

[Click to verify](#)





























Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation. Warranties are given. The license may not give you all the permissions necessary for your intended use. For example, other rights such as publicity, privacy or moral rights may limit how you use the material. Symbolic serpent with its tail in its mouth For other uses, see Ouroboros (disambiguation). An ouroboros in a 1478 drawing in an alchemical tract[1] The ouroboros or uroboros (/ˈɔʊrəˈbɒrɪs/;[2] /ˈɔʊrəˈbɒrɪs/;[3]) is an ancient symbol depicting a snake or dragon[4] eating its own tail. The ouroboros entered Western tradition via ancient Egyptian iconography and the Greek magical tradition. It was adopted as a symbol in Gnosticism and Hermeticism and, most notably, in alchemy. Some snakes, such as rat snakes, have been known to consume themselves.[5] The term derives from Ancient Greek οὐροβόρος,[6] [from οὐρά ourá 'tail' plus -βορός -boros 'eating'.]7][8] The ouroboros is often interpreted as a symbol for eternal cyclic renewal or a cycle of life, death and rebirth; the snake's skin-sloughing symbolises the transmigration of souls. The snake biting its own tail is a fertility symbol in some religions: the tail is a phallic symbol and the mouth is a yonic or womb-like symbol.[9] First known representation of the ouroboros, on one of the shrines enclosing the sarcophagus of Tutankhamun One of the earliest known ouroboros motifs is found in the Enigmatic Book of the Netherworld, an ancient Egyptian funerary text in KV62, the tomb of Tutankhamun, in the 14th century BCE. The text concerns the actions of Ra and his union with Osiris in the underworld. The ouroboros is depicted twice on the figure: holding their tails in their mouths, one encircling the head and upper chest, the other surrounding the feet of a large figure, which may represent the unified Ra-Osiris (Osiris born again as Ra). Both serpents are manifestations of the deity Mehen, who in other funerary texts protects Ra in his underworld journey. The whole divine figure represents the beginning and the end of time.[10] The ouroboros appears elsewhere in Egyptian sources, where, like many Egyptian serpent deities, it represents the formless disorder that surrounds the orderly world and is symbol in that world's periodic renewal.[11] The symbol persisted from Egyptian into Roman times when it frequently appeared on magical talismans, sometimes in combination with other magical elements.[12] The 4th-century CE Latin commentator Servius was aware of the Egyptian use of the symbol, noting that the image of a snake biting its tail represents the cyclical nature of the year.[13] Early alchemical ouroboros illustration with the words εὐ τὸ νῶν ("The All is One") from the work of Cleopatra the Alchemist in MS Marciana gr. 299. (10th century) In Gnosticism, a serpent biting its tail symbolised eternity and the soul of the world.[14] The Gnostic Pistis Sophia (c. 400 CE) describes the ouroboros as a twelve-part dragon surrounding the world with its tail in its mouth.[15] The famous ouroboros drawing from the early alchemical text, The Chrysopoeia of Cleopatra (Κλεοπάτρα χρυσοποιήτα), probably originally dating to the 3rd century Alexandria, but first known in a 10th-century copy, encloses the words hen to pan (ἓν τὸ πᾶν), "the all is one". Its black and white halves may perhaps represent a Gnostic duality of existence, analogous to the Taoist yin and yang symbol.[16] The chrysopoeia ouroboros of Cleopatra the Alchemist is one of the oldest images of the ouroboros to be linked with the legendary opus of the alchemists, the philosopher's stone.[citation needed] A 15th-century alchemical manuscript, The Aurora Consurgens, features the ouroboros, where it is used among symbols of the sun, moon, and mercury.[17] A highly stylised ouroboros from The Book of Kells, an illuminated Gospel Book (c. 800 CE) Engraving of a wyvern-type ouroboros by Lucas Jennis, in the 1623 alchemical tract De Lapide Philosophico. The figure serves as a symbol for mercury.[18] An engraving of a woman holding an ouroboros in Michael Rant's 1734 treatise on vampires Transcyrvania Thaler of Gabriel Bethlen showing his portrait and coat of arms including an ouroboros in the center of the shield (1621) Seal of the Theosophical Society, founded 1875 Flag of the short-lived Italian Regency of Carnaro at Fiume, bearing the snake Ouroborus In Norse mythology, the ouroboros appears as the serpent Jörmungandr, one of the three children of Loki and Angrboda, which grew so large that it could encircle the world and grasp its tail in its teeth. In the legends of Ragnar Lodbrok, such as Ragnarssona þáttr, the Swedish king Herrold gives a similar Lindworm a gift to his daughter Þora. Town-Hart after which the girl's lower teeth bites itself, she takes the tail. The serpent is slain by Ragnar Lodbrok who marries Þora. Ragnar later has a son with another woman Kráka and this son is born with the image of a white snake and an eye. This snake encircled the iris and bit itself in the tail, and the son was named Sigurd Snake-in-the-Eye.[19] It is a common belief among indigenous people of the tropical lowlands in South America that waters at the edge of the world-disc are encircled by a snake, often an anaconda, biting its own tail.[20] The ouroboros has certain features in common with the Biblical Leviathan. According to the Zohar, the Leviathan is a singular creature with no mate, "its tail is placed in its mouth", while Rashi on Baba Batra 74b describes it as "twisting around and encompassing the entire world". The identification appears to go back as far as the poems of Kalir in the 6th–7th centuries. [citation needed] In the Aitareya Brahmana, a Vedic text of the early 1st millennium BCE, the nature of the Vedic rituals is compared to "a snake biting its own tail".[21] Ouroboros symbolism has been used to describe the Kundalini.[22] According to the medieval Yoga-kundalini Upanishad: "The divine power, Kundalini, shines like the stem of a young lotus; like a snake, coiled round upon herself she holds her tail in her mouth and lies resting half asleep as the base of the body" (1.82).[23] Storr (2004) also refers to the ouroboros image in reference to the "cycle of samsara".[24] Swiss psychiatrist Carl Jung saw the ouroboros as an archetype and the basic mandala of alchemy. Jung also defined the relationship of the ouroboros to alchemy: Carl Jung, Collected Works, Vol. 14 para. 513. The alchemists, who in their own way knew more about the nature of the individuation process than we moderns do, expressed this paradox through the symbol of the Ouroboros, the snake that eats its own tail. The Ouroboros has been said to have a meaning of infinity or wholeness. In the age-old image of the Ouroboros lies the thought of devouring oneself and turning oneself into a circulatory process, for it was clear to the more astute alchemists that the prima materia of the art was man himself. The Ouroboros is a dramatic symbol for the integration and assimilation of the opposite, i.e. of the shadow. The significant damage to the city. Despite the criticism, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Games (2013-2015) the ouroboros plays an important part throughout the series. In Season 3 (2014) Eryn Reebooted, during the Nimrod crisis, Pythor, from man's unconscious. The Jungian psychologist Erik Neumann writes of it as a representation of the pre-ego "dawn state", depicting the undifferentiated infancy experience of both humankind and the individual child.[25] The ouroboros, Kekulé's inspiration for the structure of benzene Kekulé's proposal for the structure of benzene (1872) The German organic chemist August Kekulé described the eureka moment when he realised the structure of benzene, after he saw a vision of Ouroboros:[26] I was sitting, writing at my text-book; but the work did not progress; my thoughts were elsewhere. I turned my chair to the fire and dozed. About the atoms were gambling before my eyes. This time the smaller groups kept modestly in the background. My mental eye, rendered more acute by the repeated visions of the kind, could now distinguish larger structures of manifold conformation: long rows, sometimes more closely fitted together; all twining and twisting in snake-like motion. But look! What was that? One of the snakes had seized hold of its own tail, and the form whirled mockingly before my eyes. As it by a flash of lightning I awoke; and this time also I spent the rest of the night in working out the consequences of the hypothesis. Martin Rees used the ouroboros to illustrate the various scales of the universe, ranging from 10–20 cm (subatomic) at the tail, up to 1025 cm (supragalactic) at the head.[27] Ross stressed "the intimate links between the microworld and the cosmos, symbolised by the ouraborus", as tail and head meet to complete the circle.[28] W. Ross Ashby applied ideas from biology to his own work as a psychiatrist in "Design for a Brain" (1952): that living things maintain essential variables of the body within critical limits with the brain as a regulator of the necessary feedback loops. Parmar contextualises his practices as an artist in applying the cybernetic Ouroboros principle to musical improvisation.[29] Hence the snake eating its tail is an accepted image or metaphor in the autopoietic calculus for self-reference.[30] or self-indication, the logical use of a notation of self-reference in the theory of computation, the symbol of the Ouroboros is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ... which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued impurities".[36] The genus of the armadillo girded lizard, Ouroborus cataphractus, takes its name from the animal's defensive posture: curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Una pescadilla de rabo na boca "tail-in-mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende, featuring two snakes, one black and one white, biting the other's tail, this symbol represents the power of ALLYNN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a camp-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus" [31][32] The calculus derives from



pan (ἑν ἑνὶ νόῳ), "the all is one"). Its black and white halves may perhaps represent a Gnostic duality of opposites, analogous to the Taoist yin and yang symbol.[16] The chrysopeia ouroboros of Cleopatra's Alchemists is one of the oldest images of the ouroboros to be linked with the legendary opus of the alchemists, the philosopher's stone.[citation needed] A 15th-century alchemical manuscript, The Aurora Consurgens, features the ouroboros, where it is used as a symbol of the sun, moon and mercury.[17] A highly stylised ouroboros from The Book of Kells, an illuminated Gospel Book (c. 800 CE) Engraving of a wyvern-tyt ouroboros by Lucas Jennis, in 1623 alchemical tract De Lapide Philosophico. The figure serves as a symbol for mercury.[18] An engraving of a woman holding an ouroboros in Michael Rauff's 1734 treatise on vampires Transylvanian Thaler of Gabriel Bethlen showing his portrait and coat of arms including an ouroboros in the center of the shield (1621) Seal of the Theosophical Society, founded 1875 Flag of the short-lived Italian Regency of Carnaro at Fiume, bearing the snake Ouroborus In Norse mythology, the ouroboros appears as the serpent Jörmungandr, one of the three children of Loki and Angrboda, which grew so large that it could encircle the world and grasp its tail in its teeth. In the legends of Ragnar Lodbrok, such as Ragnarssona þátrr, the Geatish king Herraud gives a small lindworm as a gift to his daughter Þóra Town-Hart after which it grows into a large serpent which encircles the girl's bower and bites itself in the tail. The serpent is slain by Ragnar Lodbrok who marries Þóra. Ragnar later has a son with another woman named Kráka and this son is born with the image of a white snake in one eye. This snake encircled the iris and bit itself in the tail, and the son was named Sigurd Snake-in-the-Eye.[19] It is a common belief among indigenous people of the tropical lowlands of South America that waters at the edge of the world-disc are encircled by a snake, often an anaconda, biting its own tail.[20] The ouroboros has certain features in common with the Biblical Leviathan. According to the Zohar, the Leviathan is a singular creature with no mate, "its tail is placed in its mouth", while Rashi on Baba Batra 74b describes it as "twisting around and encompassing the entire world". The identification appears to go back as far as the poems of Kalir in the 6th–7th centuries. [citation needed] In the Altareya Brahmana, a Vedic text of the early 1st millennium BCE, the nature of the Vedic rituals is compared to "a snake biting its own tail." [21] Ouroboros symbolism has been used to describe the Kundalini.[22] According to the medieval Yoga-kundalini Upanishad: "The divine power, Kundalini, shines like the stem of a young lotus; like a snake, coiled round upon herself she holds her tail in her mouth and lies resting half asleep as the base of the body" (1.82).[23] Storr (2004) also refers to the ouroboros image in reference to the "cycle of samsara" [24] Swiss psychiatrist Carl Jung saw the ouroboros as an archetype and the basic mandala of alchemy. Jung also defined the relationship of the ouroboros to alchemy: Carl Jung, Collected Works, Vol. 14 para. 513. The alchemists, who in their own way knew more about the nature of the individuation process than we moderns do, expressed this paradox through the symbol of the Ouroboros, the snake that eats its own tail. The Ouroboros has been said to have a meaning of infinity or wholeness. In the age-old image of the Ouroboros lies the thought of devouring oneself and turning oneself into a circulatory process, for it was clear to the more astute alchemists that the prima materia of the art was man himself. The Ouroboros is a dramatic symbol for the integration and assimilation of the opposite, i.e. of the shadow. This 'feedback' process is at the same time a symbol of immortality since it is said of the Ouroboros that he slays himself and brings himself to life, fertilizes himself, and gives birth to himself. He symbolizes the One, who proceeds from the clash of opposites, and he, therefore, constitutes the secret of the prima materia which ... unquestionably stems from man's unconscious. The Jungian psychologist Erich Neumann writes of it as a representation of the pre-ego "dawn state", depicting the undifferentiated infancy experience of both humankind and the individual child.[25] The ouroboros, Kekulé's inspiration for the structure of benzene Kekulé's proposal for the structure of benzene (1872) The German organic chemist August Kekulé described the eureka moment when he realised the structure of benzene, after he saw a vision of Ouroboros:[26] I was sitting, writing at my text-book; but the work did not progress; my thoughts were elsewhere. I turned my chair to the fire and dozed. Again the atoms were gambling before my eyes. This time the smaller groups kept modestly in the background. My mental eye, rendered more acute by the repeated visions of the kind, could now distinguish larger structures of manifold conformation: long rows, sometimes more closely fitted together; all twining and twisting in snake-like motion. But look! What was that? One of the snakes had seized hold of its own tail, and the form whirled mockingly before my eyes. As if by a flash of lightning I awoke; and this time also I spent the rest of the night in working out the consequences of the hypothesis. Martin Rees used the ouroboros to illustrate the various scales of the universe, ranging from 10–20 cm (subatomic) at the tail, up to 1025 cm (supragalactic) at the head.[27] Rees stressed "the intimate links between the microworld and the cosmos, symbolised by the ouraborus", as tail and head meet to complete the circle.[28] W. Ross Ashby applied ideas from biology to his own work as a psychiatrist in "Design for a Brain" (1952): that living things maintain essential variables of the body within critical limits with the brain as a regulator of the necessary feedback loops. Parmar contextualises his practices as an artist in applying the cybernetic Ouroboros principle to musical improvisation.[29] Hence the snake eating its tail is an accepted image or metaphor in the autopoietic calculus for self-reference,[30] or self-indication, the logical processual notation for analysing and explaining self-producing autonomous systems and "the riddle of the living", developed by Francisco Varela. Reichel describes this as: an abstract concept of a system whose structure is maintained through the self-production of and through that structure. In the words of Kauffman, is "the ancient mythological symbol of the worm ouroboros embedded in a mathematical, non-numerical calculus".[31][32] The calculus derives from the confluence of the cybernetic logic of feedback, the sub-disciplines of autopoiesis developed by Varela and Humberto Maturana, and calculus of indications of George Spencer Brown. In another related biological application: It is remarkable, that Rosen's insight, that metabolism is just a mapping ..., which may be too cursory for a biologist, turns out to show us the way to construct recursively, by a limiting process, solutions of the self-referential Ouroborus equation f(f) = f, for an unknown function f, a way that mathematicians had not imagined before Rosen.[33][34] Second-order cybernetics, or the cybernetics of cybernetics, applies the principle of self-referentiality, or the participation of the observer in the observed, to explore observer involvement.[35] including D. J. Stewart's domain of "observer valued imparities".[36] The genus of the armadillo girdled lizard, Ouroboros cataphractus, takes its name from the animal's defensive posture, curling into a ball and holding its own tail in its mouth.[37] Pescadillas are often presented biting their tails. A medium-sized European hake, known in Spanish as pescadilla and in Portuguese as pescada, is often presented with its mouth biting its tail. In Spanish it receives the name of pescadilla de rosca ("torus hake").[38] Both expressions Uma pescadinha de rabo na boca "tail in mouth little hake" and La pescadilla que se muerde la cola, "the hake that bites its tail", are proverbial Portuguese and Spanish expressions for circular reasoning and vicious circles.[39] The Kobe, Japan-based Dragon Gate Pro-Wrestling promotion used a stylised ouroboros as their logo for the first 20 years of the company's existence. The logo is a silhouette dragon twisted into the shape of an infinity symbol, devouring its own tail. In 2019, the promotion dropped the infinity dragon logo in favour of a shield logo. A variation of the Ouroboros motif is an important symbol in the fantasy novel The Neverending Story by Michael Ende: featuring two snakes, one black and one white, biting the other's tail, this symbol represents the powerful AURYN and the infinite nature of the story. The symbol is also featured prominently on the cover of both the fictional book and the novel. The Worm Ouroboros is a high-fantasy novel written by E. R. Eddison. Much like the cyclical symbol of the ouroboros eating its own tail, the novel ends as it begins. The main villain has a ring in the form of Ouroboros. In Mexican Gothic the symbol is used throughout the story, portraying the immortality of the home and the family, as well as the persistence of outdated ideologies.[40] In The Wheel of Time and its 2021 television adaption, the Aes Sedai wear a "Great Serpent" ring, described as a snake consuming its own tail.[41] In the science fiction short story "All You Zombies" (1958) by American writer Robert A. Heinlein, the character Jane wears an Ouroboros ring, "the worm Ouroboros, the world snake".[42] The short story later inspired the movie Predestination (2014). In the SCP Foundation universe, the proposal tale "The Ouroboros Cycle"[43] spans the story of the SCP Foundation from its creation to its ending. In the A Discovery of Witches novels and television adaptation, the crest of the de Clermont family is an ouroboros. The symbol plays a significant role in the alchemical plot of the story. In The Witcher, the Horroboros, the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago. Once a massive Serpentine city, Ouroboros was buried beneath the Sea of Sand after the Serpentine War. The city was key to Pythor and the Serpentine's efforts to awaken the Great Devourer, which had been imprisoned beneath the city. After retrieving the four Fangblades, Pythor returned to Ouroboros and successfully released the Great Devourer, causing significant damage to the city. Despite the destruction, the Serpentine continued to use the city as a temporary base before abandoning it to journey to the tomb of the Stone Army. In Hemlock Grove (2013-2015), the ouroboros plays an important part throughout the series. In Season 3 (2014), Ninjago: Rebooted, during the Nindroid crisis, Pythor once again used Ouroboros as a base of operations. Here, he led an army of Nindroids and launched a giant rocket into space in search of the comet that held the remnants of the Golden Weapons. In Season 1 (2018) of the cyberpunk Netflix series Altered Carbon, the protagonist Takeshi Kovacs gets an ouroboros tattoo in shape of an infinity symbol, and it features in the show's title sequence, tying in to the themes of rebirth and the twisting of the natural cycle of life and death.[47] In the season 2 premiere of the television series Loki, a character named Ouroboros (played by Ke Huy Quan) is introduced. He is an employee of the Time Variance Authority. In the fourth episode, he also references a snake biting its own tail.[48] In the anime Fullmetal Alchemist: Brotherhood, members of the homunculi race are identified by having the symbol carved/tattooed/branded/marked on them.[49] The Abirataribia in The Dark Crystal: Age of Resistance is based on the ouroboros. Splatoon 3 has a serpent-like Salmonid creature named after it, the Ouroboros and the "snake biting its own tail" is a recurring theme. The Ouroboros is the adopted symbol of the End Times-obsessed Millennium Group in the TV series Millennium[44] It also briefly appears when Dana Scully gets a tattoo of it in The X-Files Season 4 episode "Never Again" (1997).[45] "Ouroboros" is an episode of the British science-fiction sitcom Red Dwarf, in which Dave Lister learns that he is his own father through time travel.[46] In Season 1 (2012) of Ninjago titled "Ninjago: Rise of the Snakes", the Lost City of Ouroboros (also referred to as the Ancient City of Ouroboros) serves as a pivotal location in the Serpentine's plan for vengeance against Ninjago.