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Wolf Hunting and the Ethics of Predator Control

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[–] Abstract and Keywords

A basic tool of scholarly ethics is argument analysis—the process of evaluating the soundness of the premises and the validity of arguments that underlie a particular ethical claim. We apply that technique to the controversial concern about the appropriateness of hunting wolves. Advocates of wolf hunting offer a variety of reasons that it is appropriate. We inspect the quality of these reasons using the principles of argument analysis. Our application of this technique indicates that wolf hunting in the coterminous United States is inappropriate. A value of argument analysis for public discourse is its transparency. If we have misapplied the principles of argument analysis, critics will readily be able to identify our error. While this particular application of argument analysis is contingent on details particular to wolves and the desire to hunt them, this essay has the addition value of illustrating one of the basic tools used in scholarly ethics.

Keywords: animal welfare, conservation, critical thinking, environmental ethics, hunting, wolves

Introduction

The ethics of hunting are complicated. Even ardent supporters of hunting disagree among themselves, for example, over the appropriateness of hunting methods that maximize the possibility of a clean kill (to minimize suffering) and the appropriateness of methods that emphasize fair chase.[1] A more basic ethical concern is, Under what conditions is hunting appropriate? That question rests, in turn, on an even more basic question, What counts as an adequate reason to kill a sentient creature? Some thoughtful people believe that hunting is generally wrong for the same reasons eating meat is wrong. Other thoughtful people believe that hunting is morally acceptable, even virtuous, for anyone who can reasonably conclude that eating meat is morally acceptable.[2] These perspectives offer a sense of the issues concerning the ethics of hunting such species as deer and elk when the hunter, her family, and her friends will eat the animal being hunted.[3]

In this chapter, we focus on the desire of some humans to hunt a variety of predators whose flesh humans do not eat—species such as coyotes, cougars, lynx, tigers, lions, cormorants, seals, and wolves.[4] The considerations that arise in addressing such concerns vary greatly with context, and include the particular species of predator to be hunted and the reasons for wanting to do so. As such, we focus our assessment on the desire to hunt wolves in the conterminous United States. Without such a focus, an assessment of the ethics of hunting predators is limited to generalities that overlook critical specificities that play a large role in understanding the appropriateness of hunting a predator. Nevertheless, from a detailed and focused assessment such as that offered here, one can readily anticipate the assessment of other specific cases.

We approach this assessment from the perspective of applied ethics as an academic discipline. The aim of applied ethics is, in large part, to understand the reasons we ought to behave one way or another. A particularly powerful tool for such understanding involves the analyzing of ethical arguments. An ethical argument is one whose conclusion can be expressed in the forms *We should …* or *We should not …*. An ethical argument, like any kind of argument, is sound and valid when all its premises are true or appropriate and when it contains no mistaken

inferences.[5] We therefore describe and assess arguments that are commonly invoked in discussions about wolf hunting.

Wolves

Prior to the arrival of Europeans, wolves lived throughout most of what is now the conterminous United States. That population of wolves likely comprised approximately a half million individuals.[6] But by the mid-twentieth century, wolves in the conterminous United States had been exterminated, except for a few dozen who lived in northern Minnesota. Wolves were exterminated because too many humans hated them. This hatred was related to wolves' killing of livestock and competing with humans for deer, elk, and moose, and it fueled and was fueled by exaggerated claims about wolves' capacity for killing and false beliefs about the threat they pose to humans. Beginning in 1973, wolves came under the protection of the Endangered Species Act. By 2012, approximately 5000 wolves inhabited the conterminous United States, a remarkable improvement compared to their numbers in 1950, but also hardly worth noting compared to their numbers before humans began their attempted genocide of wolves. Today, most wolves live in two populations, one in the western Great Lakes area (northern Minnesota, northern Wisconsin, and Upper Michigan) and the other in the Northern Rocky Mountain area (western Montana, western Wyoming, and northern Idaho). But in 2012, wolves were also removed from the list of US endangered species, except for the Mexican wolf subspecies (*Canis lupus baileyi*), represented in the wild by a population of fewer than 60 wolves living in the desert southwest. By 2013, all six states with established wolf populations had begun to allow wolf hunting. The delisting and subsequent hunting of wolves has been controversial.

Humans have a tendency, for better or worse, to symbolize elements of the world in which they live. To some, wolves are a symbol of much of what we love about nature; whereas to others wolves are a symbol of our adversarial relationship with nature. As powerful symbols of nature, our treatment of wolves is a critical indicator of our relationship with the rest of nature.

Can and Ought

A number of wolf biologists believe, without qualification, that we have the technical ability to hunt wolves without compromising the health of their populations or the ecosystem functions they provide. A wolf hunt without those negative impacts could be accomplished by hunting only a small percentage of the population each year. Nevertheless, other qualified wolf biologists do not believe that we can do this reliably, and they can cite examples to support that belief.

The governments of five of the six states that allow wolf hunting (Idaho, Montana, Wyoming, Minnesota, Wisconsin) have begun to implement hunting plans that aim for considerable reductions in wolf abundance. Such reductions are unlikely to threaten the short-term risk of extinction for these populations. They are, however, likely to impair genetic processes and the ecosystem functions that wolves provide, and lead to social disruptions in the wolf population. These effects are certainly detrimental to population health and ecosystem health. While we have the technical ability to implement a harvest that does not cause those harms, we appear not to have an interest to do so.

Notwithstanding those critical shortcomings, there is value in at least momentarily granting the ability and willingness to hunt wolves without harming wolf populations or the ecosystems they inhabit. Doing so raises a very basic principle in making moral judgments. That is, *can does not imply ought*. Having the ability to do something is not evidence that we ought to. This principle has been a cornerstone of thinking in Western jurisprudence and ethics for 2500 years. That Icarus possessed the ability to fly toward the sun did not mean that he should have done so, and neither should the Babylonians have built a tower just because they could.

A second basic and relevant principle is that killing a sentient creature is a serious matter because sentient creatures deserve at least some direct moral consideration. To use simpler language, it is wrong to kill a sentient creature without an adequate reason. This principle is supported by robust rational considerations that have been articulated by every scholarly and traditional perspective in environmental ethics, including animal Liberation,[7] animal rights,[8] biocentrism,[9] extended individualism,[10] universal consideration,[11] deep ecology[12] and ecocentrism.[13] Sociological research also suggests that most (at least nonsociopathic) humans attribute direct

moral standing to sentient creatures.[14] This belief is also held by the hunting community itself, some of whose members have provided convincing and beautiful expressions about the seriousness of killing a living organism.[15]

These two principles (*Do not kill without an adequate reason* and *Can does not imply ought*) lead to the conclusion that one should refrain from wolf hunting until adequate reason has been provided for doing so. With that inescapable burden of proof, advocates of wolf hunting have moral obligations to provide adequate reasons for their interest and to refrain from wolf hunting unless adequate reasons have been provided. While hunting advocates have certainly offered reasons to hunt wolves, the question is which, if any, are adequate reasons. To date, no one has detailed or analyzed the most important arguments for why we should hunt wolves.

Argument Analysis

Before analyzing the arguments for wolf hunting, it will be valuable to review the two basic steps of argument analysis.[16] The first is converting a reason into a formal argument, which requires discovering and stating all the premises that would have to be true for the argument to have a valid logical form. The second is evaluating the truth or appropriateness of each premise. This second step is important because an argument is unsound if just one premise is false or inappropriate. That an argument is unsound or invalid is not definitive proof that a conclusion is wrong, but it does mean that the given argument fails to justify the conclusion.

Wolves-Kill-Ungulates Argument

A common reason offered for why we should allow wolf hunting is that wolves reduce the abundance of the ungulates that humans like to hunt.[17] For the sake of pedagogy, we transform this reason into a formal argument in several steps, with the intention of conveying a sense of the thought process associated with converting a reason into a formal argument. The first step in transforming this reason is to identify the conclusion (C) and the key premise(s) (P) that characterize this reason:

P1. Wolves reduce ungulate abundance.

C. Wolves should be hunted.

The conclusion (C) does not logically follow from premise P1 alone. Additional premises are required. In particular:

P1. Wolves reduce ungulate abundance.

P2. Wolf hunting reduces wolf abundance.

P3. Reducing wolf abundance increases ungulate abundance.

P4. Increased ungulate abundance leads to increased hunter success.

C. We should be allowed to hunt wolves.

Premises 1 through 4 trace the sequence of specific ecological processes that have to be true if the conclusion is to be supported. While these premises are necessary, they are not enough. Ethical arguments (whose conclusion can be expressed as *We should* …) require more than premises that describe the condition of the world. Ethical arguments must contain at least one descriptive premise (describing how the world is) and at least one ethical premise (prescribing the basic moral obligations that pertain to the conclusion). An ethical argument without an ethical premise is assuredly an invalid argument. For this argument, the relevant ethical premises are:

P5. It is wrong to kill a living creature without an adequate reason.

P6. Increasing hunter returns is an adequate reason to kill wolves.

The argument is likely still incomplete. If we take for granted laws that require maintaining the population viability of wolves and a basic concern for ecosystem health,[18] then premises P2 and P3 should be revised:

P2. Wolf hunting reduces wolf abundance *without compromising the health of the wolf population or the ecosystem to which they belong*.

P3. Reducing wolf abundance increases ungulate abundance *without compromising the health of the wolf population or the ecosystem to which they belong*.

The completeness of an argument is always provisional and contingent. In principle, a missing premise could be discovered at any point in time. Judging an argument to be valid (i.e., having no missing premises) depends largely on the humans with an interest in the issue surrounding the argument.

Let us suppose this argument is sufficiently complete and that we can begin evaluating the truth and appropriateness of each premise. Sometimes a missing premise is discovered during the process of evaluating the truth of premises. But bear in mind that the conclusion of an argument is as reliable as its weakest premise. To be "very confident" about the appropriateness of a conclusion, we have to be "very confident" about the truth or appropriateness of each premise.

Premise 1. Asking an ecologist how predation affects prey abundance is not unlike asking a physicist how gravity works. Predation is complicated and has been a focus of ecologists' attention for a century. While much is known, much remains unknown. Because ecological phenomena, in general, are the complicated result of many interacting causes, isolating the effect of a single cause in real ecosystems is notoriously difficult.

With those limitations, the best available science indicates that P1 is sometime true and sometimes not true.[19] Ecologists are also unable to reliably predict when or under what circumstances P1 would be true.[20] Ecologists cannot even always agree on whether wolves caused an ungulate population to decline, even *after* the decline has occurred and the circumstances surrounding it have been well-documented.[21]

Finally, trends in ungulate abundance suggest that P1 is wrong. For example, across the Northern Rockies, some elk populations have increased and others have declined. That kind of variation is normal and occurs regardless of wolves. Notwithstanding those variations, elk numbers across the region appear to have increased by about 16 percent during the period 1994–2012, which is when most of the increase in wolf abundance occurred.[22] In Wisconsin, deer abundance tended to increase throughout the past two decades[23] and remains greater than target levels established by the Wisconsin Department of Natural Resources, which measures the detrimental impact of deer overabundance.[24] In Upper Michigan, deer abundance tended to decline in the first decade of the twenty-first century. However, that trend appears to be the result of a pattern that has existed for at least the past 50 years, whereby each year's deer abundance is largely influenced by the intensity of logging during that year.[25]

Premise 2. The effect of hunting on wolf abundance depends on the rate of hunting (i.e., proportion of wolves hunted each year). Low rates are unlikely to reduce abundance, and high rates are likely to do so. The effect of intermediate rates on abundance is very uncertain.[26] If reducing abundance were the only concern of P2, then one could be reasonably confident about the truth of that premise by revising it: "High rates of hunting will reduce wolf abundance."

However, the concern is that P2 requires satisfying three requirements: reduce abundance and, at the same time, maintain population health and maintain ecosystem health. A low rate of hunting would maintain population health and ecosystem health, but would not reduce abundance; a high rate would reduce abundance, but risk population health and ecosystem health, depending on how the terms "population health" and "ecosystem health" are defined.

If population health includes such elements as social structure and dispersal, then rates of hunting that reduce abundance would likely harm population health. If population health entails only the legal requirement to avoid relisting wolves under the Endangered Species Act, then moderately high rates of harvest for some period of time are unlikely to harm population health.[27]

Wolves contribute to ecosystem health by affecting the abundance of prey; age structure of prey populations; evolutionary pressures on prey populations; and behaviors of prey, such as when, where, and how they feed on vegetation. The most plausible assumption is that wolves fulfill their ecosystem functions when wolf abundance is determined primarily by the abundance and condition of prey, and not by rates of hunting by humans.

Ultimately, the truth of P2 is contingent on the meaning of population viability and ecosystem health. While the truth of P2 is far from certain for reasonable or widely agreed upon definitions of population health and ecosystem health, P2 is likely true with respect to each state's legal obligations to maintain population health and ecosystem

health.

Premise 3. If P3 were simply, "Reducing wolf abundance increases ungulate abundance," then P3's truth would be doubtful for the same reason that P1 is doubtful. Further doubts arise from the stipulation in P3 that ungulate abundance increases without harming ecosystem health. Maintaining ecosystem health generally requires that ungulate abundance be controlled by predation.[28] In some cases, ungulate abundance can be limited by human hunting,[29] but often there are too few hunters to have that effect.[30]

Premise 4. P4 is particularly important because it speaks directly to the ultimate concern of this argument. Hunter success can be measured in a variety of ways. The two most important measures are the proportion of successful hunters and the total number of successful hunters. However success is measured, the truth of P4 is doubtful. For example, the number of successful elk hunters and the percentage of elk hunters who were successful in the Northern Rockies did not decline during the period 1994–2008, which is the time when wolf abundance increased the most.[31] While it is appropriate to expect reductions in hunter success in the presence of a wolf population,[32] this appears not to have been the circumstance.

More generally, hunter success is affected by not only ungulate abundance but also ungulate behavior and the skill and behavior of hunters. The presence of relatively few wolves on the landscape may result in behavioral changes that affect hunters' success.[33] As such, maintaining hunters' success (or hunters' perceptions of success) through reductions in wolf abundance could easily require reducing wolf abundance to levels that are precluded by federal policy.[34] P4 also raises concerns about how high hunter success ought to be, and about the responsibility hunters have for changing behaviors and improving their skills to maintain their chances of success. We address these concerns below.

Premises 5 and 6. The appropriateness of P5 is neither doubtful nor controversial (see the section "Can and Ought," above). One approach in evaluating P6 is to begin by recalling that all the ecological premises (P1 through P4) are doubtful. As such, hunting wolves involves incurring an ethical cost (killing wolves) with considerable risk of not realizing the intended outcome of that killing (increased hunter success). To do so is to kill without good reason and to violate one's ethical commitment to P5.[35]

Additionally, one could grant the truth of P1 through P4 and consider the appropriateness of P6 directly. To do so, suppose, at least momentarily, that the welfare of a human is more important than the welfare of a non-human mammal. And also recognize that eating wild ungulates is a vital need for wolves and a non-vital interest for humans who hunt ungulates in the conterminous United States. Given those considerations, judging the appropriateness of P6 depends on judging whether the vital need of a non-human outweighs the non-vital interest of a human. In some cases, that judgment could be difficult. Passing judgment in this case, however, seems straightforward after the following are recognized: (1) no one is asking hunters to give up hunting; they are only being asked to share ungulates with wolves; and (2) today's wolf population comprises only approximately 2 percent of the wolves that would have inhabited the conterminous United States at the time when humans began their attempted genocide against wolves.

Aside from those perspectives, there might be occasion for entertaining spirited debate over the appropriateness of P6 if all the other premises of the argument were certainly true. But this is not the case. Moreover, because P6 is an ethical premise, not a sociological premise, its appropriateness does not depend simply on majority opinion. Majority views are sometimes indicative of that which is moral, and other times not.[36]

While wolf hunting is an ethical concern, it is no minor insight to recognize that the greatest weaknesses of this argument are not its ethical premises but its scientific premises. This circumstance is likely more common than is generally appreciated and is certainly characteristic of other interests to kill predators, such as cormorants and seals.[37]

The Hunt-'em-to-Conserve-'em Argument

Another important reason offered for allowing wolf hunting is that hunting them would promote wolf conservation. The formal argument associated with this reason is:

P1. Wolf conservation requires that a critical minimum number of citizens have positive attitudes about and

behaviors toward wolves.

P2. Wolf hunting would positively affect attitudes and behaviors of many who hate wolves.

P3. We ought to promote wolf conservation.

C. Therefore, we ought to hunt wolves.

This general argument represents two distinct, but related, arguments. One version is particular to citizens' attitudes, and the other version is particular to behaviors. The behavioral version of the argument is:

P1. Wolf conservation requires that a critical minimum number of citizens behave favorably toward wolves, especially by not killing them.

P2. To allow wolf hunting would prevent an otherwise inevitable public backlash against wolves that would result in higher rates of poaching and loss of political support that would threaten the viability of wolf populations.

P3. We ought to promote wolf conservation.

P4. It is wrong to kill a living creature without an adequate reason.

P5. Conserving wolf populations is an adequate reason to kill individual wolves.

C. Therefore, we ought to allow wolf hunting.

In this behavioral argument, P1, P3, and P4 are appropriate and uncontroversial. Moreover, poaching is a potentially serious concern and should be guarded against, but there is no evidence to suggest that poaching has prevented wolf populations from expanding in the western Great Lakes or Northern Rockies. If poaching were not an actual threat, then the need for hunting, as supposed by this argument, would seem absent.

Moreover, the best available science suggests that provisions for killing wolves do not tend to promote tolerance for wolves. In particular, a recent review found no evidence for the claim that allowing higher quotas of legal harvest resulted in reduced rates of poaching.[38] Also, attitudes tended to be more negative during a period of time when legal lethal control had been allowed than when wolves had been fully protected.[39] Moreover, preliminary results from a study commissioned by the US Fish and Wildlife Service fails to support this contention.[40] Deep-rooted social identity is likely the most important determinant of attitudes about wolves,[41] not allowances for killing them.

In addition to those empirical problems, this argument is also ethically deficient. Poaching is a wrong, not only because of its potential to threaten population viability, but also because it can be a wrong against the individual who was killed. Many instances of wolf poaching, in particular, are wrong because they are primarily motivated by a hatred of wolves. These instances of poaching qualify as wrongful deaths, if not hate crimes. To legalize such killing does not make them any less wrong. Moreover, people who threaten to poach wolves unless wolf killing is legalized[42] are engaging in a kind of ecological blackmail by threatening harm against individual organisms and ecosystems unless their demands to kill are met. People who advocate for this argument, even without an interest in killing wolves themselves, unwittingly abet this blackmail. If poaching is wrong because it represents an adequate reason to kill, then it is not made right simply by legalizing the killing of wolves. That would be analogous to solving the problem of illegal payments for sex by legalizing prostitution.

The attitudinal version of the hunt-'em-to-conserve-'em argument is:

P1. Wolf conservation requires a critical mass of people who respect wolves.

P2. There is a risk of losing that critical mass.

P3. Many people who do not respect wolves desire to hunt them.

P4. Hunting an animal generates respect for that animal.

C1. Allowing people to hunt wolves is necessary for wolf conservation.

P5. We ought to promote wolf conservation.

P6. It is wrong to kill a living creature without an adequate reason.

P7. Conserving wolf populations is an adequate reason to kill individual wolves.

C2. We ought to allow wolf hunting.

In this argument, C1 is a conclusion rising from P1 through P4. C1 then serves as the first premise in an argument that also includes P5, P6, P7, and C2.

P4 is a perverse misinterpretation of the relationship between respect and hunting. Hunting reinforces or deepens respect for the deer because the hunter knows the deer sacrificed his life for the sustenance of the hunter. In this relationship, respect exists before the hunting; the hunting did not generate respect ex nihilo. In other words, the hunter respects the deer in spite of killing him, not because she killed him. The wolf-hater's a priori attitude, by contrast, is hatred, not respect. Her killing the wolf is thus an exercise of hatred—she would likely celebrate the killing. Without moral concern for the wolf, the wolf's sacrifice cannot be recognized. For hunters, recognition of sacrifice is necessary for the realization of respect. Moreover, there have been episodes in conservation history during which hunting (or fishing) was important for promoting conservation involved species of waterfowl, white-tailed deer, wild turkeys, sand hill cranes, and brook trout who were respected, not hated.

For a hater, P4 could possibly be true in rare and particular circumstances. That is, hatred is sometimes dissolved when the hater becomes familiar with his victim, and hunting provides an opportunity to become familiar with the victim. However, if P4 were commonly true, killing would be a commonly prescribed therapy for unjustified hatred. It is not. Finally, sociological evidence also suggests that P4 is false.[43]

Another concern with this argument is that the truth of P2 is impossible to evaluate. No one knows how many people represent a critical mass or how the critical mass is affected by the intensity of hatred among wolf haters. Nevertheless, concern for the truth of P2 cannot be completely dismissed. For example, the proportion of people reporting negative attitudes about wolves has increased in at least one area.[44] However, attitudes are a notoriously poor predictor of how people will behave, especially when the behavior in question, that is, poaching requires nontrivial effort and is accompanied by the risk of considerable punishment.

There is also reason to think that the truth of P2 is unlikely. In particular, if intolerance is judged by the act of poaching, rather than by attitudes that are verbally expressed in surveys,[45] then there are reasons to believe intolerance will decline. This intolerance is caused by the risk that some perceive in wolves. Considerable evidence suggests that perceived risk tends to decline as humans become increasingly familiar with the source of the perceived risk.[46] Also, wolf intolerance is likely not distinct from other irrational intolerances (such as racism or sexism). That is, no one expects individual wolf haters to change their attitudes. Instead, over time their behaviors become less tolerated, and their attitudes become less common as the people holding them pass away. To paraphrase Martin Luther King, the long arc of history bends toward justice. The strength of this argument might be difficult to evaluate if P2 were the only weakness. It is not. P2 only adds to the argument's weakness.

Finally, P7 is worth highlighting. Its truth should not be taken for granted. This premise represents an increasingly important and unresolved conflict between two of the greatest ethical developments of the twentieth century, conservation ethics and animal welfare ethics. Some ardent advocates of wolf hunting tend to be hostile to justified concerns for animal welfare.[47] Others advocates of wolf hunting are sensitive to the value of conservation. The conservation tradition and its profession tends not to be very sensitive to or adept at handling this conflict.[48] Feeling comfortable with this argument would require that someone explain the appropriateness of P7. That explanation has not yet been made.

The Recreation and Tradition Argument

Another important reason offered for why wolf hunting should be allowed is:

P1. Wolf hunting is valuable as a tradition and form of recreation.

P2. Wolf hunting can be managed without threatening population viability or ecosystem health.

P3. It is wrong to kill a living creature without an adequate reason.

P4. Tradition and recreation are adequate reasons to hunt wolves.

C. We ought to allow wolf hunting.

If the honorable tradition of hunting is different from attempted genocide, then wolf hunting is not a tradition in the conterminous United States. No one alive today has ever spoken to a person who has hunted a wolf in the conterminous United States, except as part of a nearly successful program to exterminate wolves. Even if wolf hunting were a tradition, so also were slavery, child labor, and denying women the right to vote. Defending the morality of a behavior on grounds that it is tradition is so widely known to be fallacious that logicians have memorialized this particular kind of logical fallacy by naming it *argumentum ad antiquitatem*.

If wolf hunting is not traditional, could it be an acceptable form of recreation? Recreation has a common meaning (i.e., "refreshment of one's mind or body after work through activity that amuses or stimulates"[49]) and a deeper meaning reflected by the etymology of the word (re-create). The re-creative value of deer hunting does not lie in killing the deer. Its re-creative value lies in the hunter's appreciation of the sacrifice the deer made so that the hunter could sustain him or herself. When sustenance is not the central reason for hunting, its distinctive value is simply an act of killing, or worse, an opportunity to manifest hatred.[50] To consider such an activity recreation is grotesque.

A related version of this argument would replace P1 with:

P1. Wolf hunting is valuable because the wolf pelt that comes with killing a wolf has value as a trophy or an economic commodity.

A trophy is a kind of prize, memento, or symbol of some kind of success. To kill a sentient creature for the purpose of using its body or part of it as a trophy is essentially killing for fun or as a celebration of violence. And, although there was once a time when trapping wolves for their pelts might have been a respectable means of making a living because wolf pelts were then a reasonable way to make warm clothing, we no longer live in that time.

Other Arguments for Wolf Hunting

Some argue that we should allow wolf hunting because reducing the wolf population will reduce the threat to human safety. Arguments to this effect depend on a premise like "wolves threaten human safety." These arguments crumble because such premises are almost universally false. Many who do not like wolves grossly exaggerate the threat that wolves represent to human safety. In the very rare instances when human safety is threatened, that problem needs to be dealt with immediately, thoroughly, and precisely. Wolf hunting has none of those properties. For example, if a particular wolf threatens human safety in say, July, the problem cannot wait until the upcoming hunting season in the hope that some hunter will have the "good fortune" to kill the offending wolf. The inappropriateness of the argument underlying this reason has been discussed in detail elsewhere.[51]

Some assert that we should allow wolf hunting because reducing the wolf population will reduce the threat that wolves pose to livestock. The challenges of raising livestock should be of concern to anyone who eats meat. Nevertheless, several considerations suggest that protection of livestock is a poor reason to hunt wolves. First, the loss of livestock to wolves is absolutely trivial from an industry-wide perspective.[52] Where losses occur, non-lethal methods are feasible and in many cases effective in reducing or eliminating livestock losses.[53] From the perspective of an individual owner, livestock losses and the cost of non-lethal control can be non-trivial. Nevertheless, as a wealthy nation, we are more than capable of meeting those costs in a fair manner. Finally, the prevention of livestock losses requires addressing the particular wolf associated with the problem and addressing that wolf at the particular location and time of those problems. A general recreational hunt is not an appropriate tool for dealing with such a specific problem and could even exacerbate it.[54] There are sensible ways to deal with livestock losses, but wolf hunting is not one of them.[55]

Finally, some assert that we should allow wolf hunting because hunting them is necessary to prevent wolves from growing "out of control." "Out of control" is sometimes a euphemism for the idea that wolves can create

challenges for some humans who live in areas also inhabited by wolves (e.g., killing livestock). "Out of control" is also sometimes a euphemism for an obsession with "controlling" nature, not to achieve any other objective, but as an end in itself. That obsession represents a pathological relationship with nature; it lies at the core of many conservation problems, and it should be resisted.[56] Satisfying that obsession incurs an ethical cost in addition to the ethical cost of killing a sentient creature.

Each of these three reasons for hunting wolves deserve more attention than we are able to provide here. There would be value in building and analyzing the arguments associated with each reason. While space limitations preclude our providing such a treatment here, we have nevertheless contributed the basic elements that would go into building those arguments.

Conclusion

The details associated with killing predators vary considerably with the species of predator, reasons for wanting to kill, and sociological and ecological contexts surrounding any particular interest to kill. The analysis presented here required careful attention to those details as they pertain to hunting wolves in the conterminous United States. Despite the importance of details, the basic themes associated with hunting any predator would be similar to those presented here.

Because wolves (and other predators) are living creatures, the morality of killing wolves (and other predators) depends on being able to provide a good reason to do so. The analyses presented here and elsewhere[57] suggest that good reasons have not been offered. The results of argument analyses, are like the results that emerge from the scientific process; they are never definitive. They are always provisional in the sense that it may be conceivable that someone, at some time in the future, will provide a good reason to hunt wolves. Until that time, however, one would be logically bound to the conclusion that wolf hunting in the conterminous United States is wrong.[58]

This conclusion may raise the question, *Who gets to judge what counts as a good reason?* That question is misplaced. In a free society, every citizen is free to judge what counts as a good reason. The critical question is not, who gets to judge, but rather, *By what rules and standards is one obligated in judging what counts as a good reason?* The rule and standard is that reasoning be sound and valid; that is, a conclusion must be supported by an argument with no mistaken premises or missing premises (i.e., without gaps in logic).

This standard emerges directly from basic principles of justice. Justice is widely understood to depend on an idea that can be expressed as a thought experiment whereby the members of a society are required to agree on the principles of governance and social interactions before anyone knows their position in society (i.e., their wealth, abilities, aesthetic preferences, etc.).[59] One of the required principles to emerge from such a process would certainly be that social decision-making should be based on sound and valid reasoning.

Sound and valid reasoning is not a silver bullet. Argument analysis can be manipulated by those more concerned with winning political disputes than understanding what is good or right. Some premises are difficult to discover, and others are difficult to evaluate. Sound and valid reasoning does not completely clear all the fog associated with judging the appropriateness of normative premises. A number of controversies are genuinely pernicious and not easily solved (though, as we show here, hunting wolves is not one of them). Consequently, argument analysis is not sufficient, but it is an absolutely necessary feature of a just democracy.

Some may react with concern, thinking that majority of citizens are not capable engaging in argument analysis. Almost certainly, this is true. Nevertheless, one should at least expect government technocrats working on such problems in the interests of citizens to have this capacity. Sadly, a large portion of these technocrats does not possess this capacity. What exactly is the capacity of which we speak? In this analysis, we have only applied some basic facts[60] to some basic principles covered in every critical-thinking textbook that has ever been published.[61] Anyone graduating with a bachelor's degree should be expected to have a rudimentary capacity for sound and valid reasoning. However, the nature of the public discourse about wolf hunting, predator control, and dozens of other controversial issues clearly indicates that we do not have this capacity. This incapacity may be the greatest failure of university professors and administrators.

Although a citizenry can become capable of sound and valid reasoning at a rudimentary level, this kind of reasoning is nevertheless genuinely challenging. Consequently, most of us are content with our intuitions about what is right and wrong for many particular cases, and we live according to such intuitions. Intuitive moral reasoning is fine and normal, so long as one bears in mind that one's confidence about such intuitions as they apply to complicated issues should correspond to the degree to which one has studied that judgment with the rigors of sound and valid reasoning.

Further Reading

For an accessible overview of the importance of top carnivores to ecosystem health, Cristina Eisenberg, *The Wolf's Tooth: Keystone Predators, Trophic Cascades, and Biodiversity* (Washington, DC: Island Press, 2011). For an overview of wolf ecology, L. D. Mech and L. Boitani, (eds.), *Wolves: Behavior, Ecology, and Conservation* (Chicago: University of Chicago Press, 2007).

For an overview of wolf conservation in the United States, Martin A. Nie, *Beyond Wolves: The Politics of Wolf Recovery and Management* (Minneapolis: University of Minnesota Press, 2003).

For a broad and accessible overview of argument analysis, Peg Tittle, *Critical Thinking: An Appeal to Reason* (New York: Routledge, 2011). For an overview of basic themes in environmental ethics, Paul Pojman and Louis Pojman, (eds), *Environmental Ethics: Readings in Theory and Application* (Andover, MA: Cengage Learning, 2011).

Notes:

([1]) The conflict between those two principles, for example, underlies concerns about the appropriateness of bow hunting and hunting over bait piles.

([2]) Reasons for being vegetarian or vegan are varied. Moreover, a person might conclude that eating meat is appropriate in some circumstances but not others. For example, a person might think eating meat is wrong in general but acceptable for Native Alaskan Inuits, whose welfare would seem to depend on eating animal flesh. While that kind of complexity is important, it does not obviate the central point, which is a demand to confront the question, What counts as an adequate reason to kill a sentient creature? The hunting community has long recognized the value of this question for understanding the conditions under which various kinds of hunting is appropriate. See also Tovar Cerulli, *The Mindful Carnivore: A Vegetarian's Hunt for Sustenance* (New York: Pegasus, 2012); Lily R. McCaulou, *Call of the Mild: Learning to Hunt My Own Dinner* (New York: Grand Central Publishing, 2012).

([3]) For a more detailed accounts of these issues, see David Peterson, (ed.), *A Hunter's Heart: Honest Essays on Blood Sport* (New York: Holt, 1997); Jim Posewitz, *Beyond Fair Chase: The Ethics and Tradition of Hunting* (Helena, MT: Falcon, 2002); Jose Ortega y Gassett, *Meditations on Hunting* (Belgrade, MT: Wilderness Adventures Press, 2007); Nathan Kowalsky, *Hunting—Philosophy for Everyone: In Search of the Wild Life*. (Oxford, UK: Wiley-Blackwell, 2010); Allen Jones, *A Quiet Place of Violence: Hunting and Ethics in the Missouri River Breaks* (Bozeman, MT: Bangtail, 2012).

([4]) "Hunting" is not the best term to describe the relationship between humans and some of these creatures. For example, the relationship with seals in the North Atlantic is better described as "predator control," because the primary purpose of killing seals is to reduce their abundance in order to increase the abundance of their prey, which are fish that humans harvest. The relationship with wolves in the conterminous United States between 1850 and 1950 might be best described as "attempted genocide," since the goal had been complete extermination. Moreover, in many cases, predators are killed by trapping, rather than by shooting. While the above-mentioned distinctions are critically important, our main interest is in the basic question, What counts as a good reason to kill a sentient creature? So, despite its shortcomings, we use the term "hunting" to refer to all of these relationships.

([5]) Irving M. Copi, Carl Cohen, and Kenneth McMahon, *Introduction to Logic,* 14th edition (New York: Pearson, 2010).

([6]) J. A. Leonard, C. Vila, and R. K. Wayne, "Legacy Lost: Genetic Variability and Population Size of Extirpated US

Grey Wolves (*Canis Lupus*)," *Molecular Ecology* 14 (2005): 9–17.

([7]) Peter Singer, *Animal Liberation*, 2nd edition, Modern Classics (New York: Harper Perennial, 1990).

([8]) Tom Regan, *The Case for Animal Rights* (Berkeley: University of California Press, 1983).

([9]) P. W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton, NJ: Princeton University Press, 1986).

([10]) Lawrence. E Johnson, *A Morally Deep World: An Essay on Moral Significance and Environmental Ethics* (Cambridge, MA: Cambridge University Press, 1991).

([11]) T. H. Birch, "Moral Considerability and Universal Consideration," *Environmental Ethics* 15 (1993): 313–332.

([12]) Arne Naess, *Ecology, Community and Lifestyle* (Cambridge, MA: Cambridge University Press, 1989).

([13]) J. Baird Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989); J. Baird Callicott, *Beyond the Land Ethic: More Essays in Environmental Philosophy* (Albany: State University of New York Press, 1999); Holmes Rolston, *Conserving Natural Value* (New York: Columbia University Press, 1994).

([14]) For example, S. Kellert, "The Biological Basis for Human Values of Nature," in *The Biophilia Hypothesis*, ed. S. R. Kellert and E. O. Wilson (Washington, DC: Island Press, 1993), 42–69; R. E. Manning, "Social Climate Change: A Sociology of Environmental Philosophy," in *Reconstructing Conservation: Finding Common Ground*, ed. B. A. Minteer and R. E. Manning (Washington, DC: Island Press, 2003), 207–222.

([15]) For example, Paul Shepard, *The Tender Carnivore and the Sacred Game* (New York: Scribners, 1973); David Peterson, (ed.), *A Hunter's Heart: Honest Essays on Blood Sport* (New York: Holt, 1997); Gassett, *Meditations on Hunting*.

([16]) John A. Vucetich and Michael P. Nelson, *A Handbook of Conservation and Sustainability Ethics*. CEG Occasional Paper Series, issue 1, 2012, www.conservationethics.org (accessed July 15, 2013). This document also provides an accessible overview of the application of argument analysis to conservation. See also Michael P. Nelson and John Vucetich, "Environmental Ethics for Wildlife Management," in *Human Dimensions of Wildlife Management*, ed., D. J. Decker, Shawn J. Riley, William Siemer et al. (Baltimore, MD: Johns Hopkins University Press, 2012), 223–237.

([17]) "Ungulate" is a general term that includes species like deer, elk, moose, caribou, and bison.

([18]) In some cases, a concern may be that a law or policy is unjust and immoral. If so, then it would be inappropriate to take such laws or policies for granted. Instead, there may be a need to develop an argument to assess whether the law or policy is appropriate. Whether such issues should be taken for granted or demonstrated depends largely on the judgment of the humans with an interest in the issue surrounding the argument.

([19]) For example, C. C. Wilmers, E. Post, R. O. Peterson et al., "Predator Disease Out-break Modulates Top-down, Bottom-up and Climatic Effects on Herbivore Population Dynamics," *Ecology Letters* 9 (2006): 383–389.

([20]) Oswald J. Schmitz, *Resolving Ecosystem Complexity* (Princeton, NJ: Princeton University Press, 2010).

([21]) Compare J. A. Vucetich, D. W. Smith, and D. R. Stahler, "Influence of Harvest, Climate and Wolf Predation on Yellowstone Elk, 1961–2004," *Oikos* 111 (2005): 259–270, with P. J. White and R. A. Garrott, "Yellowstone's Ungulates after Wolves: Expectations, Realizations, and Predictions," *Biological Conservation* 125 (2005): 141–152, and R. Garrott, P. J. White, and J. Rotella, "The Madison Headwaters Elk Herd: Transitioning from Bottom Up Regulation to Top Down Limitation," in *The Ecology of Large Mammals in Central Yellowstone*, ed. R Garrott, P. J. White, and F. G. R. Watson (San Diego, CA: Elsevier, 2009), 489–517.

([22]) Anonymous, "Wolves by the Numbers," *Bugle,* Sept./Oct. 2009, p. 84, http://switchboard.nrdc.org/blogs/mskoglund/elk%20numbers.pdf (accessed July 7, 2013).

([23]) 1990–2012, the period of time when wolf abundance increased from approximately 30 wolves to

approximately 800 wolves.

([24]) *Deer Population Goals*, Wisconsin Department of Natural Resources, 2013, http://dnr.wi.gov/topic/hunt/popgoal.html (accessed July 15, 2013).

([25]) R. Doepker, Michigan Department of Natural Resources, unpublished data. After trees are logged and removed, the treetops are left behind on the forest floor. The twigs on those treetops are an important source of winter food. Between 1957 and 2005, the number of cords of pulpwood harvested in Upper Michigan explained 67 percent of the variation in an index of deer abundance (i.e., the mean density of pellet groups [fecal material] counted on transects across Upper Michigan).

([26]) John A. Vucetich, "The Influence of Anthropogenic Mortality on Wolf Population Dynamics with Special Reference to Creel And Rotella (2010) and Gude et al. (2011)," in "Final Peer Review of Four Documents Amending and Clarifying the Wyoming Gray Wolf Management Plan," United States Fish and Wildlife Service, 2012, pp. 78–95, http://www.fws.gov/mountain-prairie/species/mammals/wolf/WY_Wolf_Peer_Review_of_Revised_Statutes_and_Plan_Addendumt2012_0508.pdf (accessed July 15, 2013). http://www.fws.gov/mountain-prairie/species/mammals/wolf/

([27]) Each state government is legally required, under policies set in accordance with the US Endangered Species Act (1973), to maintain a minimum number of wolves. For example, Wisconsin has approximately 800 wolves but may be legally obligated to have only on the order of 100 wolves. The state of Wisconsin has for some time said that it will aim to have 350 wolves. "Wisconsin Wolf Management Plan," Wisconsin Department of Natural Resources., 1999, http://dnr.wi.gov/files/PDF/pubs/ER/ER0099.pdf) (accessed July 15, 2013).

([28]) See, for example, B. Miller, B. Dugelby, D. Foreman et al., "The Importance of Large Carnivores to Healthy Ecosystems, *Endangered Species UPDATE* 18 (2001): 202–210; R. L. Beschta and W. J. Ripple, "Large Predators and Trophic Cascades in Terrestrial Ecosystems of the Western United States," *Biological Conservation* 142 (2009): 2401–2414; J. A. Estes, J. Terborgh, J. S. Brashares et al., "Trophic Downgrading of Planet Earth," *Science* 333 (2011): 301–306.

([29]) J. Vucetich, D. W. Smith, and D. R. Stahler, "Influence of Harvest, Climate, and Wolf Predation on Yellowstone Elk, 1961–2004," *Oikos* 111 (2005): 259–270.

([30]) B. G. Giles and C. S. Findlay, "Effectiveness of a Selective Harvest System in Regulating Deer Populations in Ontario," *Journal Of Wildlife Management* 68 (2004): 266–277.

([31]) Anonymous, "Wolves by the Numbers,". *Bugle*, Sept/Oct. 2009, p. 83, http://switchboard.nrdc.org/blogs/mskoglund/elk%20numbers.pdf (accessed July 7, 2013). See also Steven Hazen, "The Impact of Wolves on Elk Hunting in Montana" (MS thesis, Montana State University, 2012).

([32]) E. B. Nilsen, T. Pettersen, H. Gundersen et al., "Moose Harvesting Strategies," in "The Presence of Wolves," *Journal of Applied Ecology* 42 (2005): 389–399.

([33]) J. A. Winnie, "Predation Risk, Elk, and Aspen: Tests of a Behaviorally Mediated Trophic Cascade in the Greater Yellowstone Ecosystem," *Ecology* 93 (2012): 2600–2614.

([34]) Failure to recognize these principles is a particularly weak aspect of the rationale for hunting wolves as stated in Vucetich, "Influence of Anthropogenic Mortality,' 2012.

([35]) This circumstance (i.e., killing with little or no chance of realizing the intended outcome of that killing) characterizes many efforts to restore ecosystems that have been affected by exotic and invasive species; see, for example, J. H. Myers, D. Simberloff, A. M. Kuris et al., "Eradication Revisited: Dealing with Exotic Species," *Trends in Ecology & Evolution* 15 (2000): 316–320; J. Vucetich and M. P. Nelson, "What Are 60 Warblers Worth? Killing in the Name of Conservation," *Oikos* 116 (2007): 1267–1278; D. K. Rosenberg, D. G. Vesely, and J. A. Gervais, "Maximizing Endangered Species Research," *Science* 337 (2012): 799.

([36]) When the majority do not believe what can reasonably be shown to be ethical, there is a problem. But that problem is not so much an ethical problem (in the sense of not knowing how we ought to behave) but is instead a behavioral problem, whereby the challenge is to behave as we know we ought to. This perspective does not

address the more complicated concern of who has the privilege of judging what counts as a "reasonable" explanation. Although standards exist for making such judgments, discussion of those standards is beyond the scope of this chapter. See, for example, John Rawls, *A Theory of Justice* (Cambridge, MA: Belknap Press, 1971); Amartya Sen, *The Idea of Justice* (Cambridge, MA: Harvard University Press, 2009).

([37]) P. Yodzis, "Culling Predators to Protect Fisheries: A Case of Accumulating Uncertainties," *Trends in Ecology and Evolution* 16 (2001): 282–283; J. S. Diana, S. Maruca, and B. Low, "Do Increasing Cormorant Populations Threaten Sportfishes in the Great Lakes? A Case Atudy in Lake Huron," *Journal of Great Lakes Research* 32 (2006): 306–320; R. J. King, "To Kill a Cormorant," *Natural History*, March 2009, http://www.naturalhistorymag.com/0309/0309_feature.html (accessed July 15, 2013).

([38]) H. Andrén, J. D. C. Linnell, O. Liberg et al., "Survival Rates and Causes of Mortality in Eurasian Lynx (Lynx lynx) in Multi-use Landscapes," *Biological Conservation* 131 (2006): 23–32; A. Treves, "Hunting for Large Carnivore Conservation," *Journal of Applied Ecology* 46 (2009): 1350–1356.

([39]) A. Treves, L. Naughton-Treves, and V. Shelley, "Longitudinal Analysis of Attitudes Toward Wolves," *Conservation Biology* 27 (2013): 315–323.

([40]) C. Browne-Nunez, A. Treves, D. MacFarland, and Z. Voyles, "The Influence of Official Lethal Control on Illegal Take, Social Tolerance, and Subsequent Depredations? The Case of Wisconsin Gray Wolves (*Canis lupus*)," http://faculty.nelson.wisc.edu/treves/wolves/wolfhuman.php (accessed March 7th 2014).

([41]) L. Naughton-Treves, R. Grossberg, and A. Treves, "Paying for Tolerance: Rural Citizens' Attitudes toward Wolf Depredation and Compensation," *Conservation Biology* 17 (2003): 1500–1511.

([42]) For example, in 2005, "a federal judge struck down a Bush administration rule that lowered Endangered Species Act (ESA) protection for wolves that are migrating out of strongholds in the Northern Rockies and Great Lakes into neighboring states … Sharon Beck, an Eastern Oregon rancher and former president of the Oregon Cattlemen's Association, said the ruling leaves ranchers little recourse but to break the law—known around the West as 'shoot, shovel and shut up'—when wolves move into their areas." See J. Barnard, "Ruling Halts Downgraded Wolf Protections," Associated Press, February 9,, 2005, www.propertyrightsresearch.org/2005/articles02/ruling_halts_downgraded_wolf_pro.htm (accessed July 15, 2013).

([43]) A. Treves and K. A. Martin, "Hunters as Stewards of Wolves in Wisconsin and the Northern Rocky Mountains, USA," *Society and Natural Resources* 24 (2011): 984–994.

([44]) Treves et al., "Longitudinal Analysis," 315–323.

([45]) Such as the survey described in Treves et al., "Longitudinal Analysis," 315–323.

([46]) L. Sjoberg, "Factors in Risk Perception," *Risk Analysis* 20 (2000): 1–11; P. Slovic, "Perception of Risk: Reflections on the Psychometric Paradigm," in *Social Theories of Risk,* ed. S. Krimsky and D. Golding (New York: Praeger, 1992), 117–152.

([47]) Michigan United Conservation Clubs, "Out-of-State Animal Rights Extremists at It Again," July 2, 2013, http://www.mucc.org/2013/07/mucc-statement-on-anti-hunting-initiative-regarding-wolf-management/ (accessed 15 July 2013).

([48]) Vucetich, "What Are 60 Warblers Worth?" 1267–1278; J. Vucetich and M. P. Nelson, "The Infirm Ethical Foundations of Conservation," in *Ignoring Nature No More: The Case for Compassionate Conservation*, ed. Marc Bekoff (Chicago: University of Chicago Press, 2013), 9–26; C. Draper and M. Bekoff, "Animal Welfare and the Importance of Compassionate Conservation: A Comment on Mcmahon et al. (2012)," *Biological Conservation* 158 (2013): 422–423.

([49]) *American Heritage Dictionary of the English Language*, 4th edition (Boston: Houghton Mifflin Company, 2000).

([50]) Hunting has other incidental values, such as providing an opportunity to spend time outdoors and better understand nature. Not only are these values incidental, they can also be accomplished without killing.

([51]) J. Vucetich and R. O. Peterson. "Using Basic Principles of Wildlife Management to Evaluate the Prospects for a Public Wolf Harvest in Michigan" (written testimony to the Michigan Natural Resources Commission, May 1, 2013).

([52]) Wolves account for 0.2% of all causes of premature death in cattle. The most common causes are various kinds of health issues, many of which could be mitigated by better husbandry. About twice as many cattle are stolen each year than are killed by wolves. Even among mammalian carnivores, wolves only account for 2% of kills (domestic dogs account for 12%). See "Cattle Death Losses" (report by the United States Department of Agriculture, May 12, 2011), http://usda.mannlib.cornell.edu/usda/current/CattDeath/ (accessed July 15, 2013). CattDeath-05-12-2011.pdf

([53]) E. Bangs, M. Jimenez, C. Niemeyer et al., "Non-lethal and Lethal Tools to Manage Wolf-Livestock Conflict in the Northwestern United States," in *Proceedings of the 22nd Vertebrate Pest Conference*, ed. R.M. Timm and J.M. O'Brien (Davis: University of California Davis, 2006), 7–16, also available at www.aphis.usda.gov/wildlife_damage/nwrc/publications/06pubs/shivik067.pdf.

([54]) For details, see Vucetich, "Using Basic Principles." Moreover, harvesting could exacerbate losses to livestock. This concern rises, in part, from the likely effect that a harvest will increase the number of dispersing wolves in areas where livestock are raised. Dispersing wolves that have not been acculturated to living in areas with livestock may be more likely to kill livestock. See E. E. Bangs and J. Shivik, "Managing Wolf Conflict with Livestock in the Northwestern United States," *Carnivore Damage Prevention News* 3 (2001): 2–5; A. Treves and L. Naughton-Treves, "Evaluating Lethal Control in the Management of Human-Wildlife Conflict," in *People and Wildlife: Conflict or Coexistence?* ed. R. Woodroffe, S. Thirgood, and A. Rabinowitz (London: Cambridge University, 2005), 86–106.

([55]) In some cases, lethal control is the most effective way to stop livestock losses. Lethal control is different from hunting and refers to the targeted killing a particular wolf at the particular time and place associated with a problem. Evaluating the appropriateness of lethal control requires the analysis of different arguments. Important questions in evaluating lethal control include, Have alterative methods for solving the problem been tried and shown to have failed? Is the problem being caused serious enough to merit the use of lethal control?

([56]) Freya Matthews, *The Ecological Self* (London: Routledge, 1991).

([57]) For example, Vucetich, "Using Basic Principles."

([58]) To reiterate, we are not saying that lethal control of wolves is never appropriate. See footnote 18.

([59]) Various expressions of this idea exist, including the "veil of ignorance"; see John Rawls, *A Theory of Justice* (Cambridge, MA: Belknap Press, 1971) and "*the impartial spectator*" (Adam Smith, *Theory of Moral Sentiments* (New York: Empire, 1759/2011). Impartiality was also central to Immanuel Kant's philosophy. For an accessible treatment of these ideas, see Amartya Sen, *The Idea of Justice* (Cambridge, MA: Harvard University Press, 2009).

([60]) None of the premises in the preceding arguments are overly complicated or particularly difficult to evaluate.

([61]) See, for example, Irving M. Copi, Carl Cohen, and Kenneth McMahon, *Introduction to Logic,* 14th edition (New York: Pearson, 2010).

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