

# Anthropomorphism

**Anthropomorphism** is the attribution of human traits, emotions, or intentions to non-human entities.<sup>[1]</sup> It is considered to be an innate tendency of human psychology.<sup>[2]</sup>

**Personification** is the related attribution of human form and characteristics to abstract concepts such as nations, emotions, and natural forces, such as seasons and weather.

Both have ancient roots as storytelling and artistic devices, and most cultures have traditional fables with anthropomorphized animals as characters. People have also routinely attributed human emotions and behavioural traits to wild as well as domesticated animals.<sup>[3]</sup>

## Contents

### Name

#### Examples in prehistory

#### In religion and mythology

Criticism

#### In literature

Religious texts  
Fables  
Fairy tales  
Modern literature

#### In film, television, and video games

Film  
Television  
Video games

#### Art history

Claes Oldenburg  
Minimalism  
Post Minimalism

#### Mascots

#### Animals

#### In science

#### In computing

#### Psychology

Foundational research  
Three-factor theory  
Developmental perspective  
Effect on learning  
In mental health  
In marketing

#### Image gallery

#### See also

#### Notes

#### References

#### Sources

#### Further reading

#### External links

## Name

Anthropomorphism derives from its verb form *anthropomorphize*,<sup>[a]</sup> itself derived from the Greek *ánthrōpos* (ἄνθρωπος, lit. "human") and *morphē* (μορφή, "form"). It is first attested in 1753, originally in reference to the heresy of applying a human form to the Christian God.<sup>[b][1]</sup>

## Examples in prehistory

From the beginnings of human behavioural modernity in the Upper Paleolithic, about 40,000 years ago, examples of zoomorphic (animal-shaped) works of art occur that may represent the earliest evidence we have of anthropomorphism. One of the oldest known is an ivory sculpture, the Löwenmensch figurine, Germany, a human-shaped figurine with the head of a lioness or lion, determined to be about 32,000 years old.<sup>[5][6]</sup>



In this illustration by Milo Winter of Aesop's fable, "The North Wind and the Sun", a personified North Wind tries to strip the cloak off of a traveler.



*Personification of Music* by Antonio Franchi, circa 1650

It is not possible to say what these prehistoric artworks represent. A more recent example is The Sorcerer, an enigmatic cave painting from the Trois-Frères Cave, Ariège, France: the figure's significance is unknown, but it is usually interpreted as some kind of great spirit or master of the animals. In either case there is an element of anthropomorphism.

This anthropomorphic art has been linked by archaeologist Steven Mithen with the emergence of more systematic hunting practices in the Upper Palaeolithic (Mithen 1998). He proposes that these are the product of a change in the architecture of the human mind, an increasing fluidity between the natural history and social intelligences, where anthropomorphism allowed hunters to identify empathetically with hunted animals and better predict their movements.<sup>[c]</sup>

## In religion and mythology

In religion and mythology, anthropomorphism is the perception of a divine being or beings in human form, or the recognition of human qualities in these beings.

Ancient mythologies frequently represented the divine as deities with human forms and qualities. They resemble human beings not only in appearance and personality; they exhibited many human behaviors that were used to explain natural phenomena, creation, and historical events. The deities fell in love, married, had children, fought battles, wielded weapons, and rode horses and chariots. They feasted on special foods, and sometimes required sacrifices of food, beverage, and sacred objects to be made by human beings. Some anthropomorphic deities represented specific human concepts, such as love, war, fertility, beauty, or the seasons. Anthropomorphic deities exhibited human qualities such as beauty, wisdom, and power, and sometimes human weaknesses such as greed, hatred, jealousy, and uncontrollable anger. Greek deities such as Zeus and Apollo often were depicted in human form exhibiting both commendable and despicable human traits. Anthropomorphism in this case is, more specifically, anthropotheism.<sup>[8]</sup>

From the perspective of adherents to religions in which humans were created in the form of the divine, the phenomenon may be considered theomorphism, or the giving of divine qualities to humans.

Anthropomorphism has cropped up as a Christian heresy, particularly prominently with the Audians in third century Syria, but also in fourth century Egypt and tenth century Italy.<sup>[9]</sup> This often was based on a literal interpretation of Genesis 1:27: "So God created man in His own image, in the image of God created He him; male and female created He them".<sup>[10]</sup>

## Criticism

Some religions, scholars, and philosophers objected to anthropomorphic deities. The Greek philosopher Xenophanes (570–480 BCE) argued against the conception of deities as fundamentally anthropomorphic:

But if cattle and horses and lions had hands  
or could paint with their hands and create works such as men do,  
horses like horses and cattle like cattle  
also would depict the gods' shapes and make their bodies  
of such a sort as the form they themselves have.

...

Ethiopians say that their gods are snub-nosed [σινυούς] and black  
Thracians that they are pale and red-haired.<sup>[11][d]</sup>

He said that "the greatest god" resembles man "neither in form nor in mind".<sup>[12]</sup>

Both Judaism and Islam reject an anthropomorphic deity, believing that God is beyond human comprehension. Judaism's rejection of an anthropomorphic deity grew during the Hasmonean period (circa 300 BCE), when Jewish belief incorporated some Greek philosophy.<sup>[1]</sup> Judaism's rejection grew further after the Islamic Golden Age in the tenth century, which Maimonides codified in the twelfth century, in his thirteen principles of Jewish faith.<sup>[e]</sup>

Hindus do not reject the concept of a deity in the abstract unmanifested, but note practical problems. Lord Krishna said in the Bhagavad Gita, Chapter 12, Verse 5, that it is much more difficult for people to focus on a deity as the unmanifested than one with form, using anthropomorphic icons (murtis), because people need to perceive with their senses.<sup>[14][15]</sup>

In *Faces in the Clouds*, anthropologist Stewart Guthrie proposes that all religions are anthropomorphisms that originate in the brain's tendency to detect the presence or vestiges of other humans in natural phenomena.<sup>[16]</sup>

## In literature

### Religious texts

There are various examples of personification as a literary device in both Hebrew Bible and Christian New Testament and also in the texts of some other religions.



The 40,000-year-old Löwenmensch figurine

## Fables

Anthropomorphism, also referred to as personification, is a well established literary device from ancient times. The story of "The Hawk and the Nightingale" in Hesiod's *Works and Days* preceded Aesop's fables by centuries. Collections of linked fables from India, the *Jataka Tales* and *Panchatantra*, also employ anthropomorphized animals to illustrate principles of life. Many of the stereotypes of animals that are recognized today, such as the wily fox and the proud lion, can be found in these collections. Aesop's anthropomorphisms were so familiar by the first century CE that they colored the thinking of at least one philosopher:

And there is another charm about him, namely, that he puts animals in a pleasing light and makes them interesting to mankind. For after being brought up from childhood with these stories, and after being as it were nursed by them from babyhood, we acquire certain opinions of the several animals and think of some of them as royal animals, of others as silly, of others as witty, and others as innocent.

— Apollonius of Tyana<sup>[17]</sup>

Apollonius noted that the fable was created to teach wisdom through fictions that are meant to be taken as fictions, contrasting them favorably with the poets' stories of the deities that are sometimes taken literally. Aesop, "by announcing a story which everyone knows not to be true, told the truth by the very fact that he did not claim to be relating real events".<sup>[17]</sup> The same consciousness of the fable as fiction is to be found in other examples across the world, one example being a traditional Ashanti way of beginning tales of the anthropomorphic trickster-spider Anansi: "We do not really mean, we do not really mean that what we are about to say is true. A story, a story; let it come, let it go."<sup>[18]</sup>

## Fairy tales

Anthropomorphic motifs have been common in fairy tales from the earliest ancient examples set in a mythological context to the great collections of the Brothers Grimm and Perrault. The *Tale of Two Brothers* (Egypt, 13th century BCE) features several talking cows and in *Cupid and Psyche* (Rome, 2nd century CE) Zephyrus, the west wind, carries Psyche away. Later an ant feels sorry for her and helps her in her quest.

## Modern literature

Building on the popularity of fables and fairy tales, specifically children's literature began to emerge in the nineteenth century with works such as *Alice's Adventures in Wonderland* (1865) by Lewis Carroll, *The Adventures of Pinocchio* (1883) by Carlo Collodi and *The Jungle Book* (1894) by Rudyard Kipling, all employing anthropomorphic elements. This continued in the twentieth century with many of the most popular titles having anthropomorphic characters,<sup>[19]</sup> examples being *The Tale of Peter Rabbit* (1901) and later books by Beatrix Potter;<sup>[f]</sup> *The Wind in the Willows* by Kenneth Grahame (1908); *Winnie-the-Pooh* (1926) and *The House at Pooh Corner* (1928) by A. A. Milne; and *The Lion, the Witch, and the Wardrobe* (1950) and the subsequent books in *The Chronicles of Narnia* series by C. S. Lewis. In many of these stories the animals can be seen as representing facets of human personality and character.<sup>[21]</sup> As John Rowe Townsend remarks, discussing *The Jungle Book* in which the boy Mowgli must rely on his new friends the bear Baloo and the black panther Bagheera, "The world of the jungle is in fact both itself and our world as well".<sup>[21]</sup> A notable work aimed at an adult audience is George Orwell's *Animal Farm*, in which all the main characters are anthropomorphic animals. Non-animal examples include Rev.W Awdry's children's stories of *Thomas the Tank Engine* and other anthropomorphic locomotives.

The fantasy genre developed from mythological, fairy tale, and Romance motifs<sup>[22]</sup> and characters, sometimes with anthropomorphic animals. The best-selling examples of the genre are *The Hobbit*<sup>[23]</sup> (1937) and *The Lord of the Rings*<sup>[9]</sup> (1954–1955), both by J. R. R. Tolkien, books peopled with talking creatures such as ravens, spiders, and the dragon Smaug and a multitude of anthropomorphic goblins and elves. John D. Rateliff calls this the "Doctor Dolittle Theme" in his book *The History of the Hobbit*<sup>[25]</sup> and Tolkien saw this anthropomorphism as closely linked to the emergence of human language and myth: "...The first men to talk of 'trees and stars' saw things very differently. To them, the world was alive with mythological beings... To them the whole of creation was "myth-woven and elf-patterned".<sup>[26]</sup>

Richard Adams developed a distinctive take on anthropomorphic writing in the 1970s: his debut novel, *Watership Down* (1972), featured rabbits that could talk, with their own distinctive language (Lapine) and mythology, and included a warren, Efrafa, run along the lines of a police state. Despite this, Adams attempted to ensure his characters' behaviour mirrored that of wild rabbits, engaging in fighting, copulating and defecating, drawing on Ronald Lockley's study *The Private Life of the Rabbit* as research. Adams returned to anthropomorphic storytelling in his later novels *The Plague Dogs* (1977) and *Traveller* (1988).<sup>[27][28]</sup>



From the Panchatantra: Rabbit fools Elephant by showing the reflection of the moon



John Tenniel's depiction of this anthropomorphic rabbit was featured in the first chapter of Lewis Carroll's *Alice's Adventures in Wonderland*

By the 21st century, the children's picture book market had expanded massively.<sup>[h]</sup> Perhaps a majority of picture books have some kind of anthropomorphism,<sup>[19][30]</sup> with popular examples being *The Very Hungry Caterpillar* (1969) by Eric Carle and *The Gruffalo* (1999) by Julia Donaldson.

Anthropomorphism in literature and other media led to a sub-culture known as furry fandom, which promotes and creates stories and artwork involving anthropomorphic animals, and the examination and interpretation of humanity through anthropomorphism.<sup>[31]</sup>

Anthropomorphic characters have also been a staple of the comic book genre. The most prominent one was Neil Gaiman's the *Sandman* which had a huge impact on how characters that are physical embodiments are written in the fantasy genre.<sup>[32][33]</sup> Other examples also include the mature *Hellblazer* (personified political and moral ideas),<sup>[34]</sup> *Fables* and its spin-off series *Jack of Fables*, which was unique for having anthropomorphic representation of literary techniques and genres.<sup>[35]</sup> Various Japanese manga and anime have used anthropomorphism as the basis of their story. Examples include *Squid Girl* (anthropomorphized squid), *Hetalia: Axis Powers* (personified countries), *Upotte!!* (personified guns), *Arpeggio of Blue Steel* and *Kancolle* (personified ships).

## In film, television, and video games

---

### Film

Some of the most notable examples are the Walt Disney characters the Magic Carpet from Disney's Aladdin franchise, Mickey Mouse, Donald Duck, Goofy, and Oswald the Lucky Rabbit; the Looney Tunes characters Bugs Bunny, Daffy Duck, and Porky Pig; and an array of others from the 1920s to present day.

In the films *Cars* (2006), *Cars 2* (2011), *Planes* (2013), *Planes: Fire & Rescue* (2014) and *Cars 3* (2017), all the characters are anthropomorphic vehicles.<sup>[36]</sup> Discussing *Madagascar*, *Escape 2 Africa* (2008), and *Europe's Most Wanted* (2012), Laurie suggests that "social differences based on conflict and contradiction are naturalized and made less 'contestable' through the classificatory matrix of human and nonhuman relations".<sup>[36]</sup>

All of the characters in Walt Disney Animation Studios' *Zootopia* (2016) are anthropomorphic animals.<sup>[37]</sup>

### Television

Since the 1960s, anthropomorphism has also been represented in various animated television shows such as *Biker Mice From Mars* (1993–1996) and *SWAT Kats: The Radical Squadron* (1993–1995). *Teenage Mutant Ninja Turtles*, first aired in 1987, features four pizza-loving anthropomorphic turtles with a great knowledge of ninjutsu, led by their anthropomorphic rat sensei, Master Splinter.

In the American animated TV series *Family Guy*, one of the show's main characters, Brian, is a dog. Brian shows many human characteristics – he walks upright, talks, smokes, and drinks Martinis – but also acts like a normal dog in other ways; for example he cannot resist chasing a ball and barks at the mailman, believing him to be a threat.

### Video games

*Sonic the Hedgehog*, a game released in 1991, features a speedy blue hedgehog as the protagonist. This series' characters are almost all anthropomorphic animals such as foxes, cats, and other hedgehogs who are able to speak and walk on their hind legs like normal humans. As with most anthropomorphisms of animals, clothing is of little or no importance, where some characters may be fully clothed while some wear only shoes and gloves.

Another example in video games is *Super Mario Bros.*, which was released in 1985. Some of the characters include Yoshi, a dinosaur who is able to talk, run and jump, and Bowser, a "Koopa" that is able to perform most human characteristics, with some exceptions, as he can breathe fire.

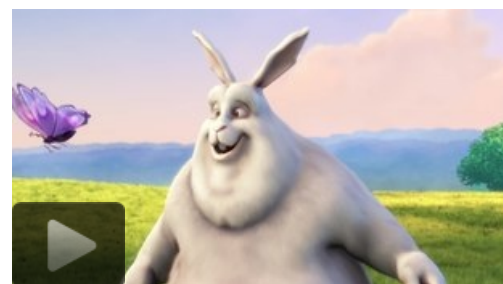
## Art history

---

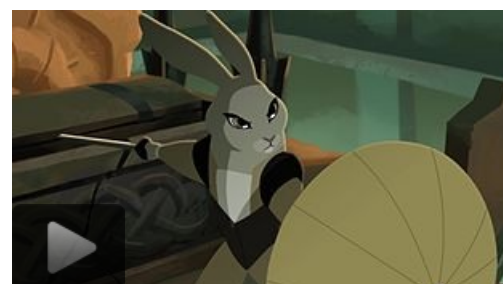
### Claes Oldenburg



From *The Emperor's Rout* (1831)



*Big Buck Bunny* is a free animated short featuring anthropomorphic characters



In *Armello*, anthropomorphic animals battle it out for control of the animal kingdom

Claes Oldenburg's soft sculptures are commonly described as anthropomorphic. Depicting common household objects, Oldenburg's sculptures were considered Pop Art. Reproducing these objects, often at a greater size than the original, Oldenburg created his sculptures out of soft materials. The anthropomorphic qualities of the sculptures were mainly in their sagging and malleable exterior which mirrored the not so idealistic forms of the human body. In "Soft Light Switches" Oldenburg creates a household light switch out of vinyl. The two identical switches, in a dulled orange, insinuate nipples. The soft vinyl references the aging process as the sculpture wrinkles and sinks with time.

## Minimalism

In the essay "Art and Objecthood", Michael Fried makes the case that "Literalist art" (Minimalism) becomes theatrical by means of anthropomorphism. The viewer engages the minimalist work, not as an autonomous art object, but as a theatrical interaction. Fried references a conversation in which Tony Smith answers questions about his "six-foot cube, Die."

Q: Why didn't you make it larger so that it would loom over the observer? A: I was not making a monument. Q: then why didn't you make it smaller so that the observer could see over the top? A: I was not making an object.

Fried implies an anthropomorphic connection by means of "a surrogate person-that is, a kind of statue."

The minimalist decision of "hollowness" in much of their work, was also considered by Fried, to be "blatantly anthropomorphic." This "hollowness" contributes to the idea of a separate inside; an idea mirrored in the human form. Fried considers the Literalist art's "hollowness" to be "biomorphic" as it references a living organism.<sup>[38]</sup>

## Post Minimalism

Curator Lucy Lippard's Eccentric Abstraction show, in 1966, sets up Briony Fer's writing of a post minimalist anthropomorphism. Reacting to Fried's interpretation of minimalist art's "looming presence of objects which appear as actors might on a stage", Fer interprets the artists in Eccentric Abstraction to a new form of anthropomorphism. She puts forth the thoughts of Surrealist writer Roger Caillois, who speaks of the "spacial lure of the subject, the way in which the subject could inhabit their surroundings." Caillois uses the example of an insect who "through camouflage does so in order to become invisible... and loses its distinctness." For Fer, the anthropomorphic qualities of imitation found in the erotic, organic sculptures of artists Eva Hesse and Louise Bourgeois, are not necessarily for strictly "mimetic" purposes. Instead, like the insect, the work must come into being in the "scopic field... which we cannot view from outside."<sup>[39]</sup>

## Mascots

For branding, merchandising, and representation, figures known as mascots are now often employed to personify sports teams, corporations, and major events such as the World's Fair and the Olympics. These personifications may be simple human or animal figures, such as Ronald McDonald or the ass that represents the United States's Democratic Party. Other times, they are anthropomorphic items, such as "Clippy" or the "Michelin Man". Most often, they are anthropomorphic animals such as the Energizer Bunny or the San Diego Chicken.

The practice is particularly widespread in Japan, where cities, regions, and companies all have mascots, collectively known as yuru-chara. Two of the most popular are Kumamon (a bear who represents Kumamoto Prefecture)<sup>[40]</sup> and Funassyi (a pear who represents Funabashi, a suburb of Tokyo).<sup>[41]</sup>

## Animals

Other examples of anthropomorphism include the attribution of human traits to animals, especially domesticated pets such as dogs and cats. Examples of this include thinking a dog is smiling simply because he is showing his teeth, or a cat is bored because it is not reacting to commands.

Anthropomorphism may be beneficial to the welfare of animals. A 2012 study by Butterfield et al. found that utilizing anthropomorphic language when describing dogs created a greater willingness to help them in situations of distress <sup>[42]</sup>. Previous studies have shown that individuals who attribute human characteristics to animals are less willing to eat them <sup>[43]</sup> and that the degree to which individuals perceive minds in other animals predicts the moral concern afforded to them <sup>[44]</sup>. It is possible that anthropomorphism leads humans to like non-humans more when they have apparent human qualities, since perceived similarity has been shown to increase prosocial behavior toward other humans <sup>[45]</sup>.

## In science

In science, the use of anthropomorphic language that suggests animals have intentions and emotions has traditionally been deprecated as indicating a lack of objectivity. Biologists have been warned to avoid assumptions that animals share any of the same mental, social, and emotional capacities of humans, and to rely instead on strictly observable evidence.<sup>[46]</sup> In 1927 Ivan Pavlov wrote that animals should be considered "without any need to resort to fantastic speculations as to the existence of any possible subjective states".<sup>[47]</sup> More recently, *The*



Anthropomorphic pareidolia by Giuseppe Arcimboldo



Fatso the Fat-Arsed Wombat, a popular symbol of the Sydney 2000 Summer Olympics created as a parody of the blandly commercial official mascots.

*Oxford companion to animal behaviour* (1987) advised that "one is well advised to study the behaviour rather than attempting to get at any underlying emotion".<sup>[48]</sup> Some scientists, like William M Wheeler (writing apologetically of his use of anthropomorphism in 1911), have used anthropomorphic language in metaphor to make subjects more humanly comprehensible or memorable.<sup>[1]</sup>

Despite the impact of Charles Darwin's ideas in *The Expression of the Emotions in Man and Animals* (Konrad Lorenz in 1965 called him a "patron saint" of ethology)<sup>[50]</sup> ethology has generally focused on behavior, not on emotion in animals.<sup>[50]</sup> Though in other ways Darwin was and is the epitome of science, his acceptance of anecdote and anthropomorphism stands out in sharp contrast to the lengths to which later scientists would go to overlook apparent mindedness, selfhood, individuality, and agency:

“ Even insects play together, as has been described by that excellent observer, P. Huber, who saw ants chasing and pretending to bite each other, like so many puppies. ”

— Charles Darwin, *The Descent of Man*<sup>[51]</sup>

The study of great apes in their own environment and in captivity<sup>[1]</sup> has changed attitudes to anthropomorphism. In the 1960s the three so-called "Leakey's Angels", Jane Goodall studying chimpanzees, Dian Fossey studying gorillas and Birutė Galdikas studying orangutans, were all accused of "that worst of ethological sins - anthropomorphism".<sup>[53]</sup> The charge was brought about by their descriptions of the great apes in the field; it is now more widely accepted that empathy has an important part to play in research.

De Waal has written: "To endow animals with human emotions has long been a scientific taboo. But if we do not, we risk missing something fundamental, about both animals and us."<sup>[54]</sup> Alongside this has come increasing awareness of the linguistic abilities of the great apes and the recognition that they are tool-makers and have individuality and culture.

Writing of cats in 1992, veterinarian Bruce Fogle points to the fact that "both humans and cats have identical neurochemicals and regions in the brain responsible for emotion" as evidence that "it is not anthropomorphic to credit cats with emotions such as jealousy".<sup>[55]</sup>

## In computing

---

In science fiction, an artificially-intelligent computer or robot, even though it has not been programmed with human emotions, often spontaneously experiences those emotions anyway: for example, Agent Smith in The Matrix was influenced by a "disgust" toward humanity. This is an example of anthropomorphism: in reality, while an artificial intelligence could perhaps be deliberately programmed with human emotions, or could develop something similar to an emotion as a means to an ultimate goal *if* it is useful to do so, it would not spontaneously develop human emotions for no purpose whatsoever, as portrayed in fiction.<sup>[56]</sup>

One example of anthropomorphism would be to believe that your PC is angry at you because you insulted it; another would be to believe that an intelligent robot would naturally find a woman sexy and be driven to mate with her. Scholars sometimes disagree with each other about whether a particular prediction about an artificial intelligence's behavior is logical, or whether the prediction constitutes illogical anthropomorphism.<sup>[56]</sup> An example that might initially be considered anthropomorphism, but is in fact a logical statement about an artificial intelligence's behavior, would be the Dario Floreano experiments where certain robots spontaneously evolved a crude capacity for "deception", and tricked other robots into eating "poison" and dying: here a trait, "deception", ordinarily associated with people rather than with machines, spontaneously evolves in a type of convergent evolution.<sup>[57]</sup> The conscious use of anthropomorphic metaphor is not intrinsically unwise; ascribing mental processes to the computer, under the proper circumstances, may serve the same purpose as it does when we do it to other people: it may help us to understand what the computer will do, how our actions will affect the computer, how to compare computers with ourselves, and conceivably how to design computer programs. However, inappropriate use of anthropomorphic metaphors can result in false beliefs about the behavior of computers, for example by causing people to overestimate how "flexible" computers are.<sup>[58]</sup> According to Paul R. Cohen and Edward Feigenbaum, in order to differentiate between anthropomorphization and logical prediction of AI behavior, "the trick is to know enough about how humans and computers think to say *exactly* what they have in common, and, when we lack this knowledge, to use the comparison to *suggest* theories of human thinking or computer thinking."<sup>[59]</sup>

Computers overturn the childhood hierarchical taxonomy of "stones (non-living) → plants (living) → animals (conscious) → humans (rational)", by introducing a non-human "actor" that appears to regularly behave rationally. Much of computing terminology derives from anthropomorphic metaphors: computers can "read", "write", or "catch a virus". Information technology presents no clear correspondence with any other entities in the world besides humans; the options are either to leverage a mushy, imprecise human metaphor, or to reject imprecise metaphor and make use of more precise, domain-specific technical terms.<sup>[58]</sup>

People often grant an unnecessary social role to computers during interactions. The underlying causes are debated; Youngme Moon and Clifford Nass propose that humans are emotionally, intellectually and physiologically biased toward social activity, and so when presented with even tiny social cues, deeply-infused social responses are triggered automatically.<sup>[58][60]</sup> The field of "social computing" attempts to make computers easier to use by leveraging anthropomorphism as a "language" of human-computer interaction.<sup>[61]</sup>

## Psychology

---

### Foundational research

In psychology, the first empirical study of anthropomorphism was conducted in 1944 by Fritz Heider and Marianne Simmel.<sup>[62]</sup> In the first part of this experiment, the researchers showed a 2-and-a-half minute long animation of several shapes moving around on the screen in varying directions at various speeds. When subjects were asked to describe what they saw, they gave detailed accounts of the intentions and

personalities of the shapes. For instance, the large triangle was characterized as a bully, chasing the other two shapes until they could trick the large triangle and escape. The researchers concluded that when people see objects making motions for which there is no obvious cause, they view these objects as intentional agents.

Modern psychologists generally characterize anthropomorphism as a cognitive bias. That is, anthropomorphism is a cognitive process by which people use their schemas about other humans as a basis for inferring the properties of non-human entities in order to make efficient judgements about the environment, even if those inferences are not always accurate.<sup>[2]</sup> Schemas about humans are used as the basis because this knowledge is acquired early in life, is more detailed than knowledge about non-human entities, and is more readily accessible in memory.<sup>[63]</sup> Anthropomorphism can also function as a strategy to cope with loneliness when other human connections are not available.<sup>[64]</sup>

## Three-factor theory

Since making inferences requires cognitive effort, anthropomorphism is likely to be triggered only when certain aspects about a person and their environment are true. Psychologist Adam Waytz and his colleagues created a three-factor theory of anthropomorphism to describe these aspects and predict when people are most likely to anthropomorphize.<sup>[63]</sup> The three factors are:

- *Elicited agent knowledge*, or the amount of prior knowledge held about an object and the extent to which that knowledge is called to mind.
- *Effectance*, or the drive to interact with and understand one's environment.
- *Sociality*, the need to establish social connections.

When elicited agent knowledge is low and effectance and sociality are high, people are more likely to anthropomorphize. Various dispositional, situational, developmental, and cultural variables can affect these three factors, such as need for cognition, social disconnection, cultural ideologies, uncertainty avoidance, etc.

## Developmental perspective

Children appear to anthropomorphize and use egocentric reasoning from an early age and use it more frequently than adults.<sup>[65]</sup> Examples of this are describing a storm cloud as "angry" or drawing flowers with faces. This penchant for anthropomorphism is likely because children have acquired vast amounts of socialization, but not as much experience with specific non-human entities, so thus they have less developed alternative schemas for their environment.<sup>[63]</sup> In contrast, autistic children tend to describe anthropomorphized objects in purely mechanical terms because they have difficulties with theory of mind.<sup>[66]</sup>

## Effect on learning

Anthropomorphism can be used to assist learning. Specifically, anthropomorphized words<sup>[67]</sup> and describing scientific concepts with intentionality<sup>[68]</sup> can improve later recall of these concepts.

## In mental health

In people with depression, social anxiety, or other mental illnesses, emotional support animals are a useful component of treatment partially because anthropomorphism of these animals can satisfy the patients' need for social connection.<sup>[69]</sup>

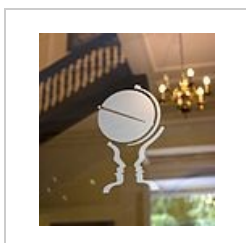
## In marketing

Anthropomorphism of inanimate objects can affect product buying behavior. When products seem to resemble a human schema, such as the front of a car resembling a face, potential buyers evaluate that product more positively than if they don't anthropomorphize the object.<sup>[70]</sup>

People also tend to trust robots to do more complex tasks such as driving a car or childcare if the robot resembles humans in ways such as having a face, voice, and name; mimicking human motions; expressing emotion; and displaying some variability in behavior.<sup>[71][72]</sup>

## Image gallery

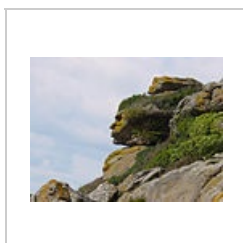
---



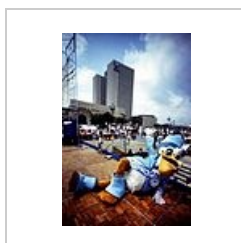
A glass door in the Chatham House



Almada tram in smiley livery



Pareidolia of a face in a rock



Seymore D. Fair 1st-ever World Expo Mascot

## See also

---

- Aniconism – antithetic concept

- [Animism](#)
- [Anthropic principle](#)
- [Anthropocentrism](#)
- [Anthropology](#)
- [Anthropomorphic maps](#)
- [Anthropopathism](#)
- [Funny animal](#)
- [Furry fandom](#)
- [Great Chain of Being](#)
- [Human-animal hybrid](#)
- [Humanoid](#)
- [Moe anthropomorphism](#)
- [National personification](#)
- [Pareidolia](#) – seeing faces in everyday objects
- [Pathetic fallacy](#)
- [Prosopopoeia](#)
- [Speciesism](#)
- [Talking animals in fiction](#)
- [Zoomorphism](#)

## Notes

---

- Possibly via [French](#) *anthropomorphisme*.<sup>[1]</sup>
- Anthropomorphism, among divines, the error of those who ascribe a human figure to the deity.<sup>[4]</sup>
- In the *New York Review of Books*, [Gardner](#) opined that "I find most convincing Mithen's claim that human intelligence lies in the capacity to make connections: through using metaphors".<sup>[7]</sup>
- Many other translations of this passage have Xenophanes state that the Thracians were "blond".
- [Moses Maimonides](#) quoted [Rabbi Abraham Ben David](#): "It is stated in the Torah and books of the prophets that God has no body, as stated 'Since G-d your God is the god (lit. *gods*) in the heavens above and in the earth below" and a body cannot be in both places. And it was said 'Since you have not seen any image' and it was said 'To who would you compare me, and I would be equal to them?' and if he was a body, he would be like the other bodies."<sup>[13]</sup>
- The [Victoria and Albert Museum](#) wrote: "Beatrix Potter is still one of the world's best-selling and best-loved children's authors. Potter wrote and illustrated a total of 28 books, including the 23 Tales, the 'little books' that have been translated into more than 35 languages and sold over 100 million copies."<sup>[20]</sup>
- 150 million sold, a 2007 estimate of copies of the full story sold, whether published as one volume, three, or some other configuration.<sup>[24]</sup>
- It is estimated that the UK market for children's books was worth £672m in 2004.<sup>[29]</sup>
- In 1911, [Wheeler](#) wrote: "The larval insect is, if I may be permitted to lapse for a moment into anthropomorphism, a sluggish, greedy, self-centred creature, while the adult is industrious, abstemious and highly altruistic..."<sup>[49]</sup>
- In 1946, [Hebb](#) wrote: "A thoroughgoing attempt to avoid anthropomorphic description in the study of temperament was made over a two-year period at the Yerkes laboratories. All that resulted was an almost endless series of specific acts in which no order or meaning could be found. On the other hand, by the use of frankly anthropomorphic concepts of emotion and attitude one could quickly and easily describe the peculiarities of individual animals... Whatever the anthropomorphic terminology may seem to imply about conscious states in chimpanzee, it provides an intelligible and practical guide to behavior."<sup>[52]</sup>

## References

---

- Oxford English Dictionary*, 1st ed. "anthropomorphism, *n*." Oxford University Press (Oxford), 1885.
- Hutson, Matthew (2012). *The 7 Laws of Magical Thinking: How Irrational Beliefs Keep Us Happy, Healthy, and Sane*. New York: Hudson Street Press. pp. 165–81. ISBN 978-1-101-55832-4.
- Moss, Stephen (15 January 2016). "What you see in this picture says more about you than the kangaroo" ([https://www.theguardian.com/commentisfree/2016/jan/14/picture-kangaroo-empathy-sexual-exploitation-human-anthropomorphise?CMP=Share\\_iOSApp\\_Other](https://www.theguardian.com/commentisfree/2016/jan/14/picture-kangaroo-empathy-sexual-exploitation-human-anthropomorphise?CMP=Share_iOSApp_Other)). *The Guardian*. Retrieved 17 January 2016.
- Chambers's Cyclopædia, Supplement*, 1753
- "Lionheaded Figurine" (<http://www.showcaves.com/english/explain/Archaeology/Loewenfrau.html>).
- Dalton (1 January 2004). "Löwenmensch Oldest Statue" (<https://web.archive.org/web/20100325233703/http://www.vnn.org/world/WD0401/WD01-8500.html>). VNN World. Archived from the original (<http://www.vnn.org/world/WD0401/WD01-8500.html>) on 25 March 2010.
- Gardner, Howard (9 October 1997), "Thinking About Thinking", *New York Review of Books* ([http://cogweb.ucla.edu/Abstracts/Gardner\\_on\\_Mithen.html](http://cogweb.ucla.edu/Abstracts/Gardner_on_Mithen.html)), archived ([https://web.archive.org/web/20100329103807/http://cogweb.ucla.edu/Abstracts/Gardner\\_on\\_Mithen.html](https://web.archive.org/web/20100329103807/http://cogweb.ucla.edu/Abstracts/Gardner_on_Mithen.html)) from the original on 29 March 2010, retrieved 8 May 2010
- "anthropotheism" (<http://www.thefreedictionary.com/Anthropotheism>). *Ologies & -isms*. The Gale Group, Inc. 2008.
- Fox, James Joseph (1907). "Anthropomorphism". In Herbermann, Charles. *Catholic Encyclopedia*. **1**. New York: Robert Appleton Company.
- Chambers, Ephraim, ed. (1728). "Anthropomorphite" (<http://digicoll.library.wisc.edu/cgi-bin/HistSciTech/HistSciTech-idx?type=turn&entity=HistSciTech.Cyclopaedia01.p0147&id=HistSciTech.Cyclopaedia01&isize=L>). *Cyclopædia, or an Universal Dictionary of Arts and Sciences* (first ed.). James and John Knapton, et al.
- Diels-Kranz, *Die Fragmente der Vorsokratiker*, Xenophanes fr. 15-16.
- [Clement of Alexandria](#), *Miscellanies* V xiv 109.1–3
- [Maimonides](#), [Moses](#), "Fundamentals of Torah, Ch. 1, § 8", *Book of Science*
- Fowler, Jeanne D. (1997). *Hinduism: Beliefs and Practices* (<https://books.google.com/?id=RmGKHu20hA0C&pg=PA42&dq=Hinduism+murti+s+shiva+linda&cd=18#v=onepage&q&f=false>). Sussex Academic Press. pp. 42–43. ISBN 1898723605.



15. Narayan, M. K. V. (2007). *Flipside of Hindu Symbolism* (<https://books.google.com/?id=ewRfp4qpvt4C&pg=PA84&dq=Hinduism+murtis+salingrama&cd=1#v=onepage&q&f=false>). Fultus. pp. 84–85. ISBN 1596821175.
16. Guthrie, Stewart E. (1995). *Faces in the Clouds: A New Theory of Religion* (<https://books.google.com/?id=dZNAQh6TuWIC&dq=Faces+in+the+Clouds:+A+New+Theory+of+Religion&printsec=frontcover#PPA7,M1>). Oxford University Press. p. 7. ISBN 0-19-509891-9.
17. Philostratus, Flavius (c. 210 CE). *The Life of Apollonius* ([http://www.livius.org/ap-ark/apollonius/life/va\\_5\\_11.html](http://www.livius.org/ap-ark/apollonius/life/va_5_11.html)), 5.14. Translated by F.C. Conybeare. the Loeb Classical Library (1912)
18. Kwesi Yankah (1983). "The Akan Trickster Cycle: Myth or Folktale?" ([https://scholarworks.iu.edu/dspace/bitstream/2022/125/1/Akan\\_Yankah.pdf](https://scholarworks.iu.edu/dspace/bitstream/2022/125/1/Akan_Yankah.pdf)) (PDF). Trinidad University of the West Indies.
19. "The top 50 children's books" (<https://www.telegraph.co.uk/news/uknews/1579457/The-top-50-childrens-books.html>). *The Telegraph*. 22 February 2008. and Sophie Borland (22 February 2008). "Narnia triumphs over Harry Potter" (<https://www.telegraph.co.uk/news/uknews/1579456/Narnia-triumphs-over-Harry-Potter.html>). *The Telegraph*.
20. "Beatrix Potter" ([http://www.vam.ac.uk/collections/prints\\_books/features/potter/index.html](http://www.vam.ac.uk/collections/prints_books/features/potter/index.html)), Official website (<http://www.vam.ac.uk>), Victoria and Albert Museum
21. Gamble, Nikki; Yates, Sally (2008). *Exploring Children's Literature*. Sage Publications Ltd;. ISBN 978-1-4129-3013-0.
22. John Grant and John Clute, *The Encyclopedia of Fantasy*, p 621, ISBN 0-312-19869-8
23. 100 million copies sold: BBC ([http://news.bbc.co.uk/2/hi/uk\\_news/england/dorset/7302101.stm](http://news.bbc.co.uk/2/hi/uk_news/england/dorset/7302101.stm)): Tolkien's memorabilia go on sale. 18 March 2008
24. *The Toronto Star* (<https://www.thestar.com/entertainment/article/203389>), 16 April 2007
25. Rateliff, John D. (2007). *The History of the Hobbit: Return to Bag-end*. London: HarperCollins. p. 654. ISBN 978-0-00-723555-1.
26. Carpenter, Humphrey (1979). *The Inklings: C. S. Lewis, J. R. R. Tolkien, Charles Williams and Their Friends*. Boston: Houghton Mifflin. p. 43. ISBN 0-395-27628-4.
27. Pallardy, Richard (14 January 2016). "Richard Adams" (<http://www.britannica.com/biography/Richard-Adams>). *Encyclopædia Britannica Online*. Chicago, IL: Encyclopædia Britannica, Inc. Retrieved 24 June 2016.
28. Levy, Keren (19 December 2013). "Watership Down by Richard Adams: A tale of courage, loyalty, language" (<https://www.theguardian.com/books/booksblog/2013/dec/19/comfort-reading-richard-adams-watership-down>). *theguardian.com*. Retrieved 24 June 2016.
29. "The Value of the Children's Picture Book Market" (<https://web.archive.org/web/20160609101641/http://www.businesswire.com/news/home/20051109005381/en/Childrens-Picture-Book-Market-UK-Declined-20>), Archived from the original on 9 June 2016
30. Ben Myers (10 June 2008). "Why we're all animal lovers" (<https://www.theguardian.com/books/booksblog/2008/jun/10/whywereallanimallovers>). *The Guardian*.
31. Patten, Fred (2006). *Furry! The World's Best Anthropomorphic Fiction*. iBooks. pp. 427–436. ISBN 1-59687-319-1.
32. Buxton, Marc (30 October 2013). "The Sandman: The Essential Horror Comic of the Nineties" (<http://www.denofgeek.us/books-comics/the-sandman/218867/the-sandman-the-essential-horror-comic-of-the-nineties>). Den of Geek. Archived (<https://web.archive.org/web/20131103220936/http://www.denofgeek.us/books-comics/the-sandman/218867/the-sandman-the-essential-horror-comic-of-the-nineties>) from the original on 3 November 2013.
33. Buxton, Marc (26 January 2014). "By Crom! The 10 Greatest Fantasy Comics of All-Time" (<http://www.comicbookresources.com/?page=article&id=50526>). Comic Book Resources. Archived (<https://web.archive.org/web/20140409194641/http://www.comicbookresources.com/?page=article&id=50526>) from the original on 9 April 2014. Archive requires scroll down
34. Josie Campbell (22 July 2014). "Hellblazer's past weighs in on Constantine's future" (<http://www.comicbookresources.com/?id=54149&page=article>). *Comic Book Resources*. Retrieved 14 October 2014.
35. Doctorow, Cory. "Great Fables Crossover: Fables goes even more meta, stays just as rollicking" (<http://boingboing.net/2010/03/25/great-fables-crossov.html>). *Boing*. 25 March 2010
36. Laurie, Timothy (2015), "Becoming-Animal Is A Trap For Humans" (<https://www.academia.edu/10912960>), *Deleuze and the Non-Human* eds. Hannah Stark and Jon Roffe.
37. McNary, Dave (11 June 2015). "Watch: Disney's 'Zootopia' Trailer Introduces Animal-Run World" (<https://variety.com/2015/film/news/disneys-zootopia-teaser-trailer-1201517794/>). *Variety*. Retrieved 18 June 2016.
38. Fried, Michael (1998). *Art and Objecthood*. Chicago: University of Chicago Press. ISBN 0-226-26319-3.
39. Fer, Briony (1999). "Objects Beyond Objecthood". *Oxford Art Journal*. 22 (2): 25–36. doi:10.1093/oxartj/22.2.25 (<https://doi.org/10.1093/oxartj/22.2.25>).
40. Official website (<http://kumamon-official.jp/>). (in Japanese)
41. Official website (<http://terawarosujimdo.com/>). (in Japanese)
42. Butterfield, M.E., Hill, S.E. and Lord, C.G., 2012. Mangy mutt or furry friend? Anthropomorphism promotes animal welfare. *Journal of Experimental Social Psychology*, 48(4), pp.957-960.
43. Bastian, B., Loughnan, S., Haslam, N. and Radke, H.R., 2012. Don't mind meat? The denial of mind to animals used for human consumption. *Personality and Social Psychology Bulletin*, 38(2), pp.247-256.
44. Gray, H.M., Gray, K. and Wegner, D.M., 2007. Dimensions of mind perception. *Science*, 315(5812), pp.619-619.
45. Burger, J.M., Messian, N., Patel, S., del Prado, A. and Anderson, C., 2004. What a coincidence! The effects of incidental similarity on compliance. *Personality and Social Psychology Bulletin*, 30(1), pp.35-43.
46. Shapiro, Kenneth J. (1993). "Editor's Introduction to Society and Animals". *Society & Animals*. 1 (1): 1–4. doi:10.1163/156853093X00091 (<https://doi.org/10.1163/156853093X00091>). Later re-published as an introduction to: Flynn, Cliff (2008). *Social Creatures: A Human and Animal Studies Reader* (<https://books.google.com/books?id=d6nT4VGleOEC&pg=PA3>). Lantern Books. ISBN 1-59056-123-6.
47. Ryder, Richard. *Animal Revolution: Changing Attitudes Towards Speciesism*. Berg, 2000, p. 6.
48. Masson & McCarthy 1996, p. xviii.
49. Wheeler, William Morton (November 1911), "Insect parasitism and its peculiarities", *Popular Science*, Vol. 79, p. 443
50. Black, J (Jun 2002). "Darwin in the world of emotions" (<http://www.jrsm.org/cgi/pmidlookup?view=long&pmid=12042386>) (Free full text). *Journal of the Royal Society of Medicine*. 95 (6): 311–3. doi:10.1258/jrsm.95.6.311 (<https://doi.org/10.1258/jrsm.95.6.311>). ISSN 0141-0768 (<https://www.worldcat.org/issn/0141-0768>). PMC 1279921 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1279921>)  PMID 12042386 (<https://www.ncbi.nlm.nih.gov/pubmed/12042386>).
51. Darwin, Charles (1871). *The Descent of Man* ([http://darwin-online.org.uk/EditorialIntroductions/Erasmus\\_TheDescentofMan.html](http://darwin-online.org.uk/EditorialIntroductions/Erasmus_TheDescentofMan.html)) (1st ed.)

51. Darwin, Charles (1871). *The Descent of Man* ([http://pdarwin-online.org.uk/Edition/introductions/freeman\\_theDescentofman.html](http://pdarwin-online.org.uk/Edition/introductions/freeman_theDescentofman.html)) (1st ed.), p. 39.
52. Hebb, Donald O. (1946), "Emotion in man and animal: An analysis of the intuitive processes of recognition", *Psychological Review*, **53** (2): 88-106, doi:10.1037/h0063033 (<https://doi.org/10.1037/h0063033>), PMID 21023321 (<https://www.ncbi.nlm.nih.gov/pubmed/21023321>)
53. Masson & McCarthy 1996, p. 9
54. Frans de Waal (1997-07). "Are We in Anthropodenial?". *Discover*. pp. 50-53.
55. Fogle, Bruce (1992). *If Your Cat Could Talk* ([https://books.google.com/?id=r17xU3z5SaUC&dq=if+your+cat+could+talk+fogle&q=anthropomorphic#search\\_anchor](https://books.google.com/?id=r17xU3z5SaUC&dq=if+your+cat+could+talk+fogle&q=anthropomorphic#search_anchor)). London: Dorling Kindersley. p. 11. ISBN 9781405319867.
56. Yudkowsky, Eliezer. "Artificial intelligence as a positive and negative factor in global risk." Global catastrophic risks (2008).
57. "Real-Life Decepticons: Robots Learn to Cheat" (<https://www.wired.com/2009/08/real-life-decepticons-robots-learn-to-cheat/>). *Wired magazine*. 18 August 2009. Retrieved 7 February 2016.
58. MARAKAS, GEORGE M.; JOHNSON, RICHARD D.; PALMER, JONATHAN W. (April 2000). "A theoretical model of differential social attributions toward computing technology: when the metaphor becomes the model". *International Journal of Human-Computer Studies*. **52** (4): 719-750. doi:10.1006/ijhc.1999.0348 (<https://doi.org/10.1006/ijhc.1999.0348>).
59. Cohen, Paul R., and Edward A. Feigenbaum, eds. The handbook of artificial intelligence. Vol. 3. Butterworth-Heinemann, 2014.
60. Moon, Youngme, and Clifford Nass. "How 'real' are computer personalities? Psychological responses to personality types in human-computer interaction." *Communication research* 23.6 (1996): 651-674.
61. Duffy, Brian R. (March 2003). "Anthropomorphism and the social robot". *Robotics and Autonomous Systems*. **42** (3-4): 177-190. doi:10.1016/S0921-8890(02)00374-3 (<https://doi.org/10.1016/S0921-8890%2802%2900374-3>).
62. "Fritz Heider & Marianne Simmel: An Experimental Study of Apparent Behavior" (<http://www.all-about-psychology.com/fritz-heider.html>). *Psychology*. Retrieved 16 November 2015.
63. Epley, Nicholas; Waytz, Adam; Cacioppo, John T. (2007). "On seeing human: A three-factor theory of anthropomorphism" (<http://doi.apa.org/getdoi.cfm?doi=10.1037/0033-295X.114.4.864>). *Psychological Review*. **114** (4): 864-886. doi:10.1037/0033-295x.114.4.864 (<https://doi.org/10.1037/0033-295x.114.4.864>). PMID 17907867 (<https://www.ncbi.nlm.nih.gov/pubmed/17907867>).
64. Waytz, Adam. *Social Connection and Seeing Human - Oxford Handbooks* (<http://oxfordhandbooks.com/view/10.1093/oxfordhb/9780195398700.001.0001/oxfordhb-9780195398700-e-23>). doi:10.1093/oxfordhb/9780195398700.013.0023 (<https://doi.org/10.1093/oxfordhb/9780195398700.013.0023>).
65. Piaget, Jean (1929). *The Child's Conception of the World: A 20th-Century Classic of Child Psychology*. New York, NY: Routledge. ISBN 0-415-16887-2.
66. Castelli, Fulvia; Frith, Chris; Happé, Francesca; Frith, Uta (1 August 2002). "Autism, Asperger syndrome and brain mechanisms for the attribution of mental states to animated shapes" (<http://brain.oxfordjournals.org/content/125/8/1839>). *Brain*. **125** (8): 1839-1849. doi:10.1093/brain/awf189 (<https://doi.org/10.1093/brain/awf189>). ISSN 0006-8950 (<https://www.worldcat.org/issn/0006-8950>). PMID 12135974 (<https://www.ncbi.nlm.nih.gov/pubmed/12135974>).
67. Blanchard, Jay; Mcninth, George (1 November 1984). "The Effects of Anthropomorphism on Word Learning" (<https://dx.doi.org/10.1080/00220671.1984.10885582>). *The Journal of Educational Research*. **78** (2): 105-110. doi:10.1080/00220671.1984.10885582 (<https://doi.org/10.1080/00220671.1984.10885582>). ISSN 0022-0671 (<https://www.worldcat.org/issn/0022-0671>).
68. Dorion, K. A Learner's Tactic: How Secondary Students' Anthropomorphic Language may Support Learning of Abstract Science Concepts. *Electronic Journal of Science Education*. Vol. 12, No. 2. 2011 Retrieved from <http://ejse.southwestern.edu>.
69. Cusack, Odean (2013). *Pets and Mental Health*. Binghamton, NY: Routledge. ISBN 0-86656-652-X.
70. Aggarwal, Pankaj; McGill, Ann L. (1 December 2007). "Is That Car Smiling at Me? Schema Congruity as a Basis for Evaluating Anthropomorphized Products" (<http://jcr.oxfordjournals.org/content/34/4/468>). *Journal of Consumer Research*. **34** (4): 468-479. doi:10.1086/518544 (<https://doi.org/10.1086/518544>). ISSN 0093-5301 (<https://www.worldcat.org/issn/0093-5301>).
71. Waytz, Adam; Norton, Michael. "How to Make Robots Seem Less Creepy" (<https://www.wsj.com/articles/how-to-make-robots-seem-less-creepy-1401473812?tesla=y&mg=reno64-wsj&url=http://online.wsj.com/article/SB10001424052702303627504579557683237189354.html>). *Wall Street Journal*. ISSN 0099-9660 (<https://www.worldcat.org/issn/0099-9660>). Retrieved 16 November 2015.
72. Waytz, Adam (13 May 2014). "Seeing Human" ([http://www.slate.com/articles/technology/future\\_tense/2014/05/anthropomorphizing\\_driverless\\_cars\\_psychology\\_research\\_into\\_autonomous\\_vehicles.html](http://www.slate.com/articles/technology/future_tense/2014/05/anthropomorphizing_driverless_cars_psychology_research_into_autonomous_vehicles.html)). *Slate*. ISSN 1091-2339 (<https://www.worldcat.org/issn/1091-2339>). Retrieved 16 November 2015.



## Sources

---

- Masson, Jeffrey Moussaieff; McCarthy, Susan (1996). *When Elephants Weep: Emotional Lives of Animals* ([https://books.google.com/books?id=UcbYqb8D4IEC&pg=PR19&dq=Jane+Goodall+controversy&lr=&ei=wQ\\_fS9mEGpm6yQT-1PHDCQ&cd=52#v=onepage&q=Jane%20Goodall%20controversy&f=false%20](https://books.google.com/books?id=UcbYqb8D4IEC&pg=PR19&dq=Jane+Goodall+controversy&lr=&ei=wQ_fS9mEGpm6yQT-1PHDCQ&cd=52#v=onepage&q=Jane%20Goodall%20controversy&f=false%20)). Vintage. p. 272. ISBN 0-09-947891-9.

## Further reading

---

- Baynes, T.S., ed. (1878). "Anthropomorphism". *Encyclopædia Britannica*. **2** (9th ed.). New York: Charles Scribner's Sons. pp. 123-124.
- Mackintosh, Robert (1911). "Anthropomorphism". In Chisholm, Hugh. *Encyclopædia Britannica*. **2** (11th ed.). Cambridge University Press. p. 120.
- Kennedy, John S. (1992). *The New Anthropomorphism* (<https://books.google.com/books?id=5RjoDMW8pSIC>). Cambridge University Press. ISBN 978-0-521-42267-3.
- Mithen, Steven (1998). *The Prehistory Of The Mind: A Search for the Origins of Art, Religion and Science*. Phoenix. p. 480. ISBN 978-0-7538-0204-5.

## External links

---

- "Anthropomorphism" entry in the Encyclopedia of Human-Animal Relationships (<http://crl.ucsd.edu/~ahorowit/Encyclopedia-anthrop.pdf>) (Horowitz A., 2007)
- "Anthropomorphism" entry in the Encyclopedia of Astrobiology, Astronomy, and Spaceflight (<http://www.daviddarling.info/encyclopedia/A/anthropomorphism.html>)
- "Anthropomorphism" in mid-century American print advertising. (<http://gogd.tjs-labs.com/gallery-view?keyword=anthropomorphism>) Collection at The Gallery of Graphic Design.

---

Retrieved from "<https://en.wikipedia.org/w/index.php?title=Anthropomorphism&oldid=847200146>"

---

**This page was last edited on 23 June 2018, at 16:32 (UTC).**

Text is available under the [Creative Commons Attribution-ShareAlike License](#); additional terms may apply. By using this site, you agree to the [Terms of Use](#) and [Privacy Policy](#). Wikipedia® is a registered trademark of the [Wikimedia Foundation, Inc.](#), a non-profit organization.