

Negus' Bisected Alligator Head and the Art of Anatomy

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Art and anatomy have had an inextricable relationship since the Renaissance (Science Museum, n.d.). Understanding anatomy helped artists to better represent the human body and better anatomical drawings simultaneously improved scientists' understanding of the body (Science Museum, n.d.). Da Vinci is probably one of the best examples from this era, who contributed greatly to both disciplines (Science Museum, n.d.).

One object that captures this curious duality so well would be the Bisected Alligator Head, accession number X1215, from the Grant Museum of Zoology. This is the story of an otolaryngologist, a doctor specializing in the ear, nose and throat, his discoveries and his collection of specimens that would unintentionally inspire one of the most controversial British artists.

X1215 and the Negus Collection

Like many of the other small-to-medium sized specimens found in the Grant Museum, the bisected alligator head X1215 occupies a space on a shelf in one of the cabinets situated against the walls of the museum. It is a modestly sized object, with dimensions of approximately 30 cm x 5 cm x 10 cm. These measurements are, of course, that of the clear acrylic casing that contains the actual alligator head, which is itself mounted on another clear acrylic board within the case and bathed in Kaiserling preservative solution. The weight of the liquid solution lends a certain heftiness to the object.



Left: "Internal" side view of the bisected alligator head

Right: "External" side view

With just a simple label stating the name of the museum, accession number and the scientific family of alligators, *Alligatoridae*, there does not seem to be much to go on with at first glance. The real value of the specimen starts to be revealed as one looks at it in the context of its parent collection. The alligator head is just one of many bisected animal heads and skulls that form the Negus collection, which was donated to the Grant Museum by the Ferens Institute of Otolaryngology upon the institute's physical closure and subsequent merger with the UCL Ear Institute (UCL Culture, n.d.). Aha, a clue! It is indeed no accident that all, if not most, of the specimens of the Negus collection have been sagittally sectioned, or sectioned through the midline, (Lackie and O'Callaghan, 2010) allowing the viewer to clearly see the nasal and throat passages of each specimen.

Otolaryngology is concerned with the study of the ear, nose and throat passages in humans and other animals, (Columbia University Department of Otolaryngology, n.d.) with the latter providing an important comparative branch of study, comparative anatomy, that has been used in the past to better understand the evolution of said passages in humans (Negus, 1954). Judging from their method of sectioning and mounting, as well as their origin, the Negus collection was most likely used to teach medical students at the Ferens Institute about these anatomical features as seen in animals with ear, nose and throat structures similar to those in humans. So what then makes the alligator head unique out of this fascinating collection? Unlike other reptiles but like mammals, alligators and crocodiles have a secondary palate, a piece of bone, that separates the nasal passage from the mouth, channelling air taken in through the nostrils to the back of the throat (Ferguson, 1981). This is clearly seen in the alligator head specimen. Other reptiles, in contrast, have nasal passages that only extend as far as the front of the mouth. As such air must pass through the common passage of the mouth to reach the lungs (Ferguson, 1981).



The secondary palate, highlighted in red, as seen in the alligator head X1215

Given these similarities, is likely that the alligator head specimen therefore provided a valuable insight into the development of the secondary palate in animals for otolaryngologists at the Ferens Institute.

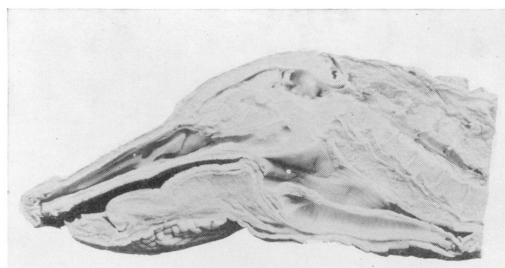
While the motives behind the creation of this particular object are starting to become clearer, one mystery still remains: who was the Negus collection named after? Who was it created by and how was their life story related to the object?

Enter Victor Negus and the larynx

Sir Victor Ewings Negus (1887-1974) was a surgeon and otolaryngologist who showed that the primary function of the larynx, commonly known as the voice box, was to prevent the entry of anything other than air into the lungs (Negus, 1940). It sits immediately above the windpipe and in front of the esophagus/gullet. The human voice is merely a by-product of the structure of this organ (Negus, 1940).

If we look back at the history of the study of the larynx, we find that Negus was in fact born at a rather fortuitous time. Prior to the late 19th century, when Negus was born, scientists, medical academics and doctors had already recognized several diseases that afflicted the larynx, but no one had devised a practical method of viewing or operating on the larynx in a living patient yet (Alberti, 1996). The invention of several reliable methods of laryngoscopy and local anesthetic to help counter the patient's gag reflex towards the end of the 19th century (Alberti, 1996) meant that by the time Negus graduated as a fully-fledged surgeon in the 1920s, there was already a well established, but still rather new speciality of Otolaryngology, offering the young surgeon much possibility of growth and discovery through research.

The naming of the Negus collection, along with its association with the Ferens Institute, where Negus conducted research from 1952-1962, suggests that Negus was likely the creator of the bisected alligator head specimen. At the very least, we can postulate that Negus requested the sectioning of the alligator head and its subsequent addition to his collection. In fact, Negus makes reference to a sectioned alligator head in his 1954 lecture, *Introduction to the Comparative Anatomy of the Nose and Paranasal Sinuses*, (Negus, 1954) and photographs of this specimen strongly suggest that this and the present day alligator head specimen are one and the same.



Photograph of bisected alligator head from Negus' lecture (Negus, 1954)

Negus' explanation during the lecture of his intention to use his collection to appreciate the evolutionary differences between the nasal and throat passages in humans and various species of

animals (Negus, 1954) links strongly with our earlier narrative of the alligator head as an object for teaching. Yet interestingly, Negus' descriptions here of the secondary palate and its convergent evolution in crocodylians, as we also described earlier, suggest an interest in nasal anatomy, with little if any reference to the larynx. But hold on, if Negus was celebrated for his work on the function of the larynx, why did his lecture focus on nasal structures? Like many other objects found in collections, the alligator head has much to say about the life of its former owner. In the postwar period, Negus' interests had shifted from the larynx to the nasal passages and sinuses, (Oxford Dictionary of National Biography, 2004) which is not all that surprising; as an otolaryngologist he would have studied the ear and nose in addition to the throat. In fact otolaryngology came together as a speciality after the 19th century discovery that all three organs were in fact interconnected through various passages in the head (Columbia University Department of Otolaryngology, n.d.).

Therefore, alligator head specimen, in addition to being a teaching object, also represents a seminal point in the life of a well-known surgeon, the point at which he began branching out into other sub-specialities. The fact that the specimen is an animal one also alludes to the work in comparative anatomy that Negus was well-known for, even during his early years studying the larynx.

Ferens Institute to Grant Museum

Not much is known about the object's history from the period following Negus' departure from the Ferens Institute to the day it was gifted to the Grant Museum following the closure of the Institute. But there are a few facts that we do know for sure. Firstly, the Ferens Institute's parent institution, the Middlesex Hospital, was closed and amalgamated into the University College Hospital in 1987, 13 years after Negus' death (Harte, North and Brewis, 2018). It was amidst this larger closure that the Ferens Institute was merged with the UCL Ear Institute. Secondly, comparative anatomy is still very much alive as a sub-discipline, (Cosans and Frampton, 2015) thus the new Ear Institute's decision to part with the Negus collection appears to be much more a political/practical one rather than a progressive one, seeing as the collection could still have value to modern day medical students studying otolaryngology. Another possibility could be that given the fact that most of Negus' observations and research were already recorded in his written works, some of which are still highly regarded as medical reference texts, (Oxford Dictionary of National Biography, 2004) it was felt that keeping the collection for teaching purposes was unnecessary. Whatever the case, with the passing of its creator, the bisected alligator head no longer held the same value as it did during the 1950s-1960s.

Damien Hirst and his “specimens”

British artist Damien Hirst graduated from Goldsmiths College, London in 1989 (Damienhirst.com, n.d.a). Goldsmiths is located south of the Thames, a significant distance from Fitzrovia, where the Negus collection was and is still located. Additionally, evidence that Damien Hirst actually visited the Grant Museum or the Ferens Institute, when the collection was still housed there, is anecdotal at best. Yet based on the method of sectioning (sagittal) and presentation in clear containers, Grant Museum Manager Jack Ashby (2017) argues that it is very likely that Hirst visited the museum prior to or during the creation of his controversial pieces, *Mother and Child (Divided)* and *The Physical Impossibility of Death in the Mind of Someone Living*. The former piece is an installation that comprises of two sagittally sectioned halves of a cow and a calf, presented in four glass-walled tanks filled with formaldehyde, (Damienhirst.com, n.d.c) while the latter comprises of a posed shark body also placed in a glass tank of formaldehyde (Damienhirst.com, n.d.b).

If Hirst was indeed inspired by the Negus collection, does that mean that the bisected alligator head is art? Ashby does not give a definitive answer and perhaps neither should we, given the fact that the discussion as to whether natural history objects can be art objects and the larger debate as to what can be considered art rages on without conclusion (Andina, 2017). What matters more, perhaps, for this chapter focused around specimen X1215, is Ashby’s (2017) suggestion that it is the *context* of the object that matters the most. Having lost, or at the very least diminished in, its original value as a teaching object within the context of a research institute, the bisected alligator head took on new meaning as a curio, a strange and unusual object, when it entered the Grant Museum. Museums depend partly on visitors and their donations to stay alive, hence it is essential that the objects on display arouse curiosity or catch one’s attention so as to attract a constant stream of visitors. Within this context, it makes sense that the specimen began to function less like a utilitarian object and more like an aesthetic one, finally culminating in it becoming a source of inspiration for Hirst.

What next?

So here we are at last, having traced the object’s life history, including its key interactions with two men and its changing purpose and value. At the end, maybe the tension between art and science within the alligator head specimen remains unresolved, but that simply describes how the object carries with it multiple meanings that change over time. We can only speculate what new meanings it may acquire in the future, but I am certain that my own contact with it will play a role in that, as will its interaction with every other person after me. But that is another story entirely...

1964 words.

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All photographs taken by the author unless otherwise stated

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