

State of the Sea

When man's nature functions soundly as a whole, when he feels that the world of which he is part is a huge, beautiful, admirable and worthy whole, when this harmony gives him pure and uninhibited delight, then the universe, if it were capable of emotion, would rejoice at having reached its goal and admire the crowning glory of its own evolution. For, what purpose would those countless suns and planets and moons serve, those stars and milky ways, comets and nebulae, those created and evolving worlds, if a happy human being did not ultimately emerge to enjoy existence?⁴

State of the Sea

When I was invited to make a piece for flute and multi-channel sound, a series of events lead me to a meditation on nature and technology. While listening to the weather report on my car radio, for the first time I noticed that the state of the sea, the “estat del mar”, “marejol” for example, was included in the weather forecast. I investigated a bit more, and found that scientists have developed the Douglas Scale, an international table of categories to name the states of the sea in the major European languages, and in keeping with the character of each language, the names sound more or less poetic. The categories for “wind sea” in Italian, for example, (quasi calmo, molto agitato, molto grosso) sound like music notation, and in Catalan they appear to come from the traditional terms used by seagoing people. I also recalled reading the news about a giant wave (26,13 meters) that was measured off the coast of Santander during one of last winter’s major storms.

The buoy belonging to the Instituto Español de Oceanografía (IEO) that made the measurement was actually broken from its mooring and carried away as far as San Sebastian. Scientists of the sea are constantly measuring the levels and movements of water, and that data is available online. The Coastal Monitoring Station of Barcelona, ICM-CSIC, maintains a system of a number of permanent devices continuously measuring different parameters of the coastal zone and systematic (monthly) surveys assessing environmental factors. This information is available as a series of daily photographs of a segment of the coastline, a monthly composite movie, as well as numerical data and graphs. The scientists who are using the data received from the system of buoys up and down the Catalan coast have made it available to me to use in this piece. Interestingly, Jorge Guillen of the Institut de Ciències del Mar, CMIMA, is a specialist in beaches, the “line” between the dry land and the sea.

Specialists in acoustics use sensitive instruments to measure and record the resonance of real spaces in order to reproduce them digitally and create recordings of music or movie sound tracks that sound more realistic, approaching 3D sound.

I was fascinated to discover that the special microphones and sensors that are used to capture the reverberation of an architectural space use heat to measure acoustic particle velocity, a translation of data that is similar to the way marine

scientists measure the pressure of water in order to calculate the height of waves. For the past three months I have been living with a beautiful book called Goethe & Palladio, Goethe’s study of the relationship between art and nature, leading through architecture to the discovery of the metamorphosis of plants. Goethe and Palladio, David Lowe/Simon Sharp, Lindesfarne Books, 2005 Inspired by the poet Goethe’s scientific approach of “knowing – from the inside”, so similar in spirit to Pauline Oliveros’ life-long practice of “deep listening”, I have approached the creation and performance of the State of the Sea as a classically trained flutist exploring natural acoustic space, as well as the electronic synthesis and reproduction of sound by using “real seeing/listening” - what Goethe called an “exact sensory imagination”, basic to both scientific and artistic study. State of the Sea is a sonification of data from measurements of the sea including the famous storm in December of 2008 that reshaped the beaches of Barcelona.

The data generates sound as well as controlling the volume or movement of music through a multi-speaker system, translating one kind of natural movement into another perception of movement, sound vibrations, interacting in architectural space. In his Quattro Libri, Palladio defines architecture as “the transformation of space”. Music, as in all the creations of nature, is perceived as a “vibrant field of formative processes”. (Gordon L. Miller, Introduction to Goethe’s The Metamorphosis of Plants, MIT Press, p. viv)

Barbara Held July, 2010

MEDIO AMBIENTE

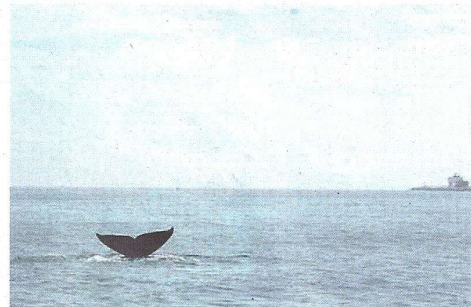
Revuelo científico por la insólita aparición de una ballena gris ante la bocana del puerto de Barcelona

Una extraña viajera

ANTÒNIA JUSTICIA
Barcelona

La lógica les decía que era imposible, pero las pruebas estaban en sus manos. Las fotografías de la cola de un ejemplar de ballena gris tomadas a las 19.24 horas del pasado domingo ante la bocana del puerto de Barcelona dejaban constancia del insólito y extraordinario avistamiento. Insólito y extraordinario porque podría tratarse de uno de los pocos supervivientes de la población de ballenas grises atlánticas, que se creía extinta desde hace 300 años. El mismo ejemplar fue visto hace un mes ante la costa de Israel, lo que ha llevado a los expertos internacionales a movilizarse para arrojar luz sobre el origen del cetáceo.

La tripulación del velero *Onas*, que colabora en la red de voluntarios de Submon (entidad dedicada a la conservación, estudio y divulgación del medio marino) hizo el avistamiento la tarde del pasado domingo, pero no fue hasta ayer que se tuvo la confirmación de la especie de la que se trataba la ballena. "No era un cachalote ni una rorcual, la ballena común del Mediterráneo, que estos días se han visto muchas. Y lo que pensábamos que era, no nos lo creíamos. Por eso cotejamos las fotografías con el personal del National Marine Mammal Laboratory de National Marine Fisheries Service de NOAA en EE.UU.", explica ayer Carla Álvarez, jefa de



RODRIGO BARAHONA

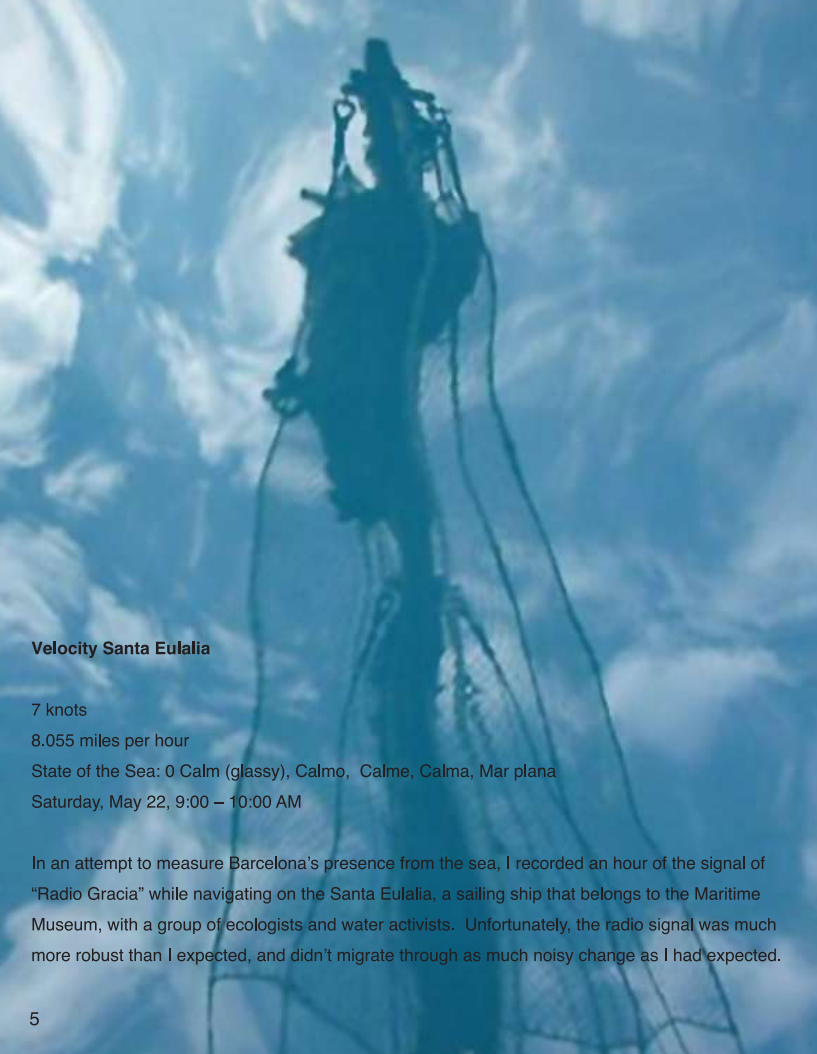
Para la posteridad. La imagen de la cola de la ballena que emerge del agua ante Barcelona quedará para la historia

proyectos de Submon. La constatación fue que, efectivamente, se trataba de un ejemplar de ballena gris. Y no sólo eso, "tras cotejar las marcas de las aletas vimos que se trataba de la misma que un mes antes había sido avistada frente a las costas de Tel Aviv", prosigue Álvarez.

La presencia de la ballena en aguas mediterráneas ha abierto un debate científico acerca del origen del animal, que podría ser uno de los pocos supervivientes de la población atlántica o, por el contrario, pertenecer a la población del Pacífico, que extraordinariamente ha llegado hasta el Mediterráneo. "Se está intentando montar un dispositivo de científicos internacionales para coger

datos del animal y poder determinar su origen", explican desde Submon. La identidad del animal puede ser confirmada a través de muestras genéticas o de la comparación de las fotografías de la aleta y el dorso del animal con catálogos internacionales.

La ballena gris es una especie de migración costera que alcanza los 16 metros de longitud y que habita en aguas del Pacífico. La población en el Atlántico Norte se considera desaparecida desde hace 300 años por la presión de la caza ballenera. Suele viajar a una media de 7 km/h y los expertos creen que, tras el avistamiento de Israel y ahora el de Barcelona, la ballena puede estar dirigiéndose al sur. ●



Velocity Santa Eulalia

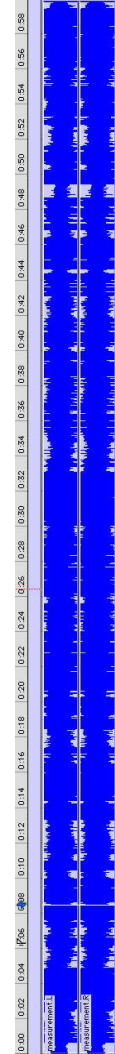
7 knots

8.055 miles per hour

State of the Sea: 0 Calm (glassy), Calmo, Calme, Calma, Mar plana

Saturday, May 22, 9:00 – 10:00 AM

In an attempt to measure Barcelona's presence from the sea, I recorded an hour of the signal of "Radio Gracia" while navigating on the Santa Eulalia, a sailing ship that belongs to the Maritime Museum, with a group of ecologists and water activists. Unfortunately, the radio signal was much more robust than I expected, and didn't migrate through as much noisy change as I had expected.



CHAPTER III.

Of the designs of town-houses.

I AM convinced, that in the opinion of those, who shall see the following fabrics, and know how difficult it is to introduce a new custom, especially in building, of which profession every one is persuaded that he knows his part, I shall be esteemed very fortunate, to have found gentlemen of so noble and generous a disposition, and of such excellent judgment, as to have hearkened to my reasons, and departed from that antiquated custom of building without grace or any beauty at all; and, indeed, I cannot but very heartily thank God, as we ought in all our actions to do, for granting me such a share of his favour, as to have been able to put in practice many of those things, which I have learnt from my very great fatigues and voyages, and by my great study.

AND altho' some of the designed fabrics are not entirely finished, yet may one by what is done comprehend what the whole will be when finished. I have prefixed to each the name of the builder, and the place where they are, that every one may, if he pleases, really see how they succeed.

AND here the reader may take notice, that in placing the said designs, I have had respect neither to the rank or dignity of the gentlemen to be mentioned; but I have inserted them where I thought most convenient: not but they are all very honourable.

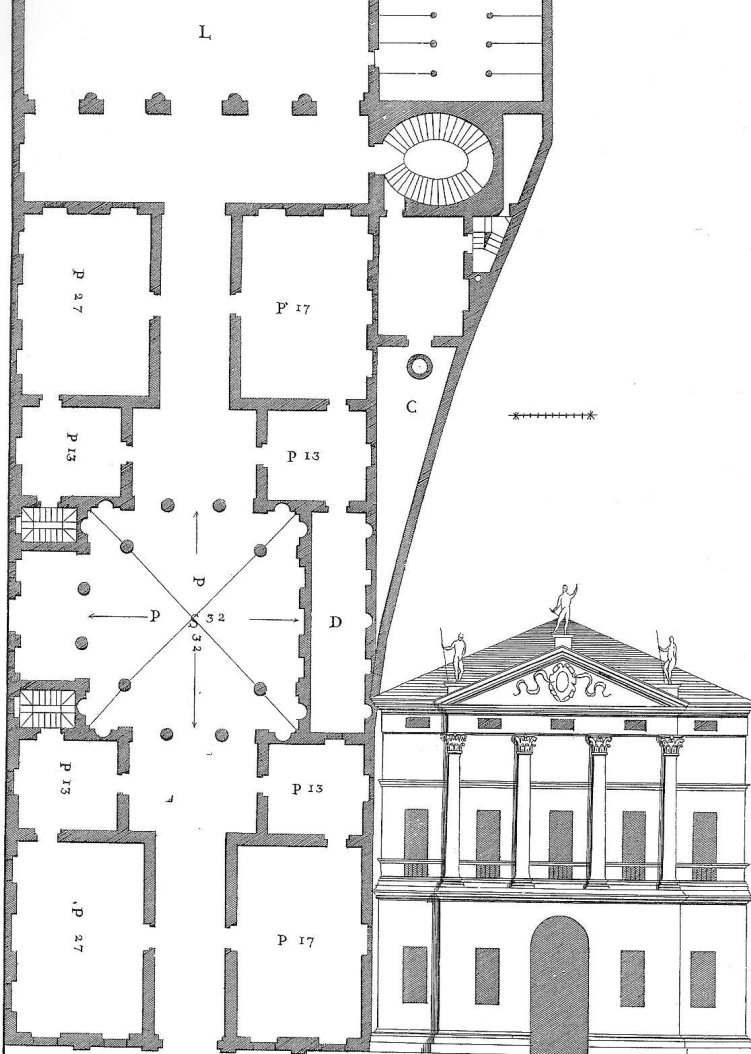
LET us now come to the fabrics, of which the following is in *Udene* the metropolis Plate 1. of *Friuli*, and was raised from the foundation by Signor FLORIANO ANTONINI, a gentleman of that city. The first order of the front is of rustic work, the columns of the front, of the entrance, and of the loggia backwards are of the Ionick order. The first rooms are vaulted; the greater have the height of the vaults according to the first method before-mentioned, for the height of vaults in places that are longer than they are broad. The rooms above have flat ceilings, and so much wider than those below, as the contraction or diminution of the walls, and the height of the ceilings, equal to their breadth. Over these are other rooms which may serve for granaries. The height of the hall reaches to the roof. The kitchen is out of the house, but very commodious nevertheless. The necessary places are on the sides of the stairs, and although they are in the body of the fabric, they do not give any offensive smell; because they are placed in a part remote from the sun, and have vents from the bottom of the pit all through the thickness of the wall, to the very summit of the house.

THIS line is half the *Vicentine* foot, with which the following fabrics have been measured.

THE whole foot is divided into twelve inches, and each inch into four minutes.

IN *Vicenza* upon the *Piazza*, which is vulgarly called the *Isola*, the Count VALERIO CAERICATO, an honourable gentleman of that city, has built according to the following Plate 2. invention.

THIS fabric has in the part below a loggia forwards, that takes in the whole front: the pavement of the first order rises above ground five foot; which has been done not only to put the cellars and other places underneath, that belong to the conveniency of the house, which would not have succeeded if they had been made intirely under ground, because the river is not far from it; but also that the order above might the better enjoy the beautiful situation forwards. The larger have rooms the height of their vaults, according to the first method for the height of vaults: the middle-sized are with groined vaults, and their vaults as high as those of the larger. The small rooms are also vaulted, and are divided off. All these

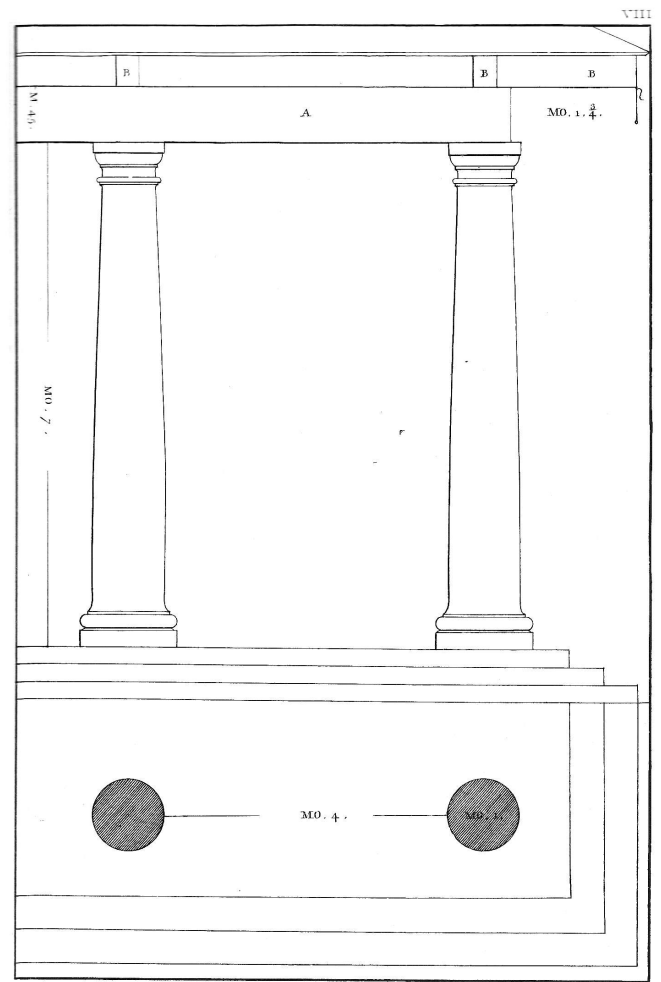




GOETHE & PALLADIO

Goethe's study of the relationship between art and nature,
 leading through architecture to the discovery of
 the metamorphosis of plants

DAVID LOWE / SIMON SHARP



look at the “dead letter” of its form or we can look for the life which has taken on the form. In architecture we can look abstractly and theoretically at the forms or we can consider them as an expression of the imagination of the architect. It all depends upon how we look at them.

It was against Goethe’s nature to make theories about things. In such abstract thinking a series of phenomena is taken and the finished material result given an empty name which has no reference or connection to the process by which the phenomena came into being. He writes of Venice as, “a hollow name that has often made me uneasy, me, the mortal enemy of verbal sounds.”⁷

The facts of nature can similarly be approached through an abstract, intellectual, classifying process and then given a “hollow name.” Goethe was more concerned about researching the phenomena and out of them to try to follow a half-hidden track to the archetype of the phenomena. What is the life process that comes to expression in the phenomena of nature? What is the imagination that comes to expression in a work of architecture?

In abstract thinking one takes a series of phenomena, then examines the finished material result and not the process by which the phenomena came into being. It is this last process, by which the form is created, that interested Goethe because he felt that not only did it explain what all plants had in common, but it also was the selfsame process which the imagination followed in creating a work of art.

“How Palladio worked” became increasingly clear to Goethe. This “how” was the process of Palladio’s imagination. In understanding it, Goethe understood “the way to all art and life”; for what both processes have in common—that of nature and that of the imagination—is metamorphosis. He identified “intensification” and “polarity” as the essential qualities of the process of becoming. These principles carried over to architecture and, to Goethe’s seeing, are what one might call the alchemy of architecture.

7. *IJ*, September, 28th, p56.

Chemistry analyzes substance, and the alchemy of substance which preceded it tried to understand the transformation of matter through heating, dissolving and so on. Architecture works on the transformation of space.⁸ What is space to start off with but a seeming nothingness: the polarity of substance and the antithesis of form. Working on space is like working on the negative image. Similarly, the form of the leaf is elaborated out of the unformed substance of the cotyledons.

Some will quarrel that the space is nothing in itself. What architecture does is create fine façades and exemplary interiors, but surely there is more. When you walk into Il Redentore, even before you notice what is around you, you notice the space; you sense the space which is unlike any you have experienced before.

Outside, too, a building can define a space. What would the view of Venice be like without San Giorgio or Vicenza without the Basilica and the Loggia? The Piazza dei Signori is clearly a created, a formed, space, though an external space open to the sky.

Let us try and approach this from a different direction. If we look at the variety of plant forms, even restricting ourselves to the annual plants, we see such a huge variety that it is sometimes difficult to see what they all have in common that we can call them plants.⁹ One could say exactly the same thing about buildings, even restricting them to those belonging to the Western Classical tradition. Considering only their external form, we likewise see a great variety. Yet we intuitively feel there is a connection between the Pantheon in Rome and the Villa Caprese (Rotonda) near Vicenza. We can to some extent reconstruct the thoughts which passed through the minds of the builders of both these buildings.

8. Palladio, *Quattro Libri*, p351, note 90. In this note, mention is made of the difficulty of translating “Aere, che sarà tra i vani.” Literally it means, “the air that will be between the spaces” (of the columns). The translators, Taverer and Schofield, comment that “it does not make sense in English.”

9. This is the question that stimulates Goethe to the imagination of the plant archetype in Sicily. *IJ*, April 17th, p214. It echoes his thoughts in Padua, *September 27th*, p54, “perhaps all plant forms can be derived from one plant.”

as lying within one another. Thus they are in a constant state of mutual interchange.

To a certain extent, then, the primordial time stands at the heart of the cultic space in the intermediate world. It represents the subconscious within the semiconscious light-tone realm of the cult. Nothing is yet visible in it; it is the dark, self-contained cavity in the penumbra of the sacred space. In it the yet unformed being rustles slowly to life, because it is the locus of the so-called primordial waters of creation, from whose rhythm all things have arisen.

What then are these primordial waters? Nothing other than the rhythms of flowing time. The primordial world is spaceless, that is, it exists only in the time dimension. The sound that exists audibly or inaudibly in the substance of every created object is the only form of existence of this object in the primordial time. These primordial waters, therefore, so often called the proto-element of creation, could never have actually been water, but only the sound thereof. The so-called primordial waters are only the acoustic expression of flowing time, which is the true nature of the primordial world. The *Shatapatha Brāhmana*, for example, says that Prajāpati the creator god made the waters out of his voice.¹³ According to *Tandjāmāya Brāhmana*, he makes his voice resound so that it develops like a drop of water.¹⁴ According to *Shatapatha Brāhmana*, the water was at first liquid and sounding, and because it flowed eight times it was the *Gāyatri*, an octosyllabic meter that later became the foundation of the world.¹⁵

This concept, like many others particularly in European usage, survived right into the music theory of our Middle Ages: for example, in the explanation of music as an "aquatic science" in the *Compendium de Discantu Mensurabili* of Petrus Frater.¹⁶ Simon Tunstede similarly states that music is a "scientia juxta aquam inventa,"¹⁷ a "science invented near the waters." Most authors attempted to explain music's aquatic character from the analogous sound of *musica* and *moys-ica*:¹⁸ a confusion exactly similar to one of the ancient Indian "etymology." Then in *Summa Musicae* the first ra-

tional attempt was made to explain the connection between music and water by the sound made by rain falling on roofs and stones.¹⁹ The author, Pseudo-Johannes de Muris, was evidently the first of the rationalistic experts, thanks to whom these conceptions, rooted in the deepest layers of the human psyche, could at a later date simply be rejected as foolishness. In fact, the entire concept of the primordial world is nothing other than the depiction of purely acoustic or light-tone events in the semiconsciousness of dreaming man.

If the primordial world represents the subconscious human psyche, then the light-tone world of the cultic space corresponds to a semiconscious dream state that constitutes the transition from the purely acoustic, only psychically experiential primordial time, to the physically bound, concrete present.

This light-tone world of the ritual that mediates between heaven and earth is just as difficult to comprehend as the bridge linking the purely spiritual functions of the human brain with the physiological organism. It can neither be weighed nor measured. It is a nature *sui generis* resulting from the confluence of two utterly different structures, mechanisms, or realities, to which neither the earthly nor the heavenly can lay sole claim within the context of the cult. For this situation, Vedic literature employs the term *satyam*. *Satyam* designates a truth "that conceals in itself the mortal as well as the immortal,"²⁰ or, similarly, "is both true and false, but the false dominates."²¹ It is fundamental to the cult in the intermediate world to seek to unite heaven and earth, which if they stood apart unmediated could never be joined. This explains the very specific nature of ritual: from the false it makes truth, and from the true, falsity. It confers spirituality upon the purely material by imbuing it with form and content. Ritual recalls the primordial world not only by means of the voice but also by extolling it in song or speech with the concrete or mute means and actions of the present time. This permits the ritual to suffuse the earthly with the divine, the purely physiological with acoustic spiri-

passion. His death even accorded him the grace of causing confusion in all quarters. For him they changed the procedure of burial, the laws of interment, and even the sacred rhythm, creating complications from one end of the city to the other and throughout the ceremonies. By authorization of the government in Madrid and special dispensation from the Pope, Gaudí's body was interred on Saturday, June 12, in the crypt of the *Sagrada Família*, the church on which he had worked for forty years and to which he had devoted exclusively the final twelve years of his life.

At the beginning of the seventeenth century a merchant from Auvergne, called Gaudí, settled in southern Catalonia, at Riudoms, near Tarragona. Seven generations later, in the neighboring village of Reus, on June 25, 1852, at half past nine o'clock in the morning, Antonio Plácido Guillermo Gaudí y Cornet was born, the fifth and last child of a modest coppersmith.

The child grew up in the country, between the farmhouse and the forge. To him his father was the incarnation of the demiurge, with a genius for creating space, a visionary from whom he learned empiricism and perfect mastery. Gaudí said that he had a particular ability to see space because he was the son, the grandson, and the great-grandson of coppersmiths. His father was a coppersmith, as were also his grandfather and his great-grandfather. His mother's family were coppersmiths; her grandfather was a cooper, which is the same thing. A maternal grandfather was a sailor, and sailors are also people with a sense of space and situation. Gaudí said, "If I could not have been an architect, I would have been interested in shipbuilding." [1]* He had been prepared by generations of coppersmiths, who, as Gaudí pointed out, "must fashion a volume from a plate. Before starting out, the coppersmith has to have seen the whole space. All the great artists of the Florentine Renaissance were chisellers who created volumes from planes. . . . The coppersmith embraces all three dimensions and thus unconsciously has a command of space that not every man possesses." [1] How could Gaudí have not felt within himself this growing thirst for space, this urge to master it, sharpened by the atavism of three centuries?

For the rest of his life Gaudí was convinced that he had within him a hereditary sense of volume.

Gaudí spent his adolescence in Reus, the town where he was born. It was a small but active commercial city in the Campo de Tarragona, a land of wheat and wine, an ideal Mediterranean countryside, quite the opposite of northern Catalonia and its looming, mysterious mountains. Gaudí spoke of Reus as a privileged place where the influences of the sea and the mountains are balanced and enable the light to reveal the continuous truth and harmony of things, of beings, of the sun and the sky, of space. It was there that he found his mystical fervor and inspiration with regard to nature. How could he have avoided the impact of the sky and the waves of the nearby Mediterranean, which was itself so alive with eternal movement and eternal murmuring?

At school in Reus he was an undistinguished student, although he excelled in geometry, and he enjoyed his teachers only when their lectures were given in concrete terms, since he was unable to understand abstractions. He had a very personal sense of mathematics and went so far as to work out his own system of empirical geometry.

Instead of going to class, he preferred to sit by the shore and contemplate the sea, which fascinated him. The depth and movement of the water revealed to him, as in the depths of a mirror, a fluid space, rhythmic and architectonic, a dynamic both vivid and formal. The sea represented for him the only element that synthesizes the three dimensions of space, and, according to Pujols, he liked to watch it while standing up, so that he could see the sky twice, in the air and in the water. That sea, a geometrical entity, was, as he said, his real university, and the jetty his favorite classroom, for there he could breathe in the winds and look at the waves that came from the north, the east, and the south. In an interview with the journalist Vicente Salaverri in 1914 he said "It is unfortunate that Madrid is the capital of Spain. Philip II would have done better to set up his court in Seville or Valencia. (Note that I don't insist on Barcelona!) All great feats are accomplished by the sea. The sea has been and must be involved in the most stupendous enterprises of humanity." [10]

For those born in Catalonia, the Mediterranean light, "the true light," sharpens and purifies everything, makes all things incandescent, surrounds them with a halo, and

* Figures in brackets refer to Notes on Sources (page 249).



State of the Sea	Stato del mare	État de la mer	Estado del mar	Estat del mar
Wind Sea	Mare di vento	Mer du vent	Mar de viento	Mar de vent
0 Calm (glassy) -	Calmo	Calme	Calma	Mar plana
1 Calm (rippled) 0-0,10 m	Quasi calmo	Calme(ridée)	Calma (rizada)	Mar arrissada
2 Smooth 0,10 - 0,50 m	Poco mosso	Belle	Marejadilla	Marejol
3 Slight 0,50 - 1,25 m	Mosso	Peu agitée	Marejada	Maror
4 Moderate 1,25 - 2,50 m	Molto mosso	Agitée	Fuerte marejada	Forta maror
5 Rough 2,50 - 4 m	Agitato	Forte	Gruesa	Maregassa
6 Very rough 4 - 6 m	Molto agitato	Très forte	Muy gruesa	Mar brava
7 High 6 - 9 m	Grosso	Grosse	Arbolada	Mar desfeta
8 Very high 9 - 14 m	Molto grosso	Très grosse	Montañosa	Mar molt alta
9 Phenomenal over 14 m	Tempestoso	Énorme	Enorme	Mar enorme

The "wind sea" is the motion of the waves generated by the wind blowing directly on the observed sea area or in its immediate vicinity

http://www.eurometeo.com/english/read/doc_douglas



Moon Phases



New Moon – The Moon's unilluminated side is facing the Earth. The Moon is not visible (except during a solar eclipse).



Waxing Crescent – The Moon appears to be partly but less than one-half illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is increasing.



First Quarter – One-half of the Moon appears to be illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is increasing.



Waxing Gibbous – The Moon appears to be more than one-half but not fully illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is increasing.



Full Moon – The Moon's illuminated side is facing the Earth. The Moon appears to be completely illuminated by direct sunlight.



Waning Gibbous – The Moon appears to be more than one-half but not fully illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is decreasing.



Last Quarter – One-half of the Moon appears to be illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is decreasing.



Waning Crescent – The Moon appears to be partly but less than one-half illuminated by direct sunlight. The fraction of the Moon's disk that is illuminated is decreasing.

Latest Name Meanings

Sadie, Sara, Sarah, Sally

The name Sarah originates from the bible... the name means "princess who laughs"

Aaron, Aaron

A mountain of strength or enlightenment, exalted one

Phillipa, Philippa

Virtue and Beauty after the Queen married to Edward of France. Philippa's are likely to be smart and pretty and extremely successful...

Kaili

Kaili runner of a vine in Hawaiian. Ka'ili would be the (ka) leather ('ili) in Hawaiian.

Kaia

Kai is Hawaiian for sea. Ka is Hawaiian for the. 'a is fish or Milky Way.

Faridah, Fareeda

Alone, independant

Thomas, Teoma

Means some one speacial who i so beautiful and has pitentual. nicole also mean the best. nicole also means that she will make a good girl friend. if your are called nicole wilson you are gorgous

Zawadi

Gift

Macaire, Makarioa, Marcar

My beloved

Daniel, Danel, Danil, Dan

Gift from God

Zakiya

Beautiful Intellectual

Aitana

Sweet

Hannah, Hanna, Hanne, Han

Absolutely mental. a total princess. prettiest. coolest and sweetest Hannah will always be a super nice sweetie pie. pratically perfect and clever.

Bethany

One site said it meant "house of figs"... idk.

Farhan

Farhan : FAR to HANdsom

Amira

Princess

Jerome, Jeroenr

Sacred one, holy, a thinker, one of a kind, selfish yet willing to understand beyond lifes meaning, complicated

Rohan

The boy's name Rohan is pronounced ro-HAHN. It is of Irish and Sanskrit origin, and its meaning is "red-haired, red; ascending".

Rohan

Rohan (from Sindarin Rochand), is a fictional realm in J. R. R. Tolkien's fantasy era of Middle-earth. It is of significant importance in the author's most famous book, The Lord of the Rings. Rohan is a grassland which lies north of its ally Gondor and north-west of Mordor, the realm of Sauron, their enemy (see maps of Middle-earth). It is inhabited by the Rohirrim, a people of herdsman and farmers who are well-known for their horses and cavalry. Conceptualized as the "Horse kings of Rohan" allied with Gondor in early drafts of 1939, the Rohirrim took their final form in 1942 when about one third of The Lord of the Rings was completed.

Andree, Andrea

A togh girl that cant be pushed around

Andrea

Tough, cant be pushed around

Megan

Combined name Maria Teresa

Maria, Marea, Mara, Marie

The perfect one

Mariutza

Beautiful,giving, generous, loving, affectionate, honest, trustworthy, strong, fearless, ambitious

Gerhard, Gerard, Goddard

Smart...powerful...inspiring

Gregor

Vigilant

Renee, Rene

Reborn

Jennifer, Jennyfer, Jenny

Light

Tamara, Tamar, Tamarah

Palm Tree

Caedmon

It means "Wise Warrior" of Irish descent. We love you Caedmon Wayne Montgomery, our little Angel baby taken 1/8/07, much too early. Before he even had a chance to take a breath.

Ray, Roy, Rey, Rui, Royal

Not known

Jennifer, Jennyfer, Jenny

Loud, outgoing, headstrong, persistant

Valentina

Strong, courageous, reliable

Kaemon

He who wanders.

Samantha

The meaning of the name Samantha is a listner she is intelligent and a good listner.All great people are called Samantha,it is originally from the name Samuel but a female version. There is many ways of spelling Samantha.

Jessica, Jessie

Yiskah: beautiful and clarivoyant. Born with innate luck and the ability to grap the unseen.

Axel

Protector, father of peace

Alfred

Uber pwner.....alf is a madman o yea.

Devin, Devyn

The spelling Devin is used for both male or female, and is Celtic/Galic for Poet.

Darlene

Beloved

Kai

Willow tree: Native American

Kai

Willow tree: native american

Idalia

Greek Aphrodyte's second name, and also name of the mountain on Cyprus where Aphrodyte's Temple stood, named after her. Greek origin, coming from the words "aidon" (to see) and "helios" (the sun). It is NOT an American, or English name, nor is it a version of the Germanic name Ida. They are two completely different names.

Beatricia, Beatrice

Cute

Kadija, Khadija

Early baby

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IN DEEP SEA, WAVES WITH A FAMILIAR CURL

By WILLIAM J. BROAD

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SCIENTISTS EXPLORING THE DEEP SEA HAVE DISCOVERED A DISTINCTIVE KIND OF BREAKING WAVE. THE FINDING REVEALS THE PRESENCE OF A SUBTLE NEW FORCE THAT CAN STIR THE DARK SEABED, AND IT HELPS TO EXPLAIN SOME OF THE NUANCES OF PLANETARY RECYCLING AND THE PROVISION OF FOOD TO ABYSSAL LIFE.

Multimedia



Graphic

SUBMERGED, SLOW-BREAKING WAVES

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SEA AND AIR, MOVE PAST ONE ANOTHER AT DIFFERENT SPEEDS. AT THE BOUNDARY, THE INTERACTION PRODUCES A SEQUENCE OF CURSTS THAT RISE GENTLY AND THEN CURL INTO CHAOTIC TURBULENCE. IN THEIR EARLY STAGES, THE WAVES PRODUCE THE KIND OF SLOPES THAT SURFERS DREAM ABOUT.

IN A FIRST, SCIENTISTS FROM THE NETHERLANDS AND FRANCE FOUND THE BREAKING WAVES RIPPLING DOWN THE SIDES OF AN UNDERWATER MOUNTAIN IN THE ATLANTIC SOME 700 MILES SOUTH OF THE AZORES. ON FEB. 6, IN [GEOPHYSICAL RESEARCH LETTERS](#), A PUBLICATION OF THE [AMERICAN GEOPHYSICAL UNION](#), THE SCIENTISTS REPORTED HOW A NETWORK OF TEMPERATURE SENSORS THAT THEY MOORED AT A DEPTH OF A HALF KILOMETER OR A THIRD OF A MILE, GAVE STRONG EVIDENCE OF THE PASSING WAVES.

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THE DISCOVERY ALSO ILLUSTRATES THE RADICAL NATURE OF THE INSIGHTS THAT LAY BEHIND THE START OF THE SCIENTIFIC REVOLUTION SOME FOUR CENTURIES AGO.

THE DEEP WAVES HAVE THE DISTINGUISHING CURL OF KELVIN-HELMHOLTZ BILLOWS, A TYPE OF WAVE PRESENT THROUGHOUT NATURE. SCIENTISTS HAVE LONG TRACKED THESE DISTINCTIVE WAVES, FINDING THEM ON THE WINDBLOWN SEA, ON SAND DUNES, AMONG CLOUDS AND EVEN IN THE CHURNING GASES OF SATURN AND JUPITER. THEY ORIGINATE WHEN TWO FLUIDS, OR GASES, FOR

THEY WERE GIANT. THEIR TYPICAL WAVELENGTH WAS 75 METERS, OR ABOUT 250 FEET, AND THEY MOVED VERY SLOWLY, ONE PASSING ABOUT EVERY 50 SECONDS.

THE DISCOVERY THROWS NEW LIGHT ON THE UBIQUITY OF KELVIN-HELMHOLTZ BILLOWS IN NATURE AND, AS A HAPPY BYPRODUCT, THE UNIVERSALITY OF NATURAL LAW — A POUNDING ASSUMPTION OF MODERN SCIENCE. THE MEDIEVAL WORLD SAW THE COSMOS AS DIVIDED INTO IRRECONCILABLE PARTS. THE HEAVENS WERE PERFECT, IMMUTABLE AND INCORRUPTIBLE, WHILE THE TERRESTRIAL REALM WAS ERRATIC, IMPERFECT AND CHANGEABLE.

EARLY SCIENTISTS DEFTED THAT DEMARCATION. THEY ASSUMED THE LAWS OF NATURE WERE UNIVERSAL AND ACTED THE SAME EVERYWHERE, WHETHER ON EARTH OR FAR BEYOND THE MOON. THUS, NEWTON ENVISIONED HIS LAW OF GRAVITATION AS ACTING ACROSS ALL SPACE. IN THE UNIVERSE, HE WROTE, EVERY MASSIVE PARTICLE ATTRACTS EVERY OTHER MASSIVE PARTICLE.

IT WAS AN ENORMOUS LEAP OF FAITH, AND IT PROVED ENORMOUSLY CORRECT.

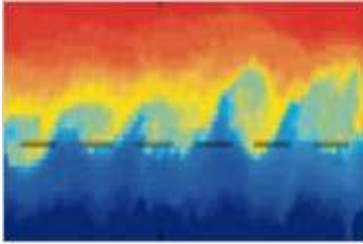
THUS, THE DISTANT WHORLS OF A SPIRAL GALAXY AND THE FAMILIAR ONES OF A CHAMBERED NAUTILUS OBEY THE SAME PHYSICAL LAWS AND EXHIBIT THE SAME PINWHEEL SHAPE.

THE CELEBRATED NAMESAKES OF THE BREAKING WAVE SUGGEST ITS FUNDAMENTAL NATURE. IN THE 19TH CENTURY, LORD KELVIN WAS A SCOTTISH PHYSICIST WHO PIONEERED THE MATHEMATICAL ANALYSIS OF ELECTRICITY AND THE LAWS OF THERMODYNAMICS. HERMANN VON HELMHOLTZ WAS A GERMAN PHYSICIAN WHO MADE BASIC ADVANCES IN PHYSIOLOGY AND PHYSICS.

IN 1871, KELVIN APPLIED A MATHEMATICAL ANALYSIS TO WINDBLOWN WAVES ON THE SEA AND, SOME TWO DECADES LATER, HELMHOLTZ DID THE SAME FOR CLOUDS. THE YEARS SINCE HAVE SHOWN KELVIN-HELMHOLTZ BILLOWS TO BE NEARLY EVERYWHERE IN NATURE.

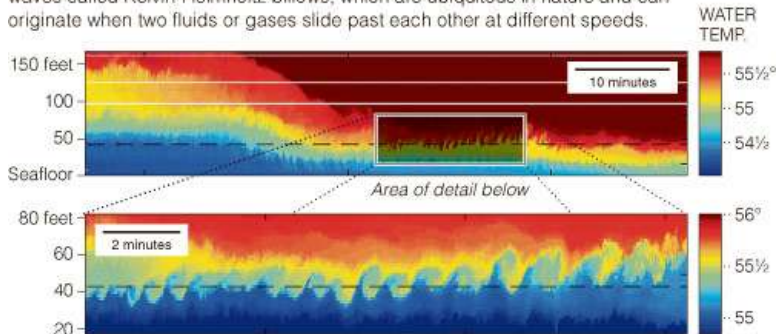
IN THEIR PAPER ON THE DEEP BREAKERS, KNOWN AS INTERNAL WAVES, HANS VAN HAREN OF THE ROYAL NETHERLANDS INSTITUTE FOR SEA RESEARCH AND LOUIS GOSTAUX OF THE FRENCH NATIONAL CENTER FOR SCIENTIFIC RESEARCH GAVE MUCH SOBER DETAIL AND ANALYSIS, USING PHRASES LIKE "BACKSCATTER STRENGTH," "BOUNDARY LAYER" AND "PYCNOCLINE THICKNESS."

THEY SAID TURBULENCE FROM THE WAVES MIGHT PLAY A ROLE IN OCEAN MIXING AND THE STIRRING OF BOTTOM SEDIMENTS, THUS HELPING DISTRIBUTE RARE NUTRIENTS TO ABYSSAL LIFE. BUT THE TWO SCIENTISTS BROKE FROM THEIR TECHNICAL REVIEW IN DESCRIBING AN IMAGE OF THE DEEP BILLOWS DERIVED FROM THEIR TEMPERATURE READINGS. THE IMAGE IN BRIGHT COLORS, SHOWED A SEQUENCE OF 10 DISTINCTIVE CURLS. THEY HAD ONE WORD FOR IT — "BEAUTIFUL."



Submerged, Slow-Breaking Waves

A line of sensors extending to the Atlantic seafloor recorded a series of curled waves called Kelvin-Helmholtz billows, which are ubiquitous in nature and can originate when two fluids or gases slide past each other at different speeds.





La fuita, a 1.500 metres de profunditat.



whose song was considered a “sieve” that tested and purified all that was spoken. This correct tone cannot be learned. It is the pious tone that finds itself when it springs from the truth when all pride is absent, and the being addressed is acknowledged with spiritual greatness, by which we mean reverence. Where this is not the case, there can be no acknowledgement, but only a devastating lack of contact that strikes the irreverent one with the blindness of his own pride. The home of the tone lies in the unconscious.

With this we reach our conclusion. Let us briefly summarize the essentials. The role of music in our concrete world is that of a *mediator*. It is no longer a primordial sound, nor a natural one, because since the dawn of creation it has become a conscious, manmade art. But the material that it uses remains the sound that reaches deep into our dark subconscious. According to the sayings of ancient cosmologies, music’s place of origin lies in the breath, in the souging of the wind and the roaring of the water. The home of music is the reddening dawn. There it has its castle with that high tower which, as it says in the fairy tale, sometimes even reaches beyond the borders of dawn into the bright daylight. As a purely sonorous phenomenon, music is the archetype of movement insofar as rhythmic sound forms the basic structure of the world. Since man is also rooted in this early cosmos, he preserves this substructure in his subconscious, where the archaic and the truthful are ever present. The rhythmic substructure is the anthropocosmic primordial memory. As an *art*, music—particularly in its connection with language—is a mixture of truth and falsity, and if the falsity of daylight is not overcome, music will become a bearer of illusion.

In order not to forget the true nature of sounds, it has been customary over the centuries to greet the rising sun with instrumental music and thankful feelings. Hence, for example, the following words: “The morning song of seven verses has set the sun in motion and has raised it up high with powerful songs. He who glows there should be revered as a



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figure XV Palazzo Barbarano (1570-1575) Vicenza, Andrea Palladio
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