

## Perception and Practice of Animal Welfare in Developing Countries

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**Abstract:** Animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behavior and if it is not suffering from unpleasant states such as pain, fear and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/killing. Animal welfare refers to the state of the animal. Animal welfare practices have multiple benefits for people and animals. By improving animal health and productivity, they help maintain the food supply for people who produce and use animal products. They sustain the livelihood of small-scale animal producers and thus help preserve stable rural communities. Good animal welfare practices can also contribute to food safety and to human health and psychological well-being. Especially in parts of the world where many people suffer from poverty and starvation, an approach to animal welfare that focuses on benefits to people is most likely to succeed. Animal welfare problems are extremely diverse, certain generic problem areas occur on a global basis. These include transportation especially over long distances, slaughter and pre-slaughter management, provision of adequate feed and water, the handling of animals by humans, culling of animals that are unhealthy or of low commercial value and keeping animals under conditions for which they are not genetically suited. Animal welfare legislation and its enforcement are not a widespread reality at present. Moreover, there are worldwide variations in practices concerning farming and the keeping of animals. In many countries concern for animal welfare is not a major issue. Religion and economy play a major role in public perceptions of animal welfare or the absence of these. At the same time a trend may be recognized of increasing attention for global animal welfare issues. Providing policy and legal frameworks (capacity building) and economic incentives (access to global markets) may provide opportunities to further improve animal welfare on a global scale. Moreover, for poor or landless farmers, making a satisfactory living is often the first step toward being able to provide appropriate animal care. Hence, improving the economic well-being of low-income animal owners is a high priority element in efforts to improve animal welfare. There is a need to develop expertise in animal welfare science in countries with developing economies, partly by creating partnerships with established centers of expertise.

**Key words:** Animal • Welfare • Perception • Developing Country

### INTRODUCTION

The welfare of humans and the welfare of animals are closely linked. In many regions, a secure supply of food for people depends on the health and productivity of animals and these in turn depend on the care and nutrition that animals receive. Many diseases of humans are derived from animals and the prevention of these animal

diseases is important for safeguarding human health. Roughly one billion people, including many of the world's poor, depend directly on animals for income, social status and security as well as food and clothing and the welfare of their animals is essential for their livelihood. Moreover, positive relations with animals are an important source of comfort, social contact and cultural identification for many people [1].

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In developing countries, poverty, resource scarcity and education all factor into the way that animals are regarded and treated. In some cultures, certain animals may be accorded holy status, while other species are subject to extreme indifference and neglect. Economic systems and human values that place efficiency and profit above animal welfare lead to the inhumane practices found in factory farming [2]; thus, animal welfare issues cannot be viewed in isolation from culture, values and economic conditions all of which affect how animals are perceived and treated. Developing countries are increasingly coming under pressure to harmonize international standards set by developed countries, such as to improve their delivery of veterinary services as a prerequisite for entering the competitive arena of international trade in animals and animal products [3]; the demand of certain standards in the instructions to authors by some scientific journals, e.g., of quality, relevance and, in animal experiments, proof that no alternative is available [4-6]. While consideration of alternative methods for animal tests in developing countries is significantly important (because good quality laboratory animals and proper animal facilities are not always sufficiently available to perform the currently required quality controlled testing), it is to be noted that some alternative methods have been implemented in the development, production and testing of new vaccines as well as in toxicological studies by some institutions [7].

Animal welfare is profoundly affected by the culture, values and economies of human societies. Research that can cause pain, suffering, or lasting harm to an animal is very tightly regulated in countries such as the UK, USA, Canada, Australia and Europe [8, 9]. Animals are sentient beings that are capable of experiencing pain and suffering. Even a procedure which is a common part of daily veterinary practice, such as venipuncture to obtain a blood sample, is regulated when it is used for research purposes, as the animal will be exposed to the pain of needle insertion without obtaining any direct benefit from the procedure. Such regulation is in place for the protection of both the animals involved in research and the researchers themselves [9].

**Definition of Animal Welfare:** In terms of achieving clarity of purpose, the first principle is to have a clear understanding of what we mean by animal welfare. Many different stakeholders have varying understandings and/or perceptions of what animal welfare means. This has been subject to much scientific research, thinking and debate over the years. There have been a

number of evolving schools of thought which have advocated the importance of different aspects - the physical state of the animal (health, nutrition, free from injury), its mental state (apprehension, fear) and the environment in which it is kept approximating its 'natural living' environment. It is now generally accepted that the well-being and thus the welfare of an animal comprises the state of the animal's body and mind and the extent to which its nature (genetic traits manifest in breed and temperament) is satisfied. However, these three aspects of welfare sometimes conflict and this presents practical and ethical challenges [10].

Animal Welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behavior and if it is not suffering from unpleasant states such as pain, fear and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/killing. Animal welfare refers to the state of the animal [10].

**The Five Freedoms of Animals:** The OIE has 'Guiding Principles for Animal Welfare', which were included in its Terrestrial Animal Health Code from 2004. These categorically state that: 'The use of animals carries with it an ethical responsibility to ensure the welfare of such animals to the greatest extent practicable [11]. Also included amongst the OIE's Guiding Principles are the internationally recognized 'Five Freedoms' which were originally published by the UK's Farm Animal Welfare Council (FAWC) in 1979 (although they originated in the 'Brambell Report', which dated back to 1965) and have been adapted slightly since their formulation. These are as follows: (a) Freedom from Hunger and Thirst and Malnutrition – by ready access to fresh water and a diet to maintain full health and vigor; (b) Freedom from Fear and Distress – by ensuring conditions and treatment which avoid mental suffering; (c) Freedom from Physical and Thermal Discomfort – by providing a suitable environment including shelter and a comfortable resting area; (d) Freedom from Pain, Injury and Disease – by prevention or rapid diagnosis and treatment; and (e) Freedom to Express Normal Patterns of Behavior – by providing sufficient space, proper facilities and company of the animal's own kind. The 'Five Freedoms' provide valuable guidance on animal welfare needs; and they cover all three of the states identified above (physical, mental and natural states) [11].

**National Legislation:** Animal welfare legislation and its enforcement are not a widespread reality at present. Moreover, there are world wide variations in practices concerning farming and the keeping of animals and regarding wildlife. In many countries concern for animal welfare is not a major issue. Religion and economy play a major role in public perceptions of animal welfare or the absence of these. At the same time a trend may be recognized of increasing attention for global animal welfare issues. Providing policy and legal frameworks (capacity building) and economic incentives (access to global markets) may provide opportunities to further improve animal welfare on a global scale [12].

The establishment of a strong and dynamic institutional relationship between animal welfare scientists and regulatory agencies is an important precursor to good animal welfare legislation. An important related factor is the ability to update legislation to keep pace with scientific developments; for that reason [13] comment that principal national legislation may be kept more basic, with the more detailed requirements set out in implementing regulations and other subsidiary legislation which can more easily be changed. Countries can choose to regulate animal welfare in a variety of ways. The strongest is to adopt constitutional provisions that recognize animal welfare principles or to provide another constitutional basis for the protection of animal welfare. Countries that adopt a constitutional provision on animal welfare may also enact national legislation on animal welfare, while other countries may enact only legislation [13].

There is much diversity in national legislation on animal welfare. Animal welfare provisions may appear in a free-standing animal welfare law or may form part of a broader law on animal health and welfare or veterinary matters in general. The most common form of legislation around the world criminalizes cruelty against animals. Many nations limit animal welfare statutes to certain animals used in scientific research or entertainment, whereas for farm animals they regulate only slaughter methods. Increasingly, more nations and sub-national jurisdictions are passing laws or adopting provisions that explicitly set out animal welfare principles and extend coverage to farm animals, not just animals used for research, entertainment or companionship. This type of animal welfare legislation has been passed in most countries in Europe, as well as in Costa Rica [14]. Some countries employ nonbinding instruments such as national animal welfare strategies or model welfare codes in lieu of binding legislation [13].

**Asia:** There is a relative paucity of protective legislation for animal welfare in most Asian countries, although individual nations such as India provide notable exceptions. While it is difficult to objectively benchmark animal welfare due to a lack of universally agreed standards and a lack of available data, personal experiences suggest that animal welfare in general does not carry the same priority as in Western European culture [15].

**African Nations:** The welfare of African livestock, of which small and large ruminants traditionally play a significant role, would be considered unfavorable if framed in, or compared to, a European context. This does not necessarily diminish their importance to livestock keepers and many of the welfare concerns relate to the challenging environment under which many are kept. While there are examples of individual countries that have developed export industries, most African nations are importers of commodity livestock products [15].

While there are a significant number of persons throughout history that have recognized and campaigned for animal welfare, it is only relatively recently that it has been widely recognized as a social good. There is no universally agreed definition of what constitutes animal welfare, but the World Organization for Animal Health's (OIE) is the most accepted for practical purposes and is effectively a summary of the Five Freedoms of animal welfare, which were initially codified by the Farm Animal Welfare Committee (FAWC) [15].

**Ethiopia:** Current legislation is based on regulations developed by Haile Selassie (Emperor of Ethiopia from 1928-1974). Ethiopia is now developing new legislation in various societal areas and it is not yet known if any regulations specific to animal welfare will be developed [16].

**Public Attitudes Toward Animals and Animal Welfares:** Public attitudes toward animals and the influential factors are of central concern within the fields of human-animal relationships and animal welfare [17]. In recent years, a growing body of survey-based research has revealed that most people showed positive attitudes to animals as animals had many measurable benefits, both to humans and to society, such as enhancing physical and psychological wellbeing, reducing loneliness and depression, improving animal diversity and promoting sustainable nature and society development [18].

From another perspective, the manner in which public attitudes toward animals are presented a factor influenced by human culture and knowledge can contribute to a healthy dietary and living environment for animals leading, ultimately, to an optimum animal welfare system. Therefore, it is clear that a better understanding of public attitudes toward animals, as well as the effects of influential factors on such attitudes, is fundamentally important to both animals and human [19].

There are a variety of attitudes toward animals around the world and multitudinous reasons exist behind each. Key drivers of these attitudes may include the geographic region, economy, human demographic and purpose of animal usage, human culture and religion [19]. For instance, European students have more concern for animal welfare than Asian students, whilst compared with northern European students, students from communist Asian and European countries have more concern about killing animals [19]. Additionally, children and adults often show different views toward animals. Humanistic, moralistic, naturalistic and ecologicistic are the four prevailing attitudes among 12–14 year old children, while adults often show confused attitudes toward animals. Individuals may differ in their attitudes to how people use animals. For example, using animals for luxury garments is the most unacceptable behavior and the use of animals for educational purposes the most acceptable, while attitudes toward farm animals should depend on the situation and the measurement model [20]. People tend to be more favorable towards popular as opposed to unpopular animals [21].

Companion animal owners often show better knowledge of and more positive attitudes toward both popular and unpopular companion animals than non-owners [22]. Culture can also influence people's attitudes toward animals. In India and Nepal, primates are viewed as sacred; while in China and Japan, primates are mythical creatures [23]. All these studies elucidate the possible factors influencing public attitudes toward animals and most also made mention of the role of human demographics, such as age, gender, education and occupation [23].

Despite culture maintaining regional differences in attitudes to animals, in recent decades a growing concern for animal welfare and rights has been apparent in some parts of the world. This may derive from increased economic development [24], the industrialization of animal farming and experimentation practices, increased relative importance of companion animals compared to farm animals and/or the extension of a social movement that has, to-date, focused on humans' rights [25, 26].

A better understanding of cultural attitudes towards animals and how they are used by humans can promote understanding and tolerance if there are clear differences between trading nations. This may benefit trade in live animals, for example the trade between Australia and the Middle East, which has had on several occasions to be temporarily restricted by the Australian government following welfare issues on the transporting ships and in the recipient countries [27]. In addition, the use of animals in teaching should take account of cultural differences in students' attitudes towards animals [27].

#### **Promoting Animal Welfare in Developing Countries:**

The IFC [13] noted that developed countries tend to have more financial resources and infra structure than developing countries to support improvements in animal welfare, including improvements to housing, feeding systems and transportation; addressing problems such as drought, cold and predators; and strengthening animal welfare research programs. Developed countries are likely to have a greater number of veterinarians and animal production specialists, more developed industries for vaccine and animal health supplies and enhanced education and industry awareness regarding animal welfare [13].

Although developing countries often face significant challenges with regard to resources, knowledge, research and awareness around animal welfare, they can benefit from the experiences and technology of developed countries. Emerging market producers can position themselves to capitalize on increased market premiums for animal welfare-credentialed products in developed countries where consumer demand and legal requirements related to animal welfare may be present. As awareness about animal welfare issues increases globally, livestock producers in developing countries may be able to benefit from demand in their home markets [13].

Implementation of standards globally at a uniform rate via regional initiatives is, however, not possible because of factors such as the socio-economic situations in developing, in-transition and developed countries; cultural and religious differences; and national priorities. However, it is possible to improve animal welfare by acknowledging it as a progressive longer term activity 'evolution rather than revolution' and will require a wider understanding and acceptance of the welfare needs of animals to ensure gains made are sustained [28]. Key to success is political support and the provision of resources, both cash and in-kind. In this latter regard, a number of countries, such as Australia and some countries of the EU are providing assistance to the OIE

and countries globally to progress the animal welfare agenda. Nongovernmental organizations such as the WSPA, which can play pivotal roles in improving animal welfare, are also providing support. Education, training, communication, legislation and research all have a part to play in improving animal welfare, as do the development of strategies at regional and national level and the full cooperation of all parties in the implementation of animal welfare activities [29].

It is also important to note that the trend towards industrial livestock systems may occur at the expense of diminishing market opportunities and competitiveness of small rural producers who may not be able to compete with the low prices of large-scale industrial production. Similarly, strict food regulations constitute barriers that often prevent poor farmers from entering formal markets because of the costs involved in certification. Pastoralists may also be pushed on to less fertile lands, endangering their way of life and requiring alternative employment and in-come [29].

### **Factors Affecting Perceptions of Animal Welfare in Developing Countries**

**Animals Welfare Challenges in Developing Countries:** Animal welfare concerns the state of an animal relative to the environment in which it lives [30]. Whether that environment is a farm, home, or shelter, the goal is to ensure that the animal is physically healthy, can live a reasonably natural life and is free from suffering. The concept of animal welfare has taken root in many industrialized countries. Advanced economic development, increased ethical concerns surrounding animal farming and food production and increased attention to animal rights have prompted many developed nations to take actions intended to safeguard animal welfare. These countries have, for example, established regulations as a way of improving animal welfare, particularly in the production, transport and slaughter of farm animals [31].

Scientific research intended to address and improve animal quality of life has also increased, especially in response to public concerns about intensive production systems [32]. Although many animal welfare studies focus on developed countries, growing evidence indicates that the topic is also an emerging concern in developing nations. Comparatively, there are fewer studies concerning animal welfare in developing nations. The applicability of using the approaches of developed nations to improve animal welfare in developing nations

should be considered; however, consideration should also be paid to the factors that influence animal welfare concerns, such as economics, culture and religion [32].

**Economy:** Developing countries often face challenges that developed nations do not, such as limited resources and technology, higher costs of living, different political priorities and food insecurity. These factors alone greatly limit focusing on animal welfare concerns. In regions such as Africa and Asia, in which agriculture and animal farming contribute significantly to the economy, animals are often viewed primarily in relation to their benefit to human well. This perception can limit improvements to animal welfare, unless these improvements also increase economic benefits to people [25].

Many developing countries lack the resources to provide high standards of care for animals, particularly production animals. In Africa and Asia, for example, most animals are transported on foot to market or slaughterhouses due to a lack of specialized trucks and poor road conditions [33]. Animals may walk for days without enough rest, water or food, all of which may decrease their welfare. The manner in which animals are handled and slaughtered in some developing nations can also be cause for concern [33]. Some developing countries extensively use traditional farming systems reliant on animal power (e.g. horses, donkeys, camels) to plough land and transport goods, with such animals often receiving limited water, food, rest, or even being subjected to physical abuse[34].

Although the aforementioned examples cannot be generalized to all developing countries, they reflect underlying economic struggles that can present challenges to the topic of animal welfare. Despite these challenges, some developing nations have begun to pay more attention to improving animal welfare, especially in regard to commercial trade in the beef and poultry industries. For example, there is evidence of changing practices and systems being implemented in countries like South Africa, Zimbabwe, Botswana and Namibia in response to the animal welfare standards set forth by the World Organization for Animal Health [34].

This suggests that the creation of strict animal-welfare policies may help to improve legislative protection and management of animals, while also creating more awareness about animal welfare. While compliance with such standards of welfare can be costly, the countries impacted may benefit from economic growth on a national level through increased trade of high welfare

products [34]. Those crafting such policies, however, must be consistent with and considerate of the needs of farmers and consumers in developing nations, particularly if they are already economically or politically disadvantaged [34].

**Culture:** The role that culture plays in attitudes towards animals cannot be underestimated, particularly in developing countries. Longstanding cultural beliefs and values may promote attitudes and support behaviors toward animals that contrast with those that predominate in developed countries as a result of changing times and globalization [35].

Animals gain significance through their association with culturally defying rituals. In Spain, for example, bulls are held in high regard because of their vital role in the Spanish bull fight, a tradition that is considered high factors affecting perceptions of animal welfare in developing countries important to that society [36]. In Africa and some parts of Asia, livestock are a major sign and source of wealth and are still used for a bride's price or dowry during marriage ceremonies [37], or as a source of conflict via cattle raids between ethnic groups [38]. Livestock are also used for a variety of purposes, further explaining their complex role in and value to, society. In some African rural communities, livestock provide food through meat, milk and blood [39]. Their hides are used for bedding and shoes and their hair and wool are used to make clothing, bedding and other accessories. Other livestock products such as dung and urine are also used to plaster traditional houses and to produce medicine, respectively [39].

The use and cultural significance of animals' may influence a developing nation's perceptions of animals, which may impact how they are handled and treated. The quality of such human-animal interactions, governed by people's perceptions, ultimately determine the level of care provided to animals, with negative or in humane handling leading to decreased welfare and productivity by increasing stress and fear in animals [40].

**Religion:** In both developed and developing nations, religious affiliations, values and beliefs affect views on a range of social issues, including how people believe animals should be treated [41]. The idea that cows are sacred among the Hindus of India and that pigs are considered unclean in Islamic cultures provide examples of long-held religious beliefs that impact how animals are perceived. Two aspects of religion shown to affect

people's attitudes include religiosity (defined as the degree of commitment to one's faith) and denomination [42]. There exist assumptions that those who identify as "deeply religious" care more deeply about animals than those who are not. However, research has shown a decreasing concern for animal welfare as tendencies to strongly uphold religious values increase [41]. One study, for example, showed that some denominations of Christianity that adhere to the Bible more strictly actually seemed to display less support for animal rights. This could be partly due to preoccupation with human concerns over animal-welfare issues as seen in the New Testament of the Bible [27] and a utilitarian view of animals as being primarily a source of food and livelihood. Higher religiosity has also been shown to be associated with lower concern for farm animal welfare among disciplines that work predominantly with animals, such as animal science and veterinary faculty [42], reflecting the influence of religiosity on perceptions of animals [43].

Wide variation also exists in the influence of religious denominations on concern for animal welfare. For example, a survey of residents of Clark County in Ohio revealed that Catholics (84%) were significantly more supportive of animal rights than Protestants (77%) and those with no religious affiliation (89%) were most supportive of animal rights. A survey on students in the Islamic country of Iran showed a low concern for animal welfare, presumably because any level of concern would be largely based on the Islamic scriptures (Quran), but not recognized as an important public matter [43]. As shown by these examples, religious beliefs may play a profound role in mediating the attitudes of people toward animals and their welfare, while also intersecting with regional and cultural norms or values [43].

#### **Organizations Working on Animal Welfare Issues**

**European Commission (Welfare Quality Project):** This research program was designed to develop European standards for on-farm welfare assessment and product information systems as well as practical strategies for improving animal welfare. The standards for on-farm welfare assessment and information systems have been based upon consumer demands, the marketing requirements of retailers and stringent scientific validation. The key was to link informed animal product consumption to animal husbandry practices on the farm. The project therefore adopted a "fork to farm" rather than the traditional "farm to fork" approach [44].

**Water Quality Network:** The Welfare Quality Network is a collaborative project of a group of former partners of the Welfare Quality Project. The Network focuses on scientific exchange and activities to contribute to the further development of the Welfare Quality animal welfare assessment systems. The Welfare Quality Network also aims to provide relevant knowledge and services to support actors in animal production chains who would like to implement or use the Welfare Quality animal welfare assessment systems. Network activities focus on the following main areas: management of the system and support instruments (including training in their use by Network partners); maintenance of the system; upgrading the system; promoting stakeholder involvement; and prioritizing and facilitating research [45].

**Food and Agriculture Organization (FAO):** FAO's program focuses on sustainable development of dairy, beef, pig and poultry as well as small ruminants' production and draught animals. It takes into account, among others, animal health and welfare related issues, the responsible use of animal genetic resources, sustainable animal nutrition and feeding. It provides advocacy, awareness raising, information, knowledge, guidance and technical support to help produce high quality animal products safely, efficiently and responsibly, while improving people's livelihoods and meeting citizens' demands. FAO also works alongside governments and farmers, responding during and after livestock emergencies and promotes dialogue amongst public, private and civil society partners whose ultimate goal is responsible, sustainable livestock production [46].

**International Finance Corporation:** IFC is committed to working with clients to reduce losses, increase productivity and/or access new markets through the application of sustainability principles, including animal welfare standards. IFC is committed to supporting clients in a responsible and forward-looking approach to traditional livestock production (dairy, beef, broiler chickens, layer chickens, pigs and ducks) and aquaculture in intensive and extensive systems to, among other things, help producers access and maintain entry to high quality and value market segments. IFC has developed Good Practice Notes which describes a range of animal welfare good practice and complements IFC's Performance Standards on Environmental and Social Sustainability [47].

**International Standards Organization:** SO/TS 34700 represents the culmination of a joint effort between ISO and the OIE following the cooperation agreement signed in 2011 between the two organizations. The new technical specification is intended to support the implementation of relevant practices to ensure animal welfare in livestock production systems. It will be a way for business operators in the food supply chain to demonstrate their commitment to animal welfare management. The purpose of this document is to ensure the welfare of animals rose for food or feed production around the world through the following objectives: To provide a management tool for the implementation of the animal welfare principles of the OIE TAHC; to provide guidance for the implementation of public or private animal welfare standards and relevant legislation that meets at least the OIE TAHC; to facilitate the integration of animal welfare principles in business-to-business relations [48].

## CONCLUSION

Animal welfare problems are extremely diverse; several problem areas stand out as high priority across many regions and production systems. These are: transportation, slaughter (including pre-slaughter management), food and water, handling/herding methods, culling and disposition of animals that are sick or of low commercial value and the keeping of animals under conditions for which they are not genetically suited. These problem areas provide logical starting points for capacity-building efforts. In addition, as poverty can severely limit the ability of owners to care for animals, poverty reduction among animal producers is a significant priority for improving animal welfare. Many variables can influence general attitudes toward animal welfare in developing nations, particularly economic status; cultural norms; and religious denominations, values, or beliefs. Diversity in these dimensions around the world complicates the creation of any consensus opinions concerning animal welfare and its global relevance. Individual perceptions of animal welfare may also be difficult to change. However, there is a need for increased research and dialogue about the influence of economic, cultural and religious factors on animal-welfare opinions in developing countries. As a general approach, improving the welfare of animals should begin with an assessment of the risks and opportunities in the entire system or production chain and a search for

improvements that will be practical in the given situation. Assessment should include science-based assessment of the needs and welfare of the animals and risk assessment to identify causes of sub-optimal welfare. In many cases the most effective approach is likely to be a continual-improvement process based on achievable targets rather than the importation of radically different procedures based on foreign technology and values. Improvements to animal welfare can play a significant role in improving the welfare of people by such means as improving access to food of animal origin, improving economic returns through increased livestock productivity, improving the efficiency of draft animals and reducing risks to human health through improved food safety and animal health. Attention to animal welfare can be of special benefit to countries with less developed economies through technology improvement, increasing access to markets and fostering international cooperation.

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