Ann's secret relationship with King Kong: a biological look at Skull Island and the true nature of the Beauty and Beast Myth

Resumen

King Kong es una de las películas más estudiadas como posible símbolo de racismo, machismo, sexualidad subconsciente y temas similares. En este artículo me concentro en la viabilidad científica de la geografía, flora y fauna de la película; la relación entre la mujer y el gorila gigante; y los cambios entre las versiones (1933, 1976 y 2005). Para ello unifico análisis dispersos en blogs, páginas web y libros, evaluando críticamente las propuestas de autores previos. Ubico King Kong en el contexto histórico, desde la Epopeya de *Gilgamés*, pasando por la escultura de Emmanuel Frémiet, hasta la película de 1933. Concluyo que -pese a las deformaciones propias de la época- la vegetación de la isla y la cultura de los nativos tienen cierta verosimilitud, no así la existencia de animales tan grandes en una isla tan pequeña. Un gorila de 20 toneladas está en el límite de lo posible pero podría funcionar en la vida real, como lo prueba la existencia del Paraceratherium bugtiense durante el Oligoceno; además, el gigantismo tendría sentido en una isla con grandes dinosaurios depredadores. Sorprendentemente, el aspecto sexual de la relación entre Ann y Kong no es imposibilitado por razones mecánicas sino por el guión mismo. Hay evidencia documental de que un gorila examinaría un pequeño objeto antropomórfico exactamente como Kong examina a Ann. La literatura científica más reciente señala que algunos indicadores de poder y actividad sexual generan respuesta en las mujeres aunque no provengan del Homo sapiens. Las diversas versiones de King Kong reflejan sus respectivas épocas: el escapismo durante la depresión económica (1933); el amor a la naturaleza y la liberación sexual (1976); y la sociedad conservadora (2005). Citando a Carl Denham en la versión de 1933: "toda leyenda tiene una base de verdad".

Palabras clave: simbolismo cinematográfico, efecto de la sociedad en el cine, realismo en el cine, biología de organismos imaginarios, gigantismo en el cine.

Abstract

King Kong is one of the most studied films as possible symbol of racism, sexism, subconscious sexuality, and similar topics. In this article I focus on the scientific feasibility of the geography, flora and fauna of the film; the relationship between the woman and the giant gorilla; and changes between versions (1933, 1976 and 2005). To do this I unify information scattered in blogs, web pages and books, critically evaluating the proposals of previous authors. I set King Kong in the historical context from the Epic of Gilgamesh, through Emmanuel Frémiet's sculpture, until the 1933 film. I conclude that -despite the deformations of the era- the island's vegetation and the culture of the natives have some plausibility, but not the existence of such large animals on such a small island. A 20-ton gorilla is at the limit for mammal biology but would work in real life, as evidenced by the existence of Paraceratherium bugtiense during the Oligocene. Gigantism makes sense on an island with large predatory dinosaurs. Surprisingly, the sexual aspect of the relationship between Ann and Kong is not impossible for mechanical reasons but because of the script. There is documentary evidence that a gorilla would treat a small anthropomorphic object exactly like Kong examines Ann. The most recent scientific literature reports that some indicators of power, and of sexual activity, generate a response in women -even if these indicators are not from Homo sapiens. The various versions of King Kong reflect their own times: escapism during the Depression (1933); love of nature and sexual liberation (1976); and a conservative society (2005). Quoting Carl Denham in the 1933 version, "Every legend has a basis of truth".

Keywords: Film symbolism, effect of society in film, realism in cinema, biology of imaginary organisms, gigantism in cinema.

I was lucky enough to watch all versions of *King Kong* on the big screen, not reduced to a less impressive miniature on television or a computer. As a teenager, I saw the original (1933) version in a festival of American film history in the *Centro Cultural Costarricense-Norteamericano* in San José, Costa Rica, as well as Guillermin's and Jackson's versions when they were first shown in theaters in 1976 and 2005.

I liked all of them and I introduced my children to the story in due time (they disliked the end, but loved the rest of the film). In this essay, as a biologist and film fan, I will tell you my personal perspective and unify the cores of all those analyses about King Kong's geography, evolution, ecology and sexology presented throughout the years in numerous blogs, websites and book-length treatments. I conclude that despite's the directors' view that in adventure films drama is more important than scientific accuracy, King Kong had scientific plausibility and even surpassed some scientific knowledge at the time it was made. Finally, I explain why I reject Dekker's (1992) interpretation of animal-woman sex myths as exclusive products of the male mind, and base that rejection on recent scientific research about this taboo topic.

Previous analyses of King Kong

The story of Kong, widely remembered as the gorilla with the woman in his paw, was

a cinematic success the three times it was filmed, and became a part of popular culture worldwide (Erb, 1998). Besides inspiring a large number of cultural products (some described by Erb, 1998), *King Kong* has been the subject of many analyses, including its geography, biomechanics, ecology, archaeology, history, and sociology; these analyses are scattered among many printed and digital publications dating mostly from a decade or more ago and sometimes difficult to find.

The geographic setting of Skull Island, with its particular geology and climate, has been imagined by the Weta team (Workshop, 2005) which designed the miniatures, makeup, native costuming and weapons of 2005's version. The island's ecosystems and their evolution were superficially treated by Silverberg (in Haber, 2005), who shows an good knowledge of biological principles even though he is not a biologist (but he is one of the most important names in science fiction history).

The biomechanical properties of film monsters were considered by LaBarbera (2003) and specifically for Kong by David Ewalt (2005); the archaeological origins of the island's "tribe" were developed into a novel, *Kong: King Of Skull Island*, by author-illustrator Joe DeVito and by Brad Strickland, a professor of English at the University of North Georgia (DeVito & Strickland, 2005).

Sociology and Psychology have abundantly considered King Kong, which depending on the authors is a representation of imperialism, racism, capitalism, nature versus civilization, sexism, male subconscious, female libido, and several others (Snead, 1991; Jense, 2002; Haber, 2005). But in my opinion after reading as much as I could bear about King Kong, is that it is not about imperialism, racism, capitalism, sexism, or female libido: it is about a giant gorilla who dies trying to keep a woman that he received in an impressive ceremony; the rest are just the worries and prejudices of writers projected on a story that was made far from their own realities ("in the land of myth, speculation is king", Harry Harrison in Haber, 2005, p. 112).

King Kong: actually a thousand year-old story?

Both the film and the gorilla-loveswoman concepts have precedents. Peary (1976) listed the films with similar plots and scenes before 1933's *King Kong*, and explained which scenes are more likely to have directly influenced the film. The basic idea is that almost every scene in *King Kong* has a precedent in literature or cinematography; what was special about the movie is that it blended them in a way that continues to attract a public decades after it premiered. Actually, the story of the giant ape and the beautiful woman is far older than you may think (unless you are a historian of literature, of course), but how old it is depends on how stringent we are when looking for similar plots.

Of course, if you want a narrow interpretation, King Kong -the story of the giant gorilla killed on top of the Empire State Building- has no precedents before the twentieth century. If you prefer to see things sensu lato, the origin of King Kong may be a thousand years old, because a giant ape and a princess appear in The One and a Thousand Nights and continued well into the European culture of later centuries (Jensen, 2002). And finally, if you are even more open to overall similarities, you can conclude that the basic story is more than 4000 years old, and for this we must first consider the observation that we feel sorry for Kong, victimized and chained by civilization, because the people who made the films humanized him (Haber, 2005). In other words, we would not feel the same if Kong were giant spider, for example.

A humanized but powerful wild being that attracted by a woman abandons nature, marks the beginning of the Sumerian *Epic of Gilgamesh*, in which Enkidu, like Kong, is a large, powerful anthropomorphic character who ate plants and lived naked in the wild. This wild being is lured into civilization by sex, a basic plot that appears explicit in the *Epic* and toned down in later versions such as R. Kipling's *The Jungle Book* and E.R. Burroughs *Tarzan*. In the *Epic*, the sexual element is provided by Shamhat, who not only captures him through marathon sexual sessions but also educates him, taking Enkidu away from nature and into the grandest city of her time (the equivalent of New York), where he dies. The Empire State Building scene in *King Kong* also resembles the *Epic*'s end, when Enkidu realized that his death was precipitated by following the woman, yet he still ends up wishing her the best (*i.e.* being desired and given valuable goods; see Dalley, 2000, and Ditmore, 2006).

But certainly it does not mean that *King Kong* is based, or even inspired, in *The Epic of Gilgamesh*, it could also be just a coincidence: after all, the more you summarize a story, the more it looks like other stories.

Skull Mountain Island: why is it believable?

There is no question of where the island is located or about its shape, because a map with coordinates appears clearly in the 1933 version; it is west of Sumatra and the film even mentions a monsoon season; so a valid question is: can an island in that location look like the one in the film?

Well, yes. Because of the location, the monsoon that would affect Skull Island is the Indo-Australian Monsoon, a seasonal change of wind direction that starts in September, bringing stormy weather and floods; even though it is not common in tropical Pacific coasts, the fog that hides the island is a geographic possibility. In real life, islands in this area have large populations of mosquitoes, which we do not see in the film pestering Kong or villagers: there the film is not realistic.

The 1933 map shows a coral reef ring around the island; a sand bar in the south, where people live protected from Kong by a wall; and a larger area that is mostly lowland but has Skull Mountain in the northwest. The coral reef is typical of the region and heavy rains explain the erosion that produced the skull image when softer material was eroded from volcanic rock (Lindsey, 2011). All of this makes scientific sense, and if you look at the lower right of the screen in Kong's cave you will see that the volcano that built the island is still active and has boiling mudpots.

Also correctly, the lowlands have thick undergrowth and the highlands grow mosses; the island's vegetation includes bananas, ferns, palms and bamboos, and differs from lowland to highland. Overall this island is credible even though a botanist might notice particular species that do not naturally grow on Pacific islands (have you ever asked why Tarzan rides Indian elephants in the films, instead of African ones? If you have, it shows that you have never tried to tame an African elephant!).

Even if we feel satisfied with this analysis about the ecology of Skull Island, bear in mind that the sets were not made specifically for *King Kong*, they were from *The Most Dangerous Game*, a film about an adventure in South America (Dohm, 2007).

The natives: why did they have that chicken cage?

Who were the natives and how did they get there? The actors were African Americans because Sumatran actors were not easy to find in Hollywood (Haber, 2005), but in any case there is a mix of African and Asian DNA in the Pacific region, and the fact remains that for the typical American viewer the requirements for "natives" are not stringent. In the first ceremony, the skipper says that their language is related to that of Nias (a real island which does have its own language despite its tiny size: Zimmer, 2006). Their culture also matches what used to exist in Nias, with villages run by chiefs, large constructions -megalithic, not made of wood- and the concept of selling human beings (Kennedy, 1943; Zimmer, 2006).

Is the demographic structure of the village reasonable? Yes, if you look carefully you will see a variety of ages and types, including children, elders and overweight people. They have basic human technologies such as pottery, basketry, ladders and torches, and are even more advanced than many Latin American countries of the time, where rural people were barefooted, my grandfather included; Kong's natives wear sandals (not the small children, in accordance with custom in primitive societies, who are often nearly unclad). In a realistic way, they also use different clothes for ceremonies (grass skirts) and daily life (fabric skirts that in the case of young women are short and show the legs).

The culture looks African if you consider the oval war shields and the headdresses. On the other hand, the flower and feather ornaments, royal cloaks, canoe stabilizers and houses are consistent with Pacific island cultures (see Kennedy, 1943). The cloaks reminded me of Hawaiian *ahuúla* feather cloaks, but the coconut brassier worn by actress Etta McDaniel is pure Hollywood fiction (see McAvoy, 2012).

I may be said that the natives could not survive in real life because they did not have access to most of the island and because you see no fishing boats or crop fields. But when Kong goes through the door, one of the villagers falls on a cage, setting free more than a dozen hens. This led me to wonder how the natives fed themselves and I noticed that their village looks like the very viable and real villages of Amerindians that I have visited in Central America. For many years Amerindian groups made a living in coastal rainforest, without large crop fields, thanks to a combination of forest plants and animals, and they fished from land (not from boats); these resources were complemented later with introduced animals like chickens like the ones in the film. So Kong's islanders had an

advanced economic system marked the ownership of chickens.

Before *King Kong*, directors Merian C. Cooper and Ernest B. Schoedsack had shown villagers building high walls against dangerous animals in their 1927 documentary *Chang: A Drama of the Wilderness*, so it is not surprising that in *King Kong* they present a tall wall, rather than moats or other defenses.

Island monsters and plate tectonics: the main question is not how the dinosaurs got there, but how they survived

The 1933 film shows Skull Island as a place populated by dinosaurs from a large time span (*Stegosaurus*, *Apatosaurus*, *Tyrannosaurus*), an unidentified iguana-like reptile, a plesiosaur -often mistaken for a snake-, a pterosaur and birds.

Some herbivores like the gorilla and the *Stegosaurus* appear to behave incorrectly by eating meat (*i.e.* humans) but a closer look will show that they use their teeth to kill the victims but do not actually swallow them. This shows knowledge and care by the animators.

The plesiosaur belonged to a marine group that could swim to any distant landmass, the only question about how it got to the island is how it reached the pond near the volcano. The script only calls for "a monster" (Dohm, 2007) so it was the film staff that chose a marine reptile. They probably were unaware of the problems that freshwater brings for marine animals (as cleverly mentioned by Silverberg in Haber, 2005), but you can also defend their choice by suggesting that perhaps not all plesiosaurs were marine or that the water in the mountain top is just the remaining of a marine ecosystem lifted by tectonic activity. In any case, the plesiosaur defends itself from Kong by constricting its neck around him, like a snake, something we now know that was not possible, but fully in agreement with paleo-illustrator Charles R. Knight's reconstruction at the time (Everhart, 2002).

The Brontosaurus (or Apatosaurus, see Choi, 2015) drags its tail, correctly according to scientific knowledge at the time, but also walks well on land, and in this, the artistic need for a chase predated current reconstructions of large herbivorous dinosaurs (Haber, 2005); we now know that these animals moved well on land, and also correctly, the Brontosaurus does not swallow the men that it kills.

The most memorable dinosaur from *King Kong* may be the *Tyrannosaurus* that he wrestles. The reptile was also correct according to the knowledge available at the time, with scales instead of feathers. According to audio commentary by Ray Harryhausen in the DVD edition of the film, it was not a *Tyrannosaurus* but an *Allosaurus*, but I will keep calling it *Tyrannosaurus* because the model was not anatomically detailed and because a *Tyrannosaurus* is what most people think they are watching.

There is also a scene in which a pterosaur captures Ann but has difficulties taking flight with its heavy load, actually an impossible task for such an animal (the same error appears in 2015's *Jurassic World*). If you pay attention you will notice that even though scientifically wrong, the scene recorded the beauty of Fay Wray's legs for history.

I can imagine the plesiosaurs (from 66 million years before present, *mybp*) swimming to the island and the pterosaurs (from 80 mybp) reaching it on the wing, but the question of how the dinosaurs could have reached the island if this were a true story forced me to check the paleomaps for the Cretaceous and Jurassic periods. The Stegosaurus and Brontosaurus lived up to 150 mybp in the northern landmass of the time, so theoretically they could have walked to the area, but the Tyrannosaurus lived on a giant North American island 66 mybp so I see no feasible way for the carnivore to reach Skull Island, despite the land connections imagined by Valdron (2005). If you take Harryhausen's statement that it was meant to be an Allosaurus, the problem disappears and its arrival is believable.

I love one aspect of the predatory dinosaur that I have not seen mentioned in the literature: before the fight, you see him scratching (or her? Females might have been larger and more fit to fight Kong). This scratching is a genial idea from the animators and forced me to ask if dinosaurs could scratch. Impossible to know? Actually not, and here I got my answer from famous ethologist and Nobel Prize winner Konrad Lorenz: scratching with a limb is a useful stereotyped behavior that appeared in our evolutionary time long before dinosaurs, with the first amphibians (Lorenz & Leyhausen, 1971). Why was it scratching? Perhaps because of the mosquitoes that I mentioned earlier?

Birds in the Sumatra region are nearly three times as diverse as reptiles, so there probably were many species on Skull Island, but even though we listen to them we only get to see a few types: some flying around when they reach the island, one that flies scared from a nest when Kong is about to place Ann on it (I could not identify this bird) and the vultures that fly above and feed on the *Tyrannosaurus* carcass.

On additional question about Skull Island dinosaurs is why they did not suffer the size reduction typical of originally large animals when they colonize small islands, where food and other resources are scarce, as asked by Silverberg (in Haber, 2005). Does this biological rule apply to dinosaurs? It does, and even though proof was ignored by the paleontological community it was actually found long ago by the tragic Baron Franz Nopcsa in Hateg, a place where dinosaurs could weigh only an eighth of their mainland relatives weight. To be absent from early twentieth century charts, Skull Island should have been much smaller than Hateg with its 78 000 km² (see Benton, Csiki, Grigorescu, Redelstorff, Sander, Stein, & Weishampel, 2010) and large dinosaurs there would have needed to be much smaller.

Even if we imagine that the island in the 1933 film appears tiny because it is not to scale, viable populations of animals as large as dinosaurs require far larger landmasses: in brief, science does not support the gigantic fauna of Skull Island (or in A. Conan Doyle's *Lost World* plateau that inspired it).

Physiology and ecology of a 40 000 pound gorilla

Kong shows intelligence and curiosity, I have heard of no criticisms to these aspects of his behavior. When the first *King Kong* was made, almost nothing was known of gorilla behavior, but gorillas are so close to us that the writers and animators succeeded in giving Kong an acceptable personality. He comes when you call him with the gong (but even a turtle that I had at home, a *Kinosternon scorpioides*, did that); he turns the mechanism that keeps Ann's ropes stretched to set her free, and he makes sure she is safe when the planes attack.

On land, bigger animals are heavier and need thicker legs, and for this reason Ewalt (2005) wrote that Kong was too big to walk: his bones would be crushed by his weight because of the square-cube law, described in 1638 by Galileo Galilei (who found that volume grows faster than area when one changes the size of things). Our current analyses of Kong and his island are not different from those that Galileo applied to another imaginary being and his habitat, i.e. Lucifer and Hell; and he was only following the steps of Antonio Manetti (1423-1497), the Florentine mathematician, architect and writer (Fisher, 2011). Regarding the question of why serious academics should pay attention to such useless topics, I cite Galileo himself:

> It is an admirable and difficult thing ... that men should have been able by long observations, continuous vigils, and perilous navigations, to measure and determine the intervals of the heavens ... and the place of earth and sea, things that completely, or for the greater part, fall under the senses. How more wonderful should we consider the study and the description of the place and size of hell which lies in the bowels of the earth hidden from all the senses (full translation: https://www.mtholyoke.edu/ courses/mpeterso/galileo/ inferno.html).

Ewalt (2005) adds, though, that giraffes are tall and thin-legged but functional and gives Kong some hope, but there he fails to consider weight. Giraffes weigh 1,5 ton, while Kong would weigh more than 20 ton (Ewalt, 2005), thus I rather agree with Valdron (2005) who wrote that if *Paraceratherium* (*Indricotherium*) *bugtiense* not only lived but colonized much of Eurasia with a weight of 20 ton and normal-width legs (see Clauss, et al., 2003), Kong could indeed walk well. Having to choose between mathematical calculations and real organisms, I always choose the later. Even Galileo got his hellish calculations wrong the first time (Fisher, 2011).

Additional questions about Kong's size relate to why gorillas would grow so much, and if they could find enough food.

The most common ecological causes of gigantism are cold weather and protection from predators. The tropical climate of the island limits us to the option of protection, and even though this probably never crossed the minds of *King Kong*'s writers, the sole presence of *Tyrannosaurus* is enough to explain such a need. The second question is harder to answer, could Kong find enough food?

Ewalt (2005) calculated that Kong would need 3 400 kg of food per day. A normal gorilla needs 3 km² of territory, and Kong, 100 times heavier, would require 300 km², probably too much for the island we see in the map (even if we do not consider the fact that at some time there had to be more gorillas; shown only in the 2005 version). No hypothetical changes in Kong's diet or the plants around him can make their populations viable on an island small enough to be missed by cartographers in the early twentieth century. And finally, the food topic brings me to the question of why the natives offered Kong young women, which I consider next.

Ann and Kong: what was the true nature of their relationship?

The basic idea of sacrifice is that of a gift given to maintain a good relationship; and food is a common form of sacrifice, well known in the West from the Cain and Abel tale.

In the 2005 version of King Kong we see skeletons of previous "Kong brides", but no evidence they were eaten, so we must assume they died from other causes such as panic or starvation; but there is no need to continue along that line, the script clearly says they were brides (Dohm, 2007). According to the Oxford Dictionary, a bride is "a woman on her wedding day", wedding is "marriage ceremony" and the meaning of marriage in most places and times, and certainly at the time of the first King Kong film, implies sexual access (Bell, 1997). In other words, the girls become Kong's wives and the problem here is that sexual intercourse is impossible because Kong's phallus is assumed to exceed the capacity of his human brides.

This uncomfortable but valid topic has been around since the film was first shown (Gottesman & Geduld, 1976). Several interesting answers have been proposed,

perhaps the most unexpected one is that in the film we do not see Kong's penis because Kong is a female (David Gerrold in Haber, 2005, p. 217). A second option is that they sexual relationships would not be penetrative and a third one, that his penis is unusually small, but a simple calculation shows that this is not necessary: the erect penis of real gorillas is about 4 cm long. At 7,5 m Kong is about 4 times taller than an normal gorilla, so we could expect a 4x4= 16 cm phallus, that is, a common human size; coupling is possible in the two positions known from gorillas, rear and face to face. I find this value more acceptable than the 60 cm calculated in Gottesman and Geduld (1976). Furthermore, gorilla and human penises are similar in shape and have a glans, unlike chimpanzees and bonobos (for details about sex organ evolution in primates, see Parker and Jaffe, 2008).

Now that we know it would be possible, where does the idea come from?

Sexual intercourse of women with other animal species has been represented in art for thousands of years, with early examples known from Egypt, India and Greece (Dekkers, 1992). How this the idea get from Mesopotamia through Arabia and into *King Kong* thousands of years later?

There is no real mystery about how the beauty and beast association in *King Kong* was born. We already saw that the sexual association of apes with women is ancient, but for *Gorilla gorilla* it began shortly after the species was named in 1847: only ten years later Emmanuel Frémiet presented in Paris a sculpture of a gorilla carrying a woman to rape her (Jones, 2006). Cooper said that he originally wanted to film a documentary about gorillas but having no funds to do it, ended up with *King Kong*, and that when young he had read some cheap novel in which gorillas kidnapped village women (Haber, 2005, p. 187). The film's dialogue mentions that you need a pretty face and a love story to attract viewers (Dohm, 2007) so everything was there for a gorillaloves-woman story.

Having established this historical connection, I wonder if something similar could happen in real life. You may be surprised.

Women and gorillas in real life

In real life, sexual intercourse between women and apes is limited to an unconfirmed report of women raped by orangutans (Maugh, 1992), but the sexual attraction and even love that women can feel for apes have recently appeared in the media; see for example the BBC report of women attracted to *Buff*, the silverback gorilla of Higashiyama Zoo described as fatherly, handsome and with rippling muscles (Anonymous, 2015). If women like J. Goodall, D. Fossey and B. Galdikas openly state that they love apes (Jensen, 2002) -and I assume that this is always meant in a non-sexual way- can women also feel sexually curious or even attracted to apes? *Buff* 's report is not unique, a similar and more sexually clear report was published a few years before about women interested in reproducing with *Guy*, a London Zoo gorilla (notice that it was written by a woman who says she was initially skeptic about it: Jahme, 2001).

Even before these early twentieth-first century examples, Mary Bradley, the first American woman to see gorillas in nature, challenged the official story by suggesting that they were not monogamous and that she was not repulsed by the idea of being taken by one. According to Jones (2006), when she wrote that sexually-charged comment, she undermined the image of white woman's "purity", placing herself at the same level of the "lusty black women". A similar "purity" belief was held by science fiction writer Ray Bradbury when he lamented that in Guillermin's version "instead of a virgin beauty, they depicted an unclad lady of the night" (Haber, 2005, p. 11). Psychologist Laura Irwin stated that those who see exploitation, abuse or rape in beauty and beast stories miss the point: the beast could harm the damsel in distress but chooses not to, and there is a happy ending (Irwin, 2010).

After commenting with a couple of lady friends that I was writing this essay, I believe that women can find attractive *features* in apes: my friends were surprised to learn that men do not expect them to be attracted. "Sex is in itself attractive" and some gorillas "look very powerful" -they said. But the possibility of interspecies sex is not limited to unreliable media reports or friends' comments, there is also peer-reviewed scientific information on the subject. The conclusion to this date is that normal women do not have "rape fantasies" (a misleading term), but that they do have fantasies of being wanted so much by a powerful male that he is willing to overpower them, imagining an "ultimately willing surrender" (Meana, 2010).

By using a device that measures genital arousal, Chivers, Seto and Blanchard (2007) found that women get sexually aroused by watching explicit and strong sexual activity in non-human primates. This result, as shocking as it can be to some, should not embarrass anyone. It is consistent with the evolution of our species, in which women were selected to favor strong males and to survive forced intercourse (Chivers, Seto and Blanchard, 2007). Dekkers (1992) thought that all stories of sex with other species were the product of male minds, not because he had evidence, but because he imagined it to be so. Ironically it took the minds of female researchers like Meredith Chivers to show how weak his argument is.

Gorilla-woman relationships: differences among the 1933, 1976 and 2005 versions

Janaisa (2012) presented a good multimedia comparison of the three *King Kong* versions, and found that Ann's attitude towards Kong changes from always trying to escape (1933) to trying to save him in the other versions, where he no longer kills humans (according to Irwin, 2010, Dwan and Ann's fraternizing with Kong could be cases of Stockholm Syndrome).

The supposedly "erotic" scene in which Kong examines Ann (or Dwan, in the second film) was also analyzed by Janaisa (2012). In the third film, Ann makes pirouettes for him; in the second, Kong washes her, and in the first version, Kong peels off Ann's clothes and sniffs his fingers. Janaisa does not discuss the reason for these differences, but it was the lack of eroticism in the third version that triggered my idea of comparing versions and writing this article.

The 1933 version with cloth removal and sniffing is the most interesting of the three. Esther M. Friesner (in Haber, 2005, p. 158) wrote that Kong is surprised because Ann doesn't smell like previous brides, and that she is not eaten for that reason. But I will turn to the original script for a more official explanation of what is happening in that scene (Dohm, 2007):

> "Kong, in side angle, begins to pick her clothes off, as a monkey might pick a rag doll to pieces. INT. LAIR - MED. SHOT – NIGHT Ann shrinks and screams as her clothes are pulled off bit by bit. EXT. TRAIL - FULL SHOT – NIGHT

Driscoll comes up the trail. He can hear the girl's screams. He hurries. INT. LAIR - FULL SHOT – NIGHT The girl is almost naked. SIDE ANGLE. Kong is still picking at her when he turns startled."

What Kong does with Ann is exactly what a real gorilla does with a doll, as you can see in the video *Koko's 42nd Birthday* (https://goo.gl/HHj6ox).

In conclusion, this famously erotic scene is not at all sexual, even though viewers might be aroused by the undressing itself. Actually, Ann's shapes and nipples are more visible during the test scream scene and when she swims after the pterosaur scene.

There is no sniffing in the 1976 version, but here Dwan is less passive, she even calls Kong a "goddamned male chauvinistic ape" and flirts for her life (Haber, 2005). With his inspection Kong uncovers her breasts (not seen thanks to a rapid cut), and Kong not only showers her but also dries her by blowing, a tender scene that in real life would probably be shocking because of his bad breath (I have not been that close to a gorilla but I am extrapolating from my Rottweiler).

The final version, that according to Mackenzie (2006) has no soul and according to me has no eroticism, is Peter Jackson's 2005 remake. Why is his script so dull?

When there were no strong financial and censorship pressures, Hollywood was

realistic and innovative; according to Dirks (2016), in the 15 years before King Kong, mainstream films had shown sex work (Traffic of Souls, 1913; Girls about Town, 1931), full female nudity (The Penitentes, 1916), atheism (The Godless Girl, 1929), lesbianism (Pandora's Box, 1929), sadomasochism (Red-Headed Woman, 1932) and rape (The Story of Temple Drake, 1933). Like other films (Croft, 2006), all King Kong versions reflect the culture and times when they were made. The 1933 version served escapist needs during the depression and presented partial nudity and explicit violence. The 1976 version had a conservationist message and reflected the sexual liberation of the period. My hypothesis is that the 2005 version also reflects its time, when a rightwing president sat in the White House and an erotic component could get the film a rating that would keep families away, threatening the film financially (see Croft, 2006).

Many reviewers unfairly rejected the 1976 version (Morton, 2005), yet it was the one that made the best profit: 3,96 times its cost, against 2,66 of the 2005 version and 2,43 of the original (calculated from references in wikipedia.org). So, at least financially, there was justice for John Guillermin's version.

Conclusion

After reading about *King Kong* until I felt dizzy and letting my brain digest all that in the juices of my experience as ecologist and

movie fan, I believe that all that "scholarship" about the meaning of King Kong has less verisimilitude than the island and village culture shown in the 1933 film; furthermore, the existence of animals of huge body mass on such a small island is not biologically correct. The behaviors of the reptiles, Kong and humans are actually more valid and believable than those in more recent movies such as Jurassic World, whose director refused to put feathers on his dinosaurs citing something also known to the makers of the original King Kong who changed the animal's size according to artistic needs: in films, dramatic effect is more important than scientific accuracy (Phillips, 2015).

Perhaps the more interesting thing about previous writers is how uncritical they were when they stated that King Kong was a symbol of imperialism, racism, capitalism, sexism or the many other things that they imagined. The contradictory nature of these explanations should be a warning to anyone reading them, even if they chose to ignore that the man who had the idea and made it into a classic, Merian C. Cooper himself, unambiguously said that such interpretations were wrong (Huntington, 2005). Finally, the idea of love, attraction and even actual sex between a woman and a gorilla, even with one as large as Kong, is scientifically possible and this certainly is the most surprising result that I got from researching, analyzing and writing

this article. Quoting film character Carl Denham himself:

"Every legend has a basis of truth".

Acknowledgments

I thank Guillermo Coronado for backing me up to write this as a sanity project during a long European vacation taken by the rest of my family. People have written ad nauseam about these films and I thought that what was missing was an article that summarized all that scattered work, checked the claims (made mostly by non-scientists), and considered the changing levels of eroticism that Janaisa (2012) only mentioned superficially. This is the contribution that the present article intends and I dedicate it to Jessica Lange, my favorite of the three Kong ladies, and to Marcel Delgado and Mario Larrinaga, the seldom mentioned Mexican artists who made 1933's Kong's body and beautiful Doré-inspired landscapes.

References

- Anonymous. (2015). 'Buff' silverback gorilla drawing crowds of women to Japanese zoo. *BBC Newsbeat*. Retrieved from: <u>http://goo.gl/BaIufM</u>
- Bell, D. (1997). Defining Marriage and Legitimacy. Current Anthropology, 38 (2), 237–253. doi: 10.1086/204606
- Benton, M. J., Csiki, Z., Grigorescu, D., Redelstorff, R., Sander, P. M., Stein, K., &

Weishampel, D. B. (2010). Dinosaurs and the island rule: The dwarfed dinosaurs from Haţeg Island. Palaeogeography, Palaeoclimatology, Palaeoecology, 293(3), 438-454. <u>doi:</u> 10.1016/j.palaeo.2010.01.026

- Chivers, M.L., Seto, M.C. & Blanchard. R. (2007). Gender and sexual orientation differences in sexual response to sexual activities versus gender of actors in sexual films. Journal of Personality and Sexual Psychology, 93(6), 1108-1121.
- Choi, C. (2015). The Brontosaurus Is Back. Scientific American. Retrieved from: <u>http://</u> <u>www.scientificamerican.com/article/</u> the-brontosaurus-is-back1/
- Clauss, M.; Frey, R.; Kiefer, B.; Lechner-Doll, M.; Loehlein, W.; Polster, C.; Rössner, G. E.; Streich, W. J. (2003). The maximum attainable body size of herbivorous mammals: Morphophysiological constraints on foregut, and adaptations of hindgut fermenters. *Oecologia*, 136 (1), 14–27.
- Croft, S. (2006). Culture, Crisis and America's War on Terror. Cambridge: Cambridge University Press.
- Dalley, S. (2000). Myths from Mesopotamia, Creation, the Flood, Gilgamesh and others. New York: Oxford University Press.
- Dekker, M. (1992). *Dearest Pet: On Bestiality.* London: Verso.
- DeVito, J. & Strickland, B. (2005). *Kong: King Of Skull Island*. Oregon: Dark Horse.
- Dirks, T. (2016). History of Sex in Cinema: The Greatest and Most Influential Sexual Films and Scenes (Illustrated). American Movie Classics <u>http://www.filmsite.org/</u> <u>sexinfilms.html</u>

- Ditmore, M. (Ed). (2006). *Encyclopedia of Prostitution and Sex Work*. Santa Barbara, California: Greenwood Publishing Group.
- Dohm, S. (2007). King Kong script, changes 09/01/1932 - 09/06/1932 <u>http:// www.whiskeyloosetongue.com/</u> scripts/kong1933.html
- Erb, C. (1998). Tracking King Kong. A Hollywood Icon in World Culture. Detroit: Wayne State University Press.
- Everhart, M. J. (2002). Where the elasmosaurs roam: Separating fact from fiction. *Prehistoric Times*, 53, 24-27.
- Ewalt, D. (2005). The Biology of King Kong. Retrieved from: <u>http://www.forbes.com/</u> <u>2005/12/12/king-kong-</u> <u>biology_cx_de_1213kongbiology.html</u>
- Fisher, L. (2011). Crashes, Crises, and Calamities: How We Can Use Science to Read the Early-Warning Signs. New York: Basic Books.
- Gottesman, R. & Geduld, H. (Ed). (1976). *The Girl in the Hairy Paw. King Kong as myth, movie, and monster.* New York: Avon
- Haber, K. (Ed). (2005). Kong Unbound: The Cultural Impact, Pop Mythos, and Scientific Plausibility of a Cinematic Legend. New York: Pocket.
- Huntington, T. (2005). King Kong: How the greatest special-effects movie was made with the simplest technology. Retrieved from: <u>http://www.americanheritage.com/</u> <u>entertainment/articles/web/20051214-</u> <u>king-kong-monster-special-effects-</u> <u>movie-fay-wray.shtml</u>
- Irwin, L. (2010). Romancing the Beast; The Sex Appeal of Vampires and Beasts. Retrieved from: Hubpages.com (page no longer online).
- Jahme, C. (2011, July 5). Lice, sex, gorillas and genetics. *The Guardian*. Retrieved from:

theguardian.com/science/blog/2011/ jul/05/lice-sex-gorillas-genetics

- Janaisa. (2012). Technological Innovation in the King Kong films. Retrieved from: <u>https://janaisa.wordpress.com/author/janaisa/</u>
- Jensen, S. (2002). Waarom vrouwen van apen hauden. Amsterdam: Bert Bakker.
- Jones, J.E. (2006). Gorilla Trails in Paradise: Carl Akeley, Mary Bradley, and the American Search for the Missing Link. *The Journal of American Culture*, 29 (3), 321-336.
- Kennedy, R. (1943). Islands and Peoples of the Indies. Washington: Smithsonian Institute War Background Studies: Number Fourteen.
- LaBarbera, M. (2003). The Biology of B-Movie Monsters. The University of Chicago: Digital Collections. Fathom Archive. Retrieved from: <u>http://</u> fathom.lib.uchicago.edu/2/21701757/
- Lindsey, W. (2011). Kong's Kingdom: A Study of Skull Island. Retrieved from: <u>http://</u> <u>geog1202skullislandstudy.blogspot.co</u> <u>m/</u>
- Lorenz, K. & Leyhausen, P. (1971). Biología del comportamiento: raíces instintivas de la agresión, el miedo y la libertad. México: Siglo XXI
- Mackenzie, A. (2006). King Kong (2005) Movie Review. Retrieved from: <u>http://</u> www.beyondhollywood.com/ king-kong-2005-movie-review/
- Maugh, T. H., II. (1992, January 13). Orangutans in the Mist: Woman's 20-Year Study of Elusive Rain Forest Apes Finds They're Not Antisocial After All. Los Angeles Times. Retrieved from: <u>http://articles.latimes.com/1992-01-13/local/me-231_1_orangutan-foundation/1</u>

- McAvoy, A. (2012, October 13). No coconut bras: Hawaii focuses on real traditions. HeraldNet. Retrieved from: <u>http://</u> www.heraldnet.com/article/20121013/ LIVING/710139997
- Meana, M. (2010). Elucidating Womens'(hetero) Sexual Desire: Definitional Challenges and Content Expansion. *The Journal of Sex Research*, 47 (2-3), 104-122.
- Morton, R. (2005). *King Kong: The History of a Movie Icon from Fay Wray to Peter Jackson.* New York: Applause Theatre and Cinema Books.
- Parker S.T. & Jaffe K. E. (2008). Darwin's Legacy: Scenarios in Human Evolution. Maryland: AltaMira Press.
- Peary, G. (1976). Missing Links: The Jungle Origins of King Kong. Retrieved from: <u>http:// www.geraldpeary.com/essays/jkl/ kingkong-1.html</u>
- Phillips, I. (2015). Jurassic World' completely ignores these important discoveries scientists have made about dinosaurs. Business Insider. Retrieved from: http://www.businessinsider.com/ jurassic-world-ignores-science-behinddinosaurs-2015-6
- Snead, J. (1991). Spectatorship and capture in King Kong: the guilty look. *Critical Quarterly*, 33(1), 53-69.
- Valdron, D. (2005). King Kong II: How did that monkey get so big? ERBzine. Retrieved from: <u>http://www.erbzine.com/</u> <u>mag15/1521.html</u>
- Workshop, W. (2005). The World of Kong: A Natural History of Skull Island (King Kong). New York: Pocket.
- Zimmer, B. (2006). Nias, Komodo, and "Kong". Retrieved from: <u>http://</u> <u>itre.cis.upenn.edu/~myl/languagelog/</u> <u>archives/002751.html</u>