

# Metaphor and Computing

## 1

### Distance

Only the truth of a metaphor may be defined.

That is not to say that truth might be in any sense metaphoric. But simply truth is a statement about this distance between metaphor and reality. Truth is an evaluation of the adequacy of a metaphor to the Real.

It would be absurd to think that truth is *only that*. Truth is *that* and nothing else. It cannot be otherwise. It has not other mode of existence. This, because there is no evaluation of the adequacy of reality to reality, and besides, there is no need for it.

## 2

### The being-there

If this distance between metaphor and reality was ever to be suppressed, then only the "being-there" would be left, the immediate being, perfectly adequate to itself, without any beyond, without any distance. A sort of absolute present, total chance or absolute necessity may be, but chance or necessity, abstracted from this fundamental distance introduced by the image, the model, cannot be distinguished, and - so to say - are not even happening.

When you consider it closely, the "being-there" stands without any laws. This because any law is an image too. A law describes a behavior, but the law is not the behavior, it only re-presents a behavior. And there are no laws in Nature except the laws that images introduce into it.

It cannot be drawn out of this situation that Nature is a chaos, nor may it be drawn out of it that Nature is an order. Chaos and determinism are two variants of the same absence of wits. This because the mind - when it has wits - remembers that chaos and order are still re-presentations, models, images.

The "being-there" as regards itself has no models. It is careless and senseless. It does not have anything like a precedent and is no example for anything. As regards what we know about it, Marcel Duchamp once noted, "*La mariee n'est jamais mise a nue que par ses celibataires mèmes*"... Magritte made the same quite obvious with "*Ceci n'est pas une pipe*".

In other terms we only get knowledge about reality through a movement by which "this" becomes absent.

### 3

## Perception is action

What our senses show to us is not the Real but only what they think of it. Our senses are not receivers, they are not even actors. They are actions, processes.

To perceive does not mean to access to the Real, but more to act, to build, to construct an image, a map related to this part of the Real that our senses presently have to deal with. The stimuli-response model has certainly proven to be useful, but it is nevertheless a lie. We do not react to external events. Our perceptive activity builds these events.

Nothing ever happens to non-living beings. What is inert has no history, although it has a history for us, for us for whom having a history has a meaning.

We credit the inanimate with this sort of autonomy we have as living beings, but the inanimate has no autonomy.

We see forms, shapes, patterns in the world, things with a sort of destiny of their own, that would be comparable to ours, things with their own properties and reactions where it might be after all that only a monstrous wave function exists.

### 4

## Religion

We never really got out of *animism*. We only exchanged the "soul of things" for the "laws of nature". And yes, it seems to work better. But we are still going on with the same old story, along the same old road, casting our point of view as living beings onto the world and believing so deeply into it that we always mix-up the prey and the shadow - in other terms the sign and the thing, - what we know about the world and what the world really is, that is to say an enigma until a better proposal is made.

We never really got out of the monotheist point of view either. We persist into thinking that there is something such as an absolute point of view about the world, a point of view that would not be the point of view of a flesh, a perspective that would be independant of this condition we are in: the condition of living beings.

We do not see that perspective only exists for living beings et that it is a real misuse to extend its meaning out of this original scope of validity.

We stick to the belief that there is an absolute truth when truth may only be - and is per definition - the truth of an image

## 5

### Surprise

To perceive is to work out a model, that is to say essentially an imperfection, from which by a sort of strange trust, we expect a certain degree of faithfulness (of truth).

Faithfulness to what, then ?

Not to reality obviously, since we only know about reality by means of our senses. But faithfulness to life without any doubts since as far as we see, we do not die that often of trusting what our senses tell us.

In this, in this fragile reason, in this risk, stands all the truth of perception. And out of this we have gained something like an understanding of the miracle.

So that we are no longer surprised, as the Greeks used to be, that our senses might sometimes be misleading. What is a real surprise to us now is that perception is, after all, relatively reliable and this is the basic reason why we are still alive.

And well, being alive, whatever people might say or think about how charming death may be, *being alive is the fundamental surprise.*

## 6

### The Real is not true

The "being-there", this "this" that our senses are talking about is what we do not see, what we do not hear, what we do not touch or feel, what our caress never discovers nor uncovers.

This because perception is poetry, because perception is "to do, to make".

We have learned from recent science that perception builds maps in the brain. But a map is not a location. A map may be reliable or wrong. On the opposite, a location is absolutely exact. It has an

immediate, total and inevitable exactitude.

*It is not true, it is real.*

## 7

### **Signs are not abstract**

From the fact that perception builds maps, it would be erroneous to derive that perception is abstract.

First, perception is real and concrete in its results. The maps that it builds are real, just as real as what they represent. A map is a code. Items of a code are always real and they must be so since a code must be perceived and read.

But even in what seems abstract and non-immediately tangible in perception, which resides in its process, in its movement, perception belong to this world: it happens.

Before perception takes place is not the same as after. Perception emerges, springs up in this world with the same degree of reality as a barrage crumbles down or as a flake of snow softly lands.

## 8

### **Trébuchet**

What was said above seems to be a confirmation of the platonician vulgate according to which we only see shadows.

However the same movement shows that this antiphon is invalidated on a certain point, a huge detail which lies in the word "only".

This because to see is to produce shadows. And it appears that the light that produces these shadows does not lie beyond our reach. This light belongs to this world and this light is us.

There is not other light, no other intellection than this one, this fragile and risky light of living beings.

We are the fire that produces knowledge and there is no knowledge which is not produced by this uncertain fire of life.

We are this fire that is knowledge.

## 9

### Consistency

We are now led to re-formulate the quite approximative assertions we initially made.

If our senses only provide us with images, metaphors, and nothing such as actual reality, the best we can reach is a certain level of consistency between what our senses let us know and these other images, metaphors, models which our representations are made of.

The problem is now to made a bit more explicit what this sort of consistency is made of.

## 10

### The power to flee

Metaphor is metaphor only because it relates *this* to *that*.

Doing this, a metaphor says *this* by *that* and at the same moment, *that* emerges as a ghost, as a beyond to *this*. In this relationship, that is to say in the faithfulness, in the truth of this relationship and only there, a metaphor is a metaphor.

An image that would not have some sort of truth, that is to say a metaphor which - etymologically - would not carry over some meaning would not be an image, but a simple "being there" as any other, a simple part of the Real.

Anything may potentially represent any other thing. However, when an image is missed, when a part of reality does not say more than itself, its has no "beyond" and above all it is of no use. This is no concession to utilitarianism, but only this finding that a metaphor is missed when it is not useful to life.

The meaning is what has *the power to flee*.

## 11

### Play

Everything may become a sign, yes.

However everyone suspects that this quite flat finding does not summarize the truth of signs. The fact

that the letters of the alphabet are (have become) arbitrary certainly does not mean that the essence of writing stands in the symbols that it uses. Knowing how to read is something quite different from knowing the alphabet.

Computer science has accustomed us to the creation and use of artificial languages, languages that may be formal, abstract, but effective and of quite concrete consequences.

This practice taught us that the core of signs stands exactly in the movement of signs, in this dynamics by which they are assembled, or better said maybe, in this dynamics by which they are growing. Glossaries are woven out of silence and grammars are absurd and dumb.

The soul flees, it runs away and seeks its salvation within time. It is this movement towards beyond that always crumples the pages of both the books of spells and the dictionaries

## 12

### **Propagation**

*A metaphor is only true if it propagates.*

An idea, a raw idea is nothing more than a promising metaphor, a metaphor which is opening on a full network of images that interconnect in an apparently consistent way. It is nothing else at first than a simple "like" or "as" plus the intuition that this comparison will mate with other comparisons which are already known or expected to be born soon.

The actual feeling, the presentiment or the confirmation of this sudden but coordinated burst of metaphoric relationships are the only difference between a poetical metaphor, the beauty of which lies in its instantaneity and an idea, the worth of which primarily lies in its consistency.

Poetry feeds on flashes, in other terms on vivid, native, atomic truth. But a truth that moves forward like a wave. The light flashes and in the same movement, it grows roots. It is like a fire melting with a tree

Poetry is certainly a risk. However, there is no lucky find for a poet if this lucky find is not true. Better expressed the luck and happiness in an image lie in its truth

## 13

### **Burning forests**

Ideas walk with a quite heavier pace. Each one of their steps relies on these same flashes which once made the pleasure of a poet, but these flashes are now stale, muffled.

They are old flashes so to say, flashes which have become habits, customs, and the helpful light of which has become so usual that the mind does not see it anymore.

Out of this dusty, flat and boring and grey matter, nevertheless, a metaphor will lighten the fire of meaning again, but at a different level and at a quite different scale. A single spark might be enough, and in a vertical and monolithic eureka, a complete network of relationships which was until that moment hardly surviving in the shadow will burst into flames and come to effectivity.

## 14

### Infinite

It would not be too surprising that the difficulties that we encounter with the infinite proved to be one of the effects of the propagation of metaphor.

What we call the infinite is generally nothing else than an approximative image of the repetition of the same. Which is a very poor image because, either the image is uncomplete, unperfect, unfinished, or it is the flattest possible image, the image of the return of the same, of the absolute return of an absolute same.

But what is worse, is that such a metaphor implicitly leads to the conclusion that the very flesh of things, what make the very essence and flavour of an instant - this flesh by which the properties of 1 are different from the properties of 3 or 5 - would ultimately disappear, "provided we go far enough" or "after a certain time". There would hence be, hidden under the concept of the infinite, the idea of a slowly disappearing time, of a time that would ultimately vanish, evaporate.

So that towards the infinite, everything would become indistinct, blurred, tasteless, so that events and new things would become rarer and rarer... But if that could possibly be the case, how would we measure, how would we perceive time ?

Although there are situations in which it is proven that the frequency of appearance of new things gets smaller as numbers get bigger (it is the case at least for prime numbers) it is quite improbable that this impression may possibly be true for all types of new things.

## 15

### Computing

A scientific model is nothing more than a metaphor that proliferates, that propagates while preserving its value of truth and hence, allows calculation, computing.

It is important to realize that the essence of calculation, of computing is analogy and not operation.

This firstly because computing only has a value as long as it is compliant with identified rules, with a grammar, a program, an algorithm. The truth of a calculation relies on the faithfulness with which the rules have been applied in "reality", that is to say in the "being-there".

The quickest computer is worth nothing if it parts - even a bit - from the road that is assigned to it by the program.

Here, once more, truth is completely enclosed in the relationship between reality and metaphor

## 16

### Four

Secondly, computing is analogy because the result of any computation is senseless (is a "being-there too) as long as it as not been interpreted.

An idea similar to the one which was used by Jorge Luis Borges in "The Babel Library", but relative to computing instead of coding, should allow suggesting a relatively good understanding about this situation.

Simply try to imagine a group of people meeting for whatever purpose and in the middle of which an expert pops up announcing: "gentlemen, I have been using all the possible computing resources on this planet, including men and machines and the result is *four*".

Despite the extraordinary prestige granted nowadays to computers and experts, one may think that someone would probably try to inquire about the rules used by the incredible computation, which may result into this little sentence: "*the result of what?*".

And then it even may be that the second question would attempt investigating what sort of interpretation could be given to the valiant result, which would result into "*four what?*". This in spite of the fact that this precise question might even not be a valid one.



## 17

### Oracle

The fact that a man or a machine might be operating in some corner of this universe, according to strict rules although unknown to us is not a computation but an operation, and it generally has no epistemologic value, since reality operates permanently without necessarily producing any knowledge.

And it may even be, following an expression of Stephen Wolfram according to which "Nature computes the next state", that the world might be this sort of senseless calculation. But men do not compute for the sake of it. There is no such thing as calculations without expectations, and there is no such a thing as calculation without at least some interpretation (theatrical meaning of interpretation) of the result.

To compute is to consult an oracle. And it would not be really surprising that computing originates there, in the procedures and rites related to oracles. The *Yi Ching* was there long before binary computing was invented, and this despite the fact that the *Yi Ching* is based on the binary notation.

And that number or set of numbers that we are expecting from our so powerful machines is not of a different nature or essence than what the pilgrims came to find in Delphi, that is to say *a sign*. It is visibly and essentially nothing else than that.

So we too may say, as once Heraclite did: "*the master to which the oracle belongs, this oracle in Delphi, he does not speak, nor does he hide, he makes signs*".

## 18

### Imperfection

And now we know why it is necessary for a metaphor to be an imperfection.

A metaphor that would be too faithful, that would stick to reality so closely as to represent all the details of it, would lead to incredibly long computations, would lead to calculations which would be just as long as the calculations operated in reality itself.

But it is by no way reasonable to hope to compute quicker than the Universe does and with the same precision as it does. Because the Universe computes with all its heart and all its power and we may not hope to use all but a very little part of this computing power for our own needs.

Computing must predict. Computing must say something of the part of the Real it simulates before the predicted events happen, otherwise it is useless. And hence to compute on basis of perfectly exact and precise metaphors, even if the whole computing power of the universe could be used, would mean not to compute quickly enough, because the result would only occur - in the best possible cases - too late, that is, just as the same moment as the simulated event itself.

## 21

### **Mother of metaphors**

What does a cell do ? It computes proteins.

Then the dynamics of these proteins is the basis for a higher order of computation, which rules or (better) guides the alchemy of behaviors and their permanently risky adequacy to events.

On the whole, the organization of the cell (and of the DNA within the cell) codes an indirect (very indirect indeed) metaphor of reality and at that level, the question of the truth of this metaphor visibly resolves into the question of life and death. All the successive levels of organization added by evolution have no other meaning than refining and improving this initial metaphor.

Through ages and ages, life has grown to a more and more refined "understanding" of reality, so that from our point of view, we often can hardly prevent ourselves from thinking that this or this feature "all looks as if" it had been made on purpose. This feeling is of course mainly due to the fact that our mind cannot fully understand what billions and billions of years of biological computation may lead to.

But this incredible computation apparently led to us, and that explains a lot why man's most powerful (and most useful) talent is to be a poet, since that is where we come from: this silent, very old and long and incredible poetical activity of life.

## 22

### **Eternal, absolute, unique**

From the fact that the question of truth only arises about an image, a model, it is clear that there is no such things as eternal truth since models are not eternal.

It is also clear that there is no such thing as a unique truth since it is quite possible that several images

may be reliable and adequate.

From another point of view, since truth is an evaluation of the adequacy of a metaphor to reality, it might even appear as a good thing that truth is not unique and eternal because we know that reality changes and that we must adapt our models to change.

## 23

### **Probabilities**

However, from the fact that truth is always relative - as an evaluation of adequacy of a necessary imperfection to reality - it might be quite erroneous to conclude that all things are equal.

Species which rely on wrong representations of the world disappear quickly. Species which rely on better metaphors disappear much later. Accident and chance are nevertheless everywhere and even talented species are never out of reach of a disaster. But on the average, talented species rely on representations covering most of the probable accidents. Which means that their chances of disappearing is relatively small - although of course not equal to zero. In other terms, the question of truth is a vital question, for the individual as well as for the species and more globally for life as a whole.

## 24

### **Praise of simulation**

From the fact that truth is always relative, it is probably not well founded to think that truth may ever go nicely together with peace and tolerance. It might be even much more reasonable to expect that in this matters, fighting (war, polemic) is the father of everything as an ancient Greek once suggested. Stimulation of fights between rival metaphors has probably been for a long time an efficient method for evaluating their respective level of truth before the question was raised with a more concrete urgency for an entire species or for life as a whole. It might then be expected that species which proved to be able to maintain within themselves this type anticipation mechanisms gained some evolutive benefits out of it.

However, as war is always quite costly, species which were capable to keep the question of truth alive and kicking within themselves at a relatively low biological cost ; in other terms, which were capable of identifying truth by means of simulated or limited wars instead of real and open ones, gained an additional advantage out of it.

Globally speaking, life is quite interested into stimulating emergence of a maximum of representations of the world (i.e. a maximum of species) and into maintaining competition between these representations (and hence species). The actual need of life is to compute sufficiently reliable

approximations of reality at the lowest possible cost. At the beginning of the biological evolution this sort of computation was achieved with the minimum level of metaphORIZATION which was available at that moment, in other terms by computing quite concretely with the life and death of individuals and species. This way of computing was considerably slow and costly but was the only possibility that could be used at that moment.

Now, paying any error with life is not very efficient and it is far better to simulate confrontations and let competition resolve the question of truth at this simulated level. This strategy is nothing else than an other application of metaphors, as it is clearly based on an additional level of metaphORIZATION. Although it is quite probable that this might introduce some sort of bias, simulation allows getting much quicker and cheaper results, which also means more results and hence even probably better results

## 25

### **Democracy**

All this leads to the conclusion that it might not be that surprising that our species likes polemic and has quite strong traditions of violence associated with the determination of truth.

However, since we have acquired various abilities of working with higher and higher levels of simulation and of resolving the adequacy evaluation issues by means of wars of a more and more simulated nature, we are now able to let models and metaphors confront so to say directly, in other terms at the level of language itself, without needing anymore to prove things by means of our own lives.

This is exactly what the emergence of democracy means. Democracy allows this possibility of letting images, models and metaphors fairly confront, whereas tyranny, by essence does not. Democracy is the theatre where a sort of image level darwinism of model level darwinism is played. Hence it appears as prolongating natural selection through different means. Democracy is the proper ground for raising the question of the truth of images, because then the question is raised at the level of the images themselves and not at the level of old high cost darwinian ordeal.

Yet this ordeal however remains at the core of things, and, either democracy plays with this background of risk, or it simply does not work anylonger. But there is something deeper... And it is the fact that democracy is a much more efficient mechanism than the biological ordeal.