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The Birth of Athena: A Teratological Approach

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Abstract

The birth of Athena, the Patron Deity of Athens, praised for her wisdom and craft skills, as an adult from Zeus' head after a severe headache, is an abnormal and biologically impossible event that challenges traditional gender roles. This narrative takes to the extreme the impossibility of Nature to change the essentially feminine function of giving birth and the worldview previously embodied by the great Goddess or great Mother, the dominant figure during the Paleolithic and Neolithic Ages. There have been significant historical shifts in societal values and power dynamics since the Bronze Age. The onset of agriculture, animal domestication, and the discovery of metals allowed the manufacture of more powerful and effective weapons that led to the flourishing of male hegemony and patriarchy, establishing the prevalence of masculine over feminine values. This essay highlights the role of Nature Sciences and Medicine in understanding mythological creatures and narratives. Approaching the natural phenomena, the aforementioned disciplines can sometimes shed light on ancient narratives, since records of congenital malformations, which came down to us in worldwide artworks, often present images similar to those from the shelves of Anatomical Museums and Pathological Anatomy books. This essay discusses this possible relationship in the case of Athena's birth, presenting a olivine stone head of Zeus from the Archaeological Museum, D. Diogo de Sousa in Braga (Portugal), which presents the crack from which Athena was born.

Keywords: *Congenital Malformations; Teratology, Ancient Mythology; Birth of Athena*

INTRODUCTION

Teratology, from the Greek *terat, téras* (sign sent by the gods) and *logos* (speech, discourse), being the study of malformations in developing organisms, recorded in worldwide artistic expressions, can be traced since immemorial times, indicating that monstrous births of human and animal creatures have fascinated the human mind long before the appearance of writing (Warkany, 1977, pp. 5-17). The term "Teratology" was coined by the French zoologist Isidore Geoffroy Saint-Hilaire (1805-1861) (Saint-Hilaire, 1830, pp. 326-34). In the Assyrian-Babylonian culture, congenital malformations were part of divination practices which predicted good or, more frequently, bad omens. This practice came into Greece during the Archaic Period (Jastrow, 1914). The midwives and the priests examined the miscarriages and newborns with congenital malformations attentively, bringing out their interpretations and prophecies. Many have inspired myths, poetry and artworks (Schatz, 1901, p. 52). This essay will discuss possible teratological approaches to Zeus' odd male parturition, of which a split stone head of Zeus from the Archaeological Museum D. Diogo de Sousa in Braga is a rare testimony.

MATERIALS AND METHODS

This essay focuses on the primary sources related to the specific aspect of Athena's birth. It thoroughly examines the literature on congenital malformations that may have inspired this narrative, complemented by critical iconographical sources, aiming to assess the plausibility of a connexion of this myth with teratological findings. The essay adopts a scholarly approach, recognizing the value of written records as a source of narratives of abnormal births, as stated by the physician Charles John Samuel Thomson (1862-1943):

> "It is evident (...) from later records that some of the traditionary monsters owed their origin to a basis of fact and that actual abnormal or monstrous births may have assisted the formation of many of the old stories which persisted in early times." (Thomson, 1930, p. 24).

The rising of patriarchy and Athena's birth

Since the Upper Paleolithic, more than 20,000 years ago, there have been statues of fertility goddesses and wall paintings alluding to women's reproductive functions. The most emblematic is the limestone relief of a pregnant goddess of the so-called "Venus of Laussel" from Dordogne, in southern France, from c. 25,000 to 20,000 BC., emphasizing fertility and abundance, is a powerful symbol of the feminine dominance in prehistoric cultures (Garcia, 2005, p. 79). Female representation became even more frequent throughout Europe and the Near East at the

beginning of the Neolithic period (between 10,000 BC and 3,000 BC). For the earlier agricultural populations, fertility and agricultural production were crucial (Gimbutas, 2001). Depictions of Mother Goddesses giving birth are frequent. A corpulent female statue of a goddess sitting in a birthing chair, decorated with arms with feline figures, from Çatal Yöyük (one of the earliest Neolithic settlements, currently in Turkey), emphasizing the act of giving birth, reflects the importance of women's reproductive roles in these early societies (Inal, 1983).

With the rise of male warrior dominance during the Bronze Age, masculine and warrior symbolic values gradually took over the feminine worldview. However, remnants of beliefs and cults associated with the previous Great Goddess, the universal Mother, continued to symbolize the enduring and crucial importance of the female function of conceiving and giving birth, a role that men sought to appropriate. This historical transition carried a significant weight, as it reshaped the societal norms and power dynamics. In this context, the myth of Athena's birth is particularly telling of patriarchy in Greece, as Nancy Demand pointed out:

> "While mortal men never figured out an effective means of male surrogate parentage, they attributed it to their gods, and the metaphor of male pregnancy was an especially productive one in Greek thought." (Demand, 1994, p. 134).

Two main myth variants refer to Athena, Zeus' daughter, either as having a mother, Metis, Zeus' first wife who was pregnant when he swallowed her, or just being produced from his father's head. In the episode recounted by Hesiod (flourished 700 BC), both versions appear, giving the impression that the myth was still under construction:

> "Now Zeus, king of the gods, first took to wife
>
> Metis, wisest of all, of gods and men.
>
> But when she was about to bear the child
>
> Grey-eyed Athene, he deceived her mind
>
> With clever words and guile, and thrust her down
>
> Into his **belly**, as he was advised
>
> By Earth and the starry Heaven. In that way
>
> They said, no other god than Zeus would get
>
> The royal power over all the gods
>
> Who live forever. For her fate would be
>
> To bear outstanding children, greatly wise,
>
> First, a girl, a Trinogeneia, the grey-eyed,
>
> Equal in spirit and intelligence
>
> To Zeus her father; then she would bear a son
>
> With haughty heart, a king of gods and men.
>
> (…)
>
> But Zeus himself produced from his **head**,
>
> Grey-eyed Athene, fearsome queen who brings
>
> The same noise of war, tireless, leads the host,
>
> She who loves shouts and battling and fights."
>
> (Hesiod, *Th.,* lines 887-912 (...) 929-31, 1973, pp. 52-53).

Corroborating the first hypothesis, Apollodorus (died after 120 BC) recounts that Metis turned into many forms to escape Zeus, allowing a remotely possible way for Zeus to swallow a pregnant woman:

> "Zeus had intercourse with Metis, who turned into many shapes in order to avoid his embraces. When she was with child, Zeus, taking time by the forelock, swallowed her, because Earth said that, after giving birth to the maiden who was then in her womb, Metis would bear a son who should be the lord of heaven. From fear of that Zeus swallowed her. And when the time came for the birth to take place, Prometheus or, as others say, Hephaestus, smote the head of Zeus with an axe, and Athena, fully armed, leaped up from the top of his head at the river Triton". (Apollodorus, 1921, Book I-6, pp. 23-25).

The Homeric Hymns (8th-6th century BC) chant Athena produced by Zeus:

> "To Athena
>
> I begin to sing of Pallas Athena, the glorious goddess, bright-eyed, inventive, unbending of heart, pure virgin, saviour of cities, courageous, Tritogeneia.
>
> Wise Zeus himself bare her from his awful head, arrayed in warlike arms of flashing gold, and awe seized all the gods as they gazed. But Athena sprang quickly from the immortal head and stood before Zeus who holds the aegis, shaking a sharp spear: great Olympus began to reel horribly at the might of the bright-eyed goddess, and earth round about cried fearfully, and the sea was moved and tossed with dark waves, while foam burst forth suddenly: the bright Son of Hyperion stopped his swift-footed horses a long while, until the maiden Pallas Athena had stripped the heavenly armour from her immortal shoulders. And wise Zeus was glad.
>
> And so hail to you, daughter of Zeus who holds the aegis! Now I will remember you and another song as well." (Anonymous, 1914, pp. 453-455).

In the tragedy *The Eumenides* by Aeschylus (c. 525/524 - c. 456/455 BC), Athena states having no mother, standing up for patriarchal values:

> "For mother had I none that gave me birth, and in all things, save wedlock, I am for the male with all my soul and I am entirely on the father's side" (Aeschylus, *Eu*., lines 735-736, 1926, pp. 343-345).

Pindar (c. 518- c. 438 BC) adds the assistance of the god Hephaestus to deliver Athena, opening his skull with an axe:

> "(...) by the skills of Hephaestus
>
> with the stoke of a bronze forged axe,
>
> Athena sprang forth on the top of her father's head
>
> and shouted a prodigious battle cry,
>
> and Heaven shuddered at her, and Mother Earth."
>
> (Pindar, *Ol.* 7, lines 35-39,1997, p. 125)

Teratological Insights

The German Gynaecologist Christian Friedrich Schatz (1841-1920) proposed a series of possible explanations for mythological figures from Greek mythology based on congenital malformations (Schatz, 1901). However, it was a later interpretation that added a new dimension to our understanding. According to the Polish Orientalist (1861-1921) Moris Jastrow, who welcomed Schatz proposals, mythological figures and narratives could be "fanciful elaborations of the impression made by actual occurring abnormal phenomena" since:

> "The direct association of the belief in fabulous creatures with birth-omens in Babylonia and Assyria lends a presumption in favor of the same association among the Greeks." (Jastrow, 1914, p. 66).

This intriguing perspective suggests a teratological phenomenon could lead to imaginary and embellished constructions. The Epignathus (a malformation in which a mass protrudes from an infant's mouth) would stand behind the swallowing of Metis who stayed in Zeus' head and was born by opening his skull (Schatz, 1901, p. 32, fig. 43) (Fig. 1). The Epignatus can appear as a teratoma (a congenital , a milder birth defect) or as a Craniopagus Parasiticus in which a parasite underdeveloped foetus attaches to the pharynx of the standard developed twin (Schwalbe, 1906, p. 339).

Schatz also figured out a pair of Craniopagus-Conjoined Twins as the most likely explanation for the birth of Athena. Two human newborns at the same stage of development, linked and fused by the cranium, both armed, are shaped in a mirror image (Schatz, 1901, pp. 33-35, fig. 45). Athena appears above Zeus' head (Schatz, 1901, fig. 44) (Fig. 2). Schatz tried to adapt the myth to the malformation. He hypothesized that the Athenians would not appreciate Athena's breech position (feet first). Therefore, she was represented in the vertex position (head first). He also put forward that the twins that could have inspired this myth could suffer from ichthyosis (a skin disorder characterized by scaly, rough and red skin), which could have been the basis of the creation of Athena's armour. Otherwise, Schatz hipothethised that, most likely, Athena's array would be an absolute product of fantasy (Schatz, 1901, pp. 33-35 fig. 43) (Fig. 1a).

Fig. 1. Epignathus. Schatz, 1901, p. 32, fig. 43.

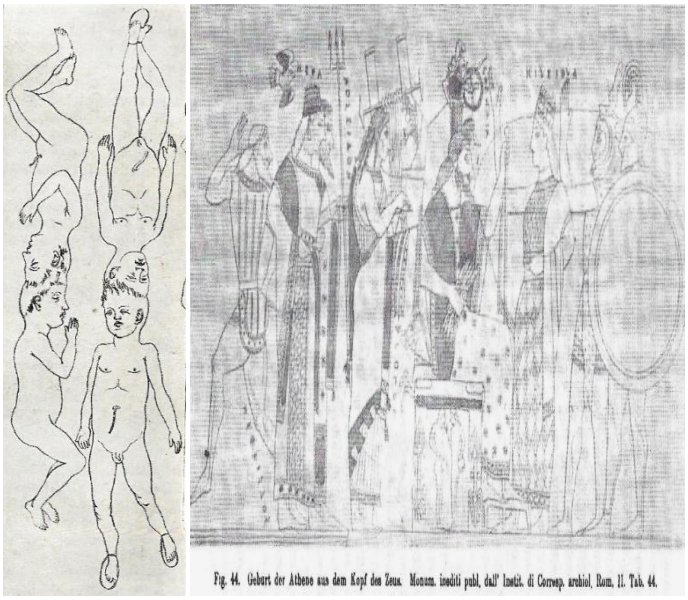

Fig. 2. Conjoined craniopagus twins in Schatz, 1901, fig. 43, p. 35. Fig. 2a- The birth of Athene in Schatz, 1901, fig. 44, p. 36.

Craniopagus, a rare abnormality, involves the fusion of conjoined twins at the cranium. This rare condition presents numerous variations, each classified based on the extent and degree of skull and brain fusion (O'Connell, 1976, pp. 1-22). In a case reported in 2016, the deep brain tissue connection of craniopagus twins was successfully separated, marking the significant medical achievements of our time (CBC News, 2016).

Schatz reproduces an image of Athena's body until the knees, fully dressed and armoured, getting out, juxtaposed to Zeus' head, who looks calm, expressing no pain or distress. As the German archaeologist Eduard Gerhard (1795-1867) pointed out, the birth of Athena was a favourite theme for the vase painters of the archaic period and was mainly found in amphorae (Gerhart, 1840, p. 3). A Tyrrhenian Etruscan amphora of black figures (produced between 565 and 550 BC) depicts Athena jumping out of Zeus' head, surrounded by Hermes, Apollo, Ilythia and Ares. A small winged Metis under Zeus' seat (Gerhard, 1840, p. 5; 203, Tafel I) (Fig. 3) still echoes as Athena's primary mother.

Fig. 3. *Birth of Athena. Gerhart 1840, Tafel I. Münchener Digitaler Bibliothek.*

A Greek split stone head of Zeus from the fifth/fourth century BC is a rare piece displaying the crack from which Athena was born by Hermes or "the skills of Haephestus", according to Pindar (Fig. 4).

Fig. 4. Greek Split Stone Head of Zeus. Olivine stone. 5th – 4th century BC. Dimensions: H. 8 cm. Inv. 2018.0562. Credit: Archaeological Museum D. Diogo de Sousa (Braga, Portugal). Bühler-Brockhaus Donation. ©MADDS/Manuel Santos.

This statue embodies the Greek pursuit of beauty and balance of a culture that traditionally frowned upon disability. Among the Olympian gods, deformity was not welcomed, making Hephaestus, the son of Zeus and Hera, a unique figure. The god of metallurgy and fire, and Zeus' "obstetrical assistant", was rejected by his mother and referred to as a cripple-foot god in Homer's *Iliad* (8th or 7 century BC) (Homer, *Il.,* 18, lines 361-2, 1987, p. 318). Hephaestus' story is fascinating, being recounted by the god himself when intervening in a dispute between his mother, the goddess Hera, and his father, Zeus:

> "Once before when I was eager to defend you, he caught me by the foot and threw me from the threshold of the gods: all day long I dropped, and with the setting of the sun I fell to earth in Lemnos, and there was little breath left in me. There the Sintians took care of me after my fall." (Homer, *Il.*, I, lines 589-603, 1987, p. 64).

The *Illiad* provides another explanation for Hephaestus' lameness. His mother Hera would have thrown him from Olympus. Therefore, his lameness resulted from a congenital disability which she tried to hide, but then Thetis and Eurynome came to his rescue:

> "She saved me. When I was in pain after the great fall brought on me by my own shameless mother, who wanted to hide me away from because I was crippled. I would have suffered agonies at heart then if Thetis had not taken me in and welcomed me to her bosom, Thethis and Eurynome, the daughter of circling stream of Ocean." (Homer, *Il.*,18, lines 387-395, 1987, p. 318).

Hephaestus, "the only major deity who was disabled" (Garland, 2010, p. 59), was depicted in what seems bilateral clubfoot in vases from the Archaic period, such as black-figure hydria dated from c. 530 BC, *The return of Hephaestus* (KH 7), currently housed in the Art History Museum of Vienna. Hephaestus' lameness has been recently overviewed from a genetic point of view. In ancient literature, his sons were also reported to suffer from deformed feet, suggesting clubfoot as the most likely diagnostic hypothesis: "his disability appears as a congenital bilateral Talipes Equinovarus, i.e. clubfoot." (Bazopoulu-Kyrkanidou, 1997, pp. 144-55). Hephaestus is the less depicted god among the Olympians (Garland, 2010, pp. 58-62). The incidence of clubfoot is 1 in 800- 1,000 births and is more common in males (Roberts and Manchester, 2010, p. 58). This condition is more prevalent than the very rare disabilities previously mentioned.

DISCUSSION

Taking Jastrow's point of view, according to which a teratological phenomenon could give rise to imaginary and embellished constructions, Schatz's insights have some place in explaining a narrative that lacks any explanation from a biological point of view. Epignatus' suggestion to explain the swallowing of Metis and her stay in Zeus' head ought to be taken into account. Two heads fused at the top (a pair of Cranipagus) may also suggest the birth of Athena from the head of Zeus. The adaptation of the myth in the iconographic representations, in which Athena appears juxtaposed to the head of Zeus, jumping from it or already outside, is unconvincing.

While in Epignatus and related variants, the incomplete parasitic twin occupies the anterior part of the face (and is a life-threatening condition) (Schwalbe, 1906, pp. 317-323), in another variant, the Craniopagus Parasiticus, the incomplete fetus appears attached to the skull of the full-developed twin. These conditions are infrequent. Schwalbe recorded the reported cases until his time (Schwalbe, 1906,

pp. 339-340, fig. 358, 359, 360) (Fig. 5). In this variation, a head protruding from another head would be a better source for the mythological narratives of head births. However, a different origin is likely at the basis of the Greek iconographic representations of the birth of Athena.

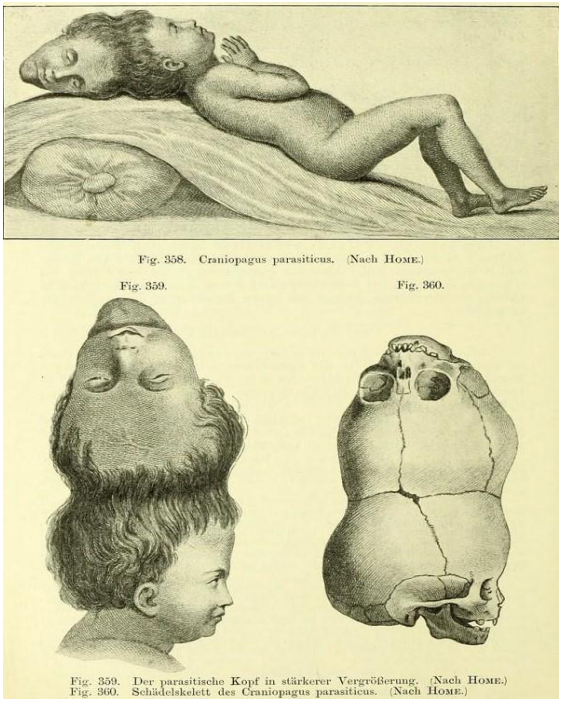

Fig. 5. Craniopagus Parasiticus in Schwalbe, 1906, p. 340, fig. 58, 59, 60.

Eastern sources could provide further insights into the origin of this myth. Written in Akkadian, which comprises Semitic Babylonian and Assyrian dialects from different literary traditions, myths came down to us in fragmented clay tablets, written in an ambiguous and exceptionally complicated writing system (Dalley, 1998, pp. XV-XVII). Hesiod's writings, often complex and filled with obscurities, refer to Aedos' narratives without reproducing them. We must rely on assumptions or uncertain recoveries of allusions to myths and narratives from the civilizations of the Near East prior to the Greek world (Duchemin, 1974, p. 60). The oral transmission implies a selection, adaptation and rewriting of the borrowed material, and what Walter Burkert called "a creative transformation" by the Greeks (Burkert, 1992, p. 7). As he noted, some motives are similar to those of the Orient, such as the swallowing of Metis and the birth of a male's head, which appear in the myth of Kumarbi (Burkert, 1993, p. 284). A Hittite and Hurrian literary corpus, the Kumarbi Cycle, discovered in the Hittite archives, has brought up forerunners of Hesiod's *Theogony*, namely the struggles of generations of gods. According to Gary Beckmann:

> "these divine characters and mythological topoi were part of an East Mediterranean cultural *koine* rather than transmitted to the Hellenes through Anatolia." (Beckmann, 2011, pp. 25-33).

In *The Song of Emergence*, the Primeval Deities are invoked in the Poemium, where Kumarbi appears as the Father of the Gods. Along with Alalu and Anu, they are the first generation of the Kings of Heaven. During Kumarbi's complex and obscure fight with the other gods and later generations, abnormal pregnancies and parturitions by males and from the head occur:

> "Do not rejoice over your belly, for I have placed a burden in your belly. First, I have impregnated you with the mighty Storm-god. Second, I have impregnated you with the River Tigris, not to be borne. Third, I have impregnated you with the mighty Tašmišu. I have placed three(!) frightful deities as a burden in your belly, and you will end up banging your head against the rocks of Mt. Tašša!" (Beckmann, 2011, pp. 25-33).

Like in Hesiod's *Theogony*, the belly and head appeared as gestation places, which led Beckmann to state that this narrative conveys "unmistakenly, the template for Athena's birth from the head of Zeus":

> "If I emerge by the 'good place,' a woman will [smite(?)] me on my head. Thereupon (someone) split Kumarbi's skull like a stone. Then KA.ZAL, the Heroic King, came up out of his skull." (Beckmann, 2011, pp. 25-33).

Moreover, medical attention is referred to repair the split skull:

> "They mended his skull [with …] like a garment. The heroic Storm-god emerged from [the 'good] place.' The Birth/Fate-deities (*Gulšeš*)9 [arrived(?)].They [mended] his 'good place' like a garment."

The term 'obstetrics' may not be the most accurate in the context of skull wounds since trepanation, which emerged in the Middle East and Central Europe around 5,000 BC, was a related and practical solution. Trepanated skulls, with their high healing rate, indicate the early use of medicinal herbs with antimicrobial and healing properties by the Neolithic populations (Künzl, 2002, p. 7).

Within this somewhat elaborated medical context, the plausibility of knowledge of congenital malformations is even more convincing. The appearance of the Epignatus in an omen translated by Jastrow supports this reading:

> "If it is a double foetus, one well formed and the second issuing from the mouth of the first, the king will be killed and his array will [revolt?], his oil plantation and his dwelling will be destroyed." (Jastrow, 1914, p. 15).

The mystery deepens regarding the iconographical sources for Athena's birth. While potentially diverse, the sources do not appear to be representations based on malformed infants. Double female marble figures from the Cycladic Islands have been regarded as possible sources for the iconography of Athena's birth. They portray the figures of a mother and a daughter, conveying the concept of matrilinear lineage. They were found in tombs and have been interpreted as votive offerings. These figures, intriguingly similar to those representing the birth of Athena, are "still difficult to

understand", according to Gabrielle Meixner (Meixner, 1994, pp. 44-45, fig. 1a-c; 94, fig. 25; p. 93). One of these figures, housed in the Metropolitan Museum of Art of New York, falls into a category of double figurines from the Early Cycladic II period. It outlines a stylised woman and a more minor one standing on her head, which does not correspond to any congenital disability:

> "An incised line on both figures delineates the head from the top of a short thick neck. The torsos are broad and flat with angular shoulders that slope downward. Two vertical incisions on each figure delineate the upper arms from a flat chest, and three horizontal incisions define the forearms (no fingers indicated), folded left over right above a short belly. There is no suggestion of a pubic triangle, breasts or any other anatomical details that would describe the sex of either figure. Instead a horizontal incision marks the bottom of the belly and the beginning of the broad thighs. On the smaller figure the legs are delineated by a vertical groove that continues to the ankles. On the larger figure they are separated by a cleft and then join again at the ankles. The arched feet of both figures are slightly angled outward and short vertical incisions mark the toes on each. Smooth transitions between concave and convex areas and shallow incisions on the back describe the backward tilt of the head, the slight rise of the buttocks, a bend at the knees and the beginning of the ankles. No spine is indicated on either figure" (Marble double female figure, MET) (Fig. 6).

Fig. 6. Marble double female figure. Cycladic Islands. Early Cycladic II Ca. 2700-2500. Marble. Stone Sculpture. Dimensions: H. 19,5 cm; W. 5,4 cm. Acession Number L.202.38.32.

CONCLUSION

After a thorough review of literary and iconographic sources, I have concluded that the Greek narrative is not based on direct observation of any significant and rare congenital malformation, with Hephaestus' clubfoot being an exception. It is more plausible that the Greeks drew from the rich literary sources of the Assyrio-Babylonian and Hittite culture when devising the birth of Athena. Evidence of an awareness of congenital malformations for divination practices in these cultures is supported by the use of this knowledge to shape their myths. The double Cycladic figure, a pivotal image, played a significant role in transforming the original feminine trace. This transformation into the warrior and masculine role, adapted to the dominance of patriarchal values, is a key aspect of Greek that we must be aware of. It signifies the desire to replace a matrilineal transmission image with a patrilineal one, serving as the ultimate purpose of this myth.

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