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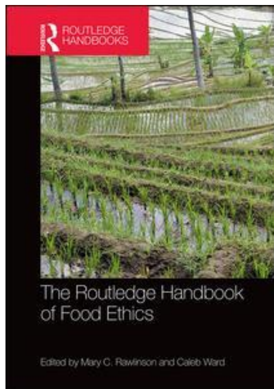

The Routledge Handbook of Food Ethics

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Animal Welfare

Publication details
https://www.routledgehandbooks.com/doi/10.4324/9781315745503.ch25
David Fraser
Published online on: 14 Jul 2016

How to cite :- David Fraser. 14 Jul 2016, *Animal Welfare from:* The Routledge Handbook of Food Ethics Routledge
Accessed on: 22 Apr 2019
https://www.routledgehandbooks.com/doi/10.4324/9781315745503.ch25

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25
ANIMAL WELFARE

David Fraser

Animal welfare is a complex concept, a social movement, and a topic of both philosophical debate and scientific research. It is also an area of increasingly global policy and action where a *practical ethics* approach by philosophers can make important contributions.

Historical context

During the 18th and 19th centuries, at a time when blood sports and blatant acts of cruelty to animals were common and perfectly legal in many parts of Europe, reformers sought to stamp out cruelty to animals as part of a broader program of social progress. This led to the criminalization of deliberate cruelty and the banning of recreations such as bull-baiting and dog-fighting, initially in the United Kingdom and then in many other countries. In line with such concerns, many animal protection organizations that were formed during this time were called societies "for the prevention of cruelty to animals."

During the 20th century, with an increasing trend toward large-scale, institutionalized use of animals in food production and biomedical research, the focus of animal ethics shifted from acts of cruelty to the use of animals for utilitarian purposes in ways that resulted in deprivation and curtailment of their freedom. This concern was increasingly expressed in terms of the "welfare" of animals. The term was used in 1925 with the founding of the organization that became the Universities Federation for Animal Welfare. The process was consolidated during the 1960s when, with increased use of restrictive environments for food-producing animals, many people became concerned that production systems designed along the lines of industrial efficiency would cause animals to have a poor quality of life. With this change in the nature of the concerns, the discourse shifted from one of cruelty to one of animal welfare, and scientists began doing research in order to understand and improve the welfare of animals (Woods 2011).

As these developments unfolded, academic philosophers also began paying substantial attention to animal ethics (Midgley 1983; Regan 1983; Singer 2009 [1975]). While a few focused explicitly on animal welfare, some saw welfare as an inadequate concept and tried to replace it with alternative concepts, such as animal rights (Regan 1983) and feminist approaches to animal ethics (Donovan 1990).

Since the 1990s, animal welfare has increasingly become a globally recognized area of social policy. Beginning in 2001, for example, the World Organisation for Animal Health has been

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developing global animal welfare standards, and many large corporations and international agencies have included animal welfare in their activities and corporate social responsibility programs. Thus, in less than a century, animal welfare has developed from an unfamiliar and somewhat radical idea to a widely accepted area of action, research, and social policy, and, at the same time, a controversial topic among philosophers and reformers.

Defining animal welfare

In what we might call an *animal welfare approach* to animal issues, the main focus is the quality of life of animals. ("Welfare" and "quality of life" for animals have been used more or less as synonyms in the animal welfare literature since the 1980s, and this usage is followed here.) However, defining what constitutes welfare or quality of life for animals has been a matter of much debate. As this debate has unfolded, it has become clear that people are using the term to capture three main areas of concern (Fraser 2008).

An obvious concern is the subjective well-being of animals, especially the feelings and emotions that animals experience. These include negative emotions such as fear, pain, frustration, and distress, together with unpleasant feelings of hunger, thirst, cold, heat, and illness. Also included are positive states such as comfort, contentment, pleasure, and enjoyment. In the absence of any simple English word, these are commonly called the *affective states* of animals, meaning those feelings and emotions that are experienced as hedonically positive or negative.

A second concern, linked to traditional goals of veterinarians and farmers, is that animals should have good health and functioning of the body – that they should be kept as free as possible from illness, injury, parasites, and similar problems, as might be evidenced by normal levels of vigor, growth, reproduction, and longevity.

A third concern is that animals should be able to lead reasonably "natural" lives. This theme has taken several forms. At the simplest level, some critics want animals to experience reasonably natural environments – for example, to be outdoors in the elements rather than permanently indoors in windowless barns. Critics have also noted that animals have characteristic types of natural behavior, such as foraging and socializing in certain ways, and they want animals to be free to carry out such behavior. As a third variation, Bernard Rollin (1995), in a neo-Aristotelian approach, notes that each animal species has a characteristic *telos* or nature, and he proposes that animal welfare depends on animals being kept in a way that respects this nature. More recent ideas arguably have expanded on this notion. For example, Nussbaum (2004) notes that animals have certain "capabilities," which they should be allowed to develop and exercise; Gjerris et al. (2006) calls for the "integrity" of animals to be protected; and Franks and Higgins (2012) propose that in addition to having what is valuable to them, animals should be able to exercise "truth effectiveness" by employing their curiosity, exploration, learning, and cognitive abilities, and "control effectiveness" by having agency over events in their lives.

These different conceptions of welfare are complementary to a degree, and they are often in agreement. For example, preventing lameness in dairy cattle is good for the animals' welfare according to all three views: it prevents a significant injury (basic health) and a painful condition (an affective state), and it allows the animals to better perform their natural behavior and exercise their inherent nature and capabilities. In other cases, however, the different views of animal welfare can lead to different conclusions. For example, open housing systems for laying hens allow natural behavior that is impossible in small cages, but they also involve greater risk that hens will become infested with a common mite that causes anemia and likely results in great discomfort for the birds. In such cases, attempts to improve animal welfare according to one criterion may worsen animal welfare according to another.

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Achieving social policy on animal welfare is complicated by the fact that people disagree on how they prioritize the different views of welfare. The urban public tends to emphasize natural living and thus tends to see outdoor systems as inherently better for animal welfare than indoor systems. Many farmers attach great importance to basic health, and they may see outdoor systems as compromising animal welfare because these offer less ability to exclude disease pathogens and control the animals' environment (Sørensen and Fraser 2010). Given such diversity, for standards and practices to be widely accepted as promoting animal welfare, they need to take the different views of welfare into account.

Animal welfare as an evaluative concept

Some of the complexity arises because animal welfare is an *evaluative concept*. Like "health" or "safety," a greater degree of welfare implies not merely a different state but (other things being equal) a *better* state. Hence, try as we may to assess animal welfare in an objective and scientifically informed way (see below), conclusions about animal welfare are inevitably underlain by people's ideas about what constitutes a good life for animals, and these are inherently value based (Fraser 1995).

In fact, it seems almost inevitable that people will judge the quality of life of animals to some degree through the lens of how they assess quality of life in general, and this involves a debate that has continued for millennia (Appleby and Sandøe 2002). The emphasis on the affective states of animals has obvious roots in a line of thought that we see in the Greek philosopher Epicurus, the English reformer Jeremy Bentham, and the modern ethicist Peter Singer (2009)[1975]. This holds that a good life is a hedonically pleasant life wherein pleasures predominate and pains are at a minimum. The emphasis on natural environments resonates with a line of thought that we see in the rural poetry of Virgil and the reverence for nature of the Romantic poets and painters. According to this view, a good life is one that is lived in harmony with nature and is not constrained or corrupted by the artificiality that pervades human society. The emphasis on normal development and growth is reminiscent of a third line of thought, extending from Aristotle to Amartya Sen, which holds that each person has certain capabilities and potential, and that a good life involves being able to exercise those capabilities and achieve that potential (Fraser 2008).

The confusion created by the different views of animal welfare has led to some philosophical analysis of the term, and to debates about whether any of the views of animal welfare should have primacy over the others. Philosopher Lennart Nordenfelt (2006: 161) has argued that animal welfare is, at its core, about the happiness or the affective states of animals, and that other considerations (e.g., health or naturalness) may be *conditions for* but are not *part of* animal welfare. Scientist Ian Duncan (1993) agrees. He notes that we can speak about the health and functioning of plants, but we are not concerned about the welfare of plants because they do not (we believe) have any subjective experience of their lives; hence, he argues, welfare must be about subjective experience.

Others have proposed competing visions (summarized in Fraser 2008). Some scientists, for example, have proposed that welfare should be defined operationally in terms of basic health, growth, longevity, or evolutionary fitness, because these can be measured with some objectivity, whereas happiness, and even specific affective states such as fear and pain, are more difficult to quantify. Barnard and Hurst (1996) proposed an evolutionary argument. They noted that animals have been shaped by natural selection not to avoid stress and hardship, but to *expend* themselves in certain ways in order to reproduce successfully. Hence, they argue, animal welfare is not about health, long life, and pleasure, but about being able to follow the evolved life strategy of the species.

Although all of these proposals have merit, the term animal welfare is not merely a scientific or philosophical term that needs to be analyzed and defined more precisely; it is also an everyday

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term that is used by people in real-life debates, policy decisions, regulations, and international agreements. If philosophers and scientists use the term in a specialized or technical way that fails to correspond to its meaning in everyday use, they may fail to contribute to (or even sow confusion in) these practical discussions. Hence, there has been a widespread tendency to accept that animal welfare is a somewhat fuzzy umbrella concept that involves different concerns which different people emphasize to different degrees (Fraser 2008).

An animal welfare approach

The diverse concerns that are captured in the term animal welfare complicate attempts to characterize an "animal welfare approach" to ethical issues. Some philosophers have offered a simple (arguably simplistic) account by equating an animal welfare approach to the utilitarianism of Jeremy Bentham, or by claiming that it implies a ready acceptance of killing animals, or that it is concerned only with "unnecessary" suffering (e.g., Francione 1996). These statements arguably capture certain variants of an animal welfare approach – Gjerris et al. (2006) call this the "narrow" version of animal welfare – but they are not its defining features.

Some clarity can be gained by contrasting an animal welfare approach with the ideas of certain animal rights philosophers. First, with an animal welfare approach, the key issue is the quality of life of animals, whereas for many animal rightists the key issue is human ownership and use of animals (Regan 1983). Thus, an animal welfare approach is generally not opposed to people owning animals as long as the animals have a good quality of life as a result. Second, where many animal rightists are opposed in principle to deliberate killing, an animal welfare approach is generally more concerned about any associated suffering. Thus, for example, some animal welfarists may not oppose slaughter or euthanasia of animals as long as the death is painless and unanticipated, and it leaves no survivors that are harmed by the death. Others, however, see killing as a harm to animal welfare inasmuch as it forecloses future welfare possibilities for the animal's life. Third, with an animal welfare approach, unintended harms to animals (see below) are a cause of concern, whereas at least some animal rightists tend to downplay such harms, apparently because they are not inflicted intentionally (e.g., Lamey 2007). Finally, whereas some animal rights philosophers see rights as an all-or-none issue – an animal is either a rights-holder or it is not – in an animal welfare approach, concerns vary widely depending on the biology, emotions, and mental capacity of the species. Thus, although welfare concerns arise for fish, rats, and gorillas, the different species raise different concerns and require different treatment. Despite these differences between welfare and rights-based approaches, animal welfarists do not necessarily eschew the use of rights-based concepts or language. For example, many would accept, as proposed by Garner (2010), that animals have a right not to suffer at human hands.

Animal welfare science

Beginning in the 1970s, people began to conduct scientific research on animal welfare, partly to address specific welfare concerns and partly because people expected the science to adjudicate among the conflicting views of welfare. Surely, people seemed to reason, if we had an objective, scientific understanding of animal welfare, this would trump any value-based disagreements about what animal welfare entails. In reality, various scientists appeared to tacitly accept the different views of welfare, each of which formed the basis of animal welfare research (details in Fraser 2008).

Given the emphasis on affective states, a major focus of animal welfare research has been on recognizing and preventing states such as pain, fear, separation distress, and frustration. Such research has led (in some countries) to the banning of certain painful procedures, the mandatory

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use of pain management in certain situations, and the use of handling methods that do not cause fear in animals. Scientists have also focused on positive states such as pleasure, noting especially that certain types of behavior, such as play and exploration, appear to be accompanied by, and provide evidence of, positive affect.

Other research, often linked to traditional veterinary medicine, focuses on the basic health of animals, for example by identifying environmental features that cause injuries or spread disease, diets that predispose animals to digestive problems such as ulcers, and feeding systems that leave some animals undernourished. For example, research by Ragnar Tauson (1998) showed that certain kinds of cages cause feather loss and injuries to laying hens, and this research formed the basis of early animal welfare standards for cage design.

Yet other research focused on natural behavior, especially by identifying elements of natural behavior that animals are strongly motivated to perform. It was shown, for example, that hens are highly motivated to enter a nest box to lay eggs and to roost on a raised perch at night, and on the basis of such research many countries now require that hens have access to these features.

A key aim of animal welfare research has been to understand the animals' own "point of view," especially by studying their motivations and preferences (Dawkins 1990). Such work has led to many useful insights. For example, chickens, being descended from jungle-dwelling ancestors, strongly prefer areas with overhead cover rather than open pasture. This likely explains why many chickens in free-range systems avoid going outdoors unless there are trees overhead (Dawkins et al. 2003). However, studies of animals' preferences have important limitations. We generally expect animals to have natural preferences for features that would allow them to thrive in the environment where the species evolved; but in very different environments, such as modern farms, an animal's preferences may have become uncoupled from its longer-term welfare. In addition, selective breeding of domestic animals for certain traits may have further distorted the connection between preferences and aspects of welfare such as health. Hence, while animals' preferences provide valuable insights into how to improve their welfare, they do not provide a definitive standard that trumps disagreements over what is best for animal welfare.

Animal welfare and real-world engagement

An animal welfare approach is criticized by some philosophers for not offering a sufficiently profound critique of human use of animals. For example, Gary Francione (1996) criticizes animal welfare for failing to call for a ban on human ownership of animals, and Richard Haynes (2011) sees the term animal welfare as being used to justify the continued exploitation of animals in science and food production.

An alternative interpretation is that many who adopt an animal welfare approach are focused on making feasible changes in the real-world rather than debating theoretical ideals. For example, billions of animals are slaughtered for food each year, and all projections are that the number will continue to increase, especially in emerging economies where per-capita meat consumption is increasing steadily. When the Humane Slaughter Association proposes practices and standards that cause less distress to animals during slaughter, this is not to say that their members want to promote the slaughter of animals, but rather that they recognize that slaughter will undoubtedly continue, and they want to improve the lot of the animals involved. Hence, debates between philosophers and practitioners sometimes seem at cross-purposes, with some philosophers proposing theoretical ideals while practitioners seek practical change.

Nonetheless, it is possible that animal welfarists, by acting to reduce animal suffering, may cause some harmful practices to seem less repugnant to the public and thus reduce fundamental opposition that might lead to a practice being banned. This criticism may apply especially in cases

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where a ban on a practice appears feasible. For example, in countries that might conceivably ban the harpooning of whales or the use of great apes in biomedical research, attempts to make these practices "more humane" might possibly slow more fundamental reform.

Animal welfare as a global issue

Animal welfare (as distinct from traditional religious respect for animals) began largely as a rich-country issue, but is now receiving a degree of global recognition, partly through the engagement of organizations such as the World Organisation for Animal Health and the Food and Agriculture Organization of the United Nations. This geographic expansion has also brought new topics into the ambit of animal welfare research and action. As examples:

1) Nearly a billion people, including many of the world's poorest people, depend on small-scale animal production for their livelihood (FAO 2009), and some international development agencies support such animal production in order to improve human nutrition and food security for the rural poor. Including animal welfare in these programs, especially to improve animal nutrition, handling, and health care, is seen as contributing to both human and animal welfare.
2) Stray dogs likely number in the hundreds of millions worldwide, and lead to many thousands of human deaths by rabies each year. Traditional killing of stray dogs is often inhumane, and it is generally ineffective at controlling numbers and protecting public health. Programs that provide basic health care, vaccination, and neutering for unowned dogs, stimulated largely by concern over the dogs' welfare, appear to be better at controlling dog numbers (Totton et al. 2010), and they may prove better for human health and safety as well.
3) Hundreds of millions of working animals provide labor for crop production and transportation. These animals are critical to the food supply and livelihood of many people, and they replace human labor and dependence on fossil fuel. Efforts to improve the welfare of these animals – especially nutrition, hydration, health care, and harnessing – are thought to benefit the animals, their owners, and the communities they serve (Ramaswamy 1998).

In the industrialized countries, animal welfare is sometimes seen as running contrary to other interests such as production efficiency and cheap food. In the above examples, an animal welfare approach points to alternative ways of solving problems which often lead to better outcomes for the human participants as well.

New challenges for animal welfare

If the principal concern of animal ethics was cruelty in the 18th and 19th centuries, and the institutionalized use of animals in the 20th century, the 21st century seems poised to add a third major problem area involving unintended harms to animals caused by the world's growing human population and its increasingly pervasive effects on the planet.

Some such harms are a fairly direct result of common human activities. Cars are estimated to kill a million vertebrates per day in the United States alone, and they are thought to have surpassed hunting as a cause of death of wild terrestrial vertebrates (Forman and Alexander 1998). Windows are thought to kill billions of birds per year, and to injure roughly one bird for every one that is killed (Klem 2009). Crop-production practices have devastating effects on animals living in agricultural land. In particular, burrowing rodents commonly reach levels of 100 or more per hectare of farmland, and one study found that plowing resulted in the disappearance of

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virtually all these animals, presumably by injuring some and leaving others without shelter (Jacob 2003). If such numbers can be applied to the 1.4 billion hectares of arable land in the world, then the amount of injury, suffering, and death must be enormous.

Even greater effects may occur indirectly when human activities alter the processes and balances of nature that are essential to the flourishing of other species. Habitat destruction and marine pollution destroy the ecological systems that support untold numbers of animals. Perhaps most severe of all, climate change is predicted to affect wild animals so drastically as to put many species on a course to extinction (Thomas et al. 2004).

To date, animal welfare and environmental conservation have developed as separate concepts, movements, and areas of research. As these examples show, however, the goals of environmental conservation and animal welfare are, in many respects, closely aligned. What is needed is a coherent ethic for both animal welfare and environmental conservation, and a unified program of action (see essays in Fraser 2010). In fact, several philosophers have proposed approaches that include both animal ethics and conservation. For example, Eric Katz (1983) proposes an environmental ethic that values both the preservation of natural systems and "individual natural entities" such as free-living wild animals; Gary Varner (1998) proposes that concern for individuals (human and non-human), and especially their "ground projects," provides a basis for both animal protection and environmental conservation; and Angus Taylor (1996) proposes that recognizing the right of sentient beings to their "vital needs," including "the vital need to have a flourishing natural environment," would provide a basis for animal ethics and environmental protection. However, much more attention and action are needed to address this enormous and growing problem area.

Another emerging challenge involves fish. Aquaculture is expanding rapidly worldwide and currently involves the annual slaughter of tens of billions of individuals – a number that rivals all terrestrial animal production (Mood and Brooke 2012). Moreover, roughly ten times as many are killed by capture fisheries, mostly by methods that fall far short of standards for humane slaughter (Mood 2010). Clearly there is a growing need for standards, practices, research, and public awareness related to the welfare of fish.

A third challenge involves the growing awareness of the effects on animal welfare of human caretakers. To date, much of the attention in farm-animal welfare standards and practices has been focused on the physical environment, for example by replacing barren cages for hens or narrow stalls for sows. However, comparative data show that basic welfare indicators often vary widely among farms even though the farms use the same type of physical environment. The different welfare outcomes appear to be due to large differences in the quality of care, handling, and attention that the animals receive from the caretakers. Hence, an important avenue for improving animal welfare in the future will be a much greater focus on the selection, training, and professional standards of animal keepers (Hemsworth and Coleman 2010).

Animal welfare as practical ethics

In many of the examples given above, an animal welfare approach falls in the realm of *practical ethics*, which tries to provide workable guidance to people making real-life ethical decisions. In other fields of practical ethics, discussion has often moved away from seeking single foundational principles, in favor of developing mid-level guiding principles, which need to be balanced and applied thoughtfully to real-life problems. Medical ethics, for example, commonly uses four guiding principles (beneficence, non-maleficence, justice, and autonomy), which need to be considered and balanced on a case-by-case basis (Beauchamp and Childress 2008).

In fact, some of the earliest guiding principles for animal welfare followed this approach. For half a century the guiding principles for the use of animals in research have been the

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"Three Rs": reducing the number of animals to the least number needed for the purpose, refining procedures to minimize negative effects on animal welfare, and replacing animals with non-animal models or animals thought to be less sentient. A somewhat parallel development for the farm animals involves the "five freedoms" or "five domains of animal welfare," which call for attention to the nutrition, environment, health, behavior, and mental state of animals (Mellor et al. 2009).

A more comprehensive set of principles arose from the observation that people affect animals in four basic ways: by caring for animals on farms, in homes, etc.; by deliberate harms such as slaughter and pest control; by unintended harms that occur when people drive cars, plow fields, etc.; and by disturbing the life-sustaining processes and balances of nature, for example by pollution, habitat alteration, and climate change. The four principles, which are intended to deal with these situations respectively, are: to provide good lives for the animals in our care, to treat all suffering with compassion, to be mindful of unintended harms so that we avoid and mitigate them as much as possible, and to protect the processes and balances of nature that are important to the lives of other beings (Fraser 2012).

An even more comprehensive approach is the "ethical matrix" which embeds animal welfare and other considerations in a structured process to inform ethical decisions (Mepham 2006). It sets out three general guiding principles (well-being, autonomy, and justice) as columns in a matrix, and lists the various affected parties as the rows. A possible action is then assessed for how it affects animal well-being, animal autonomy, and just treatment of animals, while using the same criteria to set out effects on (for example) farmers, farm workers, consumers, and others affected by the decision.

Unsolved philosophical problems

With its focus on practice more than theory, an animal welfare approach leaves many ethical issues unresolved and in many cases barely discussed. One issue is how to balance the different elements of animal welfare when they are in conflict. For example, if organic farmers allow animals more freedom and access to natural environments but are also less likely to use medications that help maintain basic health, can we draw any conclusions about their overall impact on animal welfare, or are we only able to outline the pros and cons of the different approaches?

A second issue involves balancing quality of life versus length of life. For example, some practitioners of wildlife rehabilitation readily euthanize badly injured animals to end their suffering, whereas others try to "save" such animals even if substantial suffering is likely to be involved in their recovery (Dubois and Fraser 2003). The former group appears to prioritize suffering, while the latter seems to prioritize maintaining the animals' options for future quality of life. In this and many other cases, a rational and coherent consensus remains to be articulated.

A third issue involves balancing the welfare of animals in human care against the welfare of free-living animals. For example, some people provide excellent care for colonies of unowned cats while making no attempt to prevent the cats from injuring and killing birds. Perhaps these people feel that cats, with their long history of domestication, merit a level of consideration that wild animals do not (Palmer 2011), but there has been little ethical discussion to help resolve such issues.

A fourth issue, which arises in the management of groups of animals, is how to prioritize the welfare of the "average" animal versus the most vulnerable. For example, if changing from individual housing to group housing is better for most of the animals but seriously disadvantages the smallest and least dominant, what criteria can be used to guide these decisions?

Finally, analysis is needed on how to prioritize the kind of unintended harms described above. In human ethics, intention plays an important role in moral judgments; for example, we view

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deliberate murder as a more serious wrong than negligence that results in death. Perhaps on this basis, some people appear to attach little priority to unintended harms. But is this appropriate when humans routinely cause a vast amount of unintentional harm to animals, and when these harms seem likely to increase unless they receive special attention?

Confronting these issues will require individuals with a robust understanding of the relevant practices combined with skill in ethical reflection and analysis. There is great scope for philosophers to take an interest in these questions and help to work out practical guidance.

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