Abstract

H. P. Lovecraft is best known and most studied because of his Cosmic Horror, and his developments on the element of horror in Weird Literature; in fact, his pioneering *Supernatural Horror in Literature*, published in 1927, is commonly accepted as one of the most important essays at this respect. However, one of the priorities of this article is to prove that some of his works belong to the genre named Science Fiction. His approach to sciences since his early childhood, and his “repulsion” against any nonscientific materialistic beliefs drove him to create Science Fiction, not exclusively horror stories. In fact, H. P. Lovecraft is the most important, and one of the earliest introducers of horror into Science Fiction. For that reason, and after an introduction stating how his aesthetic and rhetoric views, as well as several issues concerning his political and social ideas of the America where he was born, interfered with his popularity and the recognition of his work until almost the last quarter of the 20th century, this study shall show relevant poetic elements, as well as themes and motifs—extracted from *Science Fiction. History. Science, Vision*, written by Scholes, R., & Rabkin, E. S. (1977), one of the pillars in Science Fiction studies—, scientific theories and hypothesis employed, and facts found in Lovecraft’s work. The analysis will focus on the manner in which such components can be observed specifically in seventeen of his writings, although they also arise in some other works that belong to Weird literature and Space Opera. This analysis also compels to understand part of his stories as the beginning of a new sub-genre that could be named Science Fiction-Horror, of which he may surely be the initiator and one of the modern masters, next to Richard Matheson and Stephen Edwin King. Finally, the end of the present article will add some more details in order to corroborate this thesis with reference to these seventeen texts.

*Keywords:* H. P. Lovecraft, Science Fiction, Horror, Cosmogonical, Cosmic

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H. P. Lovecraft and his Science Fiction-Horror

No one need wonder at the existence of a literature of cosmic fear. It has always existed, and always will exist. (Lovecraft, 2000a, p. 425)

In the present article, and after offering what may probably be the most important ideological reasons that contributed to an underestimation of H. P. Lovecraft by some other fellow writers and critics until mid-60’s, there will be a brief exposition of the poetics of Lovecraft regarding his Cosmic Horror, which also assists to explain this critical refusal, confining him to the Horror genre.1 Afterward, this study will be focused on his Science Fiction (SF) writing, which started in 1917 with his short story “Dagon”. The second part will address his SF, from themes, motifs and elements to the use of science in his works. The last section will cover the description of his Science Fiction stories;2 followed by some comments to other literary texts that do not clearly belong to the genre.

Like other authors in the past, such as, Miguel de Cervantes, Oscar Wilde, or Bram Stoker, the figure of H. P. Lovecraft has been subjected, for many years, to very strong opposition, as much for his radical political and social ideology, as for his devotion to the rhetoric of Lord Dunsany and Edgar Allan Poe, underestimating some writers of his time, all of which lead to very negative remarks against both, his person and his works (Cannon, pp. 123-125), and placed him under the prejudgments of many critics and academics in the early and mid-20th century. Lovecraft is best known and most studied due to his Cosmic Horror;3 however, this study proposes a delimitation and general analysis of the Science

1 This article is an improved expansion and modified version of 5 pages from my PhD thesis, written in Spanish.
2 Due to space limitations I am going to rely to the reader’s knowledge of Lovecraft’s stories, as a full scale of examples would require, at least, twenty pages more.
3 In this article, the term cosmic—accepted by scholars and the general public—is preferred to cosmogonical, although the adjective cosmogonical would be more accurate, and implies a merger between the mythical explanation of the origin of the universe, and the discipline of Astronomy, which is the logos of the writing of Lovecraft, and a basic theme to the unifying thread. His horror, inspired by the Cosmic Horror of Arthur Llewellyn Machen, leads to the union of Myth and Cosmic Science. For a complete explanation of the cosmogonical in H. P. Lovecraft, see his own letters in Joshi & Schultz (pp. 208-213).
Fiction of Lovecraft, and the important contribution of this author to the genre, as one of the most—and perhaps the most—relevant introducers of Horror into Science Fiction. This article arises from the fact that although Sam Moskowitz (pp. 243-260) included some works of the Lovecraft’s Science Fiction within that genre, the ongoing discussion still continues, as, for instance, Ann and Jeff Vandemeer (Simmons, p. 2), China Miéville (p. 510), and Dziemianowicz (p. 194) argue that Lovecraft belongs to a subgenre of horror, in which he is the master: Cosmic Horror. In his article, Miéville explored the Weird in Lovecraft and stated that the presences in Lovecraft are nothing but weird (p. 512).

Along with the publication of his works in the always ‘questionable quality’ attributed to pulp magazines, his collaborations (Cannon, pp. 8-9), and the Puritanism of some critics, who attacked most of the writings of Lovecraft enervated with his materialism (Scheffler, pp. 22-27), perhaps one of the main reasons behind the opposition to Lovecraft lie in his political and ethnic ideas, as during his youth, he showed strong racist beliefs toward, what he considered, non-integrated foreign elements of American society.\footnote{There is nothing to be added here on this matter, for there are dozens of studies related, somewhat, to his racism, some of them very extensive. Among them, it could be worth mentioning the early psychoanalytic study on Lovecraft’s works by Lévy, published in French in 1972; the later article by Buhle, dated to 1976; the semiotic analysis of his xenophobia through his writings developed by Sondegar in 2002; the doctoral thesis entitled Communal decay, narratological and ideological analysis of H.P. Lovecraft’s fiction, defended by Pérez de Luque in 2013, where the doctoral candidate explores the narratological impact of Lovecraft’s racism on his writing; and the latest article entitled “Prosthetic Pasts: H. P. Lovecraft and the Weird Politics of History”, by Fiona Price, dated to 2016.}

In addition to that, his comments on Mussolini created an atmosphere of very negative criticism.\footnote{Lovecraft defends Mussolini’s Fascism in a letter to Anne Tillery Renshaw, dated to 1921. See (Joshi and Schultz, (2000, pp. 115-116).} Very enlightening are his own words about this subject in a letter dated back to 1915, which clearly states the supremacy of the Teutonic race, expresses his repulsion toward Jews, and insults African Americans (Joshi & Schultz, pp. 63-64). Such words, and some comments on Adolf Hitler, did not particularly favor his acceptance, like in one of his letters, in which he welcomed the victory of the German Communist Party (Lovecraft, 1991 vol. 5, p. 390), in a rather naive manner. More signs of xenophobia can be tracked in other letters, dated to 1925 and 1926, in which he attacks other races (Joshi & Schultz, pp. 179-181). All these previous comments led him to defend the purity of every race at all costs, as the
contrary ends in the destabilization of the culture of any nation (Lovecraft, 1991 vol. 4, p. 249).

In his later years, he moved from a radical conservatism to a modernized model of Socialism, defending some Socialist policies, such as, unemployment benefits, retirement pensions, and reduced working hours, among others. To further complicate his social acceptance, he defended a kind of Platonic oligarchy by which only cultivated people would be entitled to vote, and he maintained, in a letter dated to 1931, that democracy was a political system of control:

Democracy in a complex industrial civilization is a joke —since it means nothing but the concentration of all resources in the hand of a few capable plutocrats, and the subterraneous rule of this group under the outward forms of democracy.

(Joshi & Schultz, p. 313)

In a letter dated to 1933, he claims that Hitler was an unscientific extremist who fantasized that any racial branch could be reduced to its theoretical purity, and that the Nordic lineage is intellectually and aesthetically superior to all others, “but the anti-Nazis are too pounding when they maintain that these points justify precisely the opposite extremism [...] The races are equal, but vastly different.” (Joshi & Schultz, p. 325-326)

His stance on foreigners evolved over time; but these extremist ideas compromised his reputation in the literary culture, and downgraded his status among academics. On the other hand, it should be noted that this racism collides with some facts in his personal life, given that he married a Jewish Ukrainian woman named Sonia Haft Shafirkin, and he had friends of Irish and Latin American background.

Another possible reason lies in his public contempt for the prose of his time, and his praise of the rhetoric of previous authors. And as it might

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6 For more information, see Cannon (1989, pp. 123-125).
7 For a genuine example criticizing the prose of Hemingway and Carlyle, and praising that of Swift, Steele and Addison, see the letter in Lovecraft (1991 vol. 4, pp. 32-33).
be expected, many literary critics of his contemporary newspapers savaged his art, rather than separate the person from his creation. The most notorious examples are found in the vicious attacks of Edmund Wilson in the sixties (Harman, 2012, p. 7), and Colin Wilson (Joshi, 1991, p. 1). Fortunately, academics started to study the works of H. P. Lovecraft at the end of Twentieth Century separating his political and social convictions. It cannot be always said the same of general public, as, for example, the World Fantasy award trophy will no longer be modelled on H. P. Lovecraft after the polemic created during the World Fantasy Convention held in 2015, in Saratoga Springs (Flood, 2015).

Concerning his poetics, until 60s, to some writers, his rather archaic rhetoric, next to his innovative themes and Mythopoetic seemed to relegate him to an involuntary parodist of Poe (Borges, 1995, pp. 142). Another example is given to us by Julio Cortazar, who opposes his vision of ‘neo-fantastic’ to Lovecraft’s Cosmic Horror, and he misinterprets the Providence author attributing him incorrect examples of the sets, and the insertion of ‘furry critters’. As a matter of fact, Lovecraft uses realistic descriptions of New England in most of his narrative, and there is only one hairy monster in two different stories written by his own hand.9

Lovecraft occupies the empty space between British Gothic Literature and American horror: “While the American cosmism was derived from spatial latitude, Britain depended on its own antiquity to gain the same literary sense.” (Shreffler, 1997, pp. 9-10) The British Gothic Horror focuses on a supernatural event or a series of supernatural events. In Lovecraft, and in his own words, realism is poured into the descriptions to create the enabling environment for the supernatural event (Love-

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8 For further information, see Cannon (1989, pp. 123-126).
9 Translation from the original Spanish text into English: “While there is a huge audience that admires the fantastic tales of Lovecraft —public will feel horrified by what I’m about to say—, to me, personally, it is of no interest to me at all, because it seems to me a fully manufactured and artificial fantastic ... Lovecraft starts by creating a scenery which it is already fantastic, but anachronistic, it seems to belong to the Eighteenth or Nineteenth Century. Everything happens in old houses, wind-swept plateaus or vapors invading the horizon. And once you have terrorized the naive reader, he begins to drop some furry critters and mysterious curses of gods, who were very fine two centuries ago when it made anyone tremble, [...] to me, the fantastic is something very simple that can happen in the middle of every day’s life.” (Alazraki, 2001, pp. 273-274)
craft, 2000a, pp. 426-427), presented from the scientific reasoning, and beyond natural means. Thus, the horror of cosmological influence traps the characters in a circle without end (González Grueso, 2013, pp. 96-97, 110-111).

Lovecraft’s stories have been for very long time distributed into two categories: first, the stories of New England, and second, those of the Cthulhu Mythology. This classification comes from his dear friend and writer August Derleth (Shreffler, 1997, pp. 22-24). Shreffler named the following titles as the members of the second group: “The Nameless City” written in 1921, “The Festival”, written in 1923, “The Call of Cthulhu”, written in 1926, “The Colour Out of Space”, written in 1927, “The Case of Charles Dexter Ward”, written between 1927-1928, “The Dunwich Horror”, written in 1928, “The Whisperer in the Darkness”, written in 1930, “The Shadow Over Innsmouth”, written in 1931, At the Mountains of Madness, written in 1931, “The Dreams in the Witch-House”, written in 1932, “The Thing on the Doorstep”, written in 1933, “The Shadow Out of Time”, written in 1934, and “The Hunter in the Dark”, written in 1935. Shreffler based this binary classification on the idea that these writings are interconnected and have a common theme, which is that an extraterrestrial raze of creatures, the Old Ones, populated the Earth a long time ago, and that there are religions on this planet that prophesy their return (Shreffler, 1997, p. 23). However, the stories number 2, 4, 5, 6, 7, 8 and 9 have no explicit news on the Old Ones. On the other hand, a careful reading of the author’s account shows that New England appears in almost all his stories. Arkham y Kingport are nothing but versions of Salem and Marblehead (Cannon, 1989, p. 349). The forests described in his short stories and novellas are very characteristic of that region, with abundant greenery, with sweeping views from the mountains that perhaps, at those times, also maintained an isolated and somewhat wild environment from civilization. Lovecraft knew how to idealize it, by creating a perfect stage for developing psychological horror scenes. His horror to the familiar unknown,10 is reflected in the descriptions of the forests, plains, valleys and mountains, which become

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10 For more information regarding different types of horror employed by Lovecraft, see: (González Grueso, 2017).

The vestiges of Lovecraft can be traced by his influence in coming writers like Clive Barker or Stephen Edwin King. It would be very difficult to imagine the Horror genre back in the 30’s, both literary and cinematic, without certain themes and elements created between Edgar Allan Poe, Lovecraft and Robert Albert Bloch, and the ominous horror of cosmological influence that he knew so well to imprint in his works. These themes and ‘core’ elements, some of them taken from the oral tradition, are the deep caves riddled with monsters; flocks of crows squawking deafeningly to the dead; the deep and lush forests, in which something demonic dwells; the Salem process and the burning of witches; extraterrestrial beings inhabiting submerged cities that favored the possible explanation to the mysterious sinkings in the Bermuda Triangle; the idea that aliens visited Earth in the ancient past and had genetically engineered humankind, and zombies, even though they were created by Mary Shelley in a primitive form, with H. P. Lovecraft and his “Herbert West-Reanimator” (1922), gained enough popularity to generate its own kind of film and literature, and gave them their form and behavior by which we recognize them now.

Concerning his style, H. P. Lovecraft uses an extremely meticulous realism for his accurate descriptions of the sets, which is needed to achieve, according to Lovecraft, the effect of the fantastic:

In writing a weird story I always try very carefully to achieve

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11 An example of this is the book published by Charles P. Mitchell, entitled The complete HP Lovecraft filmography (2001), which is a journey through the influence of Lovecraft over film industry until 2001, both directly and indirectly. Some other relevant titles could be added since that year: The Mist (2007), directed by Frank Darabont; the Cloverfield series (2008, 2016, 2018), by Matt Reeves; Dan Trachtenberg, and Julius Onah; the Monsters series (2010, 2014), by Gareth Edwards; The Shrine (2010), by Jon Knautz; The Cabin In The Woods (2012), by Drew Goddard; Prometheus (2012), and Alien: Covenant (2017), by Ridley Scott; Banshee Chapter (2013), by Blair Erickson; Europa Report (2013), by Sebastián Cordero; The Thing on the Doorstep (2014), by Tom Gilsinan; The Void (2016), by Jeremy Gillespie and Steven Kostanski; among others.

the right mood and atmosphere, and place the emphasis where it belongs. One cannot, except in immature pulp charlatan—fiction, present an account of impossible, improbable, or inconceivable phenomena as a commonplace narrative of objective acts and conventional emotions. Inconceivable events and conditions have a special handicap to overcome, and this can be accomplished only through the maintenance of a careful realism in every phase of the story except that touching on the one given marvel.

(Lovecraft, 1937)

Sunand Tryambak Joshi suggests that “His early work is ‘overwritten’ in a way he himself later deprecated; but the later Lovecraft prose is as precise, musical, and evocative as anything out of Dunsany or Machen, his stylistic paragons.” (p. 33). It is not a coincidence that all but two pieces of Lovecraft’s Science Fiction —“Dagon (1917), and “Beyond the Wall of Sleep” (1919) — were written later than 1922, his more productive period. The full awakening of his Science Fiction took place later, when he returned to Providence on the 17th of April 1926 from a very shocking time in New York, which forced him into a cure in Sarasota Springs, between the 23rd of February and the 19th of March 1925. That precise style of Lovecraft’s writing mentioned before coincided with his final reclusion in Providence, away from the contemporary world. That is the time when he developed completely his Science Fiction. He started to publish his most famous and most acclaimed stories since 1927, when he change his literature from Horror with some scientific additions to a new sub-genre of Science Fiction: Science Fiction-Horror.

1 Science Fiction

It seems that, given the previous assertions and data, Lovecraft has been misunderstood during many years by part of the scholars, regarding his production as SF writer, relegating him, exclusively, to the Horror genre. It is accepted among most of the specialists that he wrote Science Fiction works; however, only a few of them regarded him as a writer of both genres. Sam Moskowitz and Fritz Leiber, in 1963, were the first
to point out this remark, after that, S. T. Joshi since 80’s until now, and other critics such as, David Oakes (2000), Paul Halpen and Michael C. LaBossiere (2009), González Grueso (2013), and Rebecca Janicker (2014), have continued this approach to his writings. This article will propose a definitive proof of the assertions and comments made by previous authors, by identifying below the rhetorical characteristics, themes, motifs, and elements –some of them mentioned by Moskowitz (244-259) and Oakes (29-62) – needed for any science fictional work in order to be classified as such. Later on, and as a summary of a previous analysis, the required use of the science will be exposed and accurately noted.

Lovecraft employs terminology and rhetoric of diverse scientific knowledge, and he even writes one of his novels as a report, from the beginning to the end. The narrative and expositive discourse are juxtaposed, and sometimes, especially when scientists explain phenomena, whether or not storytellers, the expositive discourse displaces the literary narrative. In addition to the detailed explanation, Lovecraft uses the argument of authority, discusses different hypotheses, compares examples which serve to justify some of those assumptions, and utilizes
abundant neologisms. He does not employ definitions, except during the description of a process, usually biological, medical, geological, physical, chemical and/or anthropological. Besides, these characteristics of the scientific and academic discourse, he reveals others that do not belong exclusively to these modes, but they can be found very often in Science Fiction, and are very representative of this genre: the combination of simple sentences with logical subordinates (subordinate adverbial manner, causal, final, concessive ...), supplements to clarify explanations, passive sentences, and abundance of denotative lexicon concerning scientific explanations.

Lovecraft creates stories based on scientific evidence, from anthropological findings, to electrical machines that kill extraterrestrial beings, through chemical resuscitation of dead bodies, alien landings, degenerative involutions of human specimens, or genetic combinations of human beings and alien races. In addition to that, the narrators of his stories are often scientists and / or scholars, wise, experienced, calm, and able to observe the strange phenomena, at least initially. That is, a kind of Super Ego. Nevertheless, sometimes, and especially in his Science Fiction literature after 1927, the narrators are early career students, somewhat, impulsive, and even dreamers. It is no coincidence that the latter are those who manage to come nearer to horror, getting caught and dying for it. His characters, in general, try to apply scientific materialism to unexpected realities, and usually, end their existence in our dimensions badly, when they get too close to the understanding of these abnormal phenomena.

Taking into consideration the characteristics specified by Scholes &
Rabkin (1977, pp. 175-186), that have been taken by researchers as the basis for the description of any SF writing, it can be affirmed that Lovecraft presents the following main themes and motifs:

The American writer introduces different worlds in a manner of travelling by psychic teleportation, as in “The Whisperer in Darkness” (1931); interstellar travel, as in “In the Walls of Eryx” (1939); interstellar travel too, but through unknown dimensions, as Azathoth does, one of the supreme gods, or Nyarlathotep, the messenger of the gods, who travels in many of Lovecraft’s stories by this method; dimensional travel through the dreams that are explained by mathematical formulas, as in “The Dreams in the Witch-House” (1933); travelling to utopian places, like in “The Whisperer in Darkness” (1931); and time travel, in “The Shadow Out of Time” (1936).

Lovecraft portrays organic beings in his Science Fiction stories, who are inspired not only from ancient mythologies, but from his own Mythopoetic. He uses aliens in almost all his works; mutants, such as those in “The Rats in the Walls” (1924); or the mutant offspring of humans and aliens in “The Shadow Over Innsmouth” (1942); dead corpses and reanimated monsters, the so called zombies, such as those in “Herbert West-Reanimator” (1922), even a robot at the end of “The Whisperer in Darkness” (1931), that serves as horrific finale of the story.

Interaction between different species can be read in “The Dunwich Horror” (1929), and “The Shadow Over Innsmouth” (1942), where humans are mixed with alien beings and procreate new mutant entities. Another option is the mention of sexual intercourse between members in first and second degree of the same family, which result in biological degeneration and regression. Such is the case of “The Lurking Fear” (1923), and “The Rats in the Walls” (1924).

Lovecraft mostly employed existing machines and scientific discoveries and / or technology in order to develop scientific hypotheses; however, in his last story “In the Walls of Eryx” (1939), he displays spaceships, futuristic weapons and equipment like in other stories of Science Fiction at that time.
Concerning science, H. P. Lovecraft employed elements specified in previous paragraphs based on science, for he was a great admirer of all scientific disciplines. At the age of nine, he began his amateur career in Chemistry, Physics and Astronomy, by publishing small articles and columns in local newspapers. His knowledge increased in time and he wrote for *Pawtuxet Valley Gleaner* (between the 27th of July, and the 28th of December 1906), *Providence Tribune* (between the 1st of August 1906, and the 1st of June 1908), and *Providence Evening News* (between the 1st of January 1914, and the 2nd of May 1918).

Philip A. Shreffler (1997, p. 22) states that the Puritan oppression of his family and the society around him, and his love of science led him to be agnostic when he could have been an exacerbated atheist in opposition to such religiousness, especially if we read the following sentence in one of his letters: “the Judeo-Christian mythology is not true.” (Lovecraft, 1991 vol. 1, p. 60) A few lines later, he makes a recalcitrant defense of science against pseudo sciences and superstitions that lurked at that time (Lovecraft, 1991 vol. 1, p. 60). On the other hand, he does not forget the dangers of science, as it is shown in the first paragraph of his story “Arthur Jermyn” (1920): “Science, already oppressive with its shocking revelations, will perhaps be the ultimate exterminator of our human species.” (Lovecraft, 2001, p. 65). To Lovecraft, as most Science Fiction writers of his time, the problem lies in the manner science is used, and also on the objectives pursued; Lovecraft always encouraged scientists to look for the common good, not for their own self-gratification and curiosity. This is, according to Lovecraft, the big difference between the old and modern scientists, and the reason for the possible destruction of the human race, both mentally and physically (Lovecraft, 1991 vol. 3, p. 299).

A review of his scientific articles reveals titles like “Science versus charlatanry” (written the 9th of September 1914), “The Falsity of Astrology” (written the 8th of October 1914), and “The Cancer of Superstition” (written after the 31st of October 1926). He is, ergo, a writer with empiric conviction, who does not exercise this side of himself in his literary work. His horror is not based on material things, as for example
in some Oriental literature, but on the undefined cosmos.

Lovecraft claimed that he wrote Fantastic Literature, and included Science Fiction:

> The interests which have led me to fantastic fiction were very early in appearing, for as back as I can remember […] I doubt if I could ever succeed well in the ordinary kind of science fiction.

(Joshi & Schultz, pp. 345-349)

He maintains in an essay, entitled “Some Notes on a Nonentity” —and several times in his letters\(^{28}\) — that he writes Fantasy and Science Fiction; he subordinates, consequently, Science Fiction, and confines it to a sub-genre of Fantasy. He is the son and heir to the British Gothic and that leads him to a new realm of scientific literature. At the same time, influenced by his readings of Lord Dunsany, he possesses a strong component of Fantasy in his dream travel stories, and in the discoveries of timeless civilizations, past, present and future. His writings become, with the inclusion of his Cosmic Horror, a continuing point in the history of Science Fiction, and concedes a new approach to the genre. In one of his letters, Lovecraft wrote that he had a tripartite nature: he loved the strange and the fantastic on one side, the abstract truth and the scientific logic on the other, and the old and durable (Joshi, p. 110).

Progressing with Lovecraft’s SF, in the following lines, there will be a brief review of the main scientific theories that he manages in his narrative production, as well as different scientific elements used.

The author proves his knowledge of astrophysical laws unveiled by Albert Einstein, Max Karl Ernst Ludwig Planck and Werner Karl Heisenberg (Energy Theorem, the Theory of Relativity, space-time motion, Theory of Infinity of the universe, ...), as well as references to others, such as Bernhard Riemann, Harlow Shapley, A. S. Eddington and J. H. Jeans. Two examples appear in “The Dreams in the Witch-House” (1933), and “The Shadow Out of Time” (1936), when he produces tran-  

\(^{28}\) See, for example, the most representative letter on the issue, a text sent to Frank Belknap Long in February 1931: (Joshi & Schultz, pp. 257-260).
scending physical matter journeys using waves that transport souls—or consciousness,— and a time travel and exchange of characters’ consciousness, respectively.

He employs the theory of Evolution of Charles Darwin and the Theory of Degeneration spread by H. G. Wells with his The Time Machine (1895), as it can be read, for example, in “The Shadow Over Innsmouth” (1942), where alien and human offspring are mixed, resulting in new entities; “The Dunwich Horror” (1929), where the degeneration of the mixture of one blood line leads to physiological degradation; and “The Rats in the Walls” (1924), where that degradation leads even to cannibalism.

Lovecraft makes use of Microbiology, Paleontology, Geology and Botany, in At the Mountains of Madness (1936), where data from bacteria, clast and stratum explained an alleged geological and biological evolution in Antarctica, which is clearly influenced by Ernst Haeckel Nomism. For more information regarding astronomic articles see: Lovecraft (2005), and Cannon (1989, pp. 213-222).²⁹

He also employs rudimentary Genetics, given the little knowledge that scientists had at the time, known only through the work of Gregor Mendel (1869) and Hugo de Vries (1900), mainly. In “The Shadow Out of Time” (1936), he mentions that social classes of a pre-Pleistocene culture depended on the genetic characteristics of each individual.

Lovecraft does not limit himself to those fields commented above, and utilizes Biological Anthropology, and the Anthropological Functionalism of Bronislaw Kasper Malinowski, as opposed to the Culturalism of Franz Boas, who was institutionalized in the USA at that time. The latter denied that the possibility of multiple phenomena worldwide had a single origin, and the cosmogony of Lovecraft is rather reductionist in this regard. He also follows the parameters dictated by Sir James George Frazer and his proclamation that Myth arises out of the pro-

²⁹ For more information regarding astronomic articles see: Lovecraft (2005), and Cannon (1989, pp. 213-222).
cess of natural evolution of religion, and E. B. Tylor, who argued that the functions of Myth, in order to explain the world, are ends in themselves, and the ritual is relevant as an explanation to control the world. This is part of the essence of the Myths that created the cosmogony of Lovecraft, and can be traced in every single one of his works of Science Fiction in the manner of rituals and customs invented by him, which belong to religions whose human characters worship, and who worship aliens as Gods.

His knowledge of Chemistry can be observed in “The Dreams in the Witch-House” (1933), for example, describing chemical processes carried out by the protagonist, where three elements of high atomic weight appear and were not collected yet in the Periodic Table at the moment.

The use of technology is not as varied as Jules Verne, but Lovecraft reveals instruments commonly employed to defeat the enemy, as in “The Shunned House” (1937). Sometimes, they do carry out amazing acts for the technology of the time, as in At the Mountains of Madness (1936), where a bulldozer pierces the land and the Antarctic glaciers, or they build a machine capable of establishing connections with other realities, like in the short story “From Beyond” (1934).

Lovecraft utilizes the Scientific Method. His works follows both, a deductive method to the development of the action in the narration, and the hypothetical-deductive, almost always based on an analytical model. Two examples are At the Mountains of Madness (1936), and “The Shadow Out of Time” (1936), respectively. The protagonists, usually, follow this pattern: first, data collection, then, they construct hypotheses, and subsequently, test the hypotheses, and validate them in the end. Furthermore, as readers, we can find, for example, deterministic predictions to a very negative ending of the History, and our present world, in “The Colour Out of Space” (1927).

He employs Parapsychology, a pseudoscience. The telepathy, is a common form of communication among some extraterrestrial beings, such as those that define the Great Race.
The use of music is rather peculiar, and very advanced for his time, because it is a vehicle to travel between dimensions, and possesses a close relationship with the violet color that accompanies it. According to Pythagoras, laws of mathematic harmony also govern the universe; next to him, Plato supports the same argument (pp. 172-174) in his *Timaeus*, and Johannes Kepler later also agreed. Although Thomas Young demonstrated in 1801, that there was no light, but similar waves to light\(^{30}\) (Asimov, 1975, p. 360), during the 19th century, the Theory of the Unit was followed in the more esoteric lines of science, and it postulated that the movement was light, heat, sound, etc. More recent findings sustain that the Doppler Effect asserts that sound and light waves behave similarly to moving objects, as when an object comes to our eyes, the color occurs, the closer to violet, the more speed the subject carried.\(^{31}\) Conversely, if the object is moving away, the perception of the retina changes it closer to red (Asimov, p. 48). This hypothesis can be tracked when the characters of Lovecraft, moving into the higher spheres, that is, to other dimensions, or permanent places from outer space, are surrounded by an unthinkable music, and a violet light that transmits heat in a cold medium, like in *The Dream-Quest of Unknown Kadath* (1948), and “The Dreams in the Witch-House” (1933).

2 Science Fiction works

Taking into consideration the analysis and remarks already made, the short stories, novels and novellas written undoubtedly by the pen of H. P. Lovecraft could be classified in three different groups, those that belong to the Science Fiction-Horror sphere on one side, those that move...
on turbulent waters between the Weird literature and Science Fiction on the other, and finally, those that exist within a sub-genre called Space Opera. The writings listed below that are closer to the Science Fiction-Horror sphere consist in some of his works written after his voluntary exile in 1926, when, as Shultz astutely stated, H. P. Lovecraft developed his vision of literature from Microcosm into Macrocosm (Schultz, 2011, p. 215). It is then, when he moved back to Providence and shared an apartment with his aunts Lilian D. Clark and Annie E. P. Gamwell, in Barnes St., after the last attempt to leave permanently Providence, and the suffering of a terrible experience in the Red Hook district, in Brooklyn. That is the also the time of the beginning of the end of his relation with his wife, Sonia Haft Greene, and when he wrote “Supernatural Horror in Fiction”. This key year marked the beginning of his most prolific period, and a radical change in his writing, when he moved from a baroque style of Horror, heir of Poe, Lord Dunsany, and Machen, to SF, although he never abandoned the first. Since here, some specific arguments will be exposed, which added to previous statements in this article, may clarify the definitive reasons to classify seventeen writings into the genre of Science Fiction.

“Dagon” (1917). A cargo vessel survives an attack by a German “sea-raider” boat during the First World War and is stranded on an island that emerged from the ocean floor. Scientific assumptions appear here in a race before the Neanderthals, a race of fish men who inhabited the Earth. In the end, he finds Dagon, a Philistine fish-god, of extraterrestrial origin.

“Beyond the Wall of Sleep” (1919). This short story tells how an intern to a psychiatric hospital meets a patient, whose strange physiological and mental conformation is associated with the degeneration of the human being. But he gradually comes to understand that this is a man who receives messages in the form of electrical impulses from outer space. In the end, the existence of a star in the Algol nova confirms the reason for the apparent madness of the patient.

“From Beyond” (1934). The main character and stereotypical mad sci-
entist, thanks to a machine that uses the principle of ultraviolet rays, contacts with dangerous creatures from another dimension and invisible to human eyes. This story was written in 1924; however, its thematic characteristics and rhetoric displayed may well have been reformulated before its final publication.

“Herbert West-Reanimator” (1922). Here through medical, chemical and surgical procedures a mad scientist tries to bring life to the dead. Instead, and after failed attempts, he produces what the contemporary social imaginary calls zombies.

“The Lurking Fear” (1923), and “The Rats in the Walls”, 1924. H. P. Lovecraft uses the Theory of Involution to explain the results of reproductive relationships within a family that had reached the state of cannibalism, and also psychological and physiological deformities.

“The Shunned House” (1937). The protagonist discovers and destroys a vampire with acid. This short story offers an alternative explanation to myths and legends on vampires, because the entity is an alien, and Lovecraft details the methods employed by this vampire to extract life from others. Written in 1924.

“Cool Air” (1928). In this text, a scientist stays mentally alive by utilizing a machine and various chemical processes. It may be affirmed that from this short story, written in 1926, as well as “The Call of Cthulhu”, the pure Science Fiction-Horror sphere starts. The previous works listed seem to be conscious attempts to Lovecraft’s new sub-genre, before his reclusion, and partial abandonment of his previous poetics influences -concerning only the mentioned writings.

“The Call of Cthulhu” (1928). It is an account of the findings by a scientific expedition to the tomb of Cthulhu. This story is explained from a scientific point of view and describes the progress of such expedition. Written in 1926.

“The Colour Out of Space” (1927). This is a short story of Hard Science
Fiction. There are no doubts reading the chemical and physical explanations of the meteorite that caused certain damage, and their biological effects on the inhabitants of the affected farm. Observations on radioactivity are at the highest level for the period in which the story was created (Moskowitz, 1963, p 255). Written in 1927.

“The Dunwich Horror” (1929). Two hybrid brothers, sons of a human woman, and an alien being and God, try to bring their father to Earth. A party of scientists, the central characters, will try to prevent that from happening. And again, chemical processes are presented in great detail. Written in 1928.

“The Whisperer in Darkness” (1931). This novella narrates the discovery of a colony of aliens living inside the mountains, and the progressive takeover of a farm. Beings seek out the mind of the farmer through dimensions in interstellar travel, while his body remains in a vegetative state, under the care of the alien race. As it happened in “The Dunwich Horror”, Lovecraft explains in a scientific fashion, what initially has the semblance of legend. Written in 1930.

*At the Mountains of Madness* (1936). This novel is based on a real expedition to Antarctica. Given the geological, paleontological, biological, botanical and chemical theoretical hypotheses expressed, this story leaves no doubt about its inclusion on this list. Moreover, the structure of the text tries to be as similar to a scientific report, as the fiction allows. Written in 1931.

“The Shadow Over Innsmouth” (1942). This novella reflects a population that lives and mixes with extraterrestrial beings that inhabit the deep ocean. After a period of mutations, exchange-born individuals are able to live under the water, and be immortal in time. Written in 1931.

“The Dreams in the Witch-House” (1933). This short story chronicles the interactions of a young mathematical genius with beings from other dimensions. Besides mathematical theories stressed throughout history, violet light and its link to travel between dimensions is most explained.
Written in 1932.

“The Shadow Out of Time” (1936). The dreams of a professor at Miskatonic University, in reality, are memories of a life in another body, in another time. Aliens, chemical and physical descriptions of real and imagined events, and above all, the method chosen to describe the facts are typical characteristics of Science Fiction. Written in 1934.

“In the Walls of Eryx” (1939). A human explorer on an alien planet seeks crystals that are presented as saviors of humanity after the exhaustion of all natural energy resources. Written in 1935.

Weird literature has a strong influence on H. P. Lovecraft, and often, affects other kinds of literary creations; such is the case of “The Temple” (1925), and “Through the Gates of the Silver Key” (1934). The first shows the energy loss and the process of the sinking of a submarine, in a fairly detailed way. The protagonist, almost airless, finally abandons the submarine, in order to explore a strange light that is coming from a subaquatic temple. In the second, Lovecraft introduces a man who has taken the body of another person. The transference of minds is a device widely used by the author in his later writings. These stories, while having Science Fiction influence, escape to Weird literature, and to philosophical-religious essay, respectively.

The Case of Charles Dexter Ward (1941). The references to Chemistry and Physics, and the alchemical explanation of the transfer of a soul from one body into another, suggest that this work fits into Weird literature, with a high degree of Science Fiction influence. The doctor, who helps the father of the young scientist, serves as a point of reflection and empirical seriousness of the argument.

On the other hand, Sam Moskowitz (1963) does not include The Dream-Quest of Unknown Kadath (1943), in his list of works belonging to Science Fiction. Nevertheless, since the trip by dreams, among other elements, includes alien species, the frontier, maps readings, and a fi-

32 For more information see González Grueso (2007).
nal meeting at the point of origin of the universe, the chaos, this novel belongs to the sub-genre Space Opera, like *Star Maker* (1937), by Olaf Stapledon, which maintains a similar approach. The realms of dreams are none other than the dimensions in space.

Moskowitz includes in his list “The Unnamable” (1925), “The Outsider” (1926) and “Pickman’s Model” (1927), but it seems that the former is a philosophical essay on the artistic power of the word to define reality, and the inability of language to confront that reality; the second is a Gothic Horror story in which the protagonist discovers a very ugly reality about himself, and we can find typical gothic elements like the dark castle littered with dead bodies —the influence of *The Castle of Otranto*, dated to 1764, and *Beowulf*, written in the 9th or 10th century, are palpable—; and the third, despite showing a few scientific evidences, these are not the center of the argument, neither the composition, nor the tone, so that, it could be defined more as a Gothic tale.

3 Conclusion

H. P. Lovecraft is very well known for his contribution to contemporary Horror, and this study offers an advanced perspective on his scientific point of view concerning 17 of his writings. He was, a writer of Horror, but also a writer of Science Fiction and one of his mayor contributions is, precisely, the introduction of his Cosmic Horror into the Science Fiction genre. A simple review of the films described in the work of Harman (2012), for instance, or those authors who defended his art against all odds —Ray Bradbury, August Derleth, Stephen King, Clark Ashton Smith, Darrell Schweitzer—, reveals that his influence has been overwhelming among Science Fiction creators since 1930’s.

Sam Moskowitz (1963) was the first scholar to list some of the stories of H. P. Lovecraft as Science Fiction, and succeeded on showing that the Providence writer created stories of different thematic fields. After him, other academic works treated some as his writings as SF, however, the main objective of this study, from a general perspective, is to prove
that not one specific work, but 17 of them belong to this genre. Lovecraft was a master writer of Science Fiction, as his use of science, plots, themes, motifs, poetics, and rhetoric prove so. Then, a question arises: Why Cosmic Horror? Cinema studies employ the term Horror/Science Fiction as a sub-genre of Horror. A plausible answer is that the Providence author belongs to the frontier, he is the link. He did not develop only a sub type of horror, even though he wrote about this “style” many times—including the quote that serves as introduction to the present article—but he intertwined Science Fiction and Horror in a perfect hybridization, in the terminology of Stanislav Lem, creating a sub-genre which could be named Science Fiction-Horror. Those seventeen stories mentioned before cannot be conceived, nor understood, without both influences in equal terms.

As a final remark, it could be assumed, that possibly, the fact that Lovecraft employed sciences of all kinds and in conjunction, without differentiation of prestige between diverse sciences—Astronomy, Biology, Chemistry, Geology, Mathematics, Physics, and Social and Human Sciences—has been one of the most important reasons to disregard his contribution to Science Fiction. After all, it is probable, in this respect, that Lovecraft himself was truly a man of the Nineteenth Century more than Twentieth Century, because the name of science, to exact sciences, belongs solely to the last one hundred years, and he consciously rejected it by making use of all scientific disciplines in order to bring his characters enough facts to explain the reality that they have to face.

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33 Stanislav Lem developed his concept of hybridization of genres in 1984. For a complete description of the term see Lem (1984, pp. 31-44).
GONZÁLEZ GRUESO

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