

HOW NOW, MODIFIED COW?
The Physical Modification of Cattle in Egyptian Art
and Its Welfare Implications

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STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

(Signed) _____

Date: 15/10/18

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ABSTRACT

Cattle were important agriculturally and religiously to the ancient Egyptians and as a result they are depicted frequently in art. In some of these representations, cattle are depicted with or undergoing a physical modification of their bodies. Many studies have arisen in the last fifty years about or including cattle, but they focus on how cattle served the Egyptians and not how their handling may have affected the animals themselves. This appears to result from the assumption that the Egyptians were deeply connected with the animal world. Recently, scholars have challenged this assumption through a re-examination of art and archaeological material. However, the modification of cattle has not received the same attention.

This thesis investigated a selection of the practices used by the Egyptians to modify their cattle, as represented in two-dimensional art scenes from elite tombs in the New Kingdom period (c.1550-1069 BC). Specifically, horn deformation, overgrown hooves, and physical adornment were examined. Due to the damage suffered in many tombs and the possibility that some of these modifications could be interpreted as artistic variation, the corpus was supplemented with scenes from New Kingdom temples, and also archaeological and textual evidence. The process, purpose and welfare implications of each modification was determined. To aid interpretation, ethnographic and veterinary studies were also considered. Evaluation of each modification practice revealed that, on balance, the Egyptians did not practice animal welfare with regard to their cattle.

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ABBREVIATIONS

<i>BACE</i>	The Bulletin of the Australian Centre for Egyptology
<i>BAR</i>	Breasted, J. H., Ancient Records of Egypt (New York, 1906-7).
<i>BMMA</i>	The Metropolitan Museum of Art Bulletin
<i>GM</i>	Göttinger Miszellen
<i>J. Anim. Sci.</i>	Journal of Animal Science
<i>JARCE</i>	Journal of the American Research Center in Egypt
<i>JEA</i>	Journal of Egyptian Archaeology
<i>JNES</i>	Journal of Near Eastern Studies
<i>LÄ</i>	Lexicon der Ägyptologie
<i>MDAIK</i>	Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo
<i>MMAF</i>	Mémoires publiés par les membres de la mission archéologique française au Caire
<i>Mol. Biol. Evol.</i>	Molecular Biology and Evolution
<i>PM</i>	Porter, B. & Moss, R. L. B., Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings
<i>Urk.</i>	Urkunden des ägyptischen Altertums
<i>SAK</i>	Studien zur Altägyptischen Kultur
<i>ZÄS</i>	Zeitschrift für ägyptische Sprache und Altertumskunde

GLOSSARY

Allogrooming: the grooming of another, such as licking, and nose and body rubbing.

Byre: a building where cattle are housed.

Claw: also known as the hoof; the claw comprises of all the bones, joints, ligaments, tendons, fat, cushions, connective tissue, blood vessels and nerves at the end of the digit. A cattle's foot is comprised of two claws. "Hoof" has been used to refer to two claws and "claw" when referring to the singular.

Dyskeratosis: abnormal keratin growth in the hoof.

Flank: the area of the animals' body between the ribs and the hips.

Gesso: gypsum powder or plaster mixed with glue.

Hock: the projecting middle joint, of elbow-like appearance, on the hind legs of cattle.

Lamellae: leaflets of hoof lining the inside of the hoof wall.

Laminae: leaflets of connective tissue, collagen fibres blood vessels, and nerves that fit between the lamellae.

Manger: an open container that contains feed for cattle.

Pedal bone: also known as the third phalangeal bone; it is the last bone in the claw and is weight bearing.

Poll: the top of an animal's head between the horns and/or ears.

Recumbent: an animal lying down.

Sepal: usually small parts of the outer flower that surrounds the petals.

Sexual dimorphism: distinct difference in size or appearance between the sexes of an animal in addition to the sexual organs themselves.

Solar horn: produces the keratin for the sole of the hoof.

Tongue rolling: in which the animal mimics eating grass, swinging the tongue from side to side outside of the mouth or rolling the tongue inside the mouth.

White line: joins the sole of the hoof to the inner wall.

Withers: the highest part of an animal's back, above its shoulders.

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