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Technological Imaginary of Mass Culture

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The Archetypal Images in the Scientific and Technological Imaginary of Mass Culture

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Abstract: The contemporary imaginary mirrors an intensive presence of science and technology in modern-day society. In the cultural field, several successful film series have been fed by this scientific-technological imaginary and have contributed to fuel it. This paper investigates what main archetypal images (and myths derived from them) have predominated in the contemporary scientific-technological imaginary. Its goal is to contribute to an investigation into how archetypes may be acting in the cultural identification process established among the audiences of mass culture products and specific world visions. The object of study is the scientific-technological imaginary built by two successful cinema productions: Star Wars and Batman–The Dark Knight Trilogy. The methodology uses mapping and analysis of symbolic elements and their semiosis. The study is based mainly on Gilbert Durand’s anthropological theory about the imaginary. These preliminary results will be used in an investigation on the collective imaginary shared by fans of science and technology in pop culture in Brazil and in the United States.

Keywords: Imaginary, Mass Culture, Archetypes

Figurative Structures of the Imaginary

The contemporary imaginary mirrors an intensive presence of science and technology in modern-day society. Technological advances and scientific knowledge are more and more present in the human experience. The progressive price cut in the technology gives to the common citizen around the world, whatever his social or economic position, access to high-tech products, and the spread of scientific information popularizes the most advanced discoveries in genetics, nanotechnology, medical studies, and astrophysics, among others. In addition to these phenomena, cultural productions in different media—comics, films, books, video games, TV series—have been fed by this scientific-technological imaginary and have contributed to fuel it.

The imaginary is defined by Gilbert Durand (1921–2012) as the set of symbolic elements produced by *homo sapiens*’ imaginative attitudes to deal with the essential anguish caused by the consciousness of their own mortality and the perception of the time that goes by. In order to do that, these imaginative attitudes, when applied to the real and fictional worlds, seek “to defeat” or “to euphemize” the death and the time. Thus, the imaginary has the function of providing a biological, psychological, and social balance in the human life.

For Durand (2002), the imaginative attitudes are the result of an “anthropological pathway” that connects human psychobiological structures and the natural and cultural worlds. Based mainly on the ideas of archetype developed by Carl Gustav Jung and innate gestures or reflexes (postural, digestive, and copulative dominants) from the Russian school of objective psychology, Durand thinks of the imaginary as anthropological structures.

For him, the symbolic elements—such as myths, archetypes, images, and symbols, which constitute the imaginary—are produced through (figurative) psychic structures and schemes that are embedded in an “anthropological pathway” from biological to social and vice versa. In these figurative schemes, the human basic gestures are related with psychological structures that are responsible for generating the archetypes. This generation of archetypes (primordial images or forms, in the Jung’s concept) occurs when these psychological structures come into contact with the social and natural worlds. From the archetypes, other symbolic elements will emerge, such as images, symbols, and myths.

Based on an extensive research into the cultural production along with the history, including the studies of Claude Lévi-Strauss and Gastón Bachelard, Durand found convergences of the

symbolic elements to the psychological structures and schemes, which are the base of archetypes, myths, images, and symbols.

Durand (2002) classified this system of figurative structures and schemes into two regimes of images inside the imaginary:

- the diurnal regime, which represents the heroic structure and schemes of ascension and separation (connected to the postural gesture); these structures seek “to defeat” death and time
- the nocturnal regime, related to two different groups of structures and schemes: the scheme of descent and crouch and mystic structures, connected to the digestive gesture; and the synthetic (or dramatic) structure and cyclical schemes, connected to the copulative gesture. The nocturnal images seek “to understate” death and time.

Figure 1 provides a graphic representation of the anthropological path of the imaginary:

basic human reflexes	psychologic “schemes”	psychologic “structures”	natural and social worlds images, symbols, archetypes and myths	regimen of images
postural	ascension and separation	heroic	light, high, sun, sky, hero, father, sword	diurnal
digestive	descent and crouch	mystic	deep, intimate, hide, womb, mother	nocturnal
copulative	cyclical	synthetic	eternal return, wheel, initiation, orgy	nocturnal (or crepuscular)

Figure 1: Graphic Representation of Durand’s “Anthropological Path” of the Imaginary
 Source: Anaz 2015

Different imaginaries related to different social and cultural movements have been built and shared in history. It is possible to see an imaginary of Romanticism, related to the Romantic period in the arts, as well as an imaginary of the punk movement in the recent popular culture. In both punk and Romanticism, it is possible to identify specific “basin semantics,” compound by symbolic elements that characterize their imaginaries, which work as “social cement” and unite people to the collective (Maffesoli 2010).

Since the Scientific Revolution and the Enlightenment, a scientific-technological imaginary has been built and shared mainly in Western societies. This imaginary has been strongly strengthened in the last decades due to the massive presence of science and technology in everyday and successful cultural productions, which brought scientific concepts and technological advances into evidence. Additionally, to elements directly related to science and technology, the scientific-technological imaginary also includes philosophical issues, customs, and behaviors that have arisen from these subjects. The ideas of progress and control of the natural world by man that have spread by positivism since the nineteenth century are exemplary of that.

In fact, successful film series have created, reproduced, and shared massive scientific and technological images with their audience in the last decades. “Image” here should be understood as “the way the conscious mind (re)presents objects that do not present themselves directly to the sensitivity” (Barros 2009, 6). In an audiovisual work, images are built from symbolic elements, which appear in the dialogs, settings, scene elements, soundtrack and incidental music, costumes, body expression of characters, and other element that make up this kind of narrative. “Image does not produce the imaginary, but what happens is just the opposite. The existence of an imaginary determines the existence of a set of images. The image is not the support, but the result” (Maffesoli 2001, 76).

There is a set of images (including visual symbols) in the most recent successful movies and series for cinema and TV that reveals a representative part of the scientific-technological imaginary that has been shared with the audience. Those images contribute to build motifs or themes related to science and technology, which, in turn, are derived from archetypal images and organized in narratives (myths) that establish a specific world vision and an *ethos*.

To start to analyze some of the main symbolic elements in the scientific-technological imaginary that are shared by movies, a mapping of scientific and technological images and related archetypes and myths are seen in two successful film series: *Star Wars* and *Batman–The Dark Knight Trilogy*.

Mapping the Scientific-Technological Imaginary

Durand (1993) proposed a myth criticism as part of a mythodology (science of the myth). This methodology contributes to the understanding of the foundations of the imaginary in mediatic products. Barros (2009, 6) explains that myth criticism has as its goal to check themes or obsessive metaphors that appear in cultural works in general. The importance of myth criticism lies in helping the understanding of a work since:

Myth would somehow be a matrix “model” of all discourses, structured by fundamental patterns and archetypes of the psyche of *sapiens sapiens*, our species. Thus, it is necessary to investigate which myths more or less explicit (or latent!) animate the expression of a second and non-mystical “language”. What is the reason therefor? Because a work, an author, an age – or at least a “moment” of an age – is “blinded” (Ch. Mauron) explicitly or implicitly, by one or more myths, in a paradigmatic way, and becomes aware of their aspirations, desires, fears, terrors. (Durand 2012, 131)

According to Iranzo (2001, 7), “myth criticism proceeds by analyzing the archetypal dimensions of the cultural work or object, identifying its minimum units, the *mythemes*, and comparing them with an ideal version of the myth they are linked to.” Based on myth criticism, developed by Durand (1985), the methodology used in this investigation maps the scientific-technological imaginary in the audiovisual productions and compares the narratives (myths) built by the motifs with the founding myths that are in circulation in contemporary society. The first step (to map the motifs) is developed with the following procedures:

- identifying the most redundant motifs,¹ considering the role of the characters and scenarios
- relating every motif, according to its functions in the narrative, to anthropological structures of the imaginary (diurnal or nocturnal regime of images)
- highlighting the motifs and archetypes related to science and technology.

The following results were obtained using these procedures in the objects of this investigation (of course, there is not a pretension to cover all the motifs and archetypes in this analysis).

Star Wars

Star Wars is a sci-fi and fantasy saga about the dualistic dispute between the light side (the good) and the dark side (the evil) of a mystical energy (the Force). The plot centers on the heroes’ journeys of two protagonists: Anakin Skywalker and his son Luke Skywalker. Some of the main

¹ According to Thompson (apud Garry and El-Shamy 2004, XV), a motif is a small narrative unite that “must be something of particular interest to make an item important enough to be remembered, something not quite commonplace.”

motifs and substantive archetypes in the six first episodes² of *Star Wars* saga are shown in Table 1.

Table 1: Redundant Motifs and Archetypical Images in *Star Wars*

<i>Diurnal Regime</i>	<i>Nocturnal Regime</i>
Skeptical and Spiritual Heroes (function: to defeat the evil and be virtuous, e.g., Luke Skywalker, Han Solo)	Magic Power/Mystical Energy (function: energy—the Force—that unites all things in the universe; union of opposites)
Skeptic and Spiritual Villains (function: to conquer the universe and impose a shadowed reign, e.g.,: Darth Vader, Palatine/Darth Sidious)	Mother/Woman (function: to mother and foster the “chosen one”—Shmi Skywalker, Padmé Amidala)
High Technology (function: to show the control of the natural universe—and its mastery—by artificial creations and progress, e.g., Galactic City in Coruscan, spaceships, weapons, Darth Vader)	Sister and Brother (function: emotional support and family ties—Luke Skywalker and Princess Leia)
The Chosen One/Fate (function: heroic journey to reestablish the Force’s balance—Anakin Skywalker and Luke Skywalker)	Lovers (function: the reward in the hero’s journey and the reason of adventure, e.g., Han Solo–Princess Leia; Anakin Skywalker–Padmé Amidala)
Pure Mother (function: the immaculate mother of the “chosen one”—Shmi Skywalker)	Fellows/Allies (function: to support heroes and villains, e.g., C3PO, R2D2, Chewbacca)
Magic Weapon/Mystical Energy (function: powerful energy used as a weapon by heroes and villains—the Force)	
Technological Weapons (function: to be used in the fights among heroes and villains, e.g., lightsabers, Death Star, spaceships)	
Wise Old Man (function: to be the mentors of heroes and villains, e.g., Obi-Wan Kenobi, Yoda, Darth Sidious)	
Fight/Wars (function: violent political and military disputes between good and evil, light and dark, Jedi and Sith, and Empire and Rebel Alliance)	
Opposite Poles (function: antithesis, to represent the dualistic antagonism and the separations/ divisions in the universe, e.g., good vs. evil; light side vs. dark side; white color vs. black color; skeptic vs. faithful; democracy/freedom vs. tyranny/oppression)	

Source: Data Adapted from Anaz 2015

As shown in Table 1, in *Star Wars* there is a predominant presence of symbolic elements that converge to the heroic structures of the imaginary (diurnal regime). Their functions express a belligerent way to deal with the world, based on radical oppositions (heroes vs. villains, light side

² Six movies of the saga, released between 1977 and 2005, were analyzed: *A New Hope* (1977), *The Empire Strikes Back* (1980), *Return of the Jedi* (1983), *The Phantom Menace* (1999), *Attack of the Clones* (2002), and *Revenge of the Sith* (2005).

vs. dark side) and in acts of ascension, fighting, and separation. All main symbolic elements in the narrative are related to the archetypes of the hero's journey.

Based on Durand's classification of the images, there is no doubt that the narrative is mostly diurnal, with a dualistic dispute between good and evil, the product of psychological structures that drive to imaginative attitudes of idealization, autism, division, separation, and antithesis—a desire to defeat death and time through a warring, heroic journey. However, this diurnal environment is permeated by powerful elements that come from the nocturnal regime of images: the representations of the magic energy of “the Force” and the images of the woman or wife, derived from the substantive archetypes of the magus (the trickster) and the mother, respectively. From the main symbolic elements in *Star Wars*' imaginary, it is possible to highlight the following scientific-technological *mythemes*:

- *High technology vs. nature*: the use of high technology to overcome natural limits of the being or forces of nature, time, and space. The use of lightsabers as extensions of bodies by Jedi or Sith and the fact that the main villain is a cyborg (half human, half machine) are examples.
- *Skeptical hero vs. spiritual hero*: the dispute between the skeptical hero, such as Han Solo, and spiritual hero, such as Luke Skywalker, when scientific and mystical world visions are counteracted.
- *Scientific method vs. magic powers*: massive presence of symbolic elements linked to science and technology does not impose a scientific world vision, based on the scientific method and its rules, such as objectivity, empiricism, rationalism, and logical method. In general, images and symbols of spiritual powers related to the main protagonists (Anakin Skywalker, Luke Skywalker) and antagonists (Darth Vader, Darth Sidious) assume essential functions in the narrative.
- *Balance among science, technology, and magic*: although the scientific and technological imaginary in *Star Wars* is predominantly related to the heroic structures, along the narrative this scientific-technological imaginary is balanced by a mystical one, made up mainly by the images and symbols of the spiritual hero (Anakin Skywalker, Luke Skywalker) and mystical energy (the Force, which unites the opposites).
- *Freedom vs. oppression*: science and technology are massively used by the Empire (tyranny) and the Rebel Alliance (democracy) in *Star Wars*, but among the most important symbols of evil and darkness (oppression) in the saga are advanced technological products: the cyborg Darth Vader and the weapon Death Star.

Regardless of some world-vision conflicts, like the one between the skeptical hero (Han Solo) and the spiritual hero (Luke Skywalker), predominant in the narrative is a (re)conciliation between science and the mystic. The heroes deal with scientific, technological, and mystical practices practically in the same level; however, the control of the Force (a spiritual energy) is crucial to the hero's success in his journey. However the origin and working of the Force is explained rationally—in what could be an attempt to give it a scientific base—the action of the hero to get and use it is a metaphysical (in a pejorative positivist and materialist meaning) performance that it is realized only for the “chosen one”—what can be understood as a “messiah” in a religious setting.

Batman–The Dark Knight Trilogy

*Batman–The Dark Knight Trilogy*³ is a sequence of adventure movies that, as in *Star Wars*' narrative, follows the “classic” hero's journey cycle: birth, initiation, and death and/or resurrection. Based on transmediatic Batman narratives, mainly in Frank Miller's graphic novels,⁴

³ There were analyzed the movies written and directed by Christopher Nolan: *Batman Begins* (2005), *Batman–The Dark Knight* (2008), and *Batman–The Dark Knight Rises* (2012).

⁴ See *Batman–The Dark Knight Returns*, by Frank Miller, released in 1986 by DC Comics.

Christopher Nolan’s trilogy shows Batman as a darkness hero, violent, anguished, and living in the boundaries of sanity but, nevertheless, a virtuous hero.

Table 2: Most Redundant Motifs and Archetypical Images in Batman–The Dark Knight Trilogy

<i>Diurnal Regime</i>	<i>Nocturnal Regime</i>
<p>Vigilante Heroes (function: to defeat the evil and be virtuous, e.g., Batman, Commissioner Gordon, Robin)</p>	<p>The Dark City (function: to create a decadent, darkness and corrupted scenario for villain and hero’s action—Gotham City)</p>
<p>Villains (function: to conquer Gotham City and impose a shadowed reign or destroy the city, e.g., The Joker, Ra’s Al Ghul, Bane)</p>	<p>Fraternities (function: to foster peers and develop organized actions, secretly or not—League of Shadows, Mafia, Police)</p>
<p>Murdered Parents (function: to feed and sustain the orphan sensation and the hero’s desire for vengeance and fighting against criminals—Thomas and Martha Wayne)</p>	<p>Fellows/Allies (function: to support heroes and villains, e.g., Rachel Dawes)</p>
<p>Fear (function: the key element in the ascension of the hero and in his action against the criminals)</p>	<p>The Refuge (function: place where heroes and villains hidden or prepare their actions, e.g., Batcave, Himalaya League of Shadows’ hideout)</p>
<p>Material Wealth (function: to empower the hero and support his double life as playboy, entrepreneur, and philanthropist)</p>	<p>The Bat (function: night’s creature that fears the protagonist and will inspire hero’s symbolism)</p>
<p>Detective Style (function: to use the scientific method—empiricist-rational—to find the truth, e.g., Batman, Robin, Commissioner Gordon)</p>	<p>Lovers (function: the reward in the hero’s journey and sometimes the reason of adventure—Bruce Wayne-Rachel Dawes, Bruce Wayne-Selina Kyle)</p>
<p>The Double (function: to show the division of the ego/personality and universe, e.g., Bruce Wayne/Batman, Harvey Dent/Two Faces, Selina Kyle/Catwoman, Jonathan Crane/Scarecrow)</p>	
<p>Weapons and Technological Devices (function: used to defeat enemies and death, e.g., Batmobile, electrical charge gun, batarang, memory cloth cape)</p>	
<p>Old Wise Man (function: to be the mentors of heroes and villains, e.g., Ra’s Al Ghul, Alfred Pennyworth, Lucius Fox)</p>	
<p>Mental Institution (function: to keep insane people separate from the society—Arkham Asylum)</p>	
<p>The Corporation (function: to be the source of ascension of heroes and villains: money, scientific knowledge, and high-tech devices and weapons—Wayne Enterprise)</p>	

Source: Data Adapted from Anaz 2015

As shown in Table 2, there is in *Batman–The Dark Knight Trilogy* (as well as in *Star Wars*) a predominant presence of symbolic elements that functions in the narrative make they converge to the heroic structures of the imaginary (diurnal regime). The trilogy shows a belligerent tone, based on disputes between opposite poles (hero vs. villain, mentor vs. following, true vs. lie), in

the use of weapons to defeat or eliminate enemies and in divisions (sane/insane behaviors, social/heroic personalities). As in *Star Wars*, all main symbolic elements in the narrative are related to the hero's journey.

In spite of being mostly diurnal, the trilogy is deeply sunk in nocturnal images, such as the darkness scenarios of Gotham City, the threatening symbolism of bats, and the hero's hidden feelings and internal conflicts. In Nolan's trilogy, the boundaries of good and evil are tender, mainly because of the ethics issues generated in the hero's journey and derived from some substantive archetypes. However, Batman is a "vigilante"—a kind of hero who do not believe in the capacity or honesty of authorities and institutions (police, government, judges) and fights against the criminals according to his own rules and believes. In Nolan's trilogy, he acts mostly according a deontological ethic (in the Kantian meaning) and struggles with intimate fears, guilt, and doubts.

Although the focus of the trilogy is about Batman's path of salvation—for Gotham City and himself—science and technology have an important role in the imaginary built by the narrative. From the main symbolic elements in the Batman–The Dark Knight Trilogy imaginary, it is possible to highlight the following scientific-technological *mythemes*:

- *A scientific-technological vigilante hero*: Batman is one of the most human heroes among contemporary superheroes. Without superpowers brought forth in scientific accidents or experiments (Spiderman), genetic mutations (X-Men), or because he came from another planet (Superman), his skills come from his own efforts to be a vigilante. The main sources of his power are in the use of high technology and scientific knowledge and methods. His strength is the result of years of physical and mental training and preparation, including tricks of invisibility and deception. He uses scientists and the most advanced scientific knowledge to develop high-tech weapons, vehicles, armored battle suits, and devices. And he is a detective, using the scientific method to investigate cases.
- *Technology as damnation and salvation*: the high-tech devices used in Nolan's trilogy are positive and negative, depending on who is in charge of their manipulation. In *Batman Begins* and *The Dark Knight Rises*, high-tech devices—a microwave emitter used to evaporate an enemy's water supply and a nuclear reactor—are stolen from Wayne Enterprise to be used as a threatening device against Gotham City by the League of Shadows. On the other hand, the effective combat to these threats is possible with the help of high-tech resources, too, such as the Batmobile, Batpod, and other devices.
- *Order (logical) vs. chaos (emotional)*: one of the most iconic disputes in Nolan's trilogy is that between Batman and the Joker in *The Dark Knight*. Batman's rational logic and method (diurnal) is put on trial when the Joker tests him with an extreme choice: to save Gotham's hero (Harvey Dent), a rational decision (mainly in a utilitarian point of view), or his love (Rachel Dawes), an emotional decision that overrules at the end.

As a result, *mythemes* related to science and technology found in *Star Wars* and *Batman–The Dark Knight Trilogy* built the following frame, as seen in Table 3.

Table 3: Most Redundant Scientific-Technological Mythemes in Star Wars and Batman–The Dark Knight Trilogy

<i>Connected Mythemes</i>	<i>Semantics</i>
<ul style="list-style-type: none"> - High technology vs nature - Scientific-technological vigilante hero - Technology as damnation and salvation 	<p>Science and technology appear as the most important elements in the hero’s journey, even when they are not the main theme of the narrative. Science and technology are resources to overcome natural limits of being or forces of nature, time, and space; they are one of the most important sources of the hero’s strength; and it is the protagonist’s morale that determines the positive (virtuous) or the negative (vicious) use of science and technology.</p>
<ul style="list-style-type: none"> - Skeptical hero vs. spiritual hero - Scientific method vs. spiritual powers - Balance among science, technology, and magic 	<p>In <i>Star Wars</i>, the apparent dualistic dispute between skepticism (scientific method) and spiritualism (mystical approach) tends to be diluted along the narratives due to the conciliation that protagonists make of science and magic.</p>
<ul style="list-style-type: none"> - Freedom vs. oppression - Order vs. chaos or logical vs. emotional 	<p>The illuminist idea of science and technology associated with progress, freedom, and democracy is brought into question as they are also associated with tyranny, oppression, and mass destruction. The positivist values of order and logical decisions are questioned for emotional issues or disorders.</p>

Source: Data Adapted from Anaz 2015

These results stimulate a myth analysis, a second step in this methodology. It compares the narratives (myths) built by the motifs with the founding myths that are in circulation in contemporary society; according to Durand (1985), the founding myths have always been in circulation in all societies during history. Identifying the founding myths that are dominant—and their archetypal images—in the current scientific-technological imaginary may open new ways to understand the *ethos* and predominant world visions in the modern-day society.

Myths that Rule the Contemporary Scientific-Technological Imaginary

Results of the mapping of the scientific-technological imaginary in two of the most successful movie series in the contemporary world—*Star Wars* and *Batman–The Dark Knight Trilogy*—confirm the dominance of heroic structures but also point to some evidences of a new balance among diurnal and nocturnal images in this imaginary.

Most parts of modern science and philosophical illuminist ideas have been supported by imaginative attitudes (archetypes, images, symbols, and myths) derived from the heroic structures of the imaginary (diurnal regime). The schemes of ascension and separation have been dominant since the nineteenth century, when positivist thoughts established a great influence on science and technology, with the (idealistic and autistic) ideas of progress and control and domination of nature by the human being. Besides, the modern scientific method has resulted in a progressive division and isolation in the fields of knowledge, and all objects out of the modern scientific paradigm, such as the imagination and mythologies, are considered “enemies” of the true knowledge that is brought only by science. The paradox in this process, as Durand points out, is that even the positivism attempt for destroying the myth led to the instauration of a positivist myth:

Auguste Comte, and before him Saint-Simon in *Industrial Religion*, wants to surpass and destroy myth obscurantism, but through another myth, another ideology which is

not new. ... There is a kind of causal “inversion,” since in order to fight the obscurantism of the age of the myth and “theological” images, we emphasize a progressive mythology in which Prometheus' myth triumphs and, mainly, in which we can glimpse the “tomorrows that sing” of the final kingdom of the Holy Ghost (Durand 2004, 10–11).

A parenthesis here is necessary: as a matter of fact, some of the consequences of this absolute dominance of heroic structures in science and technology were already deeply treated by Martin Heidegger (1996), when the German philosopher claimed that the “present-at-hand”⁵ technological experience makes human beings detached from the environment due to the way that they have used high-tech tools. According to Heidegger, this kind of experience transforms reality into mere stuff and nature is for human beings nothing other than a “warehouse” full of lifeless objects always ready for quick use to satisfy their wills. The contemporary world is replete with the problematic issues that this kind of experience generates. Mainly in relation to how modern technological vision dictates an autistic perception of the world and blinds man, it is possible to see in Heidegger’s analysis some essential elements from the Faustus and Icarus myths, where man’s fascination for the power that he has gotten from knowledge, science, and technology ends by being the source of his tragedy.

Actually, the massive presence of science and technology in the modern-day society puts into evidence that Faustus and Prometheus are among the most important myths in circulation nowadays. They are myths that rationalize the substantive archetypes of “hero,” “wise man,”⁶ and “magus/trickster”⁷ and symbolize the primordial opposite images of “light” and “darkness”—the same light of the Enlightenment and the Scientific Revolution, with the reason that illuminated the darkness, and of the fire that Prometheus stole from the gods of Olympus in order to illuminate men’s life. On the other hand, this “light” can also be so intense that it may blind the man driving him to the “darkness.” For instance, Prometheus can be seen as a virtuous narrative: a Titan who sacrifices himself—the greatest quality of a hero—in favor of humanity. However the Faustian myth can be interpreted as a narrative about the vicious modern man, who tries to surpass God to give meaning to life by deciphering the world’s mysteries through science and to control nature through technology. In the modern world, “the Faustian myth becomes a ‘living myth,’ a story that provides a model for human conduct” (Heise 2001).

From a mythological perspective (myth analysis), in times when Faustus and Prometheus have a great influence, the film series analyzed here show elements that confirm this influence and indicate at least one important counterpoint.

In the narratives analyzed, science and technology appear among the most important elements in the hero’s journey, working as resources to overcome natural limits of being and forces of nature, time, and space. This is one of the main meanings in the narratives that correlate to the Prometheus and Faustus myths. The other is that the determination of the scientific-technological value of use (Promethean/virtuous or Faustian/vicious) is made by the protagonist’s ethics. At the political level, the Promethean idea of science and technology associated with progress, freedom, and democracy is brought into question by a Faustian perspective that associates science and technology to tyranny, oppression, and mass destruction.

⁵ For Heidegger (1996), there are two kinds of technological experience: the “ready-to-hand,” when the human being experiences tools and the external environment as an extension of his body, and the “present-at-hand,” when our experience of the external world is detached and totally mediated by modern devices.

⁶ The archetypal “wise man” is the one who seeks knowledge in order to get at the truth, for only the truth can free one. He does so through the use of intelligence, analytical ability to understand the world, self-reflection, and processes for understanding how thoughts work.

⁷ The archetypal “magus” is a visionary who seeks to understand the fundamental laws of the universe, make things happen, find solutions, develop a worldview, and live according thereto.

Besides this confirmation of how Prometheus and Faustus myths influence the scientific-technological imaginary shared by the movies, narratives contain elements from the myths about the union of opposites (Great Goddess, Androgynous, Harmony, etc.) as well. For example, some *mythemes* address a (re)conciliation between science and magic dilute the dualistic dispute between skepticism (scientific method) and spiritualism (mystical approach), and some archetypal images show convergences of diurnal and nocturnal regimes.

This presence of nocturnal images (more mystic and synthetic and less heroic) in the contemporary scientific-technological imaginary may indicate a change in the perception about science and technology by authors and audiences of mass media productions. It may reflect the impairment of positivist ideas and the contestation of the classic scientific paradigm, based on Cartesian logic, Euclidian geometry, and Newtonian physics due to Einstein's theories and advancements in quantic physics, for example.

If nothing else, it certainly shows a revalorization of archetypal images and myths in the contemporary world as an essential element to human beings achieving a biological, psychological, and social balance. These preliminary reflections are the first results in a research that aims to investigate the collective imaginary shared by fans of science and technology in the pop culture in Brazil and in the United States. They show that an investigation in this direction may be promising to understand the role of the imaginary in the cultural identification processes through the successful products from the creative industry.

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REFERENCES

- Barros, Ana Taís Martins Portanova. 2009. “A saia de Marilyn: dos Arquétipos aos Estereótipos nas Imagens Midiáticas.” *Revista da Associação Nacional dos Programas de Pós-Graduação em Comunicação - E-compós* 12(1) (Jan./Abr.), Brasília.
- Durand, Gilbert. 1985. “Sobre a Exploração do Imaginário, seu Vocabulário, Método e Aplicações Transdisciplinares: Mito, Mitanálise e Mitocrítica.” *Revista da Faculdade de Educação* 11: 244–256. Universidade de São Paulo.
- . 1993. *De la Mitocrítica al Mitoanálisis: Figuras Míticas y Aspectos de la Obra*. Barcelona: Anthropos.
- . 2002. *Estruturas Antropológicas do Imaginário*. São Paulo: Martins Fontes.
- . 2004. “O Retorno do mito: Introdução à Mitodologia. Mitos e Sociedades.” *Revista Famecos* (1): 7–22, set, Porto Alegre.
- . 2012. “Passo a Passo da Mitocrítica. Tradução de Camile Fernandes Borba e Jéssica Cristina dos Santos Jardim.” *Revista Ao Pé da Letra* 14.2, Universidade Federal de Pernambuco.
- Garry, Jane; El-Shamy, Hasan (ed.) 2005. *Archetypes and Motifs in Folklore and Literature*. New York: M.E.Sharpe, Inc.
- Heidegger, Martin. 1996. *Being and Time*. Translated by Joan Staumbaugh. New York: SUNY Press.
- Heise, Eloá. 2001. *A lenda do Dr. Fausto em Relação Dialética com a Utopia*. São Paulo Humanitas/FAPESP/FFLCH/USP.
- Iranzo, Ivan Pintor. 2001. “About the Imaginary.” *Formats Revista de Comunicación Social* 3, Barcelona.
- Maffesoli, Michel. 2001. “O imaginário é uma realidade.” *Revista Famecos* 15: 74–82, Porto Alegre.
- . 2010. *O Tempo das Tribos*. Rio de Janeiro: Forense Universitária.

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The International Journal of the Image interrogates the nature of the image and functions of image-making. This cross-disciplinary journal brings together researchers, theoreticians, practitioners, and teachers from areas of interest including: architecture, art, cognitive science, communications, computer science, cultural studies, design, education, film studies, history, linguistics, management, marketing, media studies, museum studies, philosophy, photography, psychology, religious studies, semiotics, and more.

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