BULLETIN β'

An array of heterogeneous notes that may provide points of interaction with the project's concept.

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THE SHIP ARGO

"A day or two after my love pronouncement, now feral with vulnerability, I sent you the passage from *Roland Barthes by Roland Barthes* in which Barthes describes how the subject who utters the phrase "I love you" is like "the Argonaut renewing his ship during its voyage without changing its name." Just as the Argo's parts may be replaced over time but the boat is still called the Argo, whenever the lover utters the phrase "I love you," its meaning must be renewed by each use, as "the very task of love and of language is to give to one and the same phrase inflections which will be forever new."

Maggie Nelson, *The Argonauts*, Melville House UK, 2016.

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ABOUT 1.3 BILLION YEARS AGO... PART I

In the beginning the universe was black. Particles were so densely packed that they were just bumping into each other with no possible escape. A few hundred thousand years later, temperature had fallen, density had reduced, and the first ever photons started escaping and traveling through the universe. Some of that primordial light just reached us on earth now. Some has not yet arrived. But total blackness still exists and is getting bigger. It remains in what we call black holes. A black hole is a region in spacetime where the gravity is so strong, nothing can escape from inside it, not even particles and electromagnetic radiation such as light.

These holes are created from what is called a gravitational collapse. Some region in spacetime, for example a star, becomes so heavy, either because new mass is attached to it or because its fuel is running out and cannot keep its core temperature high enough to stabilize itself, that it cannot support its own weight. It, hence, implodes and collapses into a black hole. Gravitational collapse requires of course great density. But high density alone is not enough. If the high density were uniform everywhere in space, then no black holes would have been created. In order for primordial black holes to form in a dense medium, there must be initial density perturbations that can then grow under their own gravity. It is difference that creates black holes, as it is the "germinal flux of difference" (that scientists call quantum fluctuations) that creates galaxies and stars.

Gravitational collapse is not the only process that creates black holes. In principle, black holes could be formed in high-energy collisions that achieve sufficient density. This would make it conceivable for micro black holes to be created in the high-energy collisions that occur when cosmic rays hit the Earth's atmosphere, or possibly in the Large Hadron Collider at CERN. These theories are very speculative, and the creation of black holes in these processes is deemed unlikely by many specialists.

Once a black hole has formed, it can continue to grow by absorbing additional matter. Another possibility for black hole growth, is for a black hole to merge with other objects such as stars or even other black holes. There is general consensus that supermassive black holes exist in the centers of most galaxies, including our own Milky Way galaxy, which contains a supermassive black hole, known as Sagittarius A*, of about 4.3 million solar masses.

Detection of bright X-Ray flare from Sagittarius A*, in the center of the Milky Way, 5 January 2015.

How do we prove the existence of black holes, despite their invisible interior? An indirect way would be through their interaction with other objects. Matter that falls into a black hole produces some of the brightest objects in the universe (quasars), while stars orbiting a black hole can give us information about the mass and momentum of the black hole. Nevertheless, this is only indirect evidence that provides us with candidate black holes. Is there a way to directly "see" a black hole? And if not, maybe there is a way to "hear" it.

Iordanis Kerenidis' notes, quoting various sources.

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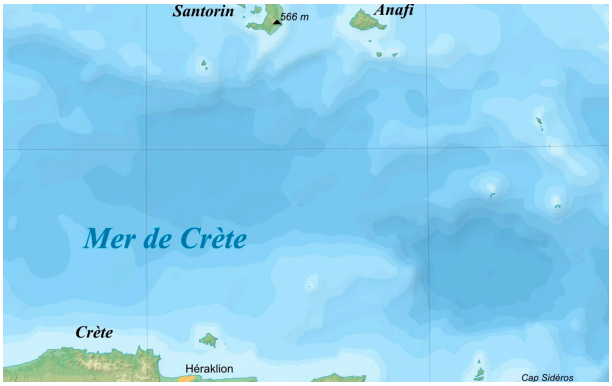
DARK PRECURSOR 1

As the Argonauts sailed northbound from Crete, they entered a hopeless dark night, the night Apollonios calls “νύξ κατουλάς”, the night of terrible dangers, the pall of darkness, a silent fatal night which was lit up neither by the moon nor by the stars. What was this “μέλαν χάος”, this black chaos the Argonauts crossed silently just before Anafi was revealed to them by Apollo’s lightning?

The 1886 version of the French *Instructions Nautiques* (n° 691, p. 105) describes a peculiar phenomenon whereby sudden darkness pervades the labyrinth of the Aegean archipelagos and reveals islands and rocks too late for boats to avoid them. The maritime guidance warns sailors about the dangers of this event and advises them to never lose sight of land at sunset, so that a shelter can be found before darkness falls.

The “νύξ κατουλάς” is also mentioned by Sophocles in the tragedy *Nauplius*, of which only fragments remain today. This phenomenon is also noticed by Homer in the Odyssey (XIV.301-4).

There may be more realistic explanations for this phenomenon than the mysterious *Instructions Nautiques* argue for. Some mention the enveloping ashes of the nearby Santorini eruption. Others attribute it to the long strip of sea without islands between Crete and Anafi; this absence of islands may have confused Greek seamen used to island-spotting for orientation and less fluent than the Phoenicians in dead reckoning and astronavigation.



In other words, what is this mysterious dark silence forerunning Apollo’s dazzling beam and the apparition of Anafi?

Piergiorgio Pepe’s notes, quoting various sources.

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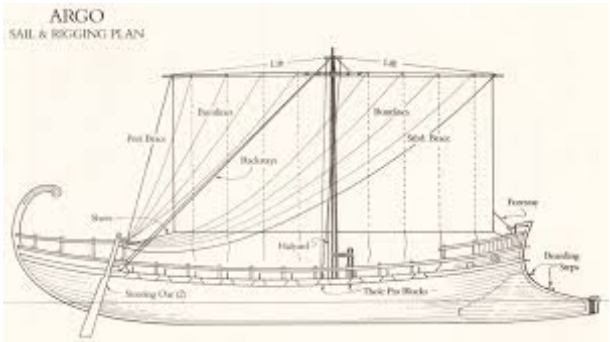
LE VAISSEAU ARGO



A frequent image: that of the ship Argo (luminous and white), each piece of which the Argonauts gradually replaced, so that they ended with an entirely new ship, without having to alter either its name or its form. This ship Argo is highly useful: it affords the allegory of an eminently structural object, created not by genius, inspiration, determination, evolution, but by two modest actions (which cannot be caught up in any mystique of creation): substitution (one part replaces another, as in a paradigm) and nomination (the name is in no way linked to the stability of the parts): by dint of combinations made within one and the same name, nothing is left of the origin: Argo is an object with no other cause than its name, with no other identity than its form. [...]

And then, the scene changes: I conceive myself seeking a dialectical way out of the maze. So I decide that the amorous apostrophe, though I repeat and rehearse it day by day through the course of time, will somehow recover, each time I utter it, a new state. Like the Argonaut renewing his ship during its voyage without changing its name, the subject in love will perform a long task through the course of one and the same exclamation, gradually dialecticizing the original demand though without ever dimming the incandescence of its initial address, considering that the very task of love and of language is to give to one and the same phrase inflections which will be forever new, thereby creating an unheard of speech in which the sign's form is repeated but never is signified; in which the speaker and the lover finally triumph over the dreadful reduction which language (and psychoanalytic science) transmit to all our affects.

Roland Barthes by Roland Barthes, page 46 and page 114, University of California Press, 1997, translated by Richard Howard.