe the "cheminement" (path) of a simple visual thought consisting of the image of a mushroom. This thought was observed in complete darkness. Focussing my attention on the darkness I suddenly observed a static mushroom as drawn. Rapidly (less than 2 seconds later) the mushroom disappeared, to be replaced by the image of the ashtray with the candle. Both images evolve in the imaginary space-time of memory through **INTERSECTIONS**.



Rob Gonsalves - Sailing Islands

An intersection is an informational place of memory where informational objects can transform into one another because they share a COMMON simple pattern.



Drawing from Claude Rifat about Homologous pattern transformations

Transformations of such visual thoughts, following homologous pattern rules, are called ***transformations motifielles*** in French, which may be translated into English as "**Homologous Pattern Transformations**". Such *transformations motifielles* have been observed by some artists (such as Grandville, Dali) but went unrecognised. *Transformations motifielles* are always observed when one focusses his attention on his thoughts. They are also, similarly, observed with serotonergic hallucinogens and cannabinoids or under ... strong stress, meaning that stress enhances the metabolic status of memory. With serotonergic hallucinogens such transformations seem more static while they are more animated under cannabinoids.

These *transformations motifielles* demonstrate that thoughts obey rules and are not random. This is an extremely important observation as it shows that "free will" is a figment of our imagination. A thought can proceed into the imaginary space-time of memory only through intersections. This demonstrates the perfectly physical nature of thoughts...

We do not need mysteries, such as Deities or quantum mechanics(!), to describe thoughts. The same applies for **consciousness which is a collection, a sum, of simple mutually interacting thoughts.**

Memory is composed entirely of MHVs which are also all intertwined. This gives rise to the discontinuity of our thoughts. For instance, the vision of a mushroom is a simple visual continuous thought. As long as that mushroom remains the same my visual thought is continuous. When, suddenly, my consciousness drifts away through a MHV jump then it becomes discontinuous or through the help of cannabinoids which enhance the metabolic status of MHVs. The idea of an MHV is extraordinarily powerful, as it then permits the scientist to begin to understand how the oneiric or schizophrenic consciousnesses are structured. A schizophrenic thinks in the same way as a normal dreamer: his consciousness just follows the way memory is organised: into MHVs. The difference between a schizophrenic and a normal waking person is that the MHVs in a schizophrenic mind are more active metabolically and so MHVs start to "radiate" meaning that discontinuity of thought is enhanced.

ATTENUATOR, DRP, SBEM

I will explain later, in more detail, why I call hallucinations "**disattenuated images**". Basically, this stems from the fact that our brain is equipped with a structure called the **attenuator, the function of which is to control, like a kind of potentiometer, the quantity of information flowing from memory to consciousness.** An imaginary image of an exoreal object is, thus, a **fully attenuated image** while the same hallucinated image is called a **fully disattenuated image**. When we dream the attenuator ceases functioning and so information flows freely and unhampered to consciousness. Hallucinogens are, in fact, disattenuating molecules while serotonergics, like the specific serotonin re-uptake blockers, are pro-attenuation molecules meaning that they increase the degree of attenuation of recalled stored memories (One exception, in this class of molecules, is the atypical serotonin re-uptake blocker fluoxetine which, to the contrary, induces subhallucinations and better recall of dreams. The probable reason for this is that fluoxetine should, logically, preferentially enhance 5-HT_{2A} receptors activity-linked to dopaminergic activation while other similar molecules, very probably, enhance dopaminergic inhibition). Conversely, **disattenuating molecules increase the degree of informational flow from memory to consciousness. This process is called "disattenuation".**

The brain is also equipped with another very important structure called **the *dérépixelisateur* in French**, which could be translated as the "**derepixelator**" or **DRP**. **The DRP is responsible for the continuity of our consciousness during waking time. During dreaming, the DRP also stops functioning, thus introducing discontinuity in our thoughts which become fragmented, like in schizophrenia (due to enhanced metabolism in MHVs).** In fact, schizophrenia is, essentially, a disease of the DRP which is malfunctioning. The DRP is thus responsible for the normality of our consciousness during our waking periods. We do not know yet which brain structures are involved in the DRP but one structure which seems to be a part of this system is the hippocampus (incidentally, the hippocampus contains cannabinoid receptors and such receptors should, logically, be involved in the generation of schizophrenic consciousness).

The DRP controls the informational structure of our consciousness and maintains the stability of this structure by preventing MHV radiation. In every individual there is a baseline level of MHV radiation which maintains him in contact with exoreality. If this baseline level of radiation is increased, then thoughts become discontinuous and we appear to be "crazy" to an exoreal observer! **MHV radiation is increased in the normal dreaming state but decreased in the conscious dream state. This means that during a conscious dream those brain structures crucially involved in the waking state form of consciousness are in a lower metabolic state.** This is a very important realisation, as it should now be possible, with PET tomography, to localise those structures responsible for the waking form of consciousness.

Surely this will be a great achievement in the study of consciousness. **The DRP is, very probably, a system which controls the intensity of metabolism in the areas which give rise to consciousness. When metabolic activity is low in these areas, then we have our normal structure of consciousness. The structure of consciousness is also called a "pixelation pattern" (*motif de pixélisation* in French). When metabolic activity becomes elevated, then our consciousness becomes metastable and dissolves into a mosaic of unrelated informational events. During our waking time, the DRP maintains a low metabolism in the areas of our brain responsible for consciousness. So the DRP (and also the attenuator) is a metabolic modulator.** Understanding how the DRP works is understanding many different states of consciousness, from the normal waking type of consciousness to the dream or schizophrenic types of consciousness. The functioning of the DRP and the attenuator are interrelated. Depending on these interrelations you will get different states of consciousness.

There is also another system which is fundamental in order to understand different states of consciousness. It is called the **SBEM (*système de blocage des éfférences motrices*)** in French and I will keep the same acronym in English. **The SBEM is a neuronal system which blocks motor efferents during the onset of dreaming but which does not work during schizophrenic states, where it remains inactive.** This is why schizophrenics express an oneiric way of thinking while awake.

Different states of consciousness are generated via the mutual interactions of the attenuator, DRP and SBEM.

The way the **DRP, the attenuator** and the **SBEM** work together determines different states of consciousness, depending upon the states of activity or inactivity of these integrated structures. For instance,

the normal waking state of consciousness will be defined so:

Attenuator: Active
DRP: Active
SBEM: Inactive

The normal dreaming state will thus be:

Attenuator: Inactive
DRP: Inactive
SBEM: Active

The conscious dream state will be:

Attenuator: Inactive (consequence: increased metabolism in our memory areas)
DRP: Active (consequence: decreased metabolism in our consciousness areas)
SBEM: Active

The hallucinatory schizophrenic state will be:

Attenuator: Inactive
DRP: Inactive
SBEM: Inactive

The non-hallucinatory schizophrenic state will be:

Attenuator: Active
DRP: Inactive
SBEM: Inactive

Hallucinatory states, drug-induced, will be:

Attenuator: More or less inactive
DRP: Active
SBEM: Inactive

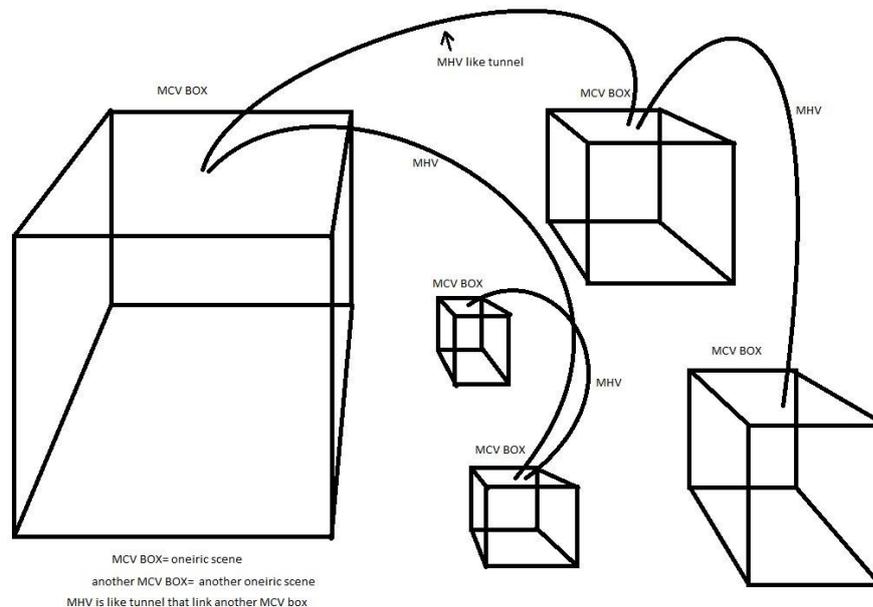
Oneiric Maps (*Les Cartes oniriques*)



Flight plan – Rob Gonsalves

In normal dreams we can revisit previous oneiric places from time to time. These oneiric places seem to be quite stable in their structure. For example, when I visit imaginary lands they are often dissimilar from their exoreal counterpart but still oneirically stable. It is as if my memory built specifically imaginary maps of places and stuck to these constructions from dream to dream! If I am in a dream about Brazil, for instance, this oneiric Brazil will most often be similar each time I come back to it. It is as if in my mind I have a whole cartography of places and people which is rather invariant. This oneiric cartography is what I call oneiric maps.

MHV's are like tunnels linking MCV boxes!



MCV boxes and MHV's like tunnels

MHVs are the shortcuts of memory. They directly link different oneiric scenes which we can represent by **MCV "boxes"**. An **MCV box is a portion of continuous oneiric space-time**. MCV boxes are visually represented as boxes which explain their naming! MCV boxes are continuously synthesised by the dreaming brain. They constitute the locus of endogenous reality where the oneiric consciousness travels. **Any dream [with different scene sequences] can be represented by a combination of radiating "stars" (MHVs) linked to different MCV boxes.** The center of the star is a slice of an MHV domain while the radiations represent the links between different slices of the MHV domain. In an MCV box oneiric time is, roughly speaking, continuous, discontinuity being introduced by the radiating MHVs. Any pattern contained in an MCV can be a part of a "specific" MHV domain. As an MCV is a metastable structure the dreamer can notice, when he "walks", in an MCV box slight discontinuities such as, for instance, the transformation of a rose into a crystal or the transformation of a fish into a mouse! In a linear man-made memory time is stored sequentially while in a MHV domain time is, in a way, randomly stacked, because MHV slices organise through pattern homologies independently from time coordinates.

For example a mushroom "A", stored in 1976, and an exceedingly close mushroom "B", stored in 1989, will be intertwined, stacked, very closely, independently of their respective time coordinates. This means that if the mushroom "A" appears into your oneiric consciousness it may very well be followed (through a simple MHV jump) by the mushroom "B". What is important to notice here is that each of these mushrooms is part of a larger MCV stored from exoreality. So if you are watching the mushroom "A" in an oneiric scene you may well be, in fact, in 1976 and when this mushroom connects to the mushroom "B" your consciousness could very well jump into the MCV associated with mushroom "B", meaning that you would all of a sudden jump from 1976 to 1989 via those mushrooms. MHVs are not always as simple as in this example...

Here is **an example of motion MHV**: in a train, in Tokyo, I look at the passenger door opening with a certain velocity. Suddenly the image of a crab opening its arms at the same subjective velocity of the door appears into my consciousness! What links the image of the door to the image of the crab is just a motion of similar speed... The apparent complexity of our thoughts can be reduced to basic MHVs connecting different MCVs. The more you observe your thoughts and the more you become keen to discover the links which connect apparently different thoughts.

So MHVs can contain any type of information not only visual or motion, or stimuli from the 5 senses but any other type that can be stored in the brain for example similar type of thoughts and emotions or procedures that are difficult to obtain consciously and can be classified as same pattern can be stored in same MHV

domain. Also, an information obviously can be and are stored in multiple MHV domains. For example in domains for its shape, its color, its function, texture, its sound, and numerous others.

Continuity and discontinuity of consciousness

The main characteristic of the dream and schizophrenic state of consciousness is discontinuity. When we are awake our consciousness is continuous and this is the reason why we can express ourselves in a verbally "logical" way. On the other hand the consciousness of the schizophrenic or the dreamer is made of continuous and discontinuous parts alternately. The nature of these discontinuities comes from the way our memory is organised and structured. Biological memories are not sequential memories: they store information both in a continuous and discontinuous way. **Discontinuity comes from the fact that our memory classifies information through patterns.** In fact, the brain has nothing to do with the computer analogy as a brain is, actually, a pattern analyser not a sequential analyser like computers. Computers will become intelligent only when they will work as artificial pattern analysers. As long as they will work sequentially they will continue to be complete imbeciles! In fact, as a scientist, I am amazed at how stupid computers can be. Another reason for their lack of any intelligence is that they cannot make mistakes and mistakes are the basis of emerging intelligence. Intersection memories, on the other hand, are very flexible.

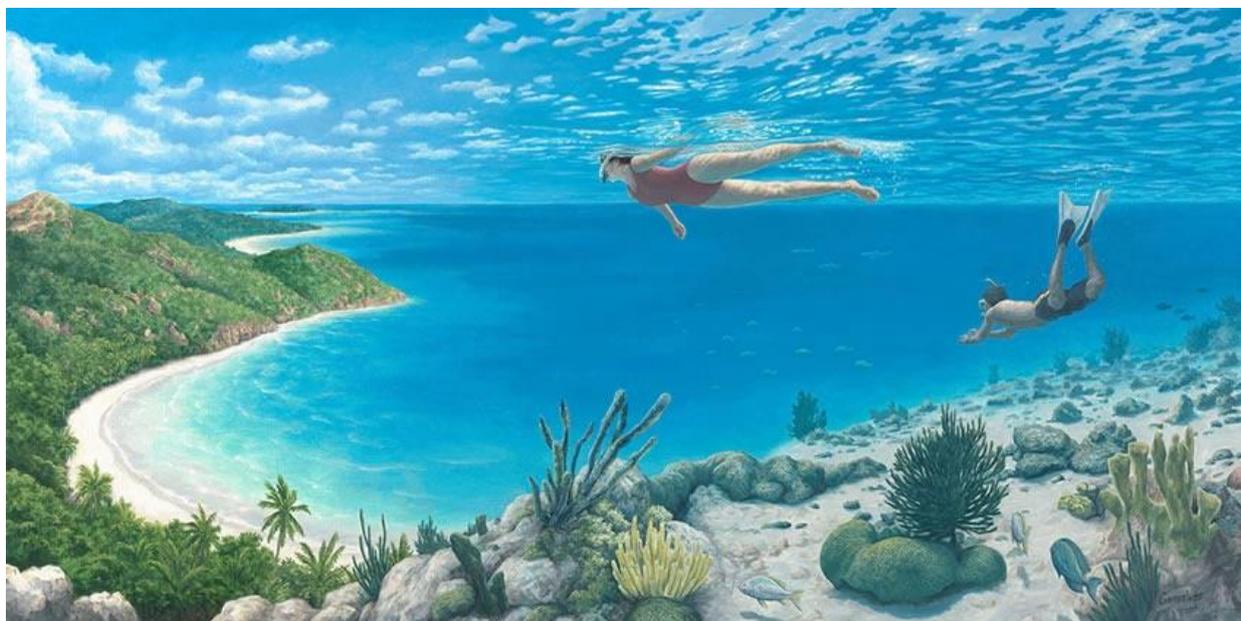
Our memory thus stores information according to patterns. For instance spherical objects will be stored in the same memory area, triangular objects will be stored in their own memory area, etc. **Our memory stores also information in a continuous way. This form of information storage is called MCV memory from "mémoire à motifs continûment variants".** In fact, analysis seems to suggest that **MCV memory is only an illusion and an expression of MHV memory where all stored patterns flow in the same time direction.** So to each slice of MHV we can assign a time coordinate and when a set of slices of MHV have similar time coordinates then this produces continuity and the illusion of MCV memory. All this has been fascinating brainstorming and research for me, from 1976 to 1989! This is the first time I have shared some of my knowledge with many people.

An area which stores homologous patterns is called a *domaine d'homologie motifielle* in French, which may be translated as "homologous pattern domain". For instance, all the heads of people we have seen in our life are stored in a common homologous pattern domain which can be called, for convenience, a "pattern domain of heads": a MHV of heads! All those stored heads constitute a MHV of heads while one head is a slice, a section of this MHV, as we saw previously. This is important to keep in mind. But one head per se **can also be subdivided into more "elementary" MHVs: so a slice of a MHV of heads, for instance, contains in itself other slices made of many mutually interacting MHVs.** If we take one head (that is, one slice of a MHV of heads) and then introduce continuity by rotating this given head in the imaginary space-time of our memory we obtain a given MCV. A moving slice of MHV in time generates, radiates potential MHVs contained in its structure. This is reminiscent of fractals.

Creativity is a process of spontaneous informational self-organisation

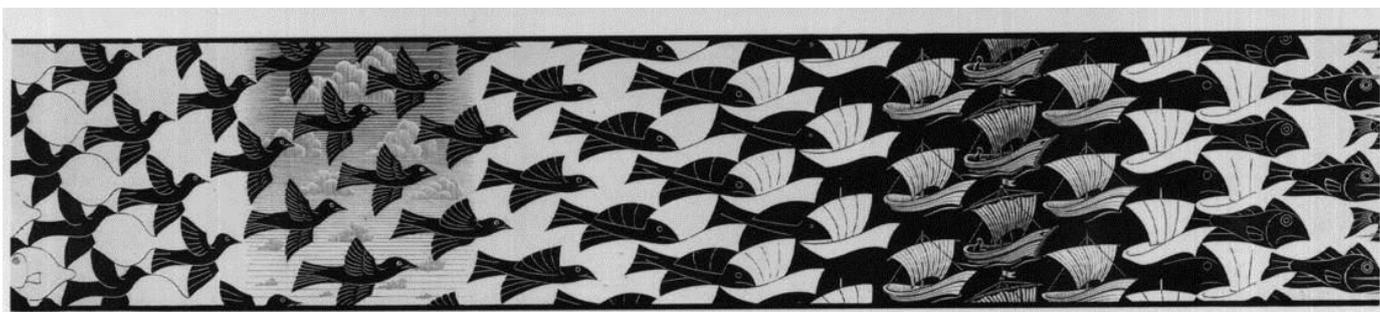
Memory is a "structure informationnelle auto-organisatrice", that is, a self-organising structure. This means that the content of memory spontaneously reorders itself to make more complex informational structures. This is done through the continuous interaction/synthesis phenomenon I just described, going on in the homologous pattern domains which, progressively, complexifies the information stored in biological memories. **This is the very essence of creativity where new ideas suddenly visually appear when they are sufficiently self-organised. Biological memories constantly create order, through interaction/synthesis in homologous pattern domains.** Then one level or order proceeds to a higher level, and so on. Cannabinoids can stimulate this natural phenomenon by enhancing the metabolism of memory areas. This does not mean that everyone can become creative with cannabinoids because, in order to be

creative, you need to study and accumulate a lot of conflicting data in your memory and you need to be able to visually observe the progress of your memory in creating higher and higher order. Moreover, as we have seen, **the hypernesia induced by cannabinoids leads to spontaneous amnesia: ideas are forgotten nearly as soon as they are discovered because consciousness, under cannabinoids, radiates into a multitude of homologous pattern domains (these new ideas are visual in nature and one can learn to see his or her thoughts self-organising)!** As for myself, I have learned to reason not only analytically but also non-sequentially, through the visual system, which always gives solution images to a particular problem I am trying to solve. The visual system solves problems by approximations.



Beyond the Reef - Rob Gonsalves

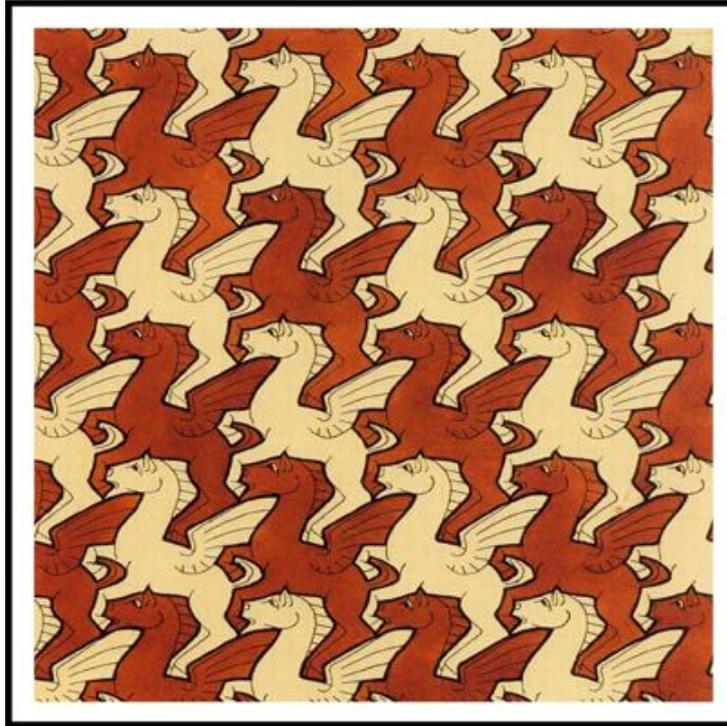
Reiterations and other phenomena



Metamorphosis III, Excerpt 4 - M.C. Escher - 1967-68

This is a very important topic as reiterations, often observed with focusing or with serotonergic disattenuating substances, express some basic laws of image synthesis by the CNS. Reiterative phenomena have also been observed by people undergoing a delirium. My opinion is that reiterations are the products of MHV domain activation. **As you "heat" a MHV it naturally starts to radiate its slices into consciousness thus giving rise to reiterations.** Many invariant phenomena can be observed under disattenuating molecules or through focusing. One of these is when an informational object becomes "soft". For instance you watch a moving aircraft and, suddenly, its wings become soft and fall down! Dali has expressed this very well in his paintings of soft watches! In fact, many of Dali's paintings contain typical things observed in disattenuations. So, I guess, Dali had the ability to observe some of his visual thoughts and paint them. Another thing often noticed in disattenuations are "*aigrettes*" (slivers?). *Aigrettes* are typically observed not only in

hallucinations but also in art, especially, in Siamese art. These *aigrettes* bring to mind similar *aigrettes* observed in fractal objects.



Pegasus (No. 105). M.C. Escher – 1959.

An interesting side-topic of my research on hallucinations is that "flying saucers" reports cannot be explained by hallucinations as they mostly never contain any trace of hallucinatory phenomena! So "flying saucers" are not the products of hallucinations and can be understood only in terms of lies, confabulations, or description of authentic unknown phenomena. Flying saucers are very rarely reiterated, never contain *aigrettes*, do not "melt" like Dali's watches and do not transform into other bizarre objects through MHV jumps!!! For instance, if flying saucers were hallucinatory in nature they should transform into other hallucinatory objects through homologous patterns: descriptions of flying saucers giving rise, let us say, to a woman's breast, etc, should frequently be observed! In the field of religion, however, things described by religious observers fit in with hallucinatory phenomena: reiterated angels, presence of benevolent "spirits" (as observed under cannabinoids, buprenorphine or *psilocine*), visions of the clouds "opening" (easily seen under *psilocine*!). One *psilocine*-induced phenomenon, however, can be sometimes found in "flying saucer observations" like the sense that time becomes still. So when a person reports "flying saucers" together with an alteration of time perception, this is, very probably, hallucinatory in nature.

From reiterations to complex images: amplification cascade of interaction/synthesis

Under kava (*Piper methysticum*) I can see beautiful reiterations for some minutes! For instance, today I started to see maybe about a dozen *poissons-papillons* (Chaetodon fish). I could distinguish them concentrated somewhere in my visual field as if they were in a translucent bowl. When the Chaetodon appeared they appeared in 3 dimensions and frozen. There was no movement. Suddenly, all of them started to rotate slowly from right to left (in my case reiterations very often seem to rotate from right to left...). But, contrary to normal reiterations, these chaetodon were not all similar! They were different in shapes and colours and even I could see non-chaetodon fish like the famous "houmouhoumou-noukounoukou-apouaa", a kind of "Baliste" (Balistes, in Latin)! But still all these informational objects were of the fish class, meaning that an MHV of fish was getting metabolically active and radiating some of its slices as different fish. The

metabolism of this MHV was, logically, higher than usual otherwise it would have kicked only similar fish into my consciousness. When the fish started their slow rotation I noticed one orange Forcipiger longirostris (a kind of Chaetodon) going out of the pack and swimming to the left! Suddenly I got an insight as how the brain could proceed in order to generate complex images via simultaneous activation of multiple different MHVs.



Bedtime Aviation – Rob Gonsalves

Source: <http://www.shaman-australis.com/~claude/dreams.html>

Collected articles: <http://www.shaman-australis.com/~claude/index.html>