CANARIAS ARQUEOLÓGICA | 2021 | vol. 22 | 419-422 | ISSN: 1888-4059

A SHORT HISTORY OF THE PRESERVATION OF HUMAN CORPSES FROM FORMALDEHYDE TO PLASTINATION

Justo Hernández

C/ Doctor González Coviella, 11. 38004 La Laguna
justoh79@hotmail.com

HERNÁNDEZ, J. (2021). A short history of the preservation of human corpses. From formaldehyde to plastination. *Canarias Arqueológica*, 22: 419-422. http://doi.org/10.31939/canarq/2021.22.35

Abstract. Anatomists have tried to reconcile the contradictory requirements of authencity and didactical value in the teaching of medical knowledge. In this way, body models, shaped and sculpted to show distinct parts or features, have been produced since the early Renaissance, to serve as teaching aids in medical schools. But the models do not give students a feel for organic texture. Therefore, anatomists have combined a preference for corpses with the educational advantages of body models. This preference has been achieved with serveral chemical substances which have preserved the corpses to be studied, i. e. formaldehyde and other ones. But from 1977, when Van Hagen devised plastination, a moral problem has arisen: the exhibition of the plastinated dead human bodies which only stimulates the popular curiosity.

Keywords. Anatomy. Formaldehyde. Van Hagen. Plastination. Curiosity.

Anatomists have tried to reconcile the contradictory requirements of authencity and didactical value in the teaching of medical knowledge. In this way, body models, shaped and sculpted to show distinct parts or features, have been produced since the early Renaissance, to serve as teaching aids in medical schools. But the models do not give students a feel for organic texture. Therefore,

anatomists have combined a preference for authentic corpses with the educational advantages of body models. Vesalius, while demonstrating the intricacies of a corpse, opened our eyes, to the depths of physiological reality. But these dissections have an educational value only during the anatomy lecture. Then, the necessity to preserve corpses for more than several days, as well as anatomists' desire to demonstrate particular physiological features, stimulated the invention of better conservation methods. Frederick Ruysh developed unprecedented standards for the preservation and display of corpses. He injected the veins with a mixture of talc, tallow, cinnabar, lavender oil, and colored pigments. As a result, the body would last much longer, sometimes up to a full year, and dissection was less messy due to the replacement of blood by a preservative. But his technique produced a new kind of anatomical artifact, a work of art, rather than a scientific work object (VAN DIJCK, 2001).

After the Renaissance, medical education increasingly called for hands-on practice with anatomical bodies. Even as practical solutions to the shortage of real corpses led to the creation of "fake bodies" in the seventeenth and eighteenth centuries, these models were equally subjected to the norms of accuracy, durability, and technical flexibility. The development of wax models catered to these educational needs, and had some advantages over real corpses. The invention of new chemical techniques, particularly the application of formaldehyde in the nineteenth century, allowed anatomists to extend the preservation of cadavers, and enabled students to participate in actual dissections. In the early twentieth century, it was possible to see a transition from individual organs to erect, fully-fledged body models, and from parts in glass bottles to specimens treated with translucent chemicals, such as plastic. One of the most popular anatomical displays in Germany was a model called the "Transparent Man" (1911). It consisted of a real human skeleton stuffed with fake inner organs harvested from various wax models and protected by a thin layer of celluloid. In fact, the "Transparent Man" is less an anatomical object intended to popularize anatomical knowledge than an interesting token of Germany's history, tainted by National Socialist ideology (VAN DIJCK, 2001).

The European tradition in anatomical modeling is pivotal to understanding the popularity of the *Bodyworlds* exhibition as well as the controversy surrounding that exposition, more a show than a scientific display (ATKINSON, 2014). The technique of plastination is supposed to be both a continuation and an enhancement of the centuries old tradition. The plastination technique of Gunther Von Hagens

(1977) is based on a special chemical treatment that renders cadavers pliable while also preventing them from decaying, and keeps the "original" body intact while still accentuating specific physiological details. As opposed to the artificiality of wax or plastic anatomical models the "realness" of the plastinated object is promoted as an important asset. But what is "real"? The objects are manipulated with chemicals to such an extent that they can hardly be regarded as "real" bodies. The plastinated sculptures, however, are as much "imitations" of bodies as they are body models, and they sometimes look less "real" (more like plastic) than eighteenth-century wax figures ideology (VAN DIJCK, 2001).

The plastinated corpses not only demonstrate technological progress in medical science, but also entails a statement about the contemporary living body: human beings have become hybrid constructs, amalgams of organic and technological part-cyborgs. This manipulation is a clear dehumanization (postmodernity). If this exhibition of plastinated cadavers were simply a contemporary continuation of an age-old tradition in anatomical art to relate scientific soundness with artistic aesthetics, there would have been no public outcry.

The problem is that Von Hagens's sculptures are not *representations* of corpses, like Vesalius's drawings in his *Fabrica* (1543). Rather, the plastinates presented at *Bodyworlds* are *imitations* of *representations* (VAN DIJK, 2001). In Vesalius's time, the anatomy lesson was a public spectacle; it took until the late eighteenth century for cadaver dissection to disappear behind the closed doors of the hospital. But in both cases, there are clear medical teaching purposes. In the case of Van Hagens, he chooses unusual settings for his unsettling displays. Why? Because his exposition has entertainment purposes. There is a morbid curiosity which makes it impossible to teach anatomy in this way to students of medicine. Is it art? It is a postmodernist view of a posthumous art but it does not respect the moral canon. The human corpse has an implicit dignity because it has belonged to a person. These corpses should be used for teaching or scientific matters without losing the deep respect the corpse deserves.

CONCLUSION

The most outspoken objections came from moral theologians, who were offended by Von Hagens's desecration of human cadavers; they said they respected the scientific use of anatomical bodies, but in the plastinated figures the artistic motives were prominent (DI GIOVINE, 2009).

A second group of vocal resisters are medical scientists: anatomists and other medical specialists, who usually subject themselves to rigid protocols regulating the donation and treatment of corpses, strongly object to Von Hagens's violation of these ethical norms by using dead bodies for frivolous purposes (ATKINSON, 2014).

Directors of Europe's leading anatomical museums stated that plastinated bodies add no scientific or educational component to body models. Anatomical exhibitions should be at the service of science, neither of art nor of the circus (DI GIOVANE, 2008).

Plastination is an illustrative symptom of postmodern culture. Cadavers have become amalgams of flesh and technology, corpses that are endlessly pliable and forever manipulable, even after death. Body models are no longer either real or fake, because such categories have ceased to be distinguishable (VAN DIJK, 2001).

The artist-anatomist's plastinated cadavers seem exemplary of a culture that is inhabited by posthumans who regard their bodies as fashion accessories rather than the fundamental reasons of being. The culture of the posthuman continues the liberal humanist tradition in which the body is discarded as a mere container for cognition, and the religious tradition that holds the body as a temporary vessel for the soul. Von Hagens's technique attempts to detach bodies from their living significance, yet they are inescapably infused with historical, local and cultural meanings (VAN DIJCK, 2001).

BIBLIOGRAPHY

ATKINSON, T. (2014). 'Death's lifers': anatomy exhibitions and the trouble with looking. English, 63: 153-170.

DI GIOVINE, M. (2009). Review Essay: Body Worlds and Body Worlds 2: towards the creation of an instructive museum of man. Museum Anthropology Review, 3(1): 25-86.

VAN DIJCK, J. (2001). Bodyworlds: The art of plastinated cadavers. Configurations, 9: 99-126.