

Religion-Based Perspective and Influences on Use of Animals in Research

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Abstract

All religions are concerned with the care and welfare of animals, paying respect to the animals. Beliefs and attitudes towards animals that are based on religious and cultural perspectives play an important role in human-animal relationships. Christian attitudes have been impacted by Western philosophical consideration of human-animal relationships, whereas Eastern religions (Hinduism, Buddhism, and Islam) and their teachings impose varying values on the existence of animals. Even though their justifications affect the views of individuals and their feelings toward animal testing, scientists continue to employ animals in their research. Even though it is impossible to underestimate the worth of a life, this article describes the religious perspectives on animal existence and harming to animals.

Keywords: *Laboratory Animals, Religion, Buddhism, Hinduism, Christianity, Islam.*

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Introduction

Animals have long been used for companionship, sport, entertainment, sustenance, and transportation. However, the use of animals in scientific research is more controversial than its general usage (National Research Council 1988). Additionally, it is the most contentious branch of science. Even though there are several alternatives, animals continue to be employed in science to comprehend fundamental biological principles, in the discovery and development of medications, vaccines, and medical devices, in the safety testing of pharmaceuticals, other chemicals, and consumer goods, in environmental research, and in education and training programmes around the world (Taylor 2019). Mice, rats, hamsters, rabbits, fishes, birds, guinea pigs, amphibians, dogs, cats, and non-human primates, are the pioneer animal models that have been used in research for a long time (National Research Council 1988). Moreover, worldwide, millions of animals are utilized in experiments each year (Driscoll 1995).

Animals must be sacrificed using a specified methodology during or after the experiment, depending on whether the entire animal, its organs, or its tissues are being utilized. Animals do, however, occasionally perish because of experiments (Doke and Dhawale 2015). The multiculturalism that impacts their regions is most likely to be the cause of the opposing values and opinions that scientists from different parts of the world may have in such situations regarding using animals in research. However, the consumption of animals for dietary purposes is approved in Judaism, Christianity, Islam, Hinduism, and many Chinese traditions, it is forbidden to Jains and many Hindus. Animal sacrifice is a major part of the traditional Hindu ritual and is also approved in Islam. Ritual sacrifice is opposed by Jains and Buddhists (Smith 1997).

These beliefs and attitudes Beliefs and attitudes toward animals play a vital role in human-animal relationships, animal welfare, ecological belief,

and sustainability (Pasaribui, Martens, and Takwin, 2021). Human attitudes toward animals have been influenced by the ancient Greek philosophers as they have formulated terms such as *ethos*, *ethics*, and *morals*. The teachings of Thomas Aquinas (1225-1274) and Francis of Assisi (1181 or 1182-1226) laid the foundation for a Western philosophical consideration of human-animal relationships, which has influenced Christian attitudes. The Eastern religions (Jainism, Hinduism, and Buddhism) abandoned animal sacrifice while emphasizing non-injury to living beings and a repeated, cyclical embodiment of all living beings. Hinduism, Buddhism, and Jainism philosophies are doctrines of non-violence or non-killing (Szuze et al., 2012).

However, most Western countries have recently adopted laws protecting laboratory animals and assuring control of their pain. It is important to understand that the attitude and beliefs of a nation regarding the use of animals are determined by their religions. Thus, it is crucial to reveal the relationship between these attitudes and the use of animals for research purposes by digging into the deep of these religious considerations.

The present review is based on data from the literature review to develop the religious perspective and influences on the use of animals in research. It may open new horizons to consider this controversial topic from a different angle by integrating the interfaces of religious perspectives and scientific points of view of animal experiments.

World Religions and Animal Welfare

Religion is frequently linked in modern countries to a particular moral perspective that emphasizes delayed satisfaction, limited sapiosexuality, and expanded collaboration. Many people assume that a set of consistent values has defined religiosity over time. However, it has occasionally not been like this. Religious behaviors were primarily about bartering commodities and offerings with supernatural abilities in societies of

hunter-gatherers, agro-pastoralist communities, and ancient chiefdoms. Rituals, animal sacrifices, and adherence to specific taboos were performed in exchange for harvests, recovery from diseases, births of descendants, or safeguarding from foes. New religions did not start prioritizing ethical commandments over practical and ritualistic commands until the end of Antiquity. The ruling classes of various vast empires later absorbed the moralizing concepts of the Axial Age and used them as the basis for their respective "world religions." (Baumard and Chevallier 2015). According to the findings of a recent study by Pasaribu, Martens, and Takwin (2021) on religious orientation, they have revealed that those who have strong personal religious convictions and who are devoted to their religions are likely to have little tolerance for harming animals (Pasaribu, Martens, and Takwin 2021).

Use of Animals in Research in Different World Regions

It was reported that the United States as the country used the highest number of animals in research and testing (around 20 million), followed by China (16 million) in 2020 (Mikulic, 2023). The report issued by the European Commission in 2019 shows that more than 11 million animals were used for scientific, medical, and veterinary research across 28 Member States (including the UK) and Norway (European Commission, 2022). However, the number of animals used for scientific purposes is not adequately reported in many countries (Driscoll 1995). Mikulic (2023) reported that the United States is the country that uses the highest number of animals in research and testing, followed by China at around 20 million and 16 million respectively as of 2020. However, the number of animals used for scientific purposes is not adequately reported in many countries (Taylor and Alvarez, 2019). Most of them are developing countries that are rich in cultural and religious diversity, which teach us to respect and be compassionate the animals and reject unnecessary suffering (Parlasca et al.

2023). Despite that, certain religious practices accept sacrifice (Rahman 2017). However, in some instances even though religions do not accept the use of animals for food or any purpose (Szűcs et al. 2012), practices accept, sacrifice. Ritual slaughter of animals is common in many developing countries, such activities account for only a small portion (Rahman 2017). However, reducing stress and pain for the animal before and during slaughter is often not compatible with traditional beliefs (Qekwana et al., n.d.).

The attitude survey done by Driscoll, implies that 44 % and 74.4 % of the sample approved fishing. Product-testing research using animals was approved by 44% of the sample; 74.4% approved of medical research using animals; and 67.7% approved of scientific research using animals (Driscoll 1993)

Carnovale et al. (2021) reported that respondents (>900) in their study agreed or strongly agreed that caring for animals makes them feel good (75%), then "for the sake of animals" (69%) and "because my religion tells me so" (59%). Further, it was found that there was no relation between the treatment of animals with religious inspiration, and with religious affiliation (Carnovale et al. 2021). In contrast, Simmond reported cultural morals and traditions, the status of animals in various religions, individual and cultural ethical values, and the diversity of concern for specific species (including the perceptions about dogs and cats versus mice, rats, and reptiles) all contribute significantly to the complexity of addressing moral and ethical issues involved in the use of animals in biomedical research, teaching, and testing activities (Simmonds 2017). For example, the views of the Indian subcontinent are heavily influenced by notions of samsara and rebirth, which are nurtured by different traditions (Smith 1997). However, the implications of those concepts are not uniform and animal sacrifice is a part of the major rituals of Hinduism, although the keeping of pets and special treatment of cattle is a key feature of Hindu life (Kang and Whittingham 2010). Further, in some instances

even though religions do not accept the use of animals for food or any purpose, do accept the sacrifice of animals. This is so true with the acceptance of the use of animals in biomedical activities which do not have black or white clear-cut definitions and answers, but many shades of gray.

Buddhists' Perception of Animal Sacrifice

The basic of Buddhism is laid down on "Not to do evil, to cultivate merit, to purify one's mind is the teaching of the Buddhas" (Sabbapapassa akaranam- Kusalsā upasampada, sacittapariyo dapanam- etam buddhāna sasanam). The four noble truths are suffering, the reason for suffering, overcoming this suffering, and the path to overcome this suffering. The noble eightfold paths are right view, right intention, right speech, right action, right livelihood, right effort, right concentration, and right ecstasy (Bodhi, 1984). Moreover, concerning the doctrine of right livelihood or correct employment Buddhists must avoid killing animals for a living. In addition, there are five precepts in Buddhism that promote the ethical conduct of human beings in everyday life in which the first precept is "I undertake to refrain from killing" (Dahlke *et al* 1975). According to the Buddha's teaching, if anyone wants to confirm whether he/she has killed an animal, they should be aware of the following five aspects that are essential to fulfill the act of killing an animal; the animal is alive, intention to kill the animal, think and follow a procedure to kill that animal and conclusively the death of the animal due to the procedure followed. Without fulfilling these aspects, the killing of an animal is not completed (Bodhi 1984).

In the Buddhist traditions, "loving-kindness" meditation is focused on cultivating experiences of compassion, joy, equanimity, and a sense of love and connectedness with others (Phyu, n.d.) and the Abaya Mudra (Mudra- positions of the hands and fingers assumed by the Buddha) in the Buddha status depicts no fear or protection (Kemmerer 2012) for all irrespective to the size,

color, gender of the animal including human. It can find a slightly bent right arm raised to the breast level with all fingers extended and the palm showing outward (Kristeller and Johnson 2005) (Figure 1).

Fundamentally, Buddhism promotes love, compassion, and kindness and the concept of Ahinsa (nonviolence), not causing harm to any living being (Kristeller and Johnson 2005). Thus, if someone adheres to Buddhist teaching, will always promote the physical and mental fitness of all living beings. The teaching of Lord Buddha always endorses the principle of non-maleficence in modern ethics such as do not kill, do not cause pain or suffering, do not incapacitate/debilitate, and do not cause offense/disregard.

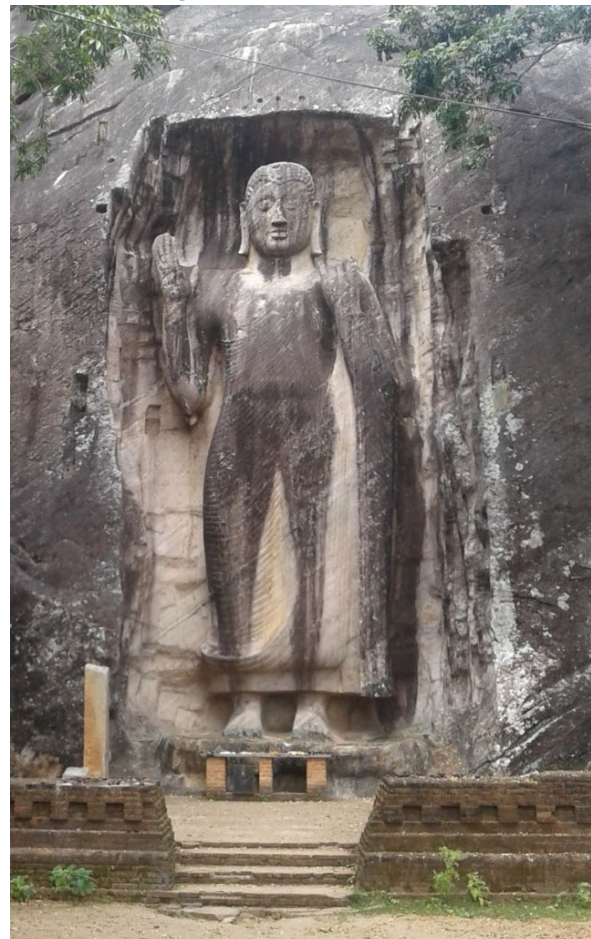


Figure 1 Statue of Lord Buddha Abhaya Mudra, hand pose, symbolizing safety and no fear in the

Reswehera Rajamaha Vihara, Kurunegala, Sri Lanka
Photo Nilmini Rajapaksha

Although the teaching of Lord Buddha did not explain the use of animals in research, scientists could consider it an accepted phenomenon in Buddhism based on their intentions. Because, when a scientist harms an animal in his/her experiments, the intention of the scientist is not just harming the animals since those experiments have been done for the benefit of humans as well as the animals. Therefore, the intentions of scientists cannot be identified as bad intentions, and they may have good effects or good karma. However, scientists must make sure to do minimal/no harm to animals during the experimental procedures as Lord Buddha says, “All tremble at force - of death are all afraid likening others to oneself- kill not nor cause to kill (All fear punishment: all fear death, comparing oneself with others, one should neither kill nor cause to kill)” Dhammapadaya verse 129) (Thero, 1993). Moreover, the teaching of the Buddha defines “ethics” as skillful thought, speech, and deed that result in happiness at a given time, while the acts that are morally awkward result in future pain, suffering, and torment. That is why the Buddha says: “If one speaks or acts with a pure mind, happiness follows him, like his shadow that never leaves- If with a corrupt mind one speaks or acts, misery follows him, as the wheel of an ox car follows the second leg” (Dhammapadaya, verses 1 and 2) (Thero, 1993).

Hinduism's Perspective on Animal Sacrifice

The main reason for Hindus' respect for animal rights is because of the principle of Ahimsa. Ahimsa, meant to be the practice of non-violence is the highest Dharma which is practiced among the Hindus to avoid harm to both humans and non-humans and treat all living beings with equal respect to bring individuals closer to Moksha (Jayaram V, n.d). The laws of Manu state that “Meat cannot be obtained without injury to animals, the slaughter of animals obstructs the way to heaven” (History.com editors, 2017).

Thus, it ensures that killing animals is considered a violation of Ahimsa which may cause a lot of suffering without attaining the Moksha. The suffering is given with the name of Karma, what a human does now will be reaped in the future. That explains the reason why many strict followers of Hinduism are vegetarians (Anonymous, n.d.,). This depicts the ethical and welfare aspects of animal use from the Hinduism perspective.

According to Hinduism, nature and all its bounties are considered a part of divinity. Vedic people who are considered the followers of ancient Hinduism treated nature as an integral part of their survival. Their compassion toward animals is portrayed through the scriptures including the Vedas, the Puranas, and the Upanishads. The love and respect for the animals were appreciated in those scriptures as all Hindu gods have their vehicles (Vahanas) as animals and birds, for instance: Lord Shiva relates to the bull so-called Nandi, and Goddess Saraswathi is associated with a peacock. Furthermore, they appreciated the repeated use of these animals, birds, fish, and serpents as carvings and frescoes on the walls of the Hindu temples the meaning of honoring them, the use of animals as religious symbols, for example, the elephant associated with the Goddess Lakshmi as a symbol of abundance and the use of a cow as a sacred symbol of life which is associated with Aditi, the mother of all the gods (History.com editors 2017). Yajurveda, one of the Vedic scriptures, says “No person should kill animals helpful to all. Rather, by serving them, one should attain happiness”.

Holy Indian cow silhouette in an old temple arch in India (Figure 2) demonstrates that nonviolence, or ahimsa, ought to be practiced not only toward humans but also towards all beings (Caruana 2020). It relies on a relatively new written content, the Chandogya Upanishad, that first appeared around 800 BC. In addition to these, other Hindu scriptures like Ramayana and Mahabharata illustrate that the animals are of divine species, for example, Hanuman one of the principal characters in Ramayana is in the form of a monkey and is still worshiped (Bristol 2019).

Bhagavata Purana 7.14.9 stated that animals should be treated with equal respect: “Deer, camel, donkey, monkey, rats, creeping animals, birds, and flies - one should consider them like one's children, and not differentiate between one's children and these creatures” (Mahawar and Jaroli 2006). Bhagavad Gita (verse 5.18) indicates that a self-realized soul can understand the equality of all beings (Szűcs *et al.* 2012).

In this way, Hinduism scriptures have been evident in the advocacy of animal welfare and the ethical and humane treatment of animals with love and respect(Figure-2)

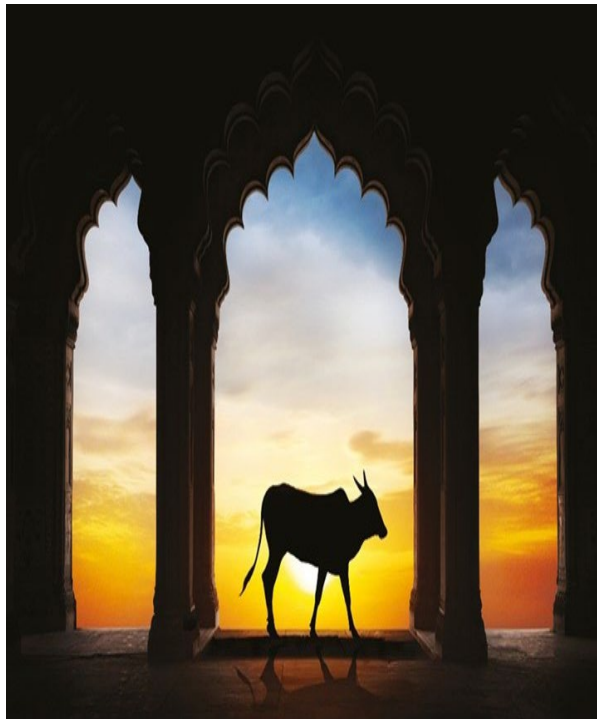


Figure 2 Holy Indian cow silhouette in an old temple arch in India (Caruana 2020).

Our view on animals goes back ages. Anciently, animals were highly considered a source that could communicate with gods. There is even a mythology that animals can acquire spiritual knowledge from their enlightened masters by simply listening to the discourses. Furthermore,

they are also found used as a whole or body part or byproduct like milk, blood, organ, skeleton, etc., to treat the ailments of humans including tuberculosis, asthma, paralysis, jaundice, earache, constipation, weakness, snake poison, etc., by living in harmony with animals. For example, in a study, it was mentioned that 15 animal species were used for 20 different medicinal purposes. Fat of pig is used as a massage cream for muscular pain, fecal matter of house sparrow is applied in the anus of the baby to treat constipation, and the fresh blood of pigeon is massaged externally to treat paralysis are some shreds of evidence for using animals to treat various diseases (Panchami 2021). In addition, they started to use animals for economic purposes as well. However, killing animals was prohibited even at those times (History.com editors 2017). Hindus have created rituals specifically to celebrate animals by providing sacrificial offerings of what they could eat or drink, moreover, they find that day an auspicious day, fast, recite mantras, and perform puja. For instance, Naag Panchami is a day of celebration for serpents, Hindus worship twelve serpents by washing them with milk and offering milk, ghee, rice, coconut sweets, and black sesame ladoos to honor them as they have an intimate connection with Lord Shiva (Krishna 2010). By doing so, they believe that they can earn merit, called *Punya* (Kemmerer 2014). In contradiction to these, animal sacrifice is also still practiced as a major ritual of Hinduism by some Hindus, cattle are set apart for special treatments in this category. Some Hindus do this as an offering to a Deity as a means of curing sickness and giving thanks to gods (Mahawar and Jaroli 2006).

The use of animals in scientific research has been seen by the doctrinal Hinduism of the Vedas and Upanishads as a distraction from the higher knowing that people should seek. The use of animals in research could not be justified except for medicinal uses (Panchami 2021). Hinduism senses the voices of animals that grieve when harmed, they will be afraid, tremble, and are in

pain. Thus, it violates the principle of Ahimsa. Hence, research involving animal suffering is not recommended in Hinduism (Shastra 2022). However, as some Hindus practice animal sacrifice for the reason of curing a sickness that seems more brutal, we might use animals without causing much suffering for the benefit of a larger human population. As an example: The Indian medical treatments such as Charaka, Sushruta, and Harita Samhita are evidence of the fact that the animals were treated with care by providing the treatments for their ailments and these herbs used in animals also have successfully managed human ailments (Johnson 1997).

Christian Perspective on Animal Sacrifice

Traditional Christians debate the concept of dominion as they try to prove that humans are the rulers of the earth, and they have the power to use animals for their needs. However, it is a misunderstanding of the term “dominion” because it is proved in Genesis 1:26-29 below, that the god says plant materials are created for humans to fulfill their requirements of food. “See, I have given you every plant that gives seeds that is on the earth, and every tree that has fruit that gives seeds. They will be food for you” (“Genesis 42” – The Holy Bible, n.d.). This quote can be stated as the god never gives a chance to hurt animals, even to fulfill the food requirements of humans. Therefore, the true meaning of “humans are the dominions over the animals” is God has given the responsibility to humans to spread kindness, care, and look after nonhuman beings – animals. Accordingly, humans have no right to hurt or kill animals for any purpose.

However, Christianity does not reveal any idea about using animals for scientific research because laboratory animal science has become an emerging trend after the golden eras of Christianity as a successful resolution to the issue of clinical experiments involving humans. Thus, the philosophy of religion should be understood carefully in the case of implementing this perspective in the case of animal welfare and ethics. From the Christian point of view, there is the concept of “respect for the integrity of

creation”. In the Bible, animals are created as helpers and companions for human beings. But human dominion over the whole creation and thus also over the animals is meant as thoughtful stewardship and not as a right to exploit animals and to consider them only as an instrumental value for humans. Animals have their intrinsic value and that should be respected.

As mentioned above, the Holy Bible is the scripture that contains the thoughts of God, although it contains old types of beliefs. When focusing on the new era and novel thoughts of Christians, it is important to study the point of view of Christian priests. Christianity and the church have a strong relationship that cannot be broken apart. The Church is the religious institution that guides Christians to their religious pathway. Therefore, the churches and the priests play a significant role in the lives of Christians. The Pope is the sovereign pontiff of all the churches in the world. Research was done by Rodriguez in 2002 in San Marcos, Texas on Catholicism & Animal Ethics by gathering the ideas of Christian priests about animal ethics. This is based on the point of view of priests and the pope present, Pope Francis, about animal welfare and ethics (Rodriguez 2002).

However, all the priests who participated in the research had agreed that abusing or hurting animals is against the holy bible and Catholicism. The problem is with the way of interpretation of the bible and holy readings of Catholicism by Christians for their sake. Humans misunderstand that they are the dominions, however, neither the gods, Jesus Christ nor any priest accept the mistreatment of animals. All their teaching is to protect ethics, validate animal welfare, and better use of animals in science. Therefore, it is the chance to obey their point of view and prove the stewardship of mankind.

Besides the aforementioned historical religious quotes and beliefs, it is crucial to investigate the status of Christian perspectives and animal experiments. The Judeo-Christian notion of human dominion over animals has a significant impact on concerns about animal welfare in

numerous parts of the world. Different civilizations have been interested in discussing their attitudes and ideas surrounding how humans relate to other animals. The development of beliefs regarding animals was also significantly influenced by the prehistoric civilizations of Greece and Rome. Animism, mechanism, vitalism, and anthropocentrism comprised the four main streams of thought in ancient Greece concerning interactions between humans and animals. The pontificates of Francis of Assisi (1181 or 1182-1226) and Thomas Aquinas (1225-1244) constitute the basis of Western philosophy's investigation of human-animal association (Szűcs *et al.* 2012). Christians' perspectives on the topic are still influenced by Aquinas' anthropocentric philosophy (Baumard and Chevallier 2015). The foundations of contemporary philosophy emerged during the Renaissance and Time of Enlightenment. Descartes (1596-1650) played a significant role in these philosophical shifts. Regan, Singer, and other researchers (Regan 2017; Singer 1975) have more recently advanced the idea that discomfort and suffering regardless of the animal, or perhaps in certain complex species, are undesirable and should be avoided or minimized. To discover the truth, it is crucial to take into account a variety of viewpoints (Rohr 1989).

Singer was possibly the pioneering Christian philosopher to criticize "men's dominion" as despotism instead of constitutional rule. Furthermore, the philosopher Jeremy Bentham (1748-1832) also formally stated the idea of utilitarianism, and John Stuart Mill, who lived from 1806 to 1873, expanded on it. The whole quantity of benefits an activity will result in is compared against the entire amount of suffering that will result to determine if the action is ethically right. Numerous philosophic breakthroughs resulted from Singer's book on animal liberation (1975). Singer grounds his vegetarianism on an animal welfarist and a hedonistic utilitarian attitude as opposed to any claim that slaughtering animals is erroneous even though many people may believe

he favors a rights-based perspective (Szűcs *et al.* 2012)(Figure-3).



Figure -3 Christian patron saint for animal care, St. Francis of Assisi (Caruana 2020).

However, the countries that represent Christianity as their major religion lead the animal-based experiments and, they have gained enormous successes in various fields. Furthermore, they are concerned the animal welfare and ethics in research procedures. With that, they have improved legislation and regulatory bodies for animal welfare and rights regarding animal experiments by considering their religious perspectives as a basis.

Islamic Perspectives on Animal Sacrifice

Although Islamic psychic force put the animals at a lower level than that of human beings, there is ample evidence in the Quran to suggest that animals' consciousness is of a higher degree than mere instinct and intuition (Awan 2018).

Islam perceives animals as Allah's creations for human needs, they must be treated humanely, as narrated in Sahih Muslim, where Prophet Muhammad SAW said, "It behooves you to treat animals gently." In line with this teaching, other traditions also reported that the Prophet SAW not only forbids killing animals without justified reasons (such as food) but also condemns

people who let animals in their care starve and force them to work without rest. Therefore, animal cruelty is a form of transgression and those guilty of it will receive repercussions in the Hereafter (Awan 2018).

Muslims believe that humans are superior to animals because humans can make moral judgments. This means that humans can use animals, but that we also must care for animals, and the Quran provides very clear guidance on animal treatment. The Quran informs Islamic law (known as sharia law) and Islamic tradition (hadith). Those indicate that certain things are permitted to humans – they are halal – whereas other things are harmful to humans and therefore not permitted (haram) (Malek 2022).

The basic principles of Islamic law remain definite and unaltered (Rahman 2017). It has been identified in Islam that human beings depend on animals for their existence and hence it permits the use of Animals in Science experiments which will in turn benefit human mankind. In the Holy Quran Chapter 45, verse 14, God has mentioned that:

“And He has subjected to you whatsoever is in the heavens and whatsoever is in the earth: all this is from Him.”

As per the above it is verse it is said that Allah has placed man in the highest order of living species and has allowed them to use the lower order of species for purposes beneficial to mankind but with proper justification (Malek 2022).

Muslim scholars have pointed out many ethical aspects to be considered by the scientists involved in animal research. For example, Al-Hafiz Basheer Ahmad Masri, a renowned scholar who extensively addresses animal welfare as an exception to Islam's general prohibition (Encik 2022). He founded the International Muslim Association for Animals and Nature and he urged that religious beliefs be harnessed with practical reverence for all creation (Safitri et al. 2022). As per the view of Masri, to justify the exception, scientists must thoroughly assess the necessity of the experiment itself and how crucial its output is in protecting human interest. Moreover,

although he does not reject the benefits of animal experimentation for humans, especially in formulating treatments and medications for fatal diseases, he highlights the fact that the assumed necessity must be reconsidered. This reconsideration is essential because humans often suffer from diseases due to unhealthy lifestyles and thus, experiments conducted on animals to find remedies for self-induced illnesses have become morally questioned (Malek 2022). However, in cases where animal testing is genuinely indispensable and cannot be avoided, the general prohibition is lifted according to one of the Islamic legal maxims, “al-Darūrāt tubīḥu al-Maḥẓūrāt”, which means “a necessity may authorize forbidden acts.” Nevertheless, this permissibility is hooked on to another critical maxim in Islamic jurisprudence, “al-Darūrah tuqaddar bi qadarihā”, which means “necessity is determined according to its degree (extent).” This maxim may rule the limit on: the permissibility of similar animal testing in the future, the number of animals to be tested, and the extent of invasive procedures.

Above all, in any form of human-animal interaction, whether it involves slaughtering animals for food, keeping them as pets, or using them for scientific research (given that the necessity is justified), humans are still responsible for ensuring their needs include food, suitable housing, and space to express natural behavior are fulfilled. Unessential waste and inhumanity towards these God's creatures are not accepted in the Holy Quran Quran (Holy Quran: 6:39, 45:13, and 31:20). Many sayings of the Holy Prophet highlight the fact how Islam supports the kind treatment of animals (Nakyinsige et al. 2013).

Islam has mentioned things about the general treatment of animals. The Islamic prohibition against cutting live animals, especially when pain results, can be extended to any interference with the body of an animal that causes pain or disfigurement is contrary to Islamic precepts. Some research on animals may still be justified, given the traditions of Islam. Basic and applied

research in the biological and social sciences, for example, is allowed if laboratory animals are not causing pain or harm and if human beings or other animals benefit because of the research. The basic and most important point to understand about using animals in science is that the same moral, ethical, and legal codes should apply to the treatment of animals as are applied to humans. According to Islam, all life is sacrosanct and has the right to protection and preservation (Awan 2018).

Many publications are showing the ethics of environmental concern and nonhuman animal protection. Islam has ethical guidance in treating animals properly (Nakyinsige et al. 2013). Laws in Islam are most prescriptive in their insistence on humane treatment. As per the codes of ethics given in Islam the killing of nonhuman animals for meat and hides by halal (that is, permissible based on a set of ethical and religious standards) methods is obligatory, with meat considered forbidden (Makrooh) if the nonhuman animal has in any way been subjected to inhumane treatment (Rahman, 2017).

Meanwhile, animal welfare has received little attention, in slaughtering sacrificial animals indeed. The conception of animal welfare in Islam has a holistic view because it is based on theology, not merely seeing animals as living things but they are one of God's creatures. Furthermore, it is important to acknowledge that Islam respects the intrinsic value of animals and teaches animal welfare. Islam lays great emphasis on animal rights and man's responsibility for their welfare (Nakyinsige, Che Man, et al. 2013). These can be seen from the following examples taken from the Holy Quran; "The Holy Prophet Muhammad was asked by his companions if kindness to animals was rewarded in the life hereafter. He replied: Yes, there is a meritorious reward for kindness to every living creature (Pasaribu, Martens, and Takwin 2021). The ethics of animals that are promoted by Islam allow taking advantage of animals because that is one of the goals of creating animals. The mana cum maghza reading resulted in an understanding

that meeting animal welfare is fulfilling all creature welfare. It is a holistic-sustainable relationship among creatures (Safitri et al. 2022).

The concept of animal rights contradicts Islamic teachings. The right to life stands for all creatures, including humans, animals, plants, and others. In some cases, killing an animal for an acceptable reason is allowed. The reasons could be for consumption, human safety, universal benefit, or others. Killing or slaughtering animals must be done in a good manner and fill the lawful aspects. The Hadith narrated by Muslims from Abu Ya' la stated that Allah commands you to do good things (Ihsan) if you want to kill then kill in a good manner, likewise if you want to slaughter an animal then do it in a good way. Freedom from hunger and thirst, freedom from discomfort, freedom from pain, freedom from fear, and freedom to express natural behavior are based on human awareness of their duties as God's vice-regent and the existence of animals as God's creatures. One of the Islamic teachings on slaughtering is reciting bismillah. The recitation showed divine awareness when taking action against animals. In the name of God, it shows that the animal is a creature created by God. Humans have to ask God's permission. Slaughtering animals is also intended to take advantage of animals as one of the purposes for which animals were created "as beneficiaries" and to express humans function as God's vice-regent (Nakyinsige et al. 2013).

Despite contemporary Islamic rites involving animals, a study of Islam also shows the spreading of kindness to living creatures. The Quran, the Hadith, and the history of Islamic civilization offer many examples of kindness, mercy, and compassion for animals. Islam teaches that animals should be given equal consideration to humans (Awan 2018). Accordingly, while working with laboratory animals it is important to keep the following goals in mind: using the least number of animals; providing all appropriate care for animals, even animals that are dying; minimizing animal

suffering and psychological abuse; as well as giving priority to safety and animal welfare. To assist in achieving these goals, regulations as well as legislation are necessary to ensure respect for the rights of laboratory animals (Ba 2007).

The fundamentals of all these religions are laid to promote good animal care, which influences the attitudes of people working with laboratory animals: researchers, technicians, laboratory animal veterinarians, and coworkers on the way of treating laboratory animals. However, the knowledge, training, and skills of persons handling laboratory animals might ensure the proper culture of care. It maintains the well-being of laboratory animals that give their lives for the well-being of humans.

Conclusion

In this review, differences, and similarities in attitudes towards the animals which are used in different religion-based cultures have been discussed. All religions have in common their emphasis on the humane treatment of animals, although mankind has been given dominion over animals. Despite their disparities, religions do share core beliefs that humans ought not to intentionally inflict pain on other beings.

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