Conservation Biology

Conservation Focus Essay

Deconstructing compassionate conservation

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***Article impact statement**: Compassionate conservation has an arbitrary focus on mammals, lacks compassion, and offers ineffective conservation solutions*

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Abstract: *Compassionate conservation focuses on 4 tenets: first, do no harm; individuals matter; inclusivity of individual animals; and peaceful coexistence between humans and animals. Recently, compassionate conservation has been promoted as an alternative to conventional conservation philosophy. We believe examples presented by compassionate conservationists are deliberately or arbitrarily chosen to focus on mammals; inherently not compassionate; and offer ineffective conservation solutions. Compassionate conservation arbitrarily focuses on charismatic species, notably large predators and megaherbivores. The philosophy is not compassionate when it leaves invasive predators in the environment to cause harm to vastly more individuals of native species or uses the fear of harm by apex predators to terrorize mesopredators. Hindering the control of exotic species (megafauna, predators) in situ will not improve the conservation condition of the majority of biodiversity. The positions taken by so-called compassionate conservationists on particular species and on conservation actions could be extended to hinder other forms of conservation, including translocations, conservation fencing, and fertility control. Animal welfare is incredibly important to conservation, but ironically compassionate conservation does not offer the best welfare outcomes to animals and is often ineffective in achieving conservation goals. Consequently, compassionate conservation may threaten public and governmental support for conservation because of the limited understanding of conservation problems by the general public.*

Keywords: animal rights, animal welfare, effective conservation, evidence-based conservation, invasives, invasive species, lethal control, translocation

Deconstrucción de la Conservación Compasiva

Resumen: *La conservación compasiva se enfoca en cuatro principios: no causar daño; los individuos importan; la integración de los animales individualmente; y la coexistencia pacífica entre los humanos u los animales. Recientemente, la conservación compasiva ha sido promovida como una alternativa a la filosofía convencional de la conservación. Creemos que los ejemplos presentados por los conservacionistas compasivos han sido elegidos arbitraria o deliberadamente por estar enfocados en los mamíferos; por ser inherentes y no compasivos; y por ofrecer soluciones de conservación poco efectivas. La conservación compasiva se enfoca arbitrariamente en las especies carismáticas, principalmente los grandes depredadores y los megaherbívoros. La filosofía no es compasiva cuando deja que los depredadores invasores dentro del ambiente causen daño a un vasto número de individuos nativos o usa el miedo al daño por superdepredadores para aterrorizar a los mesodepredadores. El entorpecimiento del control de especies exóticas (megafauna, depredadores) in situ no mejorará las condiciones de conservación de la mayoría de la biodiversidad, incluso si los conservacionistas compasivos no dañan a los individuos exóticos. Las posiciones que toman los llamados conservacionistas compasivos sobre especies particulares y sobre las acciones de conservación podrían extenderse para entorpecer otros tipos de conservación, incluyendo las reubicaciones, el encercado para la conservación y el control de la fertilidad. El bienestar animal es increíblemente importante para la conservación e irónicamente, la conservación compasiva no ofrece los mejores resultados de bienestar para los animales y comúnmente es poco efectiva en el logro de los objetivos de conservación. Como consecuencia, la conservación compasiva puede poner en peligro el apoyo público y del gobierno que tiene la conservación debido al entendimiento poco limitado que tiene el público general sobre los problemas de conservación.*

Palabras Clave: bienestar animal, conservación basada en evidencias, conservación efectiva, control letal, derechos animales, especies invasoras, invasoras, reubicación

摘要: *同理心保护注重四项原则: 不制造伤害、心系每一条生命、不排斥每一种动物, 以及人与动物和平共处。目前, 同理心保护已经被推崇为传统保护哲学的替代选择。然而, 我们认为同理心保护主义者有意或武断地挑选了哺乳动物作为范例, 这在本质上并不具备同理心, 且他们提供的保护方案也不实际。同理心保护常常不加判断地只关注明星物种, 尤其是大型食肉动物和食草动物;若是保留环境中的入侵食肉动物, 从而对原生种造成巨大伤害, 抑或是利用顶级捕食者来威慑中等食肉动物, 这样的保护理念实际上都没有同理心。即便同理心保护主义者没有直接伤害外来物种的个体, 阻止对外来物种 (大型动物、食肉动物) 的就地种群控制, 也不能改善组成生物多样性的大部分物种的保护情况。所谓的同理心保护主义者对特定物种或是特定保护行动所采取的立场, 甚至会阻碍其它形式的保护, 如迁地保护、围栏保护和繁殖控制等。动物福利对保护极为重要, 然而讽刺的是, 同理心保护不仅没有给动物提供最优的福利条件, 还通常不利于实现保护目标。因此, 鉴于公众对保护问题的认知有限, 同理心保护可能会威胁到公众和政府对保护的支持。**翻译: 胡怡思; 审校: 聂永刚***

关键词: 基于证据的保护, 动物福利, 动物权力, 有效保护, 入侵, 入侵物种, 灭杀控制, 迁地保护

Introduction

The relationship between the welfare of individual animals and a holistic ecosystem perspective has evolved since the inception of conservation as a science. In his initial definition of *conservation biology*, Soulé (1985) adopted Aldo Leopold's land ethic, whereby "the individual is a member of a community of interdependent parts" that include the environment (Leopold 1949). This perspective conflicted with the individualism philosophies promoting animal welfare at the time (Regan 1983; Singer 1990). Thereafter, due concern for individual animal welfare was slowly introduced into conservation theory and practice (Web of Science search of "*conservation*" AND "*animal welfare*" on 9 May 2019 returned <30 publications/year from 1995 to 2004 and over 1100 records in 2018), but only as an ancillary individualistic ethic to the principal holistic conservation ethic that culminated in "International Consensus Principles for Ethical Wildlife Control" (Dubois et al. 2017). But beginning with Bekoff (2010) and later Wallach and Ramp and their coauthors (Ramp 2013; Ramp et al. 2013; Ramp & Bekoff 2015; Wallach & Ramp 2015; Wallach et al. 2015, 2018*a*, 2018*b*), a new philosophy—compassionate conservation—emerged that aims to make the welfare of individual animals the primary tenet of conservation, thereby attempting to make the compassionate tail wag the conservation dog. Compassion (or, less specifically, concern for individual animal welfare) has already become an important aspect of best practices in conservation. However, the conflict is increasing between those who believe individual animal welfare is paramount and those who believe conservation of entire populations at the landscape level is the primary goal. Bekoff, Ramp, and Wallach's perspective of compassionate conservation advocates subordinating traditional conservation concern for biodiversity to concern for the welfare of individual animals. This may be considered radical compassionate conservation, but published perspectives from less extreme compassionate conservationists to confidently conclude this are lacking.

Mainstream conservationists are only beginning to recognize the risks of elements of the compassionate conservation philosophy (Fleming & Ballard 2018; Driscoll & Watson 2019; Oommen et al. 2019; Rohwer & Marris 2019). At a time when resources for conservation are stretched and urgent action is required, conservationists must focus on maximizing conservation success or they risk losing critical funding and support in favor of inefficient and ineffective strategies. We examined compassionate conservation to determine how this philosophy could hinder the conservation of biodiversity. We acknowledge that concern for the welfare of individual animals has an important place in conservation ethics. Debate on this matter is timely because most mainstream conservationists are keen to embrace ethical concern for individual animals as an important element in conservation best practices, but only to the extent that it is consistent with landscape-level methods of protecting native biodiversity that are measurably successful.

Examples of Compassionate Conservation

Proponents of compassionate conservation have identified several conservation actions they deem compassionate. Wallach et al. (2015) promote the cessation of "killing in the name of conservation" by arguing that it often has unintended consequences. They go on to identify culling programs aimed at reducing the impact of introduced cane toads (*Rhinella marina*) on Australian native fauna, gray wolves (*Canis lupus*) on woodland caribou (*Rangifer tarandus caribou*), and introduced European red foxes (*Vulpes vulpes*) on Australian native fauna. Killing for conservation is therefore considered unjustified because the costs to individuals are certain and the benefits to populations and ecosystems are not (Vucetich & Nelson 2007), despite clear evidence of benefits, in Australia at least. Wallach et al. (2015) provide examples of animal control where the benefits were questionable; however, these examples can be countered equally by others illustrating clear benefits. In Australia, controlling red foxes vastly improves survival and persistence of native marsupials (e.g., Kinnear et al. 2010); in Europe, controlling introduced eastern gray squirrels (*Sciurus carolinensis*) has allowed the native red squirrel (*Sciurus vulgaris*) to persist and expand its range (Shuttleworth et al. 2015); and in South Africa, controlling introduced Himalayan tahr (*Hemitragus jemlahicus*) has improved the plight of the endemic fynbos biodiversity hotspot (Rebelo et al. 2011).

Key members of the Centre for Compassionate Conservation (https://www.uts.edu.au/research-and-teaching/our-research/centre-compassionate-conservation) promote the idea of leaving non-native megafauna in situ and unchecked to increase the number of megafauna species present in various countries (Lundgren et al. 2018). This proposition would leave exotic species, such as camels (*Camelus dromedarius*), horses (*Equus callabus*), and donkeys (*Equus asinus*), unchecked in Australia despite the clear evidence of the damage they do to human, bird, amphibian, mammal, and plant communities (Nimmo & Miller 2007; Beever et al. 2018). Despite cats (*Felis catus*) being present in Australia since only 1788 (Abbott 2002) and the ecological devastation this species has caused there (Woinarski et al. 2015), compassionate conservationists advocate for the reclassification of feral cats to a native species in Australia (Wallach & Ramp 2015). Others promote leaving drug-lord Pablo Escobar's introduced African hippopotamus population (*Hippopotamus amphibius*) in Colombia (Dembitzer 2017). The general understanding of conservation is

premised on nativism—that native species are of more value to their ecosystems than non-native species. Nativism and what constitutes a native species is debated in the literature (Peretti 1998; Simberloff 2012; Wallach et al. 2018*a*), but there is ample evidence of the ecological damage caused by non-native species, and they remain a key threat to biodiversity (Salo et al. 2007).

Another implicit assumption in compassionate conservation recommendations for invasive animal management is that predation by nonhuman animals on other animals is more desirable, on ethical grounds, than predation by humans. From the killed animal's viewpoint, however, it is irrelevant who or what the predator is, and only humans show any compassion for their prey or concern for their welfare (Lewis et al. 2017). The methods used by professionals to kill animals for conservation purposes will almost always be more humane and compassionate than the methods used by animals to kill each other (Allen et al. 2019).

Defining Conservation

Conservation is the protection of biodiversity from factors that threaten it or the amelioration of those threats (Soulé 1985). These threats are almost invariably caused by humans (Hayward 2019). The point of view from which we critique compassionate conservation is that of scientists and managers devoted to conserving populations of diverse kinds of animals and plants in the ecosystems to which they have naturally adapted. This point of view is not shared by advocates of compassionate conservation, and therein lies the first tension associated with its ethos.

Among the 12 categories of threats to biodiversity of the International Union for Conservation of Nature are habitat loss or degradation, use, invasive species, human disturbance, pollution, and persecution (Maxwell et al. 2016). The abatement of these threats is the essence of conservation science and involves a range of practices, such as the creation of protected areas to ameliorate habitat loss and degradation; legislation to stop pollution, overuse, and persecution; translocations to establish new populations of threatened species within their historic range; landscape manipulations to facilitate coexistence of susceptible species and their threats; control and eradication of invasive species; and ex situ practices, such as captive insurance colonies and genome storage for mitigating permanent species and genetic loss when threats cannot be abated immediately. Conservationists generally support these actions because, at times, intervention is required. In the last 30 years, the evolution of large-scale conservation programs, embedded in a robust scientific framework, has allowed the development of effective decision-making practices that consider efficacy, animal welfare, logistics, and cost (Sutherland et al. 2004; Pullin et al. 2013) and have yielded significant conservation successes (Hoffmann et al. 2010). This is nowhere more obvious than in invasive species management, given that invasive species have caused vast numbers of native animal extinctions around the world (Butchart et al. 2010).

Critiquing Compassionate Conservation

Compassionate conservation has been defined as "a rapidly growing international and cross-disciplinary movement that promotes the protection of wild animals as individuals within conservation practice and policy" via "... a conservation ethic that prioritizes the protection of other animals as individuals: not just as members of populations of species but valued in their own right" (University of Technology Sydney n.d. & Supporting Information). It is an ethic that combines a number of well explored philosophies, including virtue ethics (undertaking an action because it is ennobling to do so [MacIntyre 2013]), deontology (undertaking an action because it is morally correct to do so [Regan 1983]), and consequentialism or utilitarianism (equal regard for the interests of all individuals irrespective of race, creed, sex, and species [Driver 2011]), and takes the view that individual animals are as valuable as populations or species from a conservation perspective (Singer 1990). This ethic holds to 4 tenets: first, do no harm; individuals matter; inclusivity of all individuals; and peaceful coexistence between humans and animals. We considered the implications of these tenets for conservation practice.

First, Do No Harm

The first, do-no-harm principle (Supporting Information) is a traditional tenet of medicine (Hippocratic Oath) that implies medical treatment should be performed only when benefits outweigh the risk of harm (Shmerling 2015). However, unlike human medicine that focuses on the health and well-being of an individual patient, conservation is a complex arrangement of interconnected components in which a decision directed at one portion of an ecosystem can have large direct and indirect consequences for numerous other parts of the system.

The choices made by conservationists have repercussions throughout biotic communities, not just for targeted species. For example, doing no harm to introduced feral cats and European red foxes leads to vast numbers of native Australian fauna suffering and dying daily, and will ultimately lead to the extinction of many species—negative consequences at both the individual and group levels (Kinnear et al. 2010; Frank et al. 2014). Doing no harm to eastern gray squirrels, an invasive species in Europe from the United States and Canada, will increase suffering of red squirrels and likely lead to extirpation of red squirrels in the United Kingdom and

possibly throughout Europe (Shuttleworth et al. 2016). Doing no harm to feral dogs in the Neotropics will lead to the harm of countless Brazilian animals (Lessa et al. 2016). Doing no harm to cane toads, which have invaded more than 50 countries around the globe, will lead to continued mortality of numerous predators with rippling effects through ecosystems on mesopredators and prey via trophic cascades (Doody et al. 2017). In these and many other cases, doing no harm results in more harm being done to more individual animals. Yet stopping the lethal control of invasive mammals, despite the inordinate amount of suffering they inflict on other animals, is a cardinal concern of compassionate conservationists (Wallach et al. 2015).

The do-no-harm principle may encourage more apathy than empathy and lead to a do-nothing approach to conservation (Bercovitch 2018). Therefore, it is important to acknowledge that the do-nothing option may do greater harm to a larger number of individuals than doing something that harms a few individuals (e.g., controlling introduced predators in Australia to reduce the harm to the millions of native animals they kill every day [Doherty et al. 2017]). These decisions fall into a broader paradigm in which the costs to individual animals are compared with the likely benefits to populations or species (Vucetich & Nelson 2007), but this trade-off is not possible under compassionate conservation despite its being accepted as appropriate by other ethicists (Shermer 2015).

Compassionate conservationists propose alternatives to lethal control, such as fencing (Fox & Bekoff 2011), yet this introduces further contradictions. Conservation fencing is designed to separate areas important for biodiversity from factors that threaten the biodiversity therein (Hayward et al. 2014). However, restricting the free movement of animals with conservation fences could be construed as harming individuals because they cannot move wherever they choose to access specific resources or flee predators and competitors (Fraser & MacRae 2011).

Harm was, is, and always will be an inescapable part of life on Earth. Food webs inextricably involve harm—harm by one species to another, directly or indirectly, as all living things compete for the planet's finite resources (Wackernagel et al. 2002). Whether conservationists let nature take its course (do nothing) or actively manage nature for biodiversity conservation, harm cannot be avoided given nature's interdependencies.

Individuals Matter

Compassionate conservationists often refer to individual animals as "wildlife individuals," entire species or populations of species as "wildlife collectives," and individual animals belonging to wildlife collectives as "members of collectives" (Wallach et al. 2018*a*). Yet to characterize transorganismic levels of biological organization, such as species, as wildlife collectives rhetorically suggests that species (and other levels of biological organization, such as biotic communities and ecosystems) are merely aggregates of individuals. That, however, is not how biologists understand the concepts of species, communities, and ecosystems. Rather, a biological species is a gene pool (expressed by organisms capable of interbreeding and spawning fertile offspring), representing a historic line of descent evolving through natural selection. Thus, there are clear evolutionary arguments for species conservation, and more generally biodiversity conservation, because a species' extinction is the termination of a line of descent (Rolston 2012) and the value of communities and ecosystems is greater than the sum of their parts (Golley 1993; Allen & Hoekstra 2015).

Inclusivity

Inclusivity in compassionate conservation recognizes the intrinsic value of animal individuals. That is to say, it respects individuals irrespective of their clan (species), status (population size and conservation status), native or alien heritage, or usefulness (Wallach et al. 2018*a*). There is a contradiction here in that advocates for compassionate conservation concede a hierarchy of animal protection by prioritizing a reduction of the suffering of sentient individuals, their definition of which appears not to include nonmammalian species (Wallach et al. 2018*a*). This is a seemingly Orwellian approach, suggesting all animals are equal, but some are more equal than others (Orwell 1945). Their current focus on mammalian taxa exemplifies this contradiction of inclusivity, which is further contradicted by generalizations that "sentience and sapience are prevalent across the animal kingdom" (Wallach et al., 2018*a*, but see Low 2017). The removal of ectoparasites that cause life-threatening wounds on reintroduced lions (*Panthera leo*) by veterinarians (Hayward et al. 2009) seems likely to be acceptable on compassionate grounds because the individual lions survived. However, the ticks were killed with little compassion, and the lions were harmed by darting and sedation for tick removal to happen. Conservation has long recognized the need to avoid prioritizing efforts aimed at large, charismatic species (Amori & Gippoliti 2000), but, to date, the compassion of compassionate conservation appears to be directed at large, charismatic mammals.

Peaceful Coexistence

The tenet of peaceful coexistence focuses on the relationship of humans with nonhuman wild and feral animals and emphasizes the need to reflect on human actions and people's ability to modify these actions, rather than defaulting to interventions that have impacts on wildlife (Wallach et al. 2018*a*). Partisans of compassionate

conservation advocate for conservation actions that eliminate or minimize trade-offs between the welfare of the individual animal and effective conservation of populations and ecosystems. Yet most conservationists recognize their actions often require compromises with stakeholders. Traditionally, stakeholders have often been humans and wildlife. For example, the creation of protected areas to conserve wildlife may force people out of their homelands, and the strict enforcement of these protected area boundaries and rules may limit the ability of people to feed themselves (West et al. 2006; Oommen et al. 2019). Compassionate conservationists advocate translocating dingoes (*Canis lupus dingo*) to control cats and foxes (Wallach et al. 2015). This is a valid option for some parts of Australia, but it is inconsistent with compassionate conservations' principle of first, do no harm (Bekoff 2010) (Supporting Information) because dingoes are predators and will inevitably harm both the introduced predators they are promoted to control and native species (Allen & Fleming 2012; Fleming et al. 2012), and the translocation of dingoes involves human moral agency and makes actors responsible for the welfare outcomes of these interventions. It also disregards 2 other compassionate conservation tenets because it suggests individual cats and foxes do not matter, and this is not inclusive of those species. So restoring dingoes to an area (Newsome et al. 2015) will initiate a new level of harm to animals living there and that harm is essential for the objective of mesopredator suppression to be achieved (Allen et al. 2019).

This position was starkly illustrated in an interview with Arian Wallach from the Centre for Compassionate Conservation (Marris 2018) in which the case of the Tristan Albatross (*Diomedea dabbenena*) on Gough Island was considered. There, the invasive house mouse (*Mus musculus*) preys on chicks of several critically endangered albatross species (https://www.youtube.com/watch?v=ePmlPpNND_g), causing immense suffering and death and driving entire species to extinction (Caravaggi et al. 2019). For Wallach, the principles of compassionate conservation mean the mice may not be poisoned to save the albatross. Wallach asks, "What gives us the right to be the gods of Gough Island, to say who lives and who dies?" (quote taken from Marris [2018]). This position (extended in the interview as a general principle) could lead many conservationists to the conclusion that whatever compassionate conservation is really about, it is not about conservation (Driscoll & Watson 2019). Furthermore, this position is not realistically about peaceful coexistence. Coexistence, peaceful or otherwise, is not possible if one of the species goes extinct. In this scenario, a peaceful coexistence between the Tristan Albatross and mice would be to support albatross survival on Gough Island and let mice continue to occupy the rest of its enormous, global range.

Potential Perverse Outcomes

Little in conservation is simple. Prescriptive rules, such as those promoted by compassionate conservationists, may well create perverse outcomes. The marooning of koalas (*Phascolarctos cinereus*) on French Island (near Melbourne, Australia) for conservation purposes was initially a great success; however, they rapidly became overabundant, causing severe defoliation of food plants (Menkhorst 2008). In the absence of management to control this overabundance (thereby harming individuals), a greater number of individuals were inadvertently harmed as they starved to death. Similarly, mass mortality events during droughts affect kangaroo populations that lack control, such as the 14,500 individuals that starved to death in Kinchega National Park (Australia) in 1982–1983 (Robertson 1986) and the multitude that are dying during the current drought in Australia. These animals experience worse welfare outcomes than those managed by human interventions (Wilson & Edwards 2019). Reinstating natural predation patterns may help (Wallach et al. 2015), but predation inherently causes harm and will also cause perverse impacts in pastoral zones by harming livestock (Wilson & Edwards 2019). Conservation that is adaptive and flexible under each unique situation is likely to deliver greater animal welfare gains than hard and fast rules driven by emotion or ideology. In response to such concerns, advocates of compassionate conservation may resort to virtue ethics, claiming it is sufficient to manifest the virtue of compassion by letting the animals interact without human intervention. However, this dialectic in reasoning ignores the fact that more individuals will be harmed without lethal control (i.e., fewer individuals die a less painful death if one follows mainstream conservation practice). Hence, compassionate conservation vacillates between animal-ethic paradigms (e.g., Wallach et al. 2018*a*) and retains vestiges of the more familiar and popular utilitarian paradigm (notably articulated by Singer [1990]) (e.g., Wallach et al. 2018*a*). Mainstream conservation practice already acknowledges individuals matter by recognizing that controlling introduced predators minimizes harm to the greatest number of individuals.

Conclusion

The Centre for Compassionate Conservation is an animal rights group posing as a scientific conservation organization (Fleming 2018). Evidence of this is that the primary members of the center are key participants in the animal welfare group Voiceless—The Animal Protection Institute (https://www.voiceless.org.au/about-us). Although there are important exceptions within animal-protection groups for mainstream conservation actions (Dubois et al. 2017; RSPCA 2018), these are more of a response to

the recognition that many animal-welfare agencies have historically failed to show the leadership necessary to solve conservation problems, and in many cases, these agencies have only fuelled conflict (Banks 2005; Vanak & Home 2018) and caused conservation disasters (Brown 1998; Bryce et al. 2011). Although the broader principles of compassionate conservation certainly have merit (e.g., consideration for animal welfare and the individual), the practical challenges are particularly problematic, notably, the concept of the collective or greater good is ignored.

Although compassionate conservationists have begun to target the direct mortality aspects of conservation, this is an arbitrary position they have selected that could initiate a slippery slope and challenge other conservation practices, such as inhibiting free animal movement, forced relocations, forced mating or genetic management, forced contraception or medication, and introducing one species to disrupt or kill another. It is imperative that conservation scientists provide information about the impact the compassionate conservation philosophy could have on biodiversity conservation globally. Without this, society could easily embrace the philosophy of compassionate conservation, whereas tried and tested conservation practices that have allowed threatened species to persist (Hoffmann et al. 2010; Hoffmann et al. 2011) could lose political and financial support through uninformed and ill-directed emotion and subsequent public pressure. The compassionate conservation arguments could sway public opinion by appearing as a viable alternative to existing conservation methods, yet science shows this is not the case. While mainstream conservationists must always give animal welfare due consideration, they also need to continue to educate the public and identify the problems that compassionate conservation will cause to ensure that this ineffective and ironically inhumane strategy does not eclipse a true philosophy of conservation in the popular imaginary. A compassionate tail should not wag the conservation dog.

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Supporting Information

The definition of *compassionate conservation* from the University of Technology Sydney's Centre for Compassionate Conservation (Appendix S1) is available online. The authors are solely responsible for the content and functionality of these materials. Queries (other than absence of the material) should be directed to the corresponding author.

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