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Review

Why IACUCs Need Ethicists

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Abstract

Some animal research is arguably morally wrong, and some animal research is morally bad but could be improved. Who is most likely to be able to identify wrong or bad animal research and advocate for improvements? I argue that philosophical ethicists have the expertise that makes them the likely best candidates for these tasks. I review the skills, knowledge, and perspectives that philosophical ethicists tend to have that makes them ethical experts. I argue that, insofar as Institutional Animal Care and Use Committees are expected to ensure that research is ethical, they must have philosophical ethicists as members.

Key words: animal; animal research; animal rights; animals; biomedical research; ethics; justice; moral; morality; research ethics introduction

INTRODUCTION

If an action is morally wrong, we want to know about it so we can try to stop it. If what is done is bad, but can be made better, we want to know about that as well to make improvements.

At least some animal research is morally wrong, and some research could be made morally less bad or better.[1] When morally problematic animal research occurs in the United States, this is usually, in part, because an Institutional Animal Care and Use Committee (IACUC) approved the research.[2] And when IACUCs approve morally problematic research plans and that research is subsequently conducted, IACUCs do something wrong: it is wrong to allow research that is wrong to proceed, and it is wrong to allow bad research that could have been remedied.[3] Responding to this problem will likely involve structural, systematic changes to IACUCs to reduce the likelihood of this wrongdoing.[4] This would include changes in personnel or membership so that someone notices these wrongs and addresses them: no changes will happen unless people make them happen.

This leads to the following questions:

- Who is most likely to be able to identify research that is morally wrong or problematic?
- Who is most likely able to offer and advocate for ethical solutions to ethically problematic research?

I will argue that philosophical ethicists are likely the best candidates for these roles. Ethicists who are trained and experienced in distinctly philosophical methods of engaging ethical issues are most likely to be experts concerning the ethical and, in some ways, scientific issues regarding animal research.[5]

Since IACUC approval is frequently cited to support the claim that research is ethical, not merely legal or regulatory compliant,[6] this means that IACUCs must have philosophical ethicists as members. Veterinarians' scientific and clinical expertise makes them essential to IACUCs; philosophical ethicists' ethical expertise makes them essential to ethical IACUCs.[7] Here I make this case by detailing much of the special knowledge, skills, experiences, and perspectives that philosophical ethicists have that make them essential to successful IACUCs.

ETHICISTS AS ETHICAL EXPERTS

I propose that philosophical ethicists tend[8] to be ethical experts. This means that they have training and experiences that result in skills, knowledge, and perspectives that enable them to more effectively recognize morally problematic research, explain why it is problematic, productively engage different perspectives on the issues, and advocate for morally appropriate responses compared with those who lack such training, education, and perspectives.[9]

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Ethics experts need not be morally better people in the sense that they have better moral characters and are more likely to be motivated to avoid doing what is wrong compared with anyone else; they simply have the knowledge, understanding, and skills that enable them to better evaluate complex ethical arguments on controversial issues and thus identify what actions are likely to be wrong, given all the ethically relevant concerns.

Some balk at the idea of ethical expertise, thinking that it does not exist or that we never have any idea who the experts are. But it is easy to make a plausible initial case that ethical expertise exists and that we can often tell who the experts are.[10]

To begin, we can notice that some moral judgments are more likely to be correct than others: we can even say that some are definitely correct and others are definitely wrong. Uncontroversial examples from the daily moral tragedies of our world show that some people correctly believe that certain actions are wrong while others have false or incorrect moral beliefs. Furthermore, some of these people are better able to reason towards those better moral judgments: their views are supported by strong evidence, and they are able to explain why this is so.

This means that, for some issues, some people have better moral judgment than others and we can tell that and why this is the case. These people are able to accurately characterize particular moral issues, explain what facts are relevant to understanding and resolving the issue, develop and support arguments for their ethical conclusions, engage questions and objections, and not become distracted by distorting influences in analyzing and making arguments, among other abilities.

And here I am thinking only of "ordinary people" who have stronger moral reasoning skills and the fact that we can recognize that. These people have some level of ethical expertise, especially compared with people who accept incorrect moral judgments on the basis of bad arguments.

Philosophical ethicists are similar to these people who have better moral reasoning skills but, due to their training and experience, have much more advanced, developed, refined, and reflective moral reasoning abilities. These abilities and other relevant knowledge and understanding contribute to their having genuine ethical expertise.

IACUCs are required to have a non-scientist community member who, by definition, lacks scientific expertise. Since this person will almost always lack ethical expertise, nearly any function this person performs on an IACUC would be better be done by an expert ethicist; therefore, IACUCs should have expert ethicists as members in addition to or instead of community members.[11]

What knowledge and skills contribute to the ethical expertise that philosophical ethicists would lend to IACUCs? The following reviews some of them.

Coursework and Teaching

First, philosophical ethicists usually have taken courses in many or most of the following areas, often at the graduate level:

1. Critical thinking and argumentation;
2. Formal logic;
3. Ethical theories and theories of justice;
4. Bioethics and practical ethics. Generally, courses address a wide range of issues that enable them to apply insights from arguments from other ethical and philosophical topics to animal issues;
5. Philosophy of science and theory of knowledge;
6. Ethics and animals.

And they also usually teach courses in some or many of these areas. Non-philosophers generally have neither taken nor, especially, teach these types of courses; if they have taken them, it was usually a long time ago when they were undergraduates.[12]

Since these courses prepare people to think rigorously and systematically about complex ethical issues and related philosophical issues about the nature of scientific reasoning and knowledge production, at least some IACUC members should have taken them, because IACUCs do address complex and challenging ethical and philosophical issues. That philosophical ethicists have developed knowledge of these relevant subject matters contributes to their value for ethical IACUCs.[13]

Research and Scholarly Activities

Philosophical ethicists also tend to engage in research and scholarly activity that is relevant to evaluating the ethics of research proposals; they give academic presentations on the topics and often publish peer-reviewed articles and books on animals and ethics (and usually other issues in ethics and philosophy) in philosophy, ethics, and bioethics forums. This scholarly activity develops experience, knowledge, and skills that are IACUC relevant.

It should be acknowledged that animal researchers without strong philosophical backgrounds also sometimes publish articles on ethical issues about animal research; for example, animal researchers sometimes publish moral defenses of animal research in scientific journals. However, while these are on the topic of ethics, these writings are rarely (almost never) in philosophy, ethics, or bioethics journals. That means that these articles are usually written by people who are not trained or experienced in systematic thinking about ethical issues, and then they are reviewed by people who also lack this training and experience. In general, these are not high standards that contribute to excellent understanding and knowledge production.[14]

Logical Skills: Critical Thinking

Teaching and research are the main forums where scholars demonstrate that they have the relevant knowledge and skills of their subject areas. Skill demonstration is especially important in philosophy and ethics since—from many perspectives—the core of the field is a set of intellectual skills that enable effective critical thinking and argument analysis that are applied to challenging and controversial issues, such as animal research. Let us review some IACUC-relevant skills that philosophy uniquely promotes.[15]

Defining and Clarifying Terms and Claims First, philosophers are trained in skills to help us clarify what we mean when we make claims, define our terms, and evaluate proposed definitions and characterizations of concepts for strengths and weaknesses. Analyzing unclear concepts and seeking—ideally—the necessary and sufficient conditions for their application are core philosophical skills.

Some obvious IACUC-relevant concepts that are often understood in different ways include animal, animals, human, a human, human being, benefits, harms, ethics, morality, wrong, right, rights, moral rights, legal rights, duty, obligation, good, bad, justice, injustice, equal, equality, value, importance, and many more. Conclusively defining many of these words is often challenging, to say the least, but philosophers are generally able to show when people are using words in different ways and

are "talking past each other." This ability is important to enable successful communication, especially when there are or seem to be disagreements. We need to know what is being said to know whether what is said is true or false or, at least, know what we would need to know to tell this.

To demonstrate this skill, let us examine 2 common claims made about animal research. First, this "soundbite" defense of animal research: "Animal research is essential to medical progress." A fair question is, "What do you mean, essential?" The question is fair because what is said is at best unclear and more likely false. Some questions to help recognize this include:

- In calling animal research "essential," does this mean that without animal research, there would be no medical progress, at all?
- If so, does this mean that areas of healthcare-related inquiry that *do not* involve animals contribute nothing to "medical progress"?

The word "essential" usually means something like "is necessary for," and animal research is not "essential" for all medical progress: some progress is made using research methods that do not involve animals. So, this common justification for animal research rests on a false claim, which we can see by simply reflecting on the meaning of "essential."

A more specific claim about medical progress could be true, however, such as: "If there were no animal research, or if there were less animal research, there would be less 'medical progress.'" To support this claim, however, we would have to do some hard thinking and research. We have to try to define the idea (or ideas) of "medical progress" or determine what kind of progress we really want; for example, is greater "progress" achieved by more widely distributing currently existing health-promoting goods, by developing new health-promoting goods, or by some ideal combination of both (if so, what is that ideal balance)? And there are quantity and quality questions; for example, would greater progress be made in eliminating, say, the common cold that minorly affects billions, or in eradicating horrible conditions that affect only a few?

These forms of potential progress or benefits for human beings are, of course, offered as a reason to justify harming animals. For this form of justification to potentially succeed, however, we would need a serious accounting method; we would need a systematic way to quantify and compare the benefits and costs to both humans and animals to justify any overall calculation of the harms and benefits of animal research. This accounting would include any benefits (of various types) for humans, and it would include the harms to animals. We know that the harms to animals are usually immediate, direct, and severe, whereas any benefits to humans are typically indirect and at best merely hoped for, at least at the time of the research. The accounting also has to include opportunity costs for humans, the benefits that would have been achieved had different research methods or other activities been used to bring about different forms of progress.

We have no such accounting method. The conceptual and empirical work needed to responsibly argue "the medical benefits for humans from animal research are greater than the harms to animals (and humans), so animal research is justified" is challenging, to say the least. And this perspective, of course, assumes that no animals have moral rights, such as rights to their lives or their bodies, that would make such accounting morally irrelevant since the benefits anyone achieves by violating someone else's rights generally do not justify violating those rights.

We should acknowledge that unclear claims are found on all perspectives on these issues. For example, some critics of animal research say this: "Animal research does not and could not contribute to medical progress." "What do you mean contribute to?" There has been a lot of animal research; surely some of it, even if only serendipitously, has made some difference to medical progress, however that is understood. Might this not be a "contribution" in some sense? Anyone who denies or affirms this has a lot of explaining to do, beginning with what they mean by what they say.

In sum, philosophers help people think and speak more clearly and precisely; they have skills at clarifying exactly what is said so that we can try to determine whether what is said is true and reasonable or not. With those latter goals in mind, we now turn our focus to skills in stating and evaluating arguments, that is, reasons given to support conclusions or evidence given for our views about ethics and anything else.

Invalid Arguments Arguments are conclusions supported by reasons or premises. A lot of philosophical thinking involves logic, which is the study of arguments. We use logic to test if various claims (premises) lead to other claims (conclusions).

Philosophers first help us see that many arguments have premises that simply do not lead to their conclusions; this means that even if the premises were true, they would not support their conclusions. These types of arguments are called logically invalid. To demonstrate this concept, consider these 2 arguments:

Premise 1: If animals have rights, then animal research is wrong.
Premise 2: But animals do not have rights.
Conclusion: Therefore, animal research is not wrong.

Premise 3: If animal research is wrong, then it is harmful to animals.
Premise 4: And animal research *is* harmful to animals.
Conclusion: So, animal research is wrong.

Many people think that these are good arguments, but they are not. We can see this by, among other ways, examining arguments of the same pattern:

Premise 1∗: If Eve goes to a public university, then she is a college student.
Premise 2∗: But Eve does not go to a public university.
Conclusion: Therefore, she is not a college student.

Premise 3∗: If Adam goes to a public university, then Adam is a college student.
Premise 4∗: And Adam is a college student.
Conclusion: Therefore, Adam goes to a public university.

These argument patterns allow for true premises but false conclusions, which means the premises do not even lead to the conclusion, even though—to the untrained eye—they sometimes appear to follow.

Reasoning comes in many patterns, many of which are much more complex than these simple examples, and philosophers' training and experience better enable them to see which patterns are good and which are bad and explain why this is so. These skills are essential for ethical argument evaluation and thus contribute to ethicists' value for IACUCs.

Arguments With Unstated Premises Some arguments are invalid: the premises do not lead to their conclusion. Some other

arguments are stated in an incomplete manner, without the full pattern of reasoning or all the premises stated, so we cannot readily tell how the premises lead to the conclusion. This is especially problematic when the unstated premises, essential to the reasoning, are false or at least need critical examination.

Insofar as many moral arguments about animals are given without stating these unstated premises, philosophers can help people see these premises: they can state arguments in valid form so that the full reasoning can be evaluated. Again, these skills are essential to IACUC tasks. To demonstrate these skills, consider 2 very common arguments given in support of animal research:

"Necessity" arguments:

Premise: Animal research is necessary for medical progress.
Conclusion: Therefore, animal research is morally permissible.

"No alternatives" arguments:

Premise: There are no alternatives to animal research.
Conclusion: Therefore, animal research is morally permissible.

Most respond to these arguments by focusing on their first premises, which leads to sometimes heated debates about whether animal research is indeed "necessary" or whether there are legitimate "alternatives" to animal research.

Philosophers, however, urge holding off on these debates because we should first state these arguments' full pattern of reasoning and identify any unstated premises that are essential to the argument. As a matter of logic, these arguments depend on these premises:

- If an action or practice is necessary to meet some goal, then that action or practice is morally permissible.
- If there are no alternatives to doing some action, then doing that action is morally permissible.

But both these premises are false, and it is easy to see this; we do not even need to think very deeply about how to define "necessary" or "alternatives" either.

First, consider actions involving multiple steps that are wrong. To rob a bank, other actions are necessary: identifying the bank, getting weapons, securing a getaway car, and more. To assassinate an innocent leader who is surrounded by guards, it is necessary to kill the guards. That these actions are necessary to achieve these desired ends in no way makes these actions permissible: it is not OK to obtain weapons because doing so is necessary to rob a bank or to kill guards because that is necessary to kill the leader. That an action is necessary to achieve some end does not make an action permissible if the final action is wrong.

Even very good ends might be achievable only through immoral means; for example, there could be some horrible, but rare, medical condition that can only be addressed with some non-consensual, terminal human experimentation, what some might call "human vivisection." Even if this experimentation were necessary to achieve that good end, that would not make such experimentation permissible. The point is that saying "we have to do this to do what we want to do" does not in itself morally justify doing anything.

The same is true for there being "no alternatives." Suppose there is "no alternative" to doing some action, meaning there is nothing else that could be done to bring about some end other than that action itself. Does that make the action permissible? Clearly not: there might be "no alternative" to using a saw to achieve some desired end (eg, cutting a lock to steal something), but that in itself would not make using the saw permissible. Again, the end would make it permissible, if anything, and maybe nothing would.

So, again, saying "there is nothing else we can do in order to do what we want to do" does not justify anything, so it does not justify any animal research, especially since there are "alternatives" such as doing something else that does not involve animals: for example, a different research modality, addressing a different aspect of the issue, or even doing nothing at all.

Overlooking the logical structure of arguments leads to unsound moral arguments about many issues, that is, arguments with at least 1 false premise. Given their training and experience, philosophical ethicists are better able to identify unstated essential premises and assumptions compared with people without such training, which is needed to effectively think about complex and challenging ethical issues.[16] IACUCs need people with these skills.

Argument Evaluation, Critical Thinking, and Informal Fallacies

Thus far, we have focused on the skills of clarifying the meanings of words and stating arguments in a manner such that the full pattern of reasoning is stated so that the premises can be evaluated as true or false.

Philosophers have many other concepts and critical thinking tools useful for evaluating arguments; this is their area of expertise. These include the concepts of logical validity, sound arguments, and ways to characterize the strength of arguments where the premises make the conclusion probable, not certain. Philosophers can develop counterexamples to demonstrate that premises are false and can help revise premises to make them potentially stronger. They can isolate necessary conditions, sufficient conditions, and necessary and sufficient conditions. They can distinguish correlation from cause, help us avoid confirmation bias, and help us try to determine what explanations are best and why.

Philosophers help us avoid informal logical fallacies by spotting question-begging arguments and circular reasoning, "straw person" versions of arguments, occasions when the principle of charity is not employed, and ad hominem attacks. They resist the genetic fallacy, reject "Tu quoque" responses, and help us avoid avoidable slippery slopes, red herrings, and false dichotomies. They know an "ought" does not follow from an "is," that what is "natural" or legal need not be right, and that limited experience does not justify a generalization.

The concepts mentioned above are some of the most important tools that have been developed to systematically and productively engage moral arguments. Philosophical ethicists are familiar with them all and many more, and they can use that knowledge to help an IACUC better engage in moral reasoning.

Knowledge and Understanding: Ethical Theories

Beyond the distinct critical thinking skills that philosophical ethicists would bring to IACUCs, they also have relevant knowledge and understanding. One area is knowledge of ethical theories, or general explanations for when and why actions are wrong, permissible (or not wrong), or obligatory (or wrong to not do).

To better argue that animal research is generally not wrong or that some particular experiments are not wrong, familiarity with

the best-developed and most plausible theories on what makes actions not wrong is useful, and to argue that certain types of animal research are sometimes, if not often or always, wrong, understanding the best theories of when and why wrong actions are wrong helps also.

Since most major ethical theories have been appealed to in arguing that much animal research is at least morally problematic, if not often wrong (this will be discussed later), this is an area where animal research advocates probably have more to learn than many critics do.

Understanding Utilitarianism For example, animal research advocates sometimes appeal to the greatest "common good" or "overall good" to justify animal research: we should do what promotes the greatest overall good, so we should have animal research. This argument appeals to a theory like utilitarianism, the view that we must do what produces the greatest overall happiness.[17]

My concern is that animal research advocates sometimes appeal to utilitarian-like ideas without being aware of the many objections to the view, so they are appealing to a theory that they do not really understand and, if they did, would probably reject.

For example, it is argued that utilitarianism implies that well-off people are morally obligated to make substantial sacrifices to help people in poverty; that framing an innocent person to prevent a riot might not be wrong; that it can be permissible (actually, obligatory) to take an innocent, nonconsenting person's organs if they are needed to save the lives of many more people; that there is nothing wrong with being a "peeping Tom;" that evildoer's pleasures in abusing others should count positively toward how their actions should be ethically evaluated; that slavery could be justified if more people benefitted from it than were victimized by it; and more.

I have only mentioned these objections—I did not develop them at all—and utilitarians have responses to the many of them; whether these responses are convincing is another matter. But utilitarianism is a controversial theory, to say the least. Since philosophical ethicists are familiar with the layers of the discussion of utilitarianism and related theories, they can help evaluate arguments that appeal to it.

Having said this, there are serious reasons to doubt that animal research contributes to the greatest overall good; that is, there is nothing better to be done, individually or collectively, to promote the overall good than animal research. That is, there are good reasons to doubt that utilitarianism justifies animal research; indeed, according to most advocates of utilitarianism, the theory strongly condemns it since it certainly harms animals, any benefits to humans tend to be at best indirect and sporadic, and, perhaps most importantly, there are alterative courses of actions that would certainly produce profound benefits for many more humans and animals than animal research.[18] Judged by a rigorous standard of each of us doing the absolute best we can, in terms of maximizing the quantity and quality of good and minimizing the amount and quality of bad in the world, most utilitarians who engage the issue argue that animal research fails to meet that high standard.

Understanding Rights The same concern about an inadequate understanding of ethical theories applies to appeals to moral rights, as in when animal research advocates argue that animals do not have rights, so animal research is not wrong.

There are moral theories that support thinking that animals do not or cannot have moral rights to their bodies or their lives, for example, theories on which rights depend on, say, "rationality: or potential rationality or being the kind of being that is a rational being.[19] While these theories do deny rights to animals, they also often seem to support thinking that human babies or mentally challenged human beings do not have rights. They might also imply that human embryos and fetuses have moral rights, and even that "brain dead" human beings have moral rights.[20]

Perhaps none of these surprising implications show that these theories are false, but they do suggest at least that these theories are often appealed to in a naive, uninformed manner; for example, few would have thought that to argue by appealing to a particular ethical theory that animal research is right, you would also have to believe that embryo experimentation and, probably, abortion are wrong.

Only 2 ethical theories have been discussed here of the many theories that could be discussed. But ethical theories are often complex and challenging, and philosophical ethicists can use their knowledge and understanding to help IACUCs navigate and respond to that complexity.

Knowledge and Understanding: Animal Ethics and Contemporary Moral Issues

Philosophical ethicists have skills in thinking because they know and understand what others have thought and have learned from previous experts. It is an understatement to say that much has been written by philosophers about ethics and animals in the last 50 years. Many issues have been discussed extensively, with many lessons learned.

A philosophical ethicist will have intimate knowledge and understanding of this academic literature: the arguments, the responses, the responses to the responses, new understandings of old issues. This knowledge is invaluable for ethical evaluation of current animal research; knowing what has been discussed and argued before, and how that was argued, helps us with current debates.

Also, philosophical ethicists nearly always teach or publish on a variety of topics—they are not "one trick ponies"—and they can bring insights from other areas to bear on arguments about animal research. Understanding the issues and debates about research ethics in general, abortion, embryo experimentation, euthanasia and assisted suicide, poverty, health inequality, and critiques of the pharmaceutical and healthcare industries, and so many other ethical and social justice issues yields good fruit for better understanding the ethics of animal research.

In sum, philosophical ethicists have subject area expertise they can bring to an IACUC. No other groups are likely to have the same level of understanding and experience in productively engaging ethical issues, so IACUCs should welcome this expertise.

Knowledge and Understanding: Animal Research Science

Those with ethical expertise tend to have at least competence in some related areas, including some scientific areas, that many animal research advocates probably will not be strongly familiar with.

IACUC Science First, in 2001, in the prestigious journal *Science*, 2 accomplished social scientists published research entitled "Reliability of Protocol Reviews for Animal Research."[21] This

study involved having animal research protocols reviewed by 50 IACUCs. It found their "recommendations exhibit low interrater agreement," meaning that what many IACUCs accepted, many others rejected: "regardless of whether the research involved terminal or painful procedures, IACUC protocol reviews did not exceed chance levels of intercommittee agreement."

These results suggest that these IACUCs were not using a shared methodology or set of standards, which in turn suggests that these IACUCs were not reliable in their reviewing methods. The authors suggest that "enhanced reviewer training, standardization of the review process, development of specific evaluative criteria" and other changes might increase reliability. This much-cited study is approaching 20 years old, but concerns about IACUC reliability remain: systematic changes have not been implemented to address these types of concerns. Why changes generally have not been made, given the research on these matters, is unclear.

While these are scientific issues, I suspect many ethicists are likely to be aware of them and take them seriously. An insight from critical thinking, psychology, and ordinary common sense is that people tend to ignore, downplay, or reject personal and collective critiques—even when those critiques are warranted. Critiques of IACUCs are likely to be seen by animal research advocates as something like personal attacks, so they will be less interested in learning from them: they will react defensively, not with serious engagement. Ethicists, as outsiders to the animal research community, are less likely to respond in reactionary ways and therefore will be more open to finding ways to improve IACUCs for better ethics and better science.

Animal Research Science Another scientific issue that ethicists are likely to be familiar with is simply the science of animal research. There are attempts to determine scientifically which methods are most effective to achieve medical and health-related benefit for humans.

For example, in 2004 *BMJ* published research entitled "Where is the Evidence That Animal Research Benefits Humans?"[22] This research (now cited at least 500 times) was an attempt to try to quantify the results, positive and negative, from animal research for humans. It attempted to find an evidence-based view on the impact of animal research for human health.

There is a lot of empirical research like this, as well as development of theories to explain the data. The overall trend of this research is that animal research is usually not as beneficial as its advocates claim it is. Humans are even harmed by it, especially since we are sometimes misled by animal data, and there are always opportunity costs, known goods not brought about because of efforts spent on animal research.

This sort of information is highly relevant to ethical evaluations of animal research and to assessing the general common argument that animal research is justified by its benefits for human beings and the claim that it is "necessary" for achieving profound benefits for humans, discussed above. Ethicists are more likely to be interested in learning about and from these scientific findings about animal research, compared with animal researchers and typical IACUC members, because, again, critical thinking, psychology, and common sense show that people tend to resist critique, especially when their own "identity" and employment is at stake: they become defensive and emotional, and they fail to engage scientific issues in scientific manners. This is true even when critiques are reasonable and evidence based.

In sum, philosophical ethicists are apt to know more about, or at least be more receptive to learning about, certain areas of IACUC and animal research science than many current IACUC members. This background knowledge is relevant to the ethical evaluation of research protocols, so this is another reason for ethicists to be involved in IACUCs.

Ethics and Independence

Finally, ethicists tend to have perspectives that would enable them to make good use of their knowledge and skills for IACUCs. What I mean is that their financial, social, and intellectual positions make them likely to contribute in unique and positive ways.

First, many IACUC members and advocates of animal research are financially supported by animal research. This, of course, creates a conflict of interest, and we all know that our judgments are often skewed when money is at stake. When we are employed doing something, we are more likely to not see that what we are doing might be morally problematic; we are apt to give "rationalizations" that outsiders see clearly as such.

Philosophical ethicists can provide this outsiders' more objective perspective. They are what bioethicist Gregory Pence calls "outside bioethicists," who are typically based in philosophy departments, not medical schools or science divisions.[23] Since they are not part of animal research culture, they are not under financial, cultural, or intellectual pressures to not understand the ethical issues in deep ways and to give arguments to try to rationalize antecedently held assumptions instead of following the best arguments, wherever they lead.

Philosophical ethicists' independence in these ways increases their ethical objectivity. It is well known that non-intellectual and non-scientific values sometimes distort scientific judgments and claims, for example, that those who pay for some research tend toward results more favorable to their goals. This can occur with ethics as well; people are unlikely to argue that their employer or colleagues, who are often friends, are doing wrong when such lines of inquiry are apt to be professionally, financially, and personally costly.

Philosophical culture is not perfect, but at its best it aspires to value good arguments above (nearly) all things, even if the results of critical inquiry are upsetting or contrary to a "common sense" that might be mistaken. This makes philosophical ethicists well-positioned to do something about ethical concerns and press people to "do the right thing" concerning animal research, even if this is merely saying something. Moral and intellectual integrity commits us to at least that, if not much more.

OBJECTIONS

I have argued that philosophical ethicists have skills, knowledge, and perspectives—ethical expertise—that would benefit IACUCs. So if IACUCs want to be serious about ethics, they must include ethicists. Let us now consider some objections.

"This will stifle research."

Some might respond that if ethicists tried to ensure that IACUCs employ rigorous argument analysis methods in ethical evaluations of research protocols, this would stifle and probably even prevent some research. So we would not want ethicists on IACUCs.[24]

This objection sees ethics as an obstacle and ethicists as adversaries. While some would want to deny this, the truth is that this is sometimes correct. When bad arguments and unskilled thinking lead people to do things that they should not do, this should be observed; that's essential for identifying, stopping, and correcting wrong behavior. Ethicists can and should help to prevent unethical behavior and find ways to make bad behavior less bad: that is the point of ethics.

Of course, if there were good reasons to believe that most or nearly all actual animal research is not morally problematic, this objection would be a good one. But this is not the case for much animal research since there are good reasons to believe it is problematic. These reasons will be reviewed below.

"If experts are needed here, then experts are needed everywhere."

Another objection is that if expert ethicists are needed to evaluate animal research, then ethics specialists are needed for many other areas of research. Since experts are not needed in other areas, experts are not needed for IACUCs either.[25]

In response, ethical experts are needed when a research project will seriously harm the research subjects, when consent will not or cannot be obtained, or when the research is unfair in that, at best, others might benefit from the research, not the research subjects themselves. Any human research like this needs and receives (or should receive) expert ethical review by people trained and experienced in the unique issues of these ethically harder cases of human research; the same should be true of animal research.

However, most human research just does not have these features (major harms, including death; lack of consent), so it does not demand this type of expert ethical review. Nevertheless, there are many types of cases where expert consultants should be sought for ethics concerns; this is widely acknowledged in human research and should be acknowledged regarding animal research.

"Ethicists disagree."

Another objection is that while some philosophical ethicists argue that philosophical/ethical skills, knowledge, and perspectives should incline informed, reasonable, morally motivated ethicists to conclude that much animal research is at least morally problematic, if not outright wrong, many ethicists disagree on that. Since they disagree, these so-called experts who are critical of animal research are not genuine experts, so we do not need them on IACUCs.

This claim about disagreements, however, is largely incorrect. For example, ethicist David DeGrazia observes that "The leading book-length works in this field exhibit a near consensus that the status quo of animal usage is ethically indefensible and that at least significant reductions in animal research are justified."[26]

It is hard to find writings by philosophical ethicists defending animal research. And their arguments tend to be subject to, and perhaps refuted by, the various objections mentioned above concerning babies and people with mental challenges, vulnerable humans generally, or abortion and human euthanasia. Or their arguments imply there is nothing inherently wrong with torturing animals, even for fun.[27]

Furthermore, the few philosophers who defend animal research are careful to state that they do not support all animal research or all uses of animals in scientific or industrial contexts: they specify that they only support certain types of what they consider to be potentially profoundly beneficial animal research and acknowledge that much research does not meet this standard.[28] So it is very hard to find a philosophical ethicist who supports the generally permissive views on animal research that their non-philosopher advocates usually accept.

It would be hard to find a philosophical ethicist who denied the ethical value of the skills, knowledge, and perspective presented here, or one who denied this all tends to support thinking that animal research is wrong. So, the objection fails: on these matters, philosophers generally do not disagree.[29]

Of course, there are some unskilled, uninformed, not knowledgeable, unmotivated, and/or morally corrupt people who are considered ethicists. Since it is generally wrong to be an ethicist like this, an unethical ethicist with respect to the particular action or policy in need of ethical evaluation, they should not serve on IACUCs since they will not improve the IACUCs ability to identify ethically wrong and bad research and respond appropriately.[30]

"Ethicists just do not understand."

Another response is that ethicists who are critical of animal research just do not understand how important it is and how worse off we would be without it; therefore, we would not want people like that on IACUCs.

In reply, philosophers will want serious evidence that these claims are true, especially since there is serious evidence that these claims are false. Furthermore, moral "common sense" acknowledges that just because someone, or some group, benefits from doing something, that does not automatically make that action right. That action might be very harmful to others and it might violate their moral rights in ways that make the action wrong, regardless of any benefits to those doing the action. This might be true of animal research, and the objection here does not engage the reasons to think that is so.

"There really is no ethical expertise."

A final possible response is to deny that there is ethical expertise: if "ethical expertise" leads people to be critical of animal research, then it must have gone wrong and so much the worse for it; IACUCs do not need that.

This type of response strikes me as not very self-reflective. We all have some incorrect moral beliefs; historically, our cultures have had many incorrect moral beliefs. So we might also be very mistaken in our moral views about animals; this is possible and, if we think about the types of issues we are apt to be morally mistaken about, this is likely.

Thoughtful people have made insightful observations and proposals about what mistaken moral beliefs are and how we can avoid them. These skills can be "validated" with a range of ethical issues, and these same skills are applied to ethical questions about animal research. Ethical expertise, and even just ethical common sense, make it clear that harm is a highly important moral concern, and animals are very much harmed in research. Expertise and common sense make it clear that conflicts of interest are problematic, and IACUCs have many financial and cultural conflicts of interest that might bias them in their decision making. Finally, expertise makes it clear that complex issues must be addressed in systematic, evidence-based ways, yet IACUCs do not address ethical issues in these matters. For these reasons and more, expert ethicists should be on IACUCs.

CONCLUSION: WHY IACUCs NEED ETHICISTS

I have argued that, of any scholarly population, philosophical ethicists are most likely to be able to identify potential ethical problems with animal research and be positioned to do something about it.

By saying that they might "do something," I do not mean to suggest that philosophical ethicists have political, organizational, or financial power or control over any research. They usually do not. But they do have the power to rigorously and responsibly seek the best reasons, arguments, and evidence for and against and hold everyone to high moral, intellectual, and scientific standards, and they have the power to tell the truth.

Recall the truth about why we are discussing these issues. Here are examples of what is routinely done to animals:

> Experimental procedures include drowning, suffocating, starving, and burning; blinding animals and destroying their ability to hear; damaging their brains, severing their limbs, crushing their organs; inducing heart attacks, ulcers, paralysis, seizures; forcing them to inhale tobacco smoke, drink alcohol, and ingest various drugs, such as heroin and cocaine.[31]

Why think doing this to animals is wrong or, at least, morally problematic? One likely response from people not involved in animal research is that the answer is obvious. What the philosopher Bernard Rollin calls the emerging "social ethic"[32] concerning the treatment of animals condemns much animal research: the general public finds much of animal research to be clearly wrong. When some morally problematic research makes the news, the public is generally horrified; they believe what was done to animals is profoundly wrong, and they are probably correct in those judgments.

Why is that? Recall what are widely considered the basic principles of medical ethics that research tends to be wrong when:

- It is harmful to research subjects;
- It is not beneficial to the subjects;
- The subjects do not consent: they are treated in ways they would not agree to be treated;
- The subjects are unfairly harmed: if there are any benefits from some harmful research, the individuals who suffer that harm will not receive any of them.[33]

This "common morality," which identifies areas where major ethical theories tend to agree and converge, certainly appears to condemn much animal research. If someone says these principles cannot apply to animal research, the obvious question is "why not?"

Plausible answers will be hard to find since these principles appeal to generally plausible ways to identify actions that are morally wrong, such as identifying:

- actions that violate moral rights, such as the right to one's life and a right to one's body, in contrast to actions that respect individuals as having lives that can go better and worse for them and so have inherent value and rights;
- actions that do not contribute to the best overall consequences and so are not the best option for the production of overall goods;
- actions that break various "Golden Rules" and so the person considering doing the action would not agree to that being done to them, especially if the person did not know who they were in the context of the decision and so could not make biased, self-serving decisions;
- actions that reveal certain vices and lack important virtues, such as caring and compassion.

These are, of course, the basics of some of the more influential ethical theories and, as noted above, DeGrazia has observed that all these theories (and more) have been used to argue that animal research tends to be morally problematic.[34] Philosophical ethicists will be aware of these arguments, the objections to them and replies, the many contrary positions and their arguments, and be able to use this understanding and their critical thinking skills to help IACUCs better evaluate animal research protocols. This is why ethical IACUCs need ethicists.

Endnotes

[1]This is animal research that is harmful in that animals are made physically or psychologically worse off compared with how they were and is non-therapeutic in that it addresses problems that researchers induce or create in animals, not any animals' pre-existing medical problems for which there are no effective therapies.

For arguments that such research is wrong, see Nobis, N. 'The Harmful, Nontherapeutic Use of Animals in Research is Morally Wrong.' *The American Journal of the Medical Sciences*. 2011;342(4): 297–304.

[2]Some research is, of course, ethically problematic because it violates protocols intended to protect animals, but much animal research is morally problematic when everything goes to plan, since the plan itself is morally suspect.

[3]How much of an improvement must an improvement be for anyone to be morally required to make that improvement? How bad must something be for someone to be morally required to improve it, when those improvements can be made? These details will not be addressed here since there are so many major improvements that could be made for much animal research that we need not try to identity the "limits" of improvement at this point.

[4]Another possible response is, of course, abolishing certain types of animal research. This would solve the problems of wrong and bad animal research.

[5]That these questions are appropriate to ask does depend on ethical judgments about animal research. If a type of research was obviously and uncontroversially not wrong, there would be no need for experts to help us see that it's not wrong. Animal research, however, is not like that, insofar as there are very good reasons to believe that at least some of it is wrong or, at best, problematic. Since these wrongs and problems go unnoticed or unaddressed, there is a need for someone to address this.

[6]It is commonly claimed that animal research is demonstrated to be ethical when and because it has been reviewed and approved by an IACUC. To demonstrate that IACUCs have an ethical mandate, see these quotes (emphasis mine):

- 'While originally borrowed from the human Institutional Review Board structure, the concept of IACUCs to review and ensure animal welfare is now common practice in the animal research community. The goal of each IACUC is to ensure the humane care and use of animals used in research, and compliance with guidelines and regulations, while maintaining flexibility to best meet the unique needs

of the institution. Active participation by research scientists allows for the scientific needs of research investigators to be considered; participation by nonaffiliated members incorporates a public conscience; and the involvement of veterinarians ensures appropriate medical care and animal well-being. A program of continuing education is essential to ensure that animal care and use standards and ethical principles continue to be applied at the highest possible level' (Applied Research Ethics National Association. *Institutional Animal Care and Use Committee Guidebook*. Office of Laboratory Animal Welfare, National Institutes of Health; 2002: 10).

- 'To help ensure that laboratory animals receive humane care and use or treatment in accordance with the highest ethical standards, laws, regulations and policies governing animal research, the IACUC must review and, if warranted, address any animal-related concerns raised by the public or institutional employees' (Applied Research Ethics National Association. *Institutional Animal Care and Use Committee Guidebook*. Office of Laboratory Animal Welfare, National Institutes of Health; 2002: 159).
- 'Like the types of research and work that we do, and the species and models we utilize in that work, IACUCs come in all shapes and sizes. Although not all IACUCs are operating under the same set of expectations and regulations, they all share the same aim—to ensure that the highest ethical and humane standards are applied to the care and use of the animals that we are privileged to utilize in our various undertakings.' (Rosenblatt C, Sharp P. Introduction to the IACUC: Its Purpose and Function. In Petrie WK, and Wallace SL, ed. *The Care and Feeding of an IACUC: the Organization and Management of an Institutional Animal Care and Use Committee*. Boca Ratan: CRC Press; 2015: Chapter 1.
- 'The one overriding commonality among all of the different sets of rules and regulations governing animal research is the central role of the IACUC. Conceptually, the IACUC is intended to ensure high ethical standards, humane treatment, and accountability in all use of research animals' (ibid).

[7]For an introduction to expertise, see Watson JC. Introduction. In Watson JC, Guidry-Grimes, L. *Moral Expertise: New Essays from Theoretical and Clinical Bioethics*. New York: Springer, 2018.

[8]In stating that philosophical ethicists tend to be experts, I acknowledge that this is not always the case. Just as there are trained, credentialed and experienced scientists and healthcare professionals who have 'slipped through the cracks' and just aren't competent, the same sometimes happens with philosophical ethicists. And there are some trained ethicists who are apathetic or ethically corrupt, insofar as their own behaviors, beliefs, and attitudes are not morally justified. Nevertheless, as in other fields, we can identify a set of skills and knowledge as what makes for expertise and a broad set of scholars and practitioners as experts.

[9]IACUCs are required to have a 'nonaffiliated,' non-scientist community member. While such a person may, in part, provide some of the goods that philosophical ethicists can provide, they are far less likely to have ethical expertise, as characterized here, and they are less likely to have the potential for influence that a trained, employed ethicist would have. For information on the nature of this member and his or her role, see National Institutes of Health. Guidance on Qualifications of IACUC Nonscientific and Nonaffiliated Members. https://grants.nih.gov/grants/guide/notice-files/not-od-15-109.html. Published June 9, 2015. Accessed August 19, 2020.

[10]One could deny ethical expertise this by claiming that no actions are wrong or not wrong, or that nobody ever knows what is wrong or not wrong, but these broad nihilisms and skepticisms are rejected by most people for good reasons, and they must be rejected by anyone who argues that animal research is generally not wrong.

Later we will review some reasons to think that although ethical expertise exists generally or concerning other matters, nobody is an ethical expert concerning the ethics of animal research, or that ethical critics of animal research are, or could not be, ethical experts on the issues.

[11]For discussion of the role of non-scientist community members on IACUCs, see Dresser R. Community Representatives and Nonscientists on the IACUC: What Difference Should It Make? *ILAR Journal*. 1999; 40(1):29–33.

[12]Graduate degrees in ethics are also often offered in schools of theology, divinity, and religion. This training, however, generally does not intentionally seek to develop the logic-based critical thinking skills that the academic study of philosophy develops.

[13]Some animal research advocates seem to think that because they are experts in many scientific aspects of animal research, eg, because they teach biology-based courses, this makes their views on the *ethics* of animal research 'scientific;' eg, they might call their view on the ethics of animal research *the* 'scientific perspective' on animal research. It's important to observe that this is a mistake because, in general, ethical views are never 'scientific.' Responsibly developing ethical views on complex practical issues *does* require understanding the relevant science, but the science does not determine one's ethical judgments; ethical reasoning does that.

In this way, calling a pro-animal research ethical perspective a 'scientific' view is comparable to certain anti-abortion groups calling their ethical views on abortion 'scientific' since it's a scientific fact that (living) embryos and fetuses are *biologically* alive. But that scientific fact does not settle the ethics of abortion (since it's just false that anything biologically alive is wrong to kill and anything merely biologically human [such as random, isolate human cells] is wrong to kill).

Likewise, no scientific facts concerning animal research, in themselves, settle any issues about the ethics of animal research. In cases like these, the word 'scientific' is used as a merely rhetorical device to try to persuade people, but either in ignorance of what moral reasoning is like or as intentional deception or manipulation. In this way, this use of 'scientific' is fallacious and a type of sophistry. For an introduction to the ethics of abortion, which explains why scientific facts, eg, about fetuses being biologically alive and biologically human, do not show that abortion is wrong, see Nobis N, Grob, K. *Thinking Critically About Abortion*. Atlanta: Open Philosophy Press; 2019.

[14]By analogy, some non-scientists or 'amateur' scientists without legitimate scientific training publish 'research' on the safety and efficacy of vaccines, yet not in reputable scientific or medical journals. Given the authors' lack of genuine expertise, we dismiss this 'research' or view it with strong skepticism. We should be inclined to similar reactions to ethics 'research' by non-experts, if non-experts lack the knowledge and skills that determine ethical expertise (as this article argues).

Furthermore, writings by animal researchers in defense of animal research are usually 'ethical self-defenses,' which we all tend to be skeptical of. When people argue that what they themselves do is not wrong, such arguments tend to lack objectivity and exhibit self-serving bias; this is why we seek independent

ethics reviews that are less likely to be tainted by self-serving interests. Philosophical ethicists usually are independent since they do not personally engage in animal research, aren't financially supported by it, and a commitment to believing that that it's not wrong is not part of their intellectual or professional culture. This will be discussed later in the section on 'Ethics and Independence.'

[15]For an earlier review of these skills, see Nobis, N. Rational engagement, emotional response, and the prospects for moral progress in animal use 'Debates.' In: Garrett, J. *The Ethics of Animal Research: Exploring the Controversy*. Boston: MIT Press; 2012: Chapter 14.

[16]For an excellent introduction of the logical skills presented in this article, and much more, see Feldman R. *Reason and Argument*, 2nd Ed. Upper Saddle River, New Jersey: Prentice Hall: 1999.

[17]For the most comprehensive and rigorous discussion of the challenges in justifying animal research from a utilitarian perspective, see Bass R. Lives in the Balance: Utilitarianism and Animal Research. In: Garrett, J. *The Ethics of Animal Research: Exploring the Controversy*. Boston; MIT Press; 2012: Chapter 6. Some of these concerns were addressed above in discussing the 'accounting' needed to justify claims about animal research's role in medical progress and claim that it greatly benefits human beings.

[18]In addition to Robert Bass's discussion of utilitarianism and animal research, cited in note 18, see Norcross A. Animal experimentation, Marginal Cases, and the Significance of Suffering. In: Garrett, J. *The Ethics of Animal Research: Exploring the Controversy*. Boston; MIT Press; 2012: Chapter 5. Also, Peter Singer, arguably the most famous critic of animal research, often presents himself as a utilitarian.

[19]These theories tend to be inspired by the extremely influential ethical system developed by Immanuel Kant (1724–1804). One of the most famous contemporary interpreters and defenders of Kant's ethics, however, has recently argued that Kant's ethics, when *properly understood*, support believing that animals have rights. See Korsgaard C. *Fellow Creatures: Our Obligations to the Other Animals*. Oxford: Oxford University Press; 2018.

[20]For details, see Nobis, N. Tom Regan on Kind Arguments against Animal Rights and for Human Rights. In: Engel M, Comstock G, eds. *The Moral Rights of Animals*. Lanham, MD: Lexington Books; 2016.

[21]See Plous H, Herzog H. Reliability of protocol reviews for animal research. *Science*. 2001; 293(5530):608–609.

[22]See Pound P, Ebrahim S, Sandercock P, *et al*. Where is the evidence that animal research benefits humans? *Bmj*. 2004;328(7438): 514–517.

[23]See Pence G. *Re-Creating Medicine: Ethical Issues at the Frontiers of Medicine*. Lanham, Maryland: Rowman & Littlefield; 2007. See his discussion, 'Two Types of Bioethicists,' 184–192.

[24]I thank Alison Thornton for this objection.

[25]I thank Leonard Kahn for this objection.

[26]See DeGrazia D. The ethics of animal research: What are the prospects for agreement? *Cambridge Quarterly of Healthcare Ethics*. 1999;8(1): 23–34, 25.

[27]For discussion, see Nobis, N. So Why Does Animal Experimentation Matter? Review of Ellen Frankel Paul and Jeffrey Paul, eds. 2001. Why Animal Experimentation Matters: The Use of Animals in Medical Research. *AJOB*. 2003: 1–2, and Nobis, N. Tom Regan on Kind Arguments against Animal Rights and for Human Rights. In: Engel M, Comstock G, eds. *The Moral Rights of Animals*. Lanham, MD: Lexington Books; 2016: Chapter 4.

[28]For a review of important claims made by many philosophical advocates of animal research that suggest that these philosophers' views actually *condemn* much animal research, see Engel, M. The commonsense case against animal experimentation. In: Garrett, J. *The Ethics of Animal Research: Exploring the Controversy*. Boston; MIT Press; 2012: Chapter 13.

[29]For insightful discussion on what might contribute to disagreements among philosophers, see Huemer M. Peer Disagreement @ the APA [American Philosophical Association]. https://fakenous.net/?p=333. Published April 20, 2019. Accessed August 20, 2020. Huemer suggests that philosophers sometimes disagree because they have bad motives, are ignorant, have poor philosophical methodologies, and begin with differing intuitions. Some of these factors might explain *some* disagreements amongst philosophers concerning ethics and animals.

[30]To clarify, I am not claiming that a person with strong moral reasoning skills will be some kind of morally great person overall; they might be, but they probably will not, since it is just in general very difficult to be such a person. Nevertheless, very imperfect ethicists can still have skills and understanding relevant to assessing moral arguments that they are better positioned to apply than someone without such training and experience.

[31]From Regan T. Empty Cages: animal rights and vivisection. In: Garrett, J. *The Ethics of Animal Research: Exploring the Controversy*. Boston; MIT Press; 2012: Chapter 7.

[32]For an explanation of what Rollin means by a 'social ethic,' see Rollin B. Toxicology and New Social Ethics for Animals. *Toxicologic Pathology*. 2003; 31(1, supplement):128–131; and Rollin, B. Annual Meeting Keynote Address: Animal agriculture and emerging social ethics for animals. Journal of Animal Science. 2004; 82(3):955–964; and Rollin B. *Animal Rights & Human Morality*. Buffalo: Prometheus Books; 2010.

[33]This approach to bioethics was developed by Childress J, Beauchamp T. *Principles of biomedical ethics*. Oxford: Oxford University Press; 1979. This book is now in its 8th edition (2019). For an extension of these basic bioethical principles to animal research, see Ferdowsian H, Johnson S, Johnson J *et al*. A Belmont Report for animals? *Cambridge Quarterly of Healthcare Ethics*. 2020;29(1):19–37.

[34]For an introduction to some of the more influential arguments, see Nobis, N. *Animals & Ethics 101: Thinking Critically About Animal Rights*. Atlanta: Open Philosophy Press; 2016.

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