

$0.957 \times 10^{-10} \text{ m at } 105.3^\circ$

A measure of harmony

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A star once sent a messenger. An atom of hydrogen. It met an emissary from another star. An atom of oxygen. They could understand each other. They had a common language. They shared an electron. They kept their distance. To be exact $0.957 \times 10^{-10} \text{ m}$ to go on and to talk to another atom of hydrogen. They had a common language. Another electron. The two electrons created opposite dipoles. They found out that they could coexist at 105.30° to each other. They had discovered a neighbourhood of harmony. Out of this harmony came a stable molecule. We call it water.

This molecule of water was healthy. It was just. It was peaceful. It was a happy molecule.

Like all happy things, water molecules took delight in being together. In their closeness they could feel their own electrons' tidal waves. Their height and period depended on the temperature and the pressure. In accordance with their amplitude, water could be a solid, a liquid or a gas.

In whatever form, water looked for the permanent and the contingent. In comets it travelled, frozen, across the expanses of the Universe. Near every star it glowed in a flame. In planets it encountered neighbours.

In one of those planets the radiation from a star made the right temperature and pressure. Almost at its own will water could be as solid as a rock, flow like a liquid, expand like a gas.

On that planet, hail and snow fell and stuck to the ground. Glaciers receded. Glaciers advanced. Oceans emptied. Oceans filled. Seas contracted. Seas broadened. Rivers dried. Rivers overflowed. Fog and clouds came and went.

It was a planet for the water to be free. Water showed that star and this planet its gratitude. Its harmony, its electrical dipole, became the mortar of life.

The star is the Sun. The planet is Earth. On this planet one of the water's neighbours claims to be *Homo Sapiens Sapiens*. He has an opinion.

How we love to have an opinion. We have always dwelt with the causal conjecture. We developed a great ability to combine arguments, to produce explanations for past events and to forecast. We often say: it is probable that.... This probability has nothing to do with chance. It is a measure of how certain we are about something.

With this method we have been able to produce from the void, from the mind, almost anything. Once the thread of fear is conquered our capacity to weave wonders with the yarns of the unknown is limitless.

We want to propagate both these wonders and our opinion. It is a biological imperative. It is a necessity to have our opinion known. It has arisen from billions of years of evolution. It sprang from this undivided Universe of ours. It was sung by José Saramago:

*From me to the star it is but a small step:
We are both lit with the light scattered
By the casual explosion of genesis,
In between the darkness which was and will be,
The radiant glory of thought.*

We must look for others to give them the spark of information: the difference that makes the difference. The unbreakable impulse to go and to seek neighbours is nature's emphatic answer to what we call intelligence. It is nature's push towards harmony. The principle of health, justice, peace, love and happiness.

It is responsible for our incessant search for neighbours. We just have to see them. To touch them. We have the urge to show them our body and our soul. We need to declare our I. We must also affirm who we are, what we think. We have the permanent drive to share our Self.

In the beginning it was very hard. But then, in the year 311 BC, the Romans built a terrestrial road. It became famous under the name of Via Appia. Along this road the Roman legions marched, through space, faster than ever before, to do battle in southern Italy.

From this modest single terrestrial road mankind discovered that a network could be built. With it a greater number of people could make contact between each other in their life span.

The extension of everyone's neighbourhood grew immensely. A patrician family living in Odrinhas received queries from the Senate. By means of the terrestrial roads it was able to cast its vote, in Rome, within eight days. People paid to travel on those roads. The passport and toll were invented.

Because of the very existence of these roads and their networks there was a great expansion of the economy. New nations emerged. New law appeared. A religion spread to reach the very limits of the terrestrial road network.

Terrestrial roads were for many thousands of years the only efficient means to go out there and reach for neighbours.

Then, six hundred years ago, the Portuguese genius discovered that it was possible to go faster through space, to increase the number of neighbours, using the Oceans.

This is the discovery initiated by the Portuguese. The arrival here or there, the passing of this or that cape, the overcoming of this or that difficulty, however heroic, are episodes.

The discovery was that on this planet Man and all other species could travel through space far more quickly using Ocean routes. As a consequence, the number and nature of the neighbours of every single species increased in an unprecedented manner. Again, economies grew by orders and orders of magnitude.

For several hundred years, sea and terrestrial routes were the only ones available.

At the beginning of this century the American genius started to criss-cross the Earth with airways. Through them the neighbourhood space dilated immensely. Time contracted proportionately.

When only sea lanes existed, the vicinity of a man infected with a short time incubation virus was very limited. Whatever ship he boarded would take ages to arrive at its destination. Today, he takes an aeroplane and within hours he can be anywhere on the planet. We do not know him, but he is everybody's neighbour.

Our I and another man's I, no matter how far apart, are close in the distance of time. By air we travel fast. And it is not only humankind. Every other species has found new neighbours. It lives in new environments. Our own species, using terrestrial, naval and aerial roads, is present in every habitat generated by the sun and this planet.

We have found and we are still finding, every year, new species; from complex animals and plants to simple monocellular and viral creatures. They are our

neighbours too. Some we love. Some we dislike. Others attack us. Others we exterminate for no reason. Some are so alien to us that we treat them as true extraterrestrials. In every case: they are our neighbours.

In the late fifties the Russian genius initiated the means to travel to outer space. It was the onset of another search for new neighbours. They started to break the bond of our species to Earth. They are freeing us from the vulnerability of living on a single planet. At this very moment we are learning how to live in the most aggressive environment ever encountered yet by man: outer space.

On the twentieth of July 1969 two Americans walked on the Moon. Two dozen men have left footprints on that planet. In a thousand years hence they will be the signature of the twentieth century.

Following that glorious moment a strange apathy seems to have taken hold of mankind with delusions of a risk-free society. To know the planet Earth and follow the trajectories to the solar system and beyond are two different goals in appearance only. Neither of them is finite.

After all, once a new road has been discovered, no matter how long it takes, it will bring a whole kind of new neighbours. With them comes an increment in prosperity to all of us. At first, only to those who had the talent, the energy and the courage to discover it and follow through. Then the standard diffusion process takes it to all mankind and increasingly to all the other inhabitants of the planet.

Nevertheless, these enormous discoveries were, in a way, limited. It is hard to go against geography and geology when building terrestrial roads. It is not possible to construct vessels which do not obey hydrodynamics. We cannot fly against the laws of aerodynamics. We cannot travel into outer space without conforming to the laws governing the orbits of our spacecraft. And thermodynamics tells us that in a closed system entropy keeps on growing.

On all these roads we transport, with ever increasing speed, the I. For that reason, when travelling on these roads, we must prepare the body. On all of them we must train the body and the soul, the I, not to rebel against discomfort. In this frantic compulsion to go, we must be ready for whatever take off. The I must go and withstand, almost, the unbearable.

We live in haste to depart. Most of the time we never arrive at what we want. Whenever a new road is discovered, we are able to produce more in the same amount

of time. With every new road, in the same interval of time, we hurry more and more, until we come to tell each other: I have no time.

Today it is the most often heard comment about our management of time. It had to be. Every new road has significantly contracted time.

Abade Correia da Serra lived in Mount Vernon. He was a counsellor to Thomas Jefferson. Every letter he wrote to Lisbon took around forty days to arrive. If he needed a reply from his neighbour in Portugal he had to wait at least eighty days in ignorance. The now in Mount Vernon and the now in eighteenth century Lisbon were separated by forty days.

In my village, Casal de Cinza, when the republicans took over from the monarchists in Lisbon, on the 5th of October 1910, we only noticed it on the tenth. It made no big difference. In 1910, the now in Lisbon and the now in a very small village, lost in the mountains, four hundred kilometres from the capital, had a five day delay.

Today we can transport anybody's I in twenty hours from somewhere to anywhere else on Earth. This is, now-a-days, the limit for the I to have his time.

But, we can pick up a cellular telephone in the most remote village and communicate to the most far away place on this planet in four seconds. At this very instant, the now here is the now everywhere.

This incredible contraction of time between neighbours must rely on a network of a very new kind of road. They are called the information highways. They do not transport the I. They carry only the Self.

The Self is the font of opinion, of information. It is the source of causal conjecture. It is where the feeling is included in all the content of consciousness. It is where change occurs with greater pace.

On the information highways the Self does what it has always done: tell other Selves about real or imaginary events with ever increasing frequency. Some even say that the Self generates thought as a movement of time.

The new information roads allow this Self to flow at almost the speed of light. They are able to do so because it is not our atoms of matter which move along them. They were designed to convey information. On the information highways the thinker is nothing but his thought, the observer becomes the observed.

On these brand new roads there is no passage for the I. We pay a toll, of course, but it is for the passage of the Self.

And, how intensively we are using these new roads! Through them we speed up the communications between the Selves, engulfing all of us in the most extensive neighbourhood ever known.

In our day and age we take the Selves to whom we have a quick access for the I s we deeply long for. It is very easy to forget that the Self is taking care of the propaganda of the I.

The Self, generator of information, source of communication, cannot know intimately all its new neighbours through these new roads. How can there be public opinion?!

In Eskimo villages judgements are still made by public opinion. For the Self to have a fair opinion about another person's acts he must know that someone intimately. In those villages everyone knows everyone else's I and Self. Public opinion does exist.

The only thing we can afford to have, in this overwhelmingly large neighbourhood of ours, is propaganda.

And it may be, just maybe, that here lies the reason for us to want to live with our I in a small village, and for us to want to share our Self, in the global present created by the information highway network, with a world-wide web of neighbours.

Whatever the case, propaganda kills privacy, and we all know that only in intimacy, with himself or with another, can Man find uncertain happiness.

Today, we say again and again that we live in an uncertain world. We always have. But with all these new roads to serve our gigantic neighbourhood we have come to mistake certainty with infallibility. We are not infallible!

There have always been accidents on all kinds of roads. Whenever a new road appeared there they were: a new set of dangers and fantastic prospects.

There were frequent assaults on terrestrial roads up to the end of the last century. Law for the high-seas was drafted by the end of the sixteenth century. It began to be accepted in the late nineteenth century. Pollutants are still discharged into the Oceans. There is some legislation for the air routes. For travelling in outer space there is hardly any law. None is applied to the information highways.

It is necessary to have determination and courage to go and circulate on the new highways. It has always been like this.

We are required to have a driving licence to travel on terrestrial roads. With higher degrees of skill we are allowed to command on the sea and air routes. To go into outer space and the deep Ocean we have to complete very intensive and demanding training. For the information highways it is not different.

As they are the very newest roads we find on them great opportunities but, also lurking, the worst of pirates. They are ready for the assault. The new plunderers are poised to attack the Self, to strip us of what we are. It is an attack on what we think. It is a set of assaults, called information warfare, where no quarter is given. We are very vulnerable when we follow only our senses. Our defence must rely on a deep set of convictions. They take time to construct. And, we have no time.

The educational, cultural, ethical and thus ecological requirements for having a driving licence to make the information highways safe are much more stringent than those for the permit to travel on the other roads.

The effort and dedication are very worthwhile. Every time we start a new road, in the pauses from fear to fear, we gain new wings of freedom. On these brand new roads it is the freedom to go with my Self to anyone else's Self in four seconds.

The signal from Self to Self is the basic signal, between neighbours, since the dawn of our species: I am alive; do not count, or count on me. My Self is available to your Self, or not.

Whatever might be the case, the aptitudes needed to ride these very new highways are such that only a very few are, effectively, on them. The vast majority is still on the kerb watching as the traffic goes by.

And once more, we are already seeing a tremendous expansion of the economy. These so called information highways, these new roads for the Self, have produced a great deal more confidence between neighbours.

Before the appearance of the information roads, in the aftermath of the Ocean lanes, we had invented paper money. It built trust between neighbours. On all the roads where our I meets another I we needed a set of atoms arranged as pieces of paper, badly stained and worn. They are sufficient for other neighbours to give us things, merchandise, in exchange for those torn pieces of paper.

Today, when we ask anyone: when was the last time you saw your money? We encounter an astonished face. The only thing we have today is information about money. Somehow, it seems, that it is all we need.

The encounter is no longer between the Is, it is between the Selves. And among them, the neighbours of the Self on the information highways, have built a higher degree of trust.

There is more money in information about money than there are actual bank notes. Nobody minds. Whatever the dimension of the perils we know that along each new road lies the fulfilment of great expectations.

It is no different from what happened in the past. There is, however, a small, but significant difference:

On the information highways our I stays in its location in space. It does not leave its place. These new roads allow, almost instantaneously, the trip and the communication between the Selves without the presence of the Is.

Be it at sea, in the air, in outer space, on the building site, in the factory, in the office, at home or at school, whenever we seat ourselves for the trip on the information highways, our chairs do go across time.

Now!! For travelling through time we must be in need of a new codex. A brand new code. Travelling in time. The rules for the traffic on the roads through time must be very, very different. We even think of them as written only in a book of prodigies.

We are indeed very proud of all the probes we send into space. Travelling through time is the realm of science fiction. At least that is what we say.

Yet, whenever a child is born where does he go? Inexorably, into the future. He is, above all else, a time traveller.

In our day and age only space or deep Ocean probes are front page news. We give them very personal attention and service them with the highest expertise before launching. We cannot afford for them to develop faults in orbit or at great depths. They are just too far away to repair them.

But what about the probes we send on the formidable trip through time, our children? When problems and mischief come their way, there, in the future, we will not be there to help. Are we giving them as much attention as we give our space probes? No!! We do not have the time! And this is in spite of all the networks of terrestrial, naval, aerial, outer space and information roads.

Yes! We keep on saying that we have no time. A God-given commodity has become scarce. Basic economics tells us that time must have owners and that it must be quoted on the stock market. And these owners of time do exist. They are known

under the general description of telecommunications companies. For energy, the entire oil production is owned by the so called six sisters. Time will be owned by, at the most, two or, maybe, three companies.

They are the courageous builders of the information highways: the millions of kilometres of microwave circuitry, the millions of kilometres of fibre optics on the planet, the hundreds of satellites orbiting Earth, the thousands of gateways on Earth and in space.

They have found out that information is given, by humans, for free. It comes out of the biology in us: the opinion. We pay to advertise. We love it when other people's Selves look us up on the web. We are ready to pay for knowledge, not for opinion, not for information. That is why the invoice we receive in our homes, in our institutions, is not about other people's information, is not about their opinion.

We pay for how long our Self was meeting with a neighbour's Self on the information highways. We pay for time. The travelling Self pays a very high toll to the owners of time. We are even glad to do so.

When our Self travels through the Oceans of time to reach for another Self we feel and understand Hamlet's words:

Doubt thou that stars are fire

Doubt thou the sun doth move

Doubt truth to be a liar

But never doubt I love

For the wholeness of love, we know. There is no substitute for the nearness of our integral beings. There is no replacement for the iron and the stones which make up this Pavilion of the Oceans in this EXPO '98. They are true to the lines of Edgar Allan Poe:

We are not impotent — we pallid stones.

Not all our power is gone — not all our fame —

Not all the magic of our high renown —

Not all wonder that encircles us —

Not all the mysteries that in us lie —

*Not all the memories that hang upon
And cling around about as a garment,
Clothing us is a robe of more than glory.*

Yes, more than glory. More than memory. More than magic. More than wonder. They are here to give shape to time.

They are the remembrance, for all time travellers in the aeons to come, that once, five hundred years ago, Vasco da Gama and his crew took to the river. With fear in their I s, with defiance in their Selves, the men from 1498 went. Down the Tagus they sailed on, to a new road, writing the signature of their century. Through the Oceans of water they opened the passageways to new neighbours. Most of them live in and beyond those Oceans. Most of them we do not know. Only a few we care to love.

Yet, on that very year of 1498 a high rising wave took to the air. It rained down on a very large flat rock. A “Lapa”. There, it met a wave of the solid earth. The Mountain of Lapa. A miracle of love occurred. A spring became a river. A new ecumenical language erupted. A Sanctuary was build. A Mission began.

In the Sanctuary of Our Lady of Lapa a word of goodwill was spoken. It can still be heard there. It is reverberating, around the globe, in every town where there is a Lapa district. It was carried, between neighbours, to the four corners of the Earth over the Oceans of water.

For the Oceans of time, of our time, in this EXPO ‘98 we hoist, today, Fernando Pessoa’s verses as the sail for every child, for every time traveller,

*To infinitely love the finite
To impossibly desire the possible
To want everything
Or a little more
If it can be
Or, even, if it cannot be.*

and to depart. To chart his path. To find his own new road. It will be, in all probability, outside of space ... outside of time. It will be, one of these days, a road into the neighbourhood of ... harmony.

Somehow, water has always been there.

A little over eight hundred years ago a Man fully understood this harmony. He was born on the 15th of August 1195 in this City of Lisbon some three miles from where you are standing, now, in this Oceanarium. You can go and be at the very place. His name was Fernando. He read S. Francis' oration to our sister ... the water. He became a Franciscan. He changed his name to Anthony.

He is Saint Anthony of Lisbon. Some call him Saint Anthony of Padua. He passed away there on the 13th of June 1231.

One day, he went out to pay homage to the Oceans and to all its living creatures.

On that day, Saint Anthony looked over the Adriatic and he must have seen just about the same species as those you are looking at in this EXPO '98 Oceanarium. It is said that he told them how fortunate they were. God had spared them from all the deluges and from the turbulence of all the other elements. It is also said that the feeling of brotherhood and love of this envoy of mankind were so immense that all the creatures from the Oceans were moved and bowed down before him.

In this EXPO '98 Oceanarium it is our turn to bow back, and to learn from our brothers ... in the Oceans a measure of harmony.

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