



Decision making and the role of empathy in Animal Ethics Committees (AECs)

Beslutsfattande i djurförsöksetiska nämnder – en närstudie med fokus på empati

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Summary

Ethical evaluation of scientific studies carried out using animals is legally mandated in many countries and has been so in Sweden for over three decades. The animal ethics committees (AECs) responsible for the task have however been subjected to criticism; common critique being that the wrong issues are discussed and that the ethical evaluation is thus incomplete, that there is a lack of coherence across committees and that the committees are not as democratic as they might appear. This study investigates the view of Swedish AEC members on a number of issues in order to shed some light on the mandate and functioning of the committees, and on the grounds for ongoing criticism. In a survey and interviews AEC members and other persons connected to the committees gave their views on the AEC task in relation to their roles, the ethical evaluation per se and whether or not emotions such as empathy play any part in it. There were significant differences found between AEC member categories and several issues were encountered, many of which have been stressed in previous studies. Primarily, there seems to be different views upon what constitutes the most important ethical issues regarding research on animals, as well as whether or not all of these are fully considered in the evaluation. Relevant legislation is vague and certain highly relevant justifications and definitions are virtually non-existent. A main problem is also that estimating harm and benefit which is supposed to be the basis for the ethical analysis, is very difficult in practice. Already previous investigations such as SOU 1998:75 highlighted flaws with the ethical review process, e.g. decisions being made on unclear grounds, but also a lack of knowledge about alternative methods. These flaws were found also in this study and need to be addressed now more than ever, as the new EU directive (2010/63/EU) clearly requires comprehensive project evaluations and all member states to ensure that alternative methods are used when available.

This study provides a deepened understanding of some of these issues and for some of the confusion, dissatisfaction and conflict that some of the AEC members appear to experience. In order to do this it is relevant to look at the scientific system with which the AEC evaluation is naturally linked. Although the composition of the committees is meant to provide independence and different perspectives, it seems as if scientific norms are still dominant. This is also evident in the utilitarian line of ethics advocated in the legislation. As science has traditionally valued reason and preferred “objective” ethical deliberations devoid of emotions, the utilitarian weighing of harm and benefit has been seen as a preferred way of dealing with ethical issues. However, recent scientific literature increasingly stresses emotional components as crucial for morality, which might not be included in the utilitarian model. The harm-benefit analysis also has other problems, meaning it might not be enough for a complete ethical evaluation. In addition, there are many other factors affecting ethical reasoning and decision-making, such as personality, contextual norms and group dynamics. Such factors are important to consider if we want to understand some of the difficulties the AEC members deal with in their task. Based on the findings of this and previous studies, it seems that in order for the AECs to fulfil their mandate and live up to the trust the public has put in them, there have to be certain prerequisites in place. Clear grounds for ethical reasoning, adequate information and knowledge, good group dynamics facilitating an open discussion climate and a non-judgmental atmosphere, good focus provided by the chairperson and a common ground and language that is equally accessible to all, are all factors facilitating an ideal ethical evaluation. In the light of this study, more can be done in order to achieve a satisfactory ethical review process.

Sammanfattning

Etisk prövning av vetenskapliga studier som genomförs på djur är lagstadgad i många länder och har varit så i Sverige i över tre decennier. De djurförsöksetiska nämnderna som ansvarar för denna uppgift har dock varit föremål för kritik; vanligen att de diskuterar fel frågor och att den etiska prövningen därför är ofullständig, att de olika nämnderna inte arbetar enhetligt, samt att nämnderna inte är så demokratiska som det kan verka. Denna studie undersöker svenska nämndledamöters syn på ett antal frågor med syftet att klargöra nämndernas mandat och funktion, samt belysa grunderna för nämnd kritik. I en enkät och kompletterande intervjuer ger nämndledamöter och personer med koppling till nämnderna sin syn på uppgiften i nämnden utifrån de olika rollerna, den etiska prövningen i synnerhet samt huruvida känslor som empati spelar någon roll i den. Signifikanta skillnader återfanns mellan olika medlemskategorier och flera svårigheter identifierades, varav flera har förts fram i tidigare studier. Framför allt verkar det finnas olika synsätt bland nämndmedlemmarna gällande vilka som är de viktigaste etiska frågorna samt huruvida alla dessa belyses i prövningen eller inte. Lagstiftningen på området är otydlig och vissa högst relevanta motiveringar och definitioner saknas delvis eller helt. Ett stort problem är också att uppskattningen och vägningen av lidande och nytta som är tänkt att vara grunden för den etiska analysen är väldigt svår att genomföra i praktiken. Redan tidigare utredningar som SOU 1998:75 belyste svagheter i den etiska prövningen som att beslutsfattandet skedde på oklara grunder, men även att kunskaperna om alternativa metoder var bristfälliga. Båda dessa problem återfanns även i den här studien och bör åtgärdas omgående, då det nya EU-direktivet (2010/63/EU) tydligt kräver heltäckande projektutvärderingar och att alla medlemsländer garanterat använder alternativa metoder när sådana finns tillgängliga.

Denna studie ger utökad förståelse för några av dessa problem och för en del av den förvirring, det missnöje och de konflikter som en del av nämndledamöterna verkar uppleva. Det är relevant för denna förståelse att studera det vetenskapliga system som den etiska prövningen är naturligt kopplad till. Även om nämnderna är sammansatta med syftet att skapa oberoende och ge utrymme för olika perspektiv, verkar vetenskapliga normer dominera. Detta är även tydligt i den utilitaristiska etik som förespråkas i lagstiftningen. Vetenskapssamhället har traditionellt värderat förnuftet och föredragit etiska resonemang utan inblandning av känslor, vilket har lett till att den utilitaristiska modellen där lidande och nytta vägs mot varandra har setts som det optimala sättet att hantera etiska dilemman. Men forskare framhäver i allt större utsträckning vikten av känslor för vår moral, något som inte inkluderas i den utilitaristiska modellen. Lidande/nyttö-analysen har även andra brister, vilket innebär att den kanske inte är tillräcklig för en komplett etisk utvärdering. Dessutom finns det många andra faktorer som påverkar våra etiska resonemang och vårt beslutsfattande, så som kontextuella normer, personlighet och gruppdyamik. Sådana faktorer måste vi ta i beaktande om vi vill förstå några av de svårigheter som nämndledamöterna måste hantera i sin uppgift. Det verkar utifrån denna och tidigare studier som att det krävs vissa förutsättningar för att de djurförsöksetiska nämnderna ska kunna uppfylla sitt mandat och leva upp till det förtroende de fått från samhället. Tydliga grunder för etiska diskussioner, tillräcklig information och kunskap, god gruppdyamik som underlättar ett öppet diskussionsklimat och en icke-dömande atmosfär, gott ledarskap och fokus av ordföranden samt en gemensam grund och ett gemensamt språk som är tillgängligt för alla, är alla faktorer som underlättar en ideal etisk prövning. I ljuset av denna studie krävs mer för att den etiska prövningen ska bli tillfredsställande.

“....if we expect people to be moral, we must educate their desires, emotions and sensibilities, not just their intellects. Once we do however – and especially if we build on the empathy in human nature – then desires, emotions and experiences like (rational moral) judgments can provide normative reasons for action as well as motivation to perform them” (Audi, 1997:241).

“Whenever people say ‘We mustn't be sentimental’, you can take it they are about to do something cruel” (Brigid Brophy)

Introduction

The use of animals in research has always evoked ethical dilemmas. These have been more or less acknowledged throughout history, depending for instance on current views upon science, attitudes towards animals and societal norms and priorities. Ethical awareness and commitment regarding how we use animals have however grown in the past decades, not least regarding animal research. Ethical evaluation of research projects involving animals have become mandatory in a number of countries as a way of dealing with the issues in a more organized and thorough way. Different countries have different requirements, although more uniformity is expected as ethical evaluation has recently been strengthened in the new EU directive regarding animal research (2010/63/EU). In many countries the ethical evaluation or review process is carried out by special committees, in this study referred to as AECs (Animal Ethics Committees), that are mandated to make an ethical analysis where the expected benefit is weighed against the expected suffering inflicted upon the animals (Rollin, 2006). In Sweden seven committees appointed by the Swedish Board of Agriculture are responsible for reviewing all applications and deciding whether or not they can be deemed ethically acceptable. These committees have however been subjected to criticism, both from animal advocates and scholars, and there have been several studies made concerning the functioning of the AECs both in Sweden and in other countries. A common emphasis has been the necessity to understand what the ethical review process is and how it really works. Herzog (1988) states that ethical judgments are made up in a complex matrix by emotions, logic and other psychological factors such as self-interest, and suggests that better knowledge of the psychology behind human moral reasoning and decision-making is of great importance for animal welfare and virtually any progress in the field. According to Schuppli (2011) it is necessary to know how decisions are reached in order to make sure that the evaluation system is functioning in a valid and credible way. Rollin (2006) further states that the public generally puts a lot of trust in the AECs and their analysis, meaning that it is crucial to make sure the procedure is sound.

Several authors have found flaws such as different committee members having very different views upon how the ethical evaluation is supposed to be carried out, leading to inconsistencies and low reliability. In an American study Gavin & Herzog (1992) found large differences in committee members' interpretations of whether certain experiments were justifiable or not, as well as highly personal ways of reaching decisions, describing proposals and judging costs and benefits. Ideland (2009) found in a study of Swedish AECs that although there are certain principles established as means to deal with the complex ethical issues surrounding research on animals, the committee members are bound to interpret these principles on a personal level. A person is never blank and neutral going into an ethical discourse, as he or she is always influenced by factors such as past experiences and memory (Callahan, 1988), as well as personality and culture (Ideland, 2009). According to Ideland everyone has a previous point-of-view which might lead to confusion and opposing interests in the committees. She found that there is not even consensus of what constitutes the ethical issues that are the subjects of discussion during the AEC-meetings. Instead personal views and inter-personal hierarchies as well as committee traditions play very important roles (Ideland,

2009). Shuppli (2011) also found different approaches to decision-making in Canadian AECs. Although the relevant policy (also in Canada) primarily prescribes a harm-benefit analysis in line with a utilitarian line of thought, moral intuition as well as empathy also played important roles in the ethical review and decision-making process in her study. Her reflection was that policy reflects a utilitarian approach to ethics that might come natural to scientists, but that might poorly reflect how other committee members naturally make moral decisions. She suggests the basis of the policy-mandated harm-benefit assessment should be clarified, and other ethical frameworks included in the guidelines as basis for proper ethical assessment (Schuppli, 2011).

Alexius Borgström (2009) looked at AEC applications from a juridical perspective and concluded that as almost no applications are rejected in Sweden, it seems as if the primary role of the AECs in practice is to regulate choice of methodology. She thinks there is a paradox in that the committees are assumed to be able to conduct a multi-faceted discussion free from a simply internal perspective (from the scientific system or research system itself), but at the same time third-party representatives, i.e. the laypersons, cannot participate fully due to their general lack of biomedical knowledge which is crucial in order to evaluate applications (Alexius Borgström. 2009). According to Rollin (2006) who has primarily studied the North American context, a related problem is that in many cases it is the people inherently invested in the outcome of the decisions, i.e. whether research applications are accepted or not, who are the ones in primary position to decide. His view is that there is a risk that societal and animal welfare-representatives are just “shallowly” included in the AECs so that the research can be labeled as morally acceptable and conducted in the name of society (Rollin, 2006).

These are some of the issues that have been put forth in previous studies of AECs. In relation to this there is also a vast literature regarding our morality and ethical reasoning, some of which is relevant for our understanding of an ethical decision making process such as the one regarding animals used in research. Maibom (2009:483) describes morality as “a complex system of prohibitions and prescriptions, at the core of which are norms prohibiting harm to relevant others”. The origin of such norms and rules is an increasingly popular area of research, and the view that empathy is an important factor has grown in recent years (Ellis, 2011). Many researchers claim that the ability to empathize is in fact what primarily motivates humans to care about ethics and morality (e.g. Goleman, 1995; Hoffman, 2000; Schicktanz, 2006; de Waal, 2009). Stone (2006) argues that it is our ancient ability for empathy that enables humans to be moral beings, and there is evidence suggesting that children’s moral values originate in the ability to empathize with others (Hoffman, 2000). Goleman (1995) says it is the ability to share another’s pain that makes a person wish to help or at least refrain from inflicting suffering on another. This in turn leads to him or her wanting to live and abide by certain moral principles. The ability to put oneself in another’s position also helps one to evaluate the consequences of one’s own actions, and thereby makes one more reluctant to hurting others. A person’s moral development is thus facilitated by the capacity to empathize (Goleman, 1995).

The relationship between science and emotions, however, is not an uncomplicated one. Within (natural) science there has traditionally existed an aversion towards emotions, which are seen as irrational and unreliable (e.g. Nussbaum, 2001). At the same time existing and new literature suggests that emotions are of crucial importance for moral judgments, and that the line between emotions and reason is not as clearly cut as previously thought (e.g. Goleman, 1995; Nussbaum, 2000; Haidt, 2001). Gavin & Herzog studied this already in 1992 and found important functions of emotions in the AEC review-process. Some of their subjects strongly emphasised the role of emotions in their decisions, while others felt a need for separating emotions from a more rational side of ethical judgments. Gavin & Herzog said it was as if the participants felt as if emotions risked disrupting reason, while it was evident that the rational and emotional components of the decision-making process in fact interacted and together produced an outcome. Their conclusion was that there

may be ambiguous views upon emotions in the AEC-setting, and that we need to learn more about how ethical decisions are made. Interestingly and in addition to this, Herzog (1988) had already by then gone as far as saying that reason and emotion even together still are not enough to resolve the moral debate over our use of animals in research. Other psychological factors such as our tendency to label others namely lead to paradoxes and inconsistencies in how we view animals and what moral status we ascribe them. How we view animals in turn have huge effects on our ethical reasoning and decision making regarding them (Herzog, 1988).

The studies here mentioned (and others) is the background of this study, which intends to deepen the investigation of the AECs in a more philosophical way and to combine some of the above-mentioned perspectives in order to comprehend how the AECs operate, how the ethical evaluation is carried out, and why it is seen by many as inadequate.

Aim

The first aim of this study was to investigate how decisions are made in the Swedish AECs and what constitutes the basis for the ethical evaluation, in theory and in practice. The point of departure is that key terms in the legislation such as ‘unnecessary suffering’ are merely vaguely defined, and that it thus provides limited instructions regarding how the mandated harm-benefit analysis is supposed to be carried out in practice. Taking also the existing literature in the field into account, this might imply a risk that the ethical evaluation becomes inconsistent and perhaps even incomplete. A look at why animal research requires more thorough ethical consideration compared to other animal use might also be a way of beginning to understand the background and starting point of the AEC-evaluation. My other primary focus of interest was to investigate the role of emotions such as empathy in the decision-making process. A growing body of literature is highlighting the importance of emotions for moral reasoning, and considering the traditional reason-emotion dualism present not least within science it seems probable that emotions have a complicated position in the ethical evaluation. The idea was therefore that by investigating the role of emotions and the reason-emotion dualism within an AEC-context, this study could help explaining some of the issues encountered in previous studies. Increased knowledge about factors affecting the ethical review process could also strengthen it and potentially provide increased understanding of our reasoning and ethical awareness regarding animals in general.

Primary research questions:

1. Why are the demands for ethical evaluation most established for animal research compared with other forms of animal use?
2. What is the ethical evaluation based on (in theory and practice)?
3. Do the committee members experience emotional aspects such as empathy as a part of the decision-making process? If yes, what is the role of emotions according to them?
4. Based on results from these questions, how can the ethical review process be improved?

Background

Research on animals

Humans have used animals all throughout history, with first scientific studies on animals stretching as far back as Aristotle (Hajar, 2011). It is roughly estimated that around 115 million vertebrates are used in experiments worldwide every year, and about 300 000 were used in Sweden during 2011 according to the EU definition, while 8.6 million according to the Swedish definition where non-invasive experiments and test fishing are included (Swedish Board of Agriculture, 2013:1). Major criticism against research on animals on ethical grounds were present already in the days of Descartes and his notion of animals as machines, but had a surge in the 19th century, mainly in England, with some of the world's first animal welfare organizations being founded on the basis of this particular issue (Rollin, 2006). At the end of the 19th century several organizations critical of the use of animals in research were formed. Several animal welfare organizations actually first started as "anti-vivisectionist" organizations, and according to Forsman (1992) this was one of the very first large protest movements. Britain was the first country in the world to enact through legislation minimal standards for facilities and laboratory animal welfare. This took place in 1876 and it took quite some time for other countries to follow suit. According to Orlans (2002) virtually all initial legislation was a result of public protests about animal suffering and the conditions that they endured in laboratories. From the initial anti-cruelty-laws more attention was paid the animals' well-being and conditions. During the 1960's the increasing questioning of research on animals was also facilitated by a general suspicion towards authorities and technology (Forsman, 1992), and from the 1970's there was a vast increase in public concern and outrage against research on animals. According to Orlans (2002) this could be due to both growth of the animal rights-movement as well as scientific evidence for animal suffering.

Ethical arguments against research on animals vary from strictly abolitionist to very specific ones (Forsman, 1992). Zamir (2006) sees four different but related arguments for using animals in research: the idea that humans have greater value than animals; that we ascribe greater importance to human features; that we care more for ourselves and think we deserve more; and finally that we believe that by experimenting on animals we minimize the harm done to us. If we ascribe to this it doesn't mean that animals shouldn't be considered at all, but that animals are not eligible for such consideration to the extent that it is immoral to experiment on them (Zamir, 2006). What makes research on animals perhaps a more evident ethical dilemma compared to other forms of animal use is that we are not just refraining from action but actively harming the animals (e.g. Forsman, 1992; Zamir, 2006). A well known paradox is that the animals used in research are considered similar enough to us in order to provide relevant results, while at the same time being considered different enough in order to justify the usage and inflicted harm (e.g. Sandoe & Christiansen, 2008).

The animal ethics committees

Research on animals has thus long challenged us with moral dilemmas, debates and the task of balancing "opposing" interests. The biomedical research community has however according to Rollin (2006) throughout history been a strong force and repeatedly been successful in averting stricter legislation in favour of the animals. One way of doing this has been to portray animal research as a "scientific necessity instead of an ethical issue" and to demonize anti-vivisectionists as misanthropes (Rollin, 2006:288). However, there have also been initiatives by parts of the scientific community itself to increase standards and deal with the ethical issues involved in doing research on animals. In Sweden the first legislative proposal striving to restrict research on animals was put forth in 1978. A trial AEC was initiated by scientists in 1976 at the University of Uppsala, one reason being the will to ease the ethical burden for each individual scientist (Forsman, 1992). The

committees were then fully established in 1979, which can be seen in the perspective of the first Swedish animal welfare law being enacted in 1945. In 1989 layperson representation was strengthened and a supposedly “neutral” or “impartial” chairperson and vice chairperson were included (SOU 2007:57). Originally the outcome of the ethical committees was only advisory, but in 1998 the approvals or rejections became legally binding.

Today there are seven AECs in Sweden, linked to the District Courts in all university towns with medical faculties: Uppsala, two in Stockholm, Göteborg, Malmö/Lund, Umeå and Linköping (Swedish Board of Agriculture, 2013:2). They are responsible for reviewing all planned research projects involving animals (with some exceptions where the animals are not subjected to any suffering) (Swedish Board of Agriculture, 2009). These committees have several functions, one being increasing the credibility of research and confirming methodological and moral quality to the public (e.g. Forsman, 1992). The review process also enables researchers to reflect upon their own work and avoid being “blind” to it (SOU 1989:75). Animals included in the mandatory review in Sweden are mammals, birds, reptiles, amphibians, fish and cyclostomes (Swedish Board of Agriculture 2013:2). Every committee is an independent decision-making body that generally meet every month and each year a total of about 1600 applications are reviewed (SOU 2007:57). Applications are mainly processed in panels with about three to six AEC members who then give recommendations for verdict in plenary. The committees are comprised of one chairperson (normally a judge), six scientific representatives (normally scientists or animal technicians) and six laypersons (four political representatives and two representing animal welfare or animal rights organizations) (Swedish Board of Agriculture, 2013:2). These will onwards be referred to as member categories. All members have personal suppliants, and one laboratory animal veterinarian and one animal welfare inspector are also allowed to participate as advisors during plenary. This composition of the committees came about with the aim of breaching the conflict between scientists and animal advocates, providing some insight to the general public, and making the original ethical evaluation more balanced and inclusive (Alexius Borgström, 2009). Refusals can be appealed against by the applicant. The application will then be sent to a central animal research ethics committee (established in 2013) for evaluation. This central committee also has the mandate to evaluate certain projects retrospectively if they are deemed as particularly problematic from an ethical point of view (SOU 2007:57). But what is the basis of the ethical evaluation?

Legislation

In 1988 a new general animal welfare law was enacted in Sweden (the Swedish Animal Welfare Act, onwards abbreviated SAWA), and after that several amendments have been added, not least regarding research on animals (SOU 2007:57). Most recently, only this year, Swedish legislation regarding research on animals has been updated to fulfil requirements from the new EU Directive (2010/63/EU). From the very beginning the Swedish government has stated that research on animals is necessary, but something that constitutes an ethical dilemma and therefore requires reflection and restriction. The goal has been and still is to use animals as seldom as possible, to minimize the number of animals required and to refine the methods used and the housing and care for the animals (SOU 2007:57). This view reflects the famous 3R-principle, originally put forth by Russell and Burch in 1959 meaning replacement (substituting with animal-free methods), reduction (using a minimal amount of animals) and refinement (improving the methodology and the experience for the animals). The three R:s are incorporated in the legislation and fill an important role in that they represent a stepping stone for consensus and a “uniting ethical concept”, and also provide a common language for discussions about research on animals (Fenwick et al., 2009). Such research should also according to the Swedish legislation only be allowed when no alternatives are available and when measures are taken to minimize “unnecessary suffering” (SOU 2007:57).

According to the proposition behind SAWA (1987/88:93), the duty of the animal ethics committees should be to consider both ethical and welfare-related aspects of research on animals. It also notes that there is a conflict between the demand for high animal welfare and demands for increased knowledge about humans. In the more detailed regulations (25§ L150) it further says that the committees are supposed to carry out “a harm-benefit analysis of the proposed experiment and from an ethical perspective, where the animal’s suffering is weighed against the expected benefit that the experiment could result in for humans, animals or environment”. The committees should also according to SAWA (1988:534 §21) approve an application “only if such use of animals could be seen as urgent from the public’s viewpoint” and the preconditions from 19§ are met, namely that “the purpose stated with the study cannot be fulfilled with any other satisfactory method”, that “as few animals as possible are used”, and that “the study is planned in a way that the animals aren’t exposed to greater suffering than absolutely necessary”. (It is also stated that the animals, apart from some exceptions, are required to be destination bred). In SAWA 2§ it is written that “Animals should be treated well and be protected from unnecessary suffering and disease”, and according to Prop. 2001/02:93 to prevent unnecessary suffering of animals is the very primary aim of animal welfare legislation in Sweden. SAWA, however, also states that “animals that are used in research should not be considered exposed to unnecessary suffering or disease when used in a study, if this has been approved by an animal ethics committee”. A central task for the AECs is thus to determine what can be classified as ‘unnecessary suffering’.

This is however not a very easy task, something that has been emphasised by several scholars. Alexius Borgström (2009) states that legislation concerning research on animals is generally very difficult to comprehend. According to her this reflects the initial reluctance to include research on animals within the legal system. For example, she argues the wording that animals shouldn’t be inflicted ‘unnecessary suffering’ represents a goal rather than means to accomplish it. In the very first Swedish animal welfare regulations the term “obvious cruelty” was used, but was in the 1940’s replaced with “undue” or “unnecessary suffering”, both terms very vaguely defined (Alexius Borgström, 2009). In the legislation it has also been phrased that it is in some practices “unavoidable” that animals are caused suffering, for example regarding research (Prop. 1987/88:93). But what do we mean by unavoidable? A problem according to Franck (2002) is that there is no sharp line regarding what can be deemed as “necessary” and “unnecessary” suffering (as well as avoidable and unavoidable suffering), but this has to be subjected to a constant rational as well as emphatic evaluation (see also Lundmark et al., 2013). The same goes for what is really meant by ‘public good’ or “urgent from the public’s viewpoint” as it is phrased in the law, which according to Forsman (1992) could pragmatically be defined as “aggregated interests”, but that probably also would need a clearer definition. This vagueness of definitions seems to always have been present in animal welfare legislation, and has probably not been very beneficial for animals (Forsman, 1992). According to Alexius Borgström (2009) vague rules are difficult to apply in practice, leaving the practical applications of them highly open to interpretation by the AECs. In practice, in the actual review process, they are the ones having to make these judgments.

The ethical review process

According to Hoff (2003) ethical committees are generally established in order to increase ethical awareness and create ethical rules and codes of conduct. They are also often established in order to improve the reputation of a certain activity. In this way scientific committees could actually serve to increase opportunities instead of restricting them, due to increased confidence in science (Hoff, 2003). In many areas ethical committees are a complement to legislative tools, however regarding research on animals it is incorporated in legislation. According to Dahlborn (2006) a main goal for AECs (from a Swedish perspective) is to increase transparency and understanding for research on animals, as well as giving it an “ethical alibi”. Orlans (2002) says what generally motivates an ethical review process is that scientists should be held accountable for research on animals to both

colleagues and the public. An important aim and effect of the animal ethics committees has been to legitimise the ethical conflicts surrounding research on animals and affirming the moral dilemmas involved (Forsman, 1992). However, the independence of the committees from the scientific community has been questioned, not least by Forsman, who states that it is very difficult to “criticize the system from within” (the scientific system in this case). She concluded that committee members are easily defined as either in or out of the system, which could suggest that it is only those already in it that have a say in the discussions. This leads to the system up for scrutiny (i.e. scientific use of animals) not really being reviewed, but simply continuously consolidated (Forsman, 1992).

According to FELASA, Federation for Laboratory Animal Science Associations, there should in every case be “adequate and clearly explained ethical justification for using animals which should be subjected to ongoing critical evaluation” (FELASA, 2005:i). This view has also recently been strengthened by the new EU Directive (2010/63/EU). Ethical judgments and review outcomes are reliable if they are “sensitive, balanced and informed...and responsive to all reasonable perspectives on the issues” (Smith & Boyd, 1991). According to FELASA (2005) this entails; 1) taking into account all the different features of the proposal or situation that are relevant to the judgment, 2) involving all the necessary expertise and as wide a range of views and perspectives on the issues as possible, 3) recognizing that decisions and advice resulting from such reviews are ‘interim’ judgments that may change as the work progresses and with scientific advance, and so should be subject to ongoing review and re-evaluation, and finally 4) being seen to do these things. It is in FELASA’s view also crucial that all parties are able to engage in the discussions and that ethical reasoning is developed progressively and not just halted at status quo. They further discuss how the harm-benefit assessment is the most common approach to the ethical review process in many countries (now also included in 2010/63/EU), but that it should not be considered as a quantitative checklist or scoring scheme, since the issues are far too complex to be dealt with in a seemingly “certain” way. There are no explicit guides for how the harm-benefit analysis should be done in practice, although there are some tools developed and at use in some countries such as New Zealand and the UK (e.g. Smith & Boyd, 1991; Porter, 1992; De Cock et al., 1993; Mellor & Reid, 1994). As a consequence of the new EU Directive a number of EU countries have also recently started working on formulating criteria for the ethical evaluation (e.g. Austria, for more information see www.messerliinstitute.au).

Schuppli (2011) studied Canadian AECs and states that the AEC review generally works at two levels. Step one is to decide whether a certain experiment can be justified and step two to look at how it can be improved. However, Orlans (2002) questions whether the fundamental ethical debate and justification of the experiments actually take place (Orlans, 2002). There also seems to be somewhat of a paradox in that the utilitarian harm-benefit approach is considered the most objective and sound way of making an ethical evaluation, while many state that it is in fact a near impossible task in practice (e.g. Stafleu, 1994). According to Schuppli (2011) there is a problem with the AEC assessments being perceived as objective although neither harms nor benefits are really quantifiable nor in commensurable units. Orlans (2002) has a similar line of thought as she says that the harms and benefits are incommensurable in the sense that all harm is on the side of animals and all benefit on the side of humans. Hills (1993) states that this type of analysis assumes equal weighing of qualities and quantities such as happiness or suffering. According to her this weighing would only work if animals were originally seen as worthy of equal consideration, which isn’t the case. Furthermore, it has been reported that the cost-benefit analysis is interpreted and used in inconsistent ways; that there are different interpretations regarding which benefits can be said to justify which harms (e.g. Ideland, 2009; Schuppli, 2011). Another reason why the efficacy of the harm-benefit system of analysis has been questioned is that it is by some thought to be very different from how moral evaluations are normally made in natural settings (Klein, 1998; Slovic, 2006). Studies have found that different people use different ethical views and strategies in their reasoning, and it has

been shown that affect and intuition as well as imagination play crucial roles for decision outcomes (e.g. Klein, 1998; Slovic, 2006). Schuppli (2011) found in her study that considerations such as empathy with animals, comparison with perceived community standards, attempts to be consistent with previous decisions and moral intuition also affect the ethical evaluation.

Due to the personal nature of ethical convictions, work in an ethical committee is also strongly affected by the members' views upon ethics and the nature and function of it (Göthlin & Lanz, 1993). According to Ideland (2009) the mission of the ethical committees has to be clearly defined to ensure that the issues and underlying premises are understood by all participants. Underlying fundamental differences in ethical stances can make it difficult to discuss ethical issues on a more applied level and it will almost be like speaking different languages (Göthlin & Lanz, 1993). What might make it even more difficult is according to the same authors that most people haven't really identified or reflected upon their ethical views, meaning they aren't even aware of them, and thus of the potential differences they might stumble upon in discourse with others. There has to be an underlying foundation from which ethical discussions can begin and it can be important to distinguish whether the deliberations are about more general ethical principles or ethical problems in single cases (Göthlin & Lanz, 1993). Someone might think it is irrelevant to consider whether a certain experiment is really justified or not, while someone else simply want to focus on whether the method could be improved (Forsman, 1992). In a Swedish study, Ideland (2009) asked committee members to define the ethical debate at stake, which lead to her identifying three different "types of ethics" in the AECs, namely ethics in the name of animals, in the name of science or in the name of patients. It is thus likely that we don't just deal with one type of ethics, but ethics in the name of different interests which somehow have to be reconciled (Ideland, 2009).

The statutory ethical evaluation is theoretically quite similar for research on animals and humans, in that both are supposed to be made in a similar harm-benefit line of thought (Vetenskapsrådet, 2011). The main differences are however that testing on human subjects primarily requires informed consent and that the principle of autonomy, the principle of kindness, the principle not to cause harm and the principle of justice are in focus (see e.g. Beauchamp & Childress, 1994). Scientists carrying out research on humans also particularly have to justify actions that cause an already impaired and weak group any more strain (Medicinska Forskningsrådet, 2003). Another difference is that the scientists have an obligation to not prioritize the interests of science and knowledge before the human subject's health and well-being (Hoff, 2003). The ethical foundation of human ECs is thus more deontological in the sense that the potential benefit doesn't justify any means (Forsman, 1992). From this background we now turn to the present study.

Material and methods

Survey

This study was carried out in three parts: a literature review, one quantitative and one qualitative study. The quantitative part consisted of a web-based survey (Appendix 1) targeting all AEC members in Sweden. The survey was tested and reviewed by a group of ten people with different experience and knowledge relevant to the topic. They were researchers, former committee members, former research animal technicians and colleagues within the field of animal welfare. Access to committee members' e-mail addresses was not available, instead requests had to be sent via the committee secretaries and then distributed. Normally there should be 12 members in each committee, each with one substitute. This together with one chairperson and vice chairperson would give 26 persons per committee (in seven committees). However, some of the secretaries clearly stated that they did not have e-mail addresses to everyone and since I was not allowed to see their contact lists, and did not receive any postal addresses, I cannot know of how many people in each of the committees that were approached and invited to participate in the study. Based on what the

secretaries said, it seems as if there were a couple of persons without necessary contact information in each committee and thus in order to estimate an approximate full sample I count $20 \times 7 = 140$ accessible committee members (including chairperson).

80 people filled in the online survey anonymously but 6 were removed due to incompleteness. Of the 74 remaining, 4 were not fully complete but included anyway since they had answered more than two thirds (66 %) of the questions. This gives an estimated reply rate of 53 %. For all incomplete replies the last couple of questions remained unanswered, suggesting dropouts due to length and time requirement of the survey. The survey contained four parts: general information about gender and age, questions regarding the members' experience of work in the committee, questions regarding the ethical evaluation and finally questions regarding the role of emotions in ethical decision-making. The questions were mostly statements with a Likert scale scoring 1 to 5; 1 in most cases corresponding to 'Completely disagree' and 5 to 'Completely agree'. Most results were derived by looking at the average score from this grading scale for each member category. Also, data analysis was carried out in statistical software program SPSS where Mann-Whitney U-tests were used to compare scores from two groups.

Interviews

The third part of the study was comprised of interviews (questions in Appendix 2) with eight people, representing different backgrounds and categories in the AECs. Interviews were made after a preliminary result of the questionnaire was available, with the purpose of gaining complementary input and deepened perspectives from all groups who are involved in the AECs and who can be said to represent different interests. In relation to this I also decided to include one veterinarian due to their advisory function and one representative from a patient organization, since they have asked to be included in the AECs for many years. They also more explicitly represent patients which were one of the main ethical interest groups identified in the study by Ideland (2009). Most of these persons were chosen due to their long experience and thus vast knowledge within the field, while some were recommended based on their current dedication. All except the patient organization representative have been or are currently committee members. The interviewees were distributed across committees in Sweden, although there were double representatives from two of them. Hence not all committees are represented in this part of the study. Participation was voluntary and the interview was carried out over telephone starting with a short introduction stating the purpose of the study and the scope of the interview. All interviewees gave consent to audio recording and were ensured full anonymity in this report. Participants also validated chosen extracts from their interviews. The interviews were semi-structured with a set of thirteen questions chosen based on the research questions and themes from the survey. These were piloted on two current committee members. Interviews lasted between 30 minutes and 1, 25 hours. The audio recordings were transcribed and translated from Swedish to English.

Content analysis was qualitative and carried out according to 'Theoretical thematic analysis' (somewhat simplified), since it according to Braun & Clarke (2006) is a method that "tend to be driven by the researcher's theoretical or analytic interest in the area". This suited the approach of this study where several methods are used together in order to answer the research questions. Interview material has thus been processed in relation to existing literature on decision making in animal ethics committees and with some consideration to the survey results. Below is an example of how the transcribed material was coded and analyzed through themes (see also Graneheim & Lundman, 2004). The identified themes were grouped together forming six broader themes in which interview content will be presented in the results-section.

Condensed meaning unit	Interpretation of meaning (codes)	Theme
The more unemotional you are the more you are listened to	Frustration in expressing emotions	Low status of emotions
She was emotional making it easier to dismiss her		
Those who are empathic get depressed since there is no use		
It is difficult to involve emotions since everything is very abstract	Conditions that favour reason	
Argument based on facts generally gain more support		
Arguments were generally quite harsh (unemotional)		
One should be professional enough to not let one’s emotions matter	Emotions seen as irrelevant	
It is not that we sit and feel sorry for the animals		

Table 1. Model of interview content analysis.

Literature review

1. Ethics in relation to animal research

First and foremost, what is ethics? In Hemsworth's (1996) words ethical reasoning is about wanting to improve and be able to justify our own or others' behaviour. According to The Biotechnology and Biological Sciences Research Council (BBSRC, 1996) ethical concerns are about the reasons and justifications for judging actions to be right or wrong, while moral concerns are feelings concerning what is right or wrong to do. In Sapontzis' (2012) view, following a slightly different line of explanation, moral values are concerned with creating a better way of life and the strive for a world based on other than self-centered values. Hoff (2003) agrees as he says morality is what is good for individuals and for society as a whole, which often boils down to restricting selfish interests. As religion and other authoritative "moral guardians" have lost power, morality has become more and more personal and subjective (Hoff, 2003). Webster (2007) states that the ethical view of a person depends on several factors such as culture, education and geography, and is not necessarily constant during his or her lifetime. Forsman (1992) adds that people are commonly quite inconsistent and choose freely and sometimes unpredictably between their different values. Our moral intuitions are according to Greene & Haidt (2002) affected and shaped by natural selection as well as cultural factors. They stress the importance of interactions with equal peers throughout development, and that morality is self-constructed through these interactions, although only after sufficient development of the brain. Through proper experiences children develop an increased ability to respect rules and negotiate them, take turns and solve conflicts, which are all important steps in their moral development (Greene & Haidt, 2002). Moral behaviour has according to Lurie (2004) a component of training since it is shaped by surrounding customs, norms and traditions. Hoff (2003) emphasises how the socialization process makes our moral values deeply rooted and part of our personalities.

The establishment of ethical committees within areas such as social care and research can, according to Göthlin & Lanz (1993) be seen as a sign of increased ethical awareness in society. Technical development within these fields has made ethical demands more pressing, and committees are sometimes seen as being able to deal with ethical issues more directly compared to legislation

(Göthlin & Lanz, 1993). According to Lurie (2004), factual knowledge is always necessary in order to make ethical decisions, but needs to be complemented by ethical knowledge. But what is ethical knowledge and what kind of competence is needed in order to be able to make well-considered ethical decisions? According to Göthlin & Lanz (1993) several types of knowledge and skills are needed: factual, rational and emotional/empathic, meaning that knowledge, rationality and emotionality are all required. There is a need for what the authors call “logical clarity” and freedom from contradictions, as well as the empathic ability to identify with others’ thoughts and feelings. The authors state that some people may be more inclined to one or two of these, for instance due to the culture of their profession. Göthlin & Lanz (1993) also think that it can be important to have some previous experience in ethical deliberations, implying that you can to some extent be trained to make better judgments based on having had to judge in ethical conflicts and also having had to deal with the consequences of your decisions. This kind of ethical competence together with relevant experience can according to the authors be criteria for what could be called “ethical expertise”. (See also Verhoog, 1989; Höglund, 2005).

Although there are many different normative schools that can guide us in our moral reasoning, throughout the last centuries, utilitarianism has been one of the most influential ones. Its core is to maximise pleasure while minimising harm for as many individuals as possible. In practice this leads to estimating and weighing benefits and disadvantages in situations with conflicting interests (e.g. Nussbaum, 2000). One branch of ethics that contrasts with the utilitarian perspective is care ethics which is a form of virtue ethics focusing on knowledge of the current moral situation and the relationships involved, i.e. does not base an ethical judgment primarily on normative rules and principles (Lurie, 2004; Donovan & Adams, 2007). Instead of weighing of harm and benefit, one of its advocates, Wiggins (1988), stresses reflection, imagination and thought experimentation combined with the concern and emotions that the situation evokes as proper grounds for ethical decision making. Emotions such as remorse, compassion and guilt are according to some what make up our conscience, which is crucial for morality (Lurie, 2004). In a similar way that we reflect morally in different ways about our conduct towards other humans, we can also reflect about animals.

Animal ethics

Animal ethics is a field within applied ethics that deals with virtually all issues regarding human relations with and conduct towards animals (see e.g. Sandoe & Christiansen, 2008). Given the animal experience of suffering or pain, animal ethics also has to deal with issues of animal welfare (Röcklinsberg, 2001). There are as within ethics in general many different arguments and positions on what is right and wrong, good or bad also when it comes to human-animal relationships, and as with ethics in general there is no universal right or wrong. Today however, most agree that it is animal *sentience* that is a main reason for us to consider them as moral objects, i.e. worthy of or moral consideration (Singer, 1975; Regan, 1983, see also e.g. Webster, 2007; Broglio, 2009). Animals’ ability to suffer is according to these authors what primarily forces us to consider duties and responsibilities towards them, and even makes animal welfare a moral issue in itself (Webster, 2007). Over time as knowledge has progressed regarding animals and their abilities to experience suffering and pleasure, there has been a change in many people’s attitudes, also resulting in stricter legislation (Garner, 2010). The attitudes of European citizens towards animals have been investigated in e.g. Eurobarometer 2005, and animal sentience is acknowledged in EU legislation as a valid reason to pay regard to animal welfare (see e.g. Tjärnström 2010 for an analysis of Article 13 in the Lisbon Treaty).

There are however other criteria than sentience for including animals in our moral realm. Clark (1997) states that the main requirement for deeming an action as morally wrong is that we do something against another’s will. To him a main problem is that we tend not to see animals as

autonomous beings; since they cannot object we can theoretically do anything we want to them. Although the concept of 'free will' is highly debated even regarding humans, it is clear that we consider humans as autonomous beings to a much higher extent than non-human animals. We are from an early age socialized into the notion that animals are ours to use (Forsman, 1992), and according to Benton (1996) moral sentiments towards animals can by some be seen as "morally misguided", e.g. due to the fact that they are not moral *subjects*. Due to above-mentioned factors such as sentience or vulnerability, the common notion is however that animals can still be considered moral *objects* and thus worthy of our moral concern. According to Linzey (e.g. 2009) the ones who should primarily benefit from moral principles are the vulnerable ones, and he believes morality is first and foremost about looking out for the weak who are in need for protection. A common view throughout history is that humans are on top of the "sociozoological scale", which inevitably places other animals gradually below us (e.g. Sandoe & Christiansen, 2008). According to Linzey, (e.g. 2009) however, this doesn't mean that we have free pass to use other animals. Instead he suggests that our uniqueness imply that we can deal with issues such as suffering in a unique way by actively reflect upon and fight it, and that being a moral being means we can and should treat other beings well. Franck (2002) says we need both ethical insight and factual knowledge, e.g. about animal behaviour and welfare to be able to draw ethical lines for our conduct towards animals. According to him, to acknowledge that non-human animals are sentient and can suffer is far from a solution to the ethical problems that inevitably arise in human-animal relationships, but it is a clear incentive why we need to deal with them in the best way possible.

Katz (1960) was one of the first to stress the need to understand the origins of our attitudes towards animals as these have such a great impact on the relationships we create or fail to create with them. Herzog (1988) states that our moral judgments about other species are illogical as well as inconsistent, but greatly influenced by the roles they play in our lives and the value and attributes we thus ascribe to them. An implication of this is that we can more easily use rodents such as mice and rats in research, due to their label as pests in most human societies, compared to "high-value animals" such as cats or dogs (e.g. Herzog, 1988). Hills (1993) claims that people's attitudes towards animals are also likely to vary due to the context and circumstances of a particular issue, for example depending on how much they are directly affected, the emotional appeal of the animal concerned, the degree of cruelty involved, the prevailing social norms, or the persuasiveness of different arguments (Hills, 1993). Hills further proposed three fundamental bases motivating our responses towards animals: instrumental self-interest, empathy/identification, or belief and values about the nature and status of animals. She particularly stresses animals' instrumentality and utility to us as factors mediating how far we are likely to go in including animals in our moral circle. Opatow (1993) on the other hand highlights belief in animal mind (sometimes abbreviated BAM) as an important factor affecting our attitudes towards other animals. This means that the more intelligent and similar to us we perceive animals, the more value we ascribe them. Since there are such multi-faceted origins behind our attitudes towards animals, it is according to Holmberg (2011) crucial that people dealing with moral issues regarding animals are aware of their own values and where they stem from.

Another problem with ethical reasoning regarding animals is that in order to minimize their suffering we have to be able to estimate it and know at what level and in what situation it occurs. Animal welfare science is an area that has grown vastly and there are today several well-established definitions of what animal welfare constitutes. Different definitions however emphasise different aspects of animal behavior, which somewhat complicates the scientific debate (for a review see Lund & Röcklinsberg, 2001). It is also problematic that we can never fully know the subjective experiences of other individuals, particularly when they belong to another species (e.g. Bateson, 2011). Recently this has been a big debate regarding sentience in fish (see work e.g. by Braithwaite & Huntingford). This leads to the notion of suffering being greatly open to different interpretations (Biller-Andorno, 2002). Many authors point out the need for deeper knowledge concerning suffering,

and it is according to Biller-Andorno (2002) crucial to try to understand the subjective worlds of other beings even though it is difficult, since there is otherwise simply no way of taking enough consideration to that being in one's moral reflection and action. Wolf (1992) states: "We need empirical data on the nature of those affected by our decisions and have to be able to project ourselves into their situation – otherwise, the realization of the consequences of our action will hardly motivate us to moral consideration" (Wolf 1992:174, translated by Gluck et al., 2002). What is clear is that scientific knowledge strongly affects and feeds into our moral deliberations.

Ethics and science

The relationship between science and ethics is however and as mentioned in the introduction, not entirely uncomplicated. The traditional gap between science and ethics is by many explained by reference to the scientific tradition which stresses objectivity and verificationism. Since ethical claims are not possible to test and verify in this sense, they have traditionally been perceived as too subjective by the scientific community and thus irrelevant (Guerrini, 2003). Forsman (1992) however states that although science may often be seen as "value-neutral", it is based on hidden values, sometimes disguised as facts. Rollin (2006) was one of those who worked hard for animal protection legislation in the United States, particularly within the field of animal research, and says he gradually learned the strong scientific ideology, primarily derived from Logical Positivism where empiricism was seen as value-free and thus by extension also ethics-free. Finsen (1988) further adds that there is a traditional view upon science in our society as something superior and that to do science and the quest for knowledge can be seen as having moral value in itself. With new and increasing demands put upon us (often by ourselves) scientific research appears even more urgent, perhaps also making us more willing to sacrifice others for the sake of it (Finsen, 1988).

Another barrier of scientific commitment to the moral issues related to animals in general and research on animals in particular, is the traditional reluctance to acknowledge pain, fear and other relevant states in non-human animals (Guerrini, 2003). The scientific ideology has traditionally stressed all understanding of animal thought, feeling or consciousness as empirically impossible (Rollin, 2006). The strive for objectivity and clarity has also made a utilitarian approach to ethics dominant in areas related to science, not least where animals are involved. Utilitarianism is often seen as the superior form of ethics due to it supposedly making it possible to evaluate moral issues as objectively as possible (Forsman, 1992). As is argued in this paper, however, this might not be an entirely realistic ideal.

According to the Swedish Board of Agriculture (2009) the composition of the AECs is thought to facilitate discussions about animal research from different ethical view-points, and in them science and ethics are confronted. The purpose is also to "create a mutual understanding between the interests of science and animal welfare" (Swedish Board of Agriculture, 2009:6; see also Alexius Borgström, 2009). According to Hoff (2003) a problem with AECs however, is by reference to Luhmann's systems theory that since the committees are derived from and established more or less within the scientific community, the prevailing norms will be of a scientific nature. This implies that all other norms and values will be subordinate to scientific ideals set by researchers (Forsman, 1992; Hoff, 2003). Ethical committees as part of the scientific system are also controlled by a scientific language and terminology. As a consequence, science is affected by ethics but from scientific premises, scientific goals and norms, implying that the committees become scientific representatives instead of ethical ones (Hoff, 2003). He also stresses that there is a danger in that the AEC decisions become unquestionable proofs of ethical acceptance. Actions that were previously criticized as ethically unacceptable have in countries such as Sweden become ethically legitimate through the committees' approvals (Hoff, 2003). Buchanan (2002) further states that science and the medical profession in particular have long been and still is to some extent making itself immune to criticism. He claims this is due to the institutional context surrounding it in many countries, characterized by a

certain culture of high social status and authority. According to Buchanan, much external criticism can be dismissed as coming from non-experts due to the high estimation of expertise, making no other in proper position for questioning. Hoff (2003) also says that scientists are trained to formulate and resolve scientific problems, but this doesn't imply good knowledge in dealing with and resolving ethical problems. This and the traditional notion that science should be "ethics-free" might in discussions lead to a situation where criticism of an ethical nature are met with scientific arguments instead of ethical ones (Forsman, 1992).

Reason and emotion

The traditional gap between science and ethics can also be understood by looking at the reason-emotion dualism. As previously mentioned, science has traditionally favoured reason and rejected emotionality on the same grounds as ethics, namely that it is subjective and cannot be objectively established (Guerrini, 2003). According to Nussbaum (2000) it has been a dominating view that it is virtually impossible for reason and emotion to meet and be influenced by each other. Instead these have generally been seen as separated from each other and as counterparts. Already Plato was of the opinion that reason would best function independently and should not be affected by the something "as intrinsically corrupt" as emotions (Nussbaum, 2000). According to Lindström (2012), common criteria for rational reasoning are that it should be coherent, informed and appropriate. What is deemed as rational can also be linked to a traditional/historical context.

The dualism between reason and emotion has throughout history also been evident in a discourse regarding which one of them is and should be our main guide to morality. According to the 18th century philosopher Kant, emotions are far too egoistic and should never be the guideline for true moral values and actions. In his view, if emotions are allowed to influence our moral judgments, we would most likely be biased in favour of the persons close to us and can thus never achieve a truly objective morality (Nussbaum, 2000). There have throughout history however also been many philosophers (e.g. Hume, Schopenhauer, Scheler, Buber, Husserl, Mercer, Stein and Acton mentioned in Nussbaum, 2000) who have stressed the importance of emotions in moral reasoning. Already Aristotle stated having the right emotions as crucial for ethical actions. Nussbaum discusses that according to him there isn't even necessarily a clear line to be drawn between the cognitive/rational and emotional, as emotions can be viewed as "beliefs relying on elements of thought" (Nussbaum, 2000). Aristotle also highlighted their complementary nature as emotions can play a cognitive role, while reason isn't fully informed without taking emotions into account (Nussbaum, 2000). This is a view that has gained more and more in the last decades, with growing evidence indicating that reason and emotion aren't in fact as separated as has previously been advocated. According to scholars such as Nussbaum (2001) reason and emotion are in fact synergistic and parallel processes that constantly blend and interact with each other, making them almost impossible to separate. There are however, she says, differences between the two systems, wherefore they can serve to complement each other.

A main function of our rational side is according to Franck (2002) that it can help us realize when our ethical responsibility is lacking, and then use it to reflect upon and improve our approach. Emotions can on the other hand be seen as "moral intuition", which serves a valid role in for example identifying ethical issues that need to be further investigated (Franck, 2002). Emotions also enable attention, interest and concern in others as well as a "readiness to act" (e.g. Nussbaum, 2000; Lurie, 2004). Emotions seem to comprise more cognitive aspects than previously thought, and there is evidence for emotions affecting all sorts of cognitive processes such as memory efficiency, problem-solving, learning ability, predictions of the future, social evaluations, self-estimates, altruistic decisions and conflict assessments just to name a few (Callahan, 1988). He concludes that the view that emotions can and should be separated from reason thus seems naive and unrealistic. Nussbaum (2001) says we tend to view emotions as impulses rather than understanding them from a fuller

perspective and from the full context in which they exist and are developed. Emotions often include ethical judgments in themselves, for example regarding what is good or bad. This implies, according to her that they shouldn't be ignored, and also that it will be crucial for our moral abilities to take the understanding of our emotions into account; where they come from, how they are developed and expressed and connected with our intelligence. It is however important to note that just as emotions can affect our reason, so can reasoning affect our emotions (as is done in everything from ordinary self-restraint to psychotherapy). According to Nussbaum (2001), reasoning can have an effect on emotions and changes in thought can eventually lead to changes in behaviour and in the emotions itself.

Franck (2002) states that both rational reflection and empathic abilities need to be parts of a sound ethical discourse that can lead to the resolving of ethical disputes and dilemmas. Gavin & Herzog (1992) even found in a study that emotional and rational components do in fact interact to produce the decisions made by AEC members. In a study by Schuppli (2011) several informants however expressed that they struggled to balance their rational emotional responses to applications. Some also expressed that they strive to keep their emotions in check in order for them not to interfere with the rational arguments. According to Callahan (1988) the best way of trying to resolve this dilemma is for every person to strive for a "personal equilibrium" where emotion and reason are mutually active and in agreement. It thus seems as if our rational and emotional sides work together in forming our ethical judgments. There are however also other factors that have an impact.

2. Factors affecting ethical reasoning and decision making

Mencl & May (2009) explain how we in decision-making processes are affected by everything from individual differences and contextual constraints to the information and knowledge we have regarding the situation (see also Jones, 1991). If the topic is of an ethical nature there is also an evaluative judgment regarding right and wrong to take into account, leading to even greater complexity (Mencl & May, 2009). Galvin & Herzog (1992) found in a study that routes to decisions can be quite unpredictable with the same reasoning sometimes leading to different decisions, and different reasoning sometimes leading to the same. Mattison (2000) discusses how there is a paradox in that ethical decisions are thought to be, or supposed to be, made in a strictly logical way as is done within utilitarian or deontological ethics, "scientific or objective by nature", while at the same time they are so strongly influenced by the preferences and value systems of each individual. According to Botes (2000) social and moral phenomena can never be objective in the sense often used because they are so dependent on relationships and context. He says that in practice, the consensus between the parties involved in an ethical situation replaces objectivity. There have been several models proposed in order to try to more fully grasp the different components affecting an ethical decision-making process, whereof Jones' (1991) provides one of the more comprehensive. According to him there are six primary factors influencing our perception and thus our decision-making in a moral situation, namely the level of positive or negative consequences, the level of consensus regarding the consequences, the probability of consequences, the time between decision and event, the level of closeness between decision-maker and those affected, and the number of individuals affected.

Beu et al. (2003) state that moral disagreements may be due to factors such as difference in moral principles, different perception of facts, or differences in the weighing of relevant values. How people perceive a situation is strongly related to their personality and has consequences for how they will proceed with dealing with and responding to the problem (Thomas et al., 1993). According to Mattison (2000) people are affected by everything from personal preferences, motivations and attitudes to professional roles and experiences in a decision-making situation. Furthermore, both cognitive and intuitive/emotional factors are at play (Watley & May, 2004), which are naturally

complementary rather than contradictory (Gaudine & Thorne, 2001). Intuitive factors deal according to Watley & May (2004) primarily with the relationship we have with the others in a moral situation. One important cognitive factor on the other hand is according to Beu et al. (2003) “perceived psychological closeness”, which affects the way a person will respond to another’s needs.

There is vast research done into personal influences on ethical decision-making, with factors such as gender, education, moral development and personality factors often stated as relevant (reviewed in O’Fallon & Butterfield, 2005). Nwachukwu & Vitell (1997) further stated that the culture of a context such as an organization can have a great impact on what is deemed as right and wrong, with both external factors such as socio-economic environment, peers and organizational culture, and internal factors such as moral value structure, moderating what is seen as ethical or unethical behaviour (Nwachukwu & Vitell, 1997). These two types of factors also interact with each other and together influence decision outcomes. Schuppli & Fraser (2007) also mentioned institutional culture, committee composition and structure, policy and guidelines and training as factors influencing the ethical review-processes. Furthermore, according to Mattison (2000), problems can arise when people involved in an ethical decision-making process aren’t familiar with relevant legislation and guidelines, or lack training in how to systemically analyze ethical issues. Schuppli & Fraser (2007) states that there are both pros and cons with making decisions in a group, since individual bias is adjusted but at the same time there are complex group dynamics at play and individual biases of several people are pooled together. According to Ferris et al. (1997) there are also factors related to group dynamics, such as internal pressure and accountability that need to be considered. Nussbaum (2001) stresses the important effect of hierarchies, which among other things have been found to impair discussion climate and impede compassion (see also Hedlund, 2007). This suggests that there is something about compassion that should be relevant in ethical decision-making, and this is indeed what is found when digging a bit deeper into the literature. As it turns out, compassion, or empathy as it is often called is a highly relevant factor that deserved further attention.

Empathy

What is empathy?

First and foremost, it is not always clear if and what difference there is between empathy, compassion and sympathy, as these are terms that many authors use interchangeably. Although these distinctions are not the primary scope of this paper, it should be clarified that I choose to focus on the concepts of empathy and compassion and to view them as names of very similar phenomena. Some authors do not think that empathy is sufficient for compassion (although a route to it), since it is seen as a more neutral grasping of another’s situation, without necessarily adding positive or negative value to it. According to e.g. Nussbaum (2001) there are several steps from empathy to compassion: the suffering person has to be considered important, as non-deserving of suffering and the suffering in turn as relevantly severe. My basic starting point in discussing empathy is however that by being exposed to or closely relating to another’s negative experience, compassion is in most cases evoked. It is of course highly relevant to discuss why in some cases this isn’t so, but for further discussion regarding empathy impairments that can cause other reactions, I will for now refer to authors such as Hoffman (2000), de Waal (2009) or Baron-Cohen (2012). There are several definitions of empathy and I will now present a few of the most prominent.

According to de Waal (2009) empathy can be understood as our own emotions being awakened by others, followed by a more advanced understanding of the other’s situation. Maibom (2009) defines it as the ability to experience something similarly to another individual and thereby “feel what the other is feeling”. According to Nussbaum (2001) empathy serves to establish concern and connection with another being and to acquire an understanding of what is going on within that other. A lack of empathy thus makes us less susceptible for the situation of others and how we affect them. De Waal

(2009) emphasises that empathy was originally a purely emotional response to others that we developed in order to be able to respond to and interact with them in social situations. Only gradually was this ability refined “layer by layer” until our ancestors not only felt but also understood others’ wishes and needs (de Waal, 2009). Recent evidence put forth by e.g. Shamay-Tsoory et al. (2009) consolidates this view upon empathy as two-fold; being constituted by both an emotional and a more cognitive system (see also e.g. Decety & Jackson, 2004). These two systems seem to work autonomously, although are always both evoked to some extent depending on factors such as social context and level of distress (Jackson et al., 2005), or the perceived similarity between subject and object (Mitchell et al., 2005).

Affective and cognitive empathy

The affective component of empathy involves feelings of compassion and sympathy (e.g. Batson 1990). The very basic form is emotional contagion, which is thought to be the origin of empathy (de Waal, 2009). This basic ability has then developed into emotional empathy and compassion, which is thought to be the main determinant of how attentive and receptive a person is to caring for the needs of others (Hoffman, 2000). These authors thus all stress the importance of this affective response, as it motivates us to direct our attention to others and take an interest in their experiences. Empathy also involves cognitive elements, particularly in the process of imagining the other’s situation and thereby understanding him or her both intellectually and emotionally (e.g. Mercer, 1972). Brehm et al. (2002) say the most important aspect of cognitive empathy is perspective taking, defined as the ability and will to “look at the world through someone else’s eyes”. According to Batson et al. (1997) there are two different ways in which one can take another’s perspective; either to apprehend another’s experience and thereby understand how he or she feels, or to assume what one’s own reaction would be in a similar situation and with this as a basis respond to the other. McPhedran (2009) in turn defines perspective-taking as “understanding or identifying with another individual’s response”. According to Batson et al. (1997) it is crucial to be able to identify with others in order to feel empathy, since identification leads to the difference between myself and others being eliminated (Donovan, 1996). It is however crucial that we can distinguish between our own and someone else’s feelings and appreciate the value that a feeling can have to another person even though we might not feel the same way ourselves (Batson et al., 1997). According to Hoffman (2000) and Pizarro (2000) the cognitive side of empathy is valuable in that it can help us correct for “biased and inappropriate” emotions. Biller-Andorno sums it up well as she says: “Whereas the cognitive element may help us to be empathic with beings that do not have a positive emotional appeal to us, the emotional element may kindle our curiosity to catch a glimpse of other subjective worlds” (Biller-Andorno, 2002:38). But do these subjective worlds have to be human?

Empathy for animals

De Waal (2009) sees empathy as an ability designed to care about those closest to us (family, friends and partners), but that can be extended to also include others. Harrisson (2010) says our fundamental ability to respond to the emotional expressions of others is crucial to human interaction, but can also be extended to other species. Humans have according to Lukes (1985) a “deep, primary disposition” to feel sympathy for animals, but which is to a great extent diminished and suppressed by our cultural upbringing. According to Forsman (1992), it is also much easier to empathize with someone you recognize, understand and identify with. Due to this importance of identification, studies have shown that our empathy for different species increases with phylogenetic relatedness (Harrisson, 2010). Bradshaw & Paul (2010) say that an interplay between the animals’ appearance and powerful cultural factors, appears to be what determines to what extent we relate emotionally to animals and to which species. According to Serpell (2004) the animal’s appearance, how attractive, cute and vulnerable it is seen, affects the level of empathy shown towards it. Our support for animal use also usually declines with increased belief that animals are able to think and feel (Herzog & Galvin, 1997). The more experience one has of contact with individual animals, the more likely it is further

that they are perceived as relevant (Lieberman & Chaiken, 1996). Hamberger & Hewstone (1997) have however added that it is the quality and intimacy of the relationships that are of most importance for our attitudes.

Several studies (e.g. Ascione 1997; Taylor & Signal 2005; Paul, 2000) have indicated that empathy towards animals is connected to empathy towards humans. Specifically, this body of research suggests that those less sensitive to the maltreatment of animals also exhibit less empathy towards other people. A lack of the ability to empathize is thus believed to be an underlying reason for violence towards both humans and animals (McPhedran, 2008). Paul (2000) however suggests that human- and animal-directed empathy might be separable and have different sources of variation. She suggests that although there may be a similar basis and underlying mechanisms for both kinds of empathy, there may be different factors mediating the process of directing the empathy depending on the target. It seems as if more research is needed to clarify this. Interesting to note is that animals can often be helpful in increasing empathic ability in children, an ability that also affect their human-human interactions (Sprinkle, 2008).

Conditions for empathy

According to de Waal (2009) many factors affect our empathic ability. Although it is inherent, he says it functions through a filter that helps us determine when and what to react and respond to. De Waal talks about an empathic portal or a trigger that is activated in certain situations, voluntarily or not. Inside our inner circle the portal is normally open, whereas outside of it, things are more optional. He says there are many different ways of opening or closing our empathic portal. Identification is a key trigger, but our level of empathy is also affected by whether we can afford to be affected as well as whether we want to be. We are also more inclined to empathize with what we experience directly than what is distant and out of sight. Empathy thus primarily builds on proximity, similarity and familiarity (de Waal, 2009). Baron-Cohen (2011) states that there is a complex interplay between biological and psychological factors contributing to our empathic abilities, and that cultural sanctions also highly affect the levels of empathy in society. There are also situational requirements for empathy, and it needs a state of calmness and receptivity in order to function optimally (Goleman, 1995). According to Decety & Jackson (2004) the ability to empathize is innate but needs developmental conditions. Holm (1991) in turn stresses the importance of being in tune with, aware of, and able to handle one's own feelings in order to be able to deal with others. Zhou et al. (2002) highlights the importance of parents' emotional behaviour, and that if they can satisfy the emotional needs of the child it is likely that egoism is reduced and care for others developed.

Some studies suggest increasing empathy with age, which is thought to be due to increased experience and thus understanding. Gruhn et al. (2008) did not find any connections to age, but instead suggested that empathy increases with level of education. Furthermore, several studies (e.g. Eisenberg et al., 2005; Laible et al., 2004) have found women to score higher for empathy compared to men. In a study by Angantyr (2008) it was shown that women who were parents and also those who were pet owners showed more empathy, also implying the importance of contextual factors and experiences in developing this ability. According to e.g. Baron-Cohen (2011) there is evidence that men are more apt to switch off their empathy, especially when dealing with possible competitors, people who are behaving badly or that they are uninterested in maintaining a relationship with. Women generally are found to be "more ethical" than men (Loe et al., 2000) which is thought to correlate with their reported higher levels of empathy. There are suggestions, however, that the reported sex differences in empathy is influenced by factors such as the type of method used in the study, and these are thus not yet fully understood (Eisenberg & Lennon, 1983). What is clear is the link between empathy and morality.

Empathy and morality

According to Lindström (2012) emotions are the real motivators of moral actions, particularly those that are expressions of other-oriented care, such as empathy. Sapontzis (2012) even goes as far as to say that there can be no moral values without emotions. Callahan (1988:10) says emotions “energize the ethical quest”, in the sense that if a person isn’t emotionally interested in or care enough about another, he or she will not likely invest in moral reasoning and action on the other’s behalf, especially if there are costs and distractions involved. Haidt (2001) has developed what he calls ‘the social intuitionist model of moral judgment’, wherein he stresses that moral judgment is generally derived from instant gut feelings. Reasoning then fills the role of justifying the initial response, aids in sharing with- and persuading others, as well as dealing with conflicting intuitions. Haidt thus acknowledges the importance of reasoning, but emphasises that it is our emotions that play the most crucial role in their quick, automatic and sometimes subconscious functioning.

According to Scher (1997) as well as Mikula et al. (1998), anger, disgust and sadness are all negative emotions that can help us perceive moral injustice, particularly in situations where it is directly experienced (Eisenberg, 2000). Guilt and shame are other emotions often mentioned in the context (e.g. Hoffman, 1998). Although many emotions have roles in morality, it is however empathy that is often labeled the most important moral emotion (e.g. Stone, 2006; Mencl & May, 2009; Hoffman, 1990; Pizarro & Salovey, 2002). Empathy is believed to be crucial in that it determines our moral sensitivity, i.e. what we perceive as moral issues and to what extent (Biller-Andorno, 2002). Hoffman says it is the notion of someone as a potential victim and the empathy derived from the other’s suffering that constitutes the very drive for morality. Without the will to help someone in need, there would be no incentive for ethics at all (Hoffman, 2000). According to McPhedran (2008) it is the capacity of realizing the consequences of one’s own actions for others, that makes someone want to refrain from hurting and instead help another. In Donovan’s (1996) words empathy leads to moral respect, implying that the other is worthy of moral consideration and has interests that can be comparable to one’s own. Kennet (2002) even argues that if we fail at being affected by others and changing our own responses in the light of others’, we will fail to be moral agents.

Mencl & May (2009) studied how and to what extent decision-makers’ experienced level of empathy affected their decision. According to them, having an emotional attachment to the moral object influences both the recognition of a relevant moral issue and the intent to act morally. The same authors also found that as empathy and a sense of responsibility for others increase, focus on costs and benefits of the outcome of a certain situation decreases, meaning that empathy can be said to be more closely linked with virtue-based ethics rather than with principle-based ethics. When there is less emotional attachment and identification, the decision-maker is more prone to focusing on the outcomes rather than the responsibilities of a situation, implying that a more utilitarian ethical approach is expected (Mencl & May, 2009). In support of this, Koenigs et al. (2007) found that damage to a brain region particularly involved in generating social emotions, created abnormal utilitarian judgments. Reynolds (2006) in turn found that utilitarians were found to have lower levels of ethical sensitivity compared to individuals who employed a more deontological or principle-based ethics. According to Rest (1986), moral sensitivity requires both cognitive and affective aspects of empathy. This sensitivity varies greatly between persons (Sparks & Hunt, 1998), and is affected by factors such as perceived closeness (socially, culturally, psychologically or physically) to another, as well as severity of consequences of the action at stake (Jones, 1991). It is clear that many different factors affect how we view other and how we respond morally to them.

Subject versus object

Relevant to these reflections upon empathy and morality, as well as to ethical discussions regarding animals in general and research on animals in particular, is whether animals are considered as

subjects or objects (note that this is not synonymous to being a moral subject or object). Many authors stress that animals are generally objectified, meaning that they are seen as means to an end and not as ends in themselves, which is something that simplifies our use of them. Objectification is also about de-individualization and de-identification (e.g. Holmberg, 2008). Adams (e.g. in Donovan & Adams, 2007) have referred to this as “the structure of the absent referent”, whereby making animals objects rather than subjects, the user is separated from the animal and thus also from its suffering. In relation to this it is relevant to discuss the view we have upon mice and rats which are the most common and numerous animals used in research. Herzog (1988) noted that laboratory mice generally have very low status, and according to Birke (2003) these are often invisible in the discussion although the ones most affected by it. They are made invisible by for example being referred to in terms of statistics or by wording such as “models”. Birke (2003) talks about a de-naturalization of the animals, making them into something abstract. Lynch (1988) adds that the technical procedures carried out transform the animal from a body to a scientific object. Furthermore, objectification of animals is probably even more of an issue when it comes to transgenic animals that could even be said to have lost some of their nature (e.g. Forsman, 1992; Gjerris & Sandoe, 2009; Ideland, 2009). Technical names of specific breeds or strains of breeds such as NMRI or Blb/c also add to the reification and distancing from the animals (e.g. Forsman, 1992; Holmberg, 2008; Gjerris & Sandoe, 2009).

When referring to animals as subjects, one might be criticized for anthropomorphism meaning unduly ascribing human attributes to other animals. Arluke (1988) however emphasises that objectification could be seen as the opposite, namely “counter-anthropomorphism” (attributing inanimate qualities to living things), which is also questionable. Staub (1987) further states that anthropomorphism is only illegitimate in instances of “false empathy”, where we lack understanding of others and instead simply project our own feelings and responses onto them. Hills (1995) stresses that in order to enhance accurate empathy we need to learn more about the mental experience of animals. Science is of course crucial in terms of advancing this knowledge. The question is how science and empathy can be inclusive of each other. Holmberg (2008) discusses how both empathy and the socialization and learning process within the profession (the communities of practice), is what makes scientists adopt a caring approach towards animals. She says that within animal research the “contradictory notions of empathy and instrumentalism are always present” (Holmberg, 2008:330), and this ambivalence may become extra tangible regarding research on those animals that are mainly seen as pets, such as dogs (Arluke, 1988). As they are more likely to be seen as subjects compared to species such as mice or rats, they are also more likely to evoke our empathy (Håkansson-Eklund, 2006). Empathizing with mice and rats may however not be quite as straightforward, and this ambivalence might be something that scientists should consider. Many question marks have appeared as we now approach the results of the present study.

Survey results

General

An estimate of 140 committee members from all seven AECs in Sweden received an online invitation to participate in the survey, and the estimated response rate was 53 %. Of the total of 74 anonymous respondents, 55.4 % were women and 44.6 % men. This is a fairly even distribution although it is not possible to compare it to the overall gender distribution of the full Swedish AEC-population, since this is inaccessible. The average age was 53 years old, and the majority had been committee members between one and three years. The respondents were quite evenly distributed across the seven committees (59 known committees of the 74 responses, see chart 1). All categories were represented, although most were scientists (72 given replies, see chart 2). The member category ‘layperson from animal welfare or rights organization’ is forwards abbreviated AW/AR layperson. Scientists and AW/AR laypersons were compared statistically on some key statements due to the big

differences between these two groups seen in the descriptive results. Survey questions can be viewed in their original language in Appendix 1.

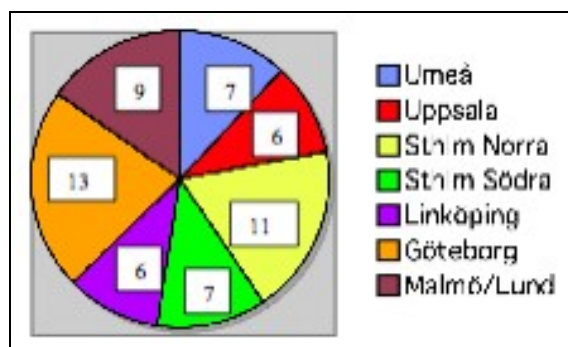


Chart 1. Distribution of respondents from the different AECs in Sweden.

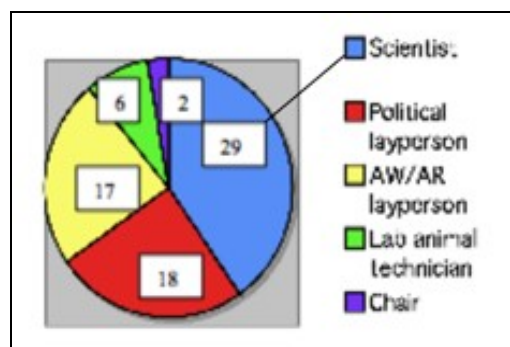


Chart 2. Distribution of respondents' member categories.

54.2 % of the respondents replied that they did not receive any training related to ethical evaluation as they became committee members, although 77 % said they had later participated in training days organized by the Swedish Board of Agriculture. 82.4 % said they think they have adequate scientific knowledge for their work in the committee and 86.5 % that they have sufficient ethical knowledge.

Ethical viewpoints

61.4 % of all respondents think that all aspects are considered in the evaluation (question 19, compare scientists 82.1 % vs. AW/AR laypersons 25 %), but 59.2 % state that they don't think the committee members share the same view of what are relevant ethical aspects of research on animals (question 20, compare scientists 50 % vs. AW/AR laypersons 82.4 %). Survey question number 21 was specifically formulated to investigate possible differences in ethical views regarding animals and animal research. Statement 21a "I think all animal research that could benefit humans in any way are necessary and thereby justified" got significantly higher scores (scales were always 1-5, 5 in this case meaning "I completely agree") from scientists compared to AW/AR laypersons ($p < 0.0001$). There was also a significant difference regarding to what extent these two member categories agree with statement 21f "I believe mice and rats can suffer in a way equivalent to humans", with scientists scoring significantly lower than AW/AR laypersons ($p = 0.001$). It was also investigated whether or not scientists and AW/AR laypersons responded differently on statement 22e "I think that decisions should be made based on reason rather than emotion" which might reflect differences in underlying ethical stances. However, no significant difference in the scoring was found ($p = 0.25$).

Interest groups

When asked what interests the committee members see themselves as representing (question 12), overall, most stated that they represent animals (42), followed by science (34). Each member could select more than one option and it was common to choose for example both animals and science. This question was formed based on Ideland's (2009) finding of ethics in the name of different interests in the AECs. It was developed to include four main categories; animals, science, the public and patients, and one for other suggestions. 26 out of 29 scientists (90 %) said they represent science, but also 15 out of 29 (52%) that they represent animals. 17 out of 17 AW/AR laypersons said they represent animals, 13 out of 18 political laypersons (72 %) that they represent the public and 6 out of 6 lab animal technicians that they represent animals. One of the two chairpersons said that he or she represents the public and the other that he or she represents the law.

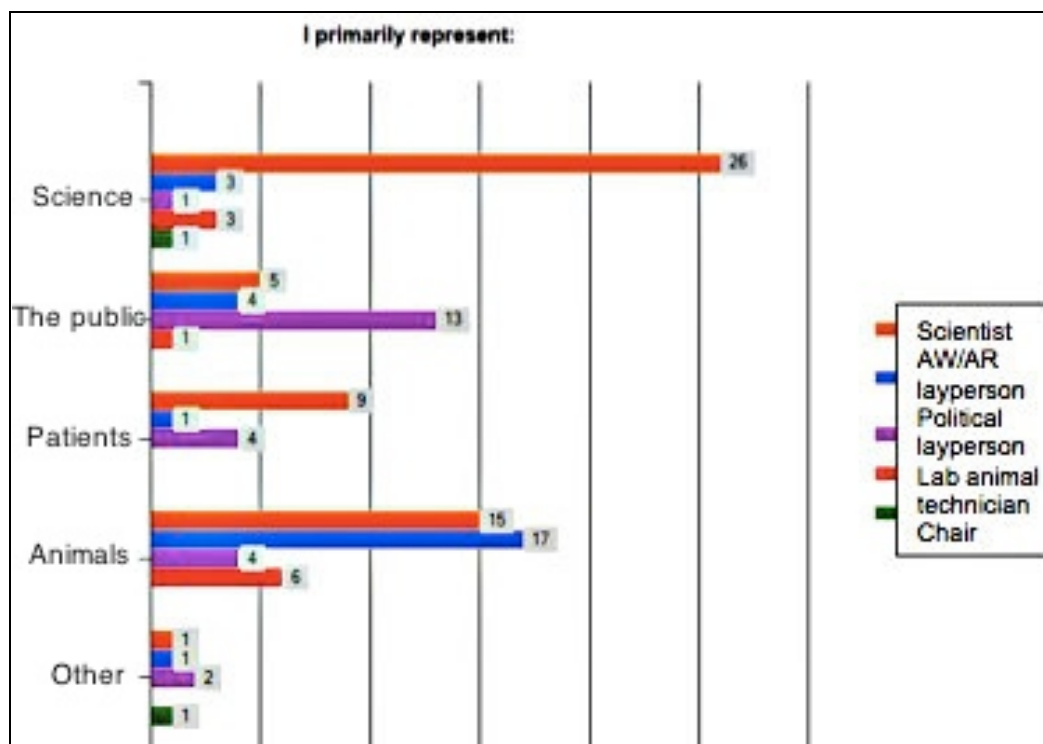


Chart 3. What interests the respondents see themselves as representing in the AECs.

Emotions in the ethical evaluation

This affinity for different interests in the ethical evaluation was also noticeable in the statements aimed at testing the level of empathy experienced by the committee members (question 23). The respondents overall scored quite high on whether they feel for and imagine being in the situation of the different interest groups. Generally the animals seem to be the interest group evoking most empathy, followed by the people who might benefit from the research. Political laypersons said they feel the most for these people, scientists equally for these and the animals, while AW/AR laypersons and lab animal technicians feel most for the animals (see chart 4). There were significant differences in the scores of scientists and AW/AR laypersons in the two statements regarding empathy with the animals used in research (23 cd). Scientists had significantly lower scores for both “I feel for the animals being used in the research” ($p=0.04$) and “I imagine being in their situation” ($p=0.009$). The scientists had however significantly higher scores for the same statements regarding the researchers applying for ethical approval (23 ef): “I feel for...” ($p=0.004$) and “I imagine being...” ($p=0.02$). There were no found difference regarding empathy for those who might benefit from the research/patients (23 ab), but a weak difference where scientists empathize more with the staff carrying out the research (23 gh, $p=0.05$).

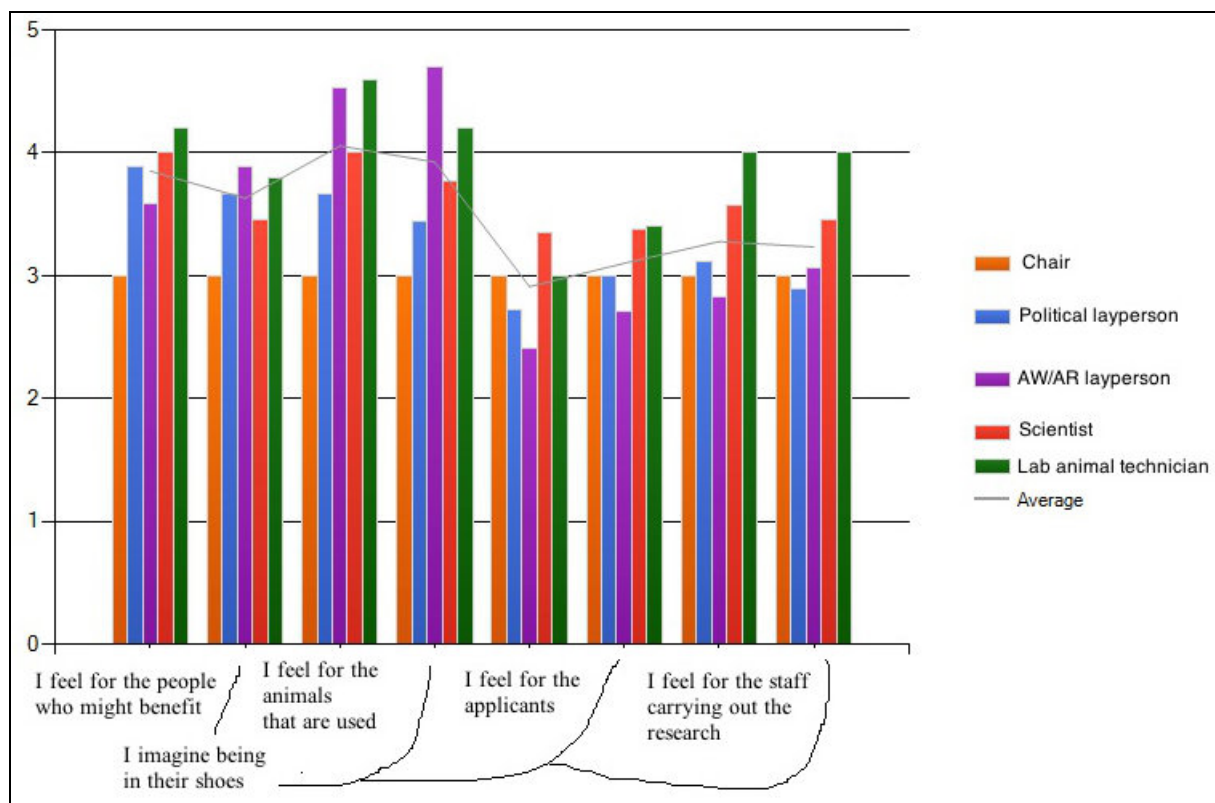


Chart 4. Respondents' scores on empathy with different interest groups. Question was formulated with the aim of inquiring for affective and cognitive empathy respectively. Every other statement was "I imagine being in their shoes, i.e. in the situation of people who might benefit, animals, applicants and staff, left to right.

When looking at the general scores of all member categories combined it is noticeable that there is a trend for higher scores on the statements aimed at testing affective empathy, except for the scientists who apply for ethical approval (see chart 5 below).

Statement	Average score (scale 1-5)
I feel for the people who may benefit from the research	3.84
I imagine being in their situation	3.63
I feel for the animals that are used in the research	4.06 (highest)
I imagine being in their situation	3.93
I feel for the scientists who apply for ethical approval	2.90 (lowest)
I imagine being in their situation	3.11
I feel for the staff carrying out the research	3.29
I imagine being in their situation	3.24

Chart 5. Average scores (all member categories) for affective and cognitive empathy.

If going back to chart 3 and representation of the different interest groups, the ones claiming to primarily represent the public and the animals said they got more emotionally involved (question 22a) than average (average score of 3.52 and 3.44 vs. general average 3.11). Difference in level of emotional involvement in the committee work was also seen when comparing the different member categories (see chart 6). Lab animal technicians and AW/AR laypersons said they get the most emotionally involved (question 22a), and also to a higher extent said they often react negatively to the animals' potential suffering compared to the others (question 22c). Scientists and chairpersons had the lowest score on emotional involvement, and when comparing scientists and AW/AR layperson this difference was indeed significant ($p=0.013$).

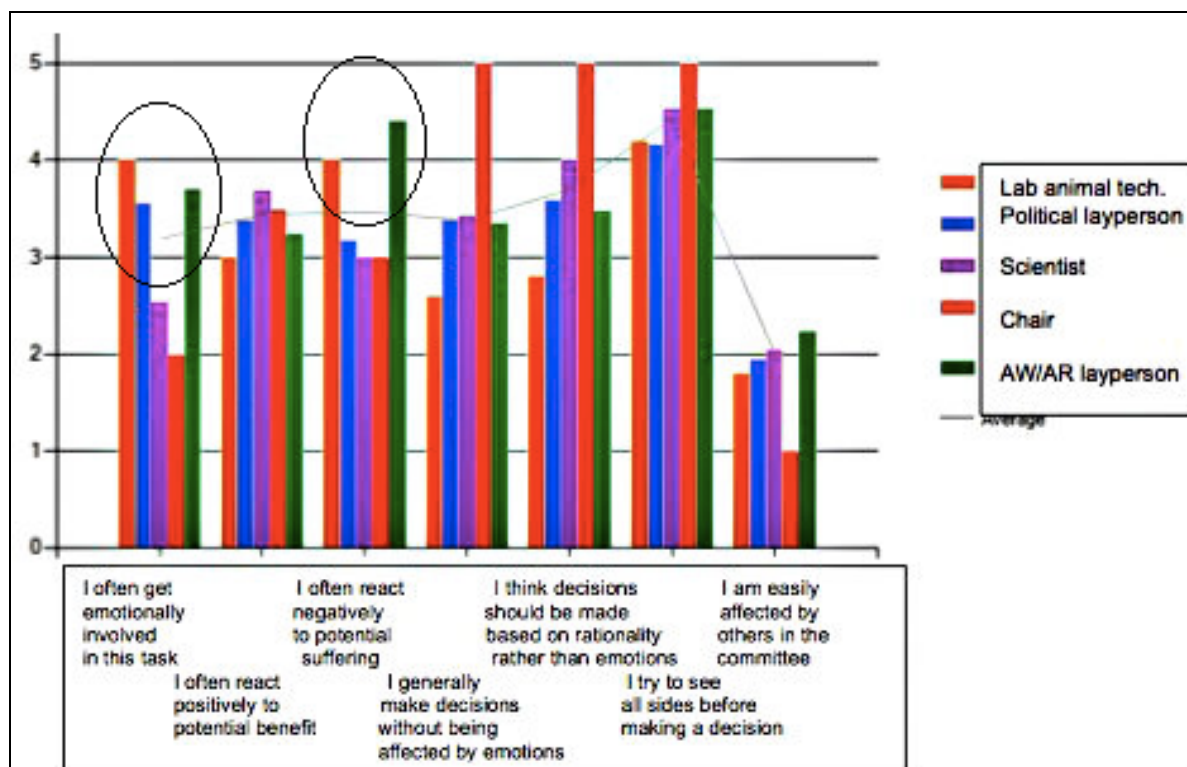


Chart 6. The average scoring of different member categories on questions of emotional involvement in the ethical evaluation.

A connection was found between claiming to be emotionally involved (22a), responding negatively to animal suffering (22c) and the experience of having influence during plenary meetings (15d), as the ones scoring highest on these two statements (1 and 3 below) were also the ones feeling the least influential (see chart 7). Scientists were found to feel significantly more influential during plenary meetings compared to AW/AR laypersons ($p < 0.0001$).

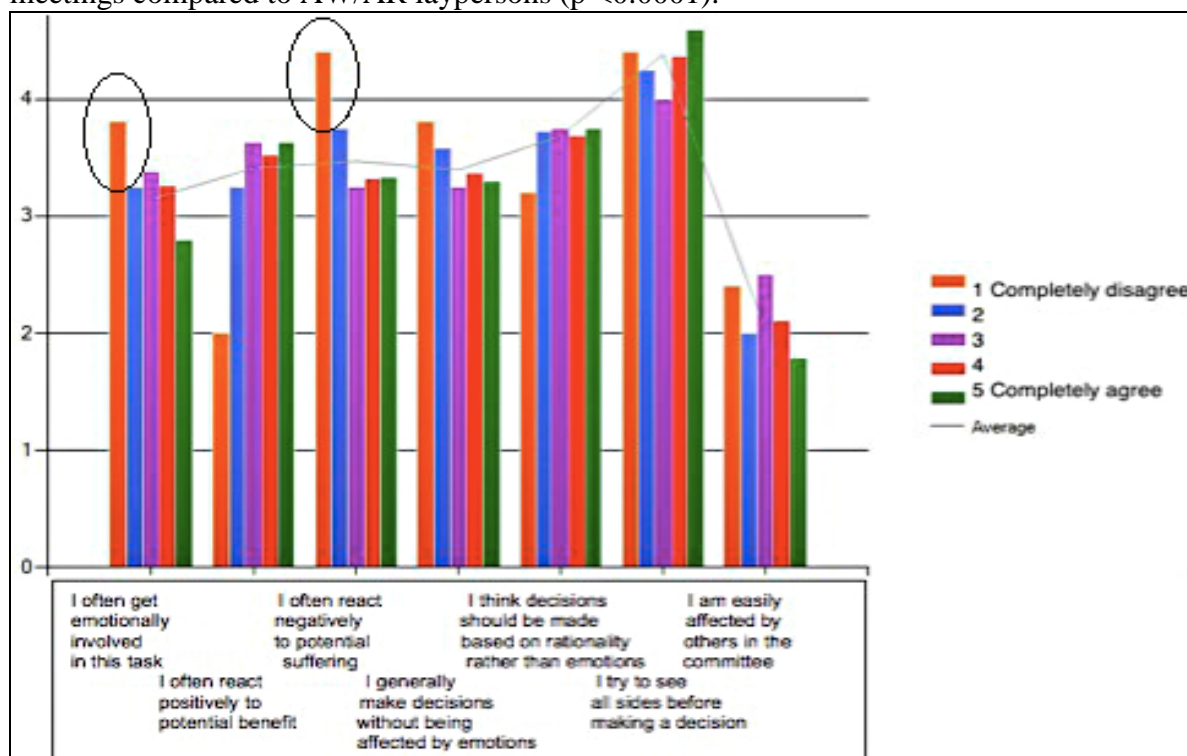


Chart 7. Grading on the statement "I feel that I have influence" linked with responses regarding emotional involvement.

Experienced level of certainty in the evaluation

The different member categories also feel certain to a very different extent of how to estimate different factors going in to the ethical evaluation (question 17). As is noticeable in chart 8 below there is a clear pattern for all factors, with AW/AR laypersons feeling the least while scientists and chairpersons the most certain.

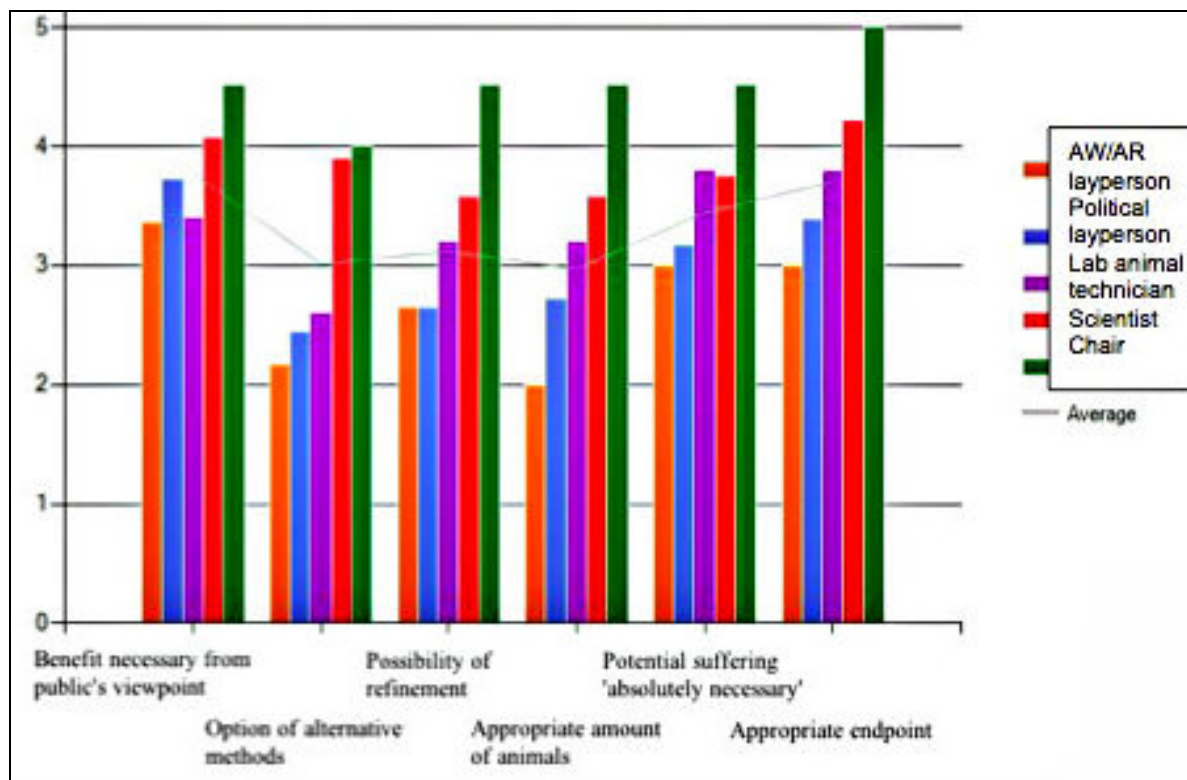


Chart 8. Experienced level of certainty in evaluating different factors that are supposed to go into the ethical evaluation.

No connection was found between time spent as a member of the committee and level of certainty in the evaluation. There was however a connection between level of certainty and experience of the discussion climate (question 15a). The members who think that the discussion climate is good were the ones also feeling the most certain in their evaluation (see chart 9). Scientists were found to be significantly happier with the discussion climate compared to AW/AR laypersons ($p=0.004$).

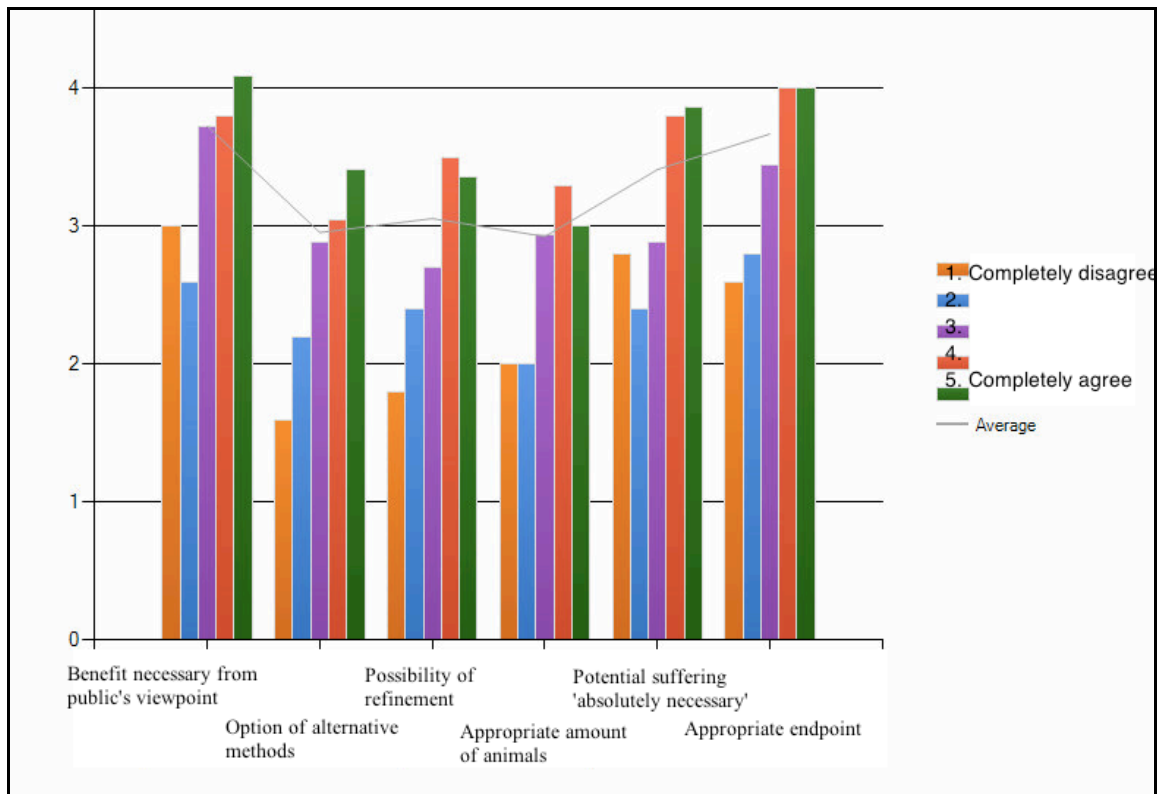


Chart 9. Experienced level of certainty in evaluating different factors, linked with grading on the statement “I think the discussion climate is good”, 5 representing being the most happy with the discussion climate.

General experience of committee meetings

There were also clear differences in general experience of the AEC meetings between the different member categories. Below in chart 10 and 11 is a combined score for questions 14 and 15 respectively, regarding discussion climate, whether or not they are listened to, if they are taken seriously, if they have any influence, if discussions are relevant, if there is enough room for ethical discussions, and if every application is given enough time. The pattern is similar to that in chart 8.

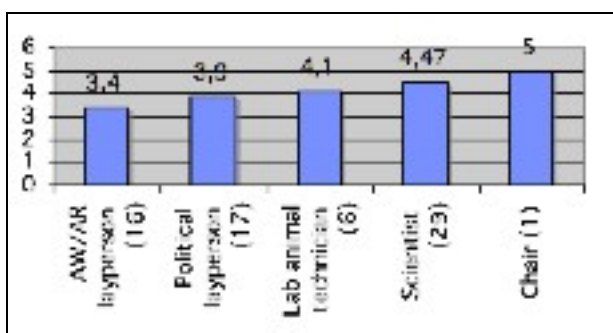


Chart 10. Average experience (grading 1-5) of panel meetings.

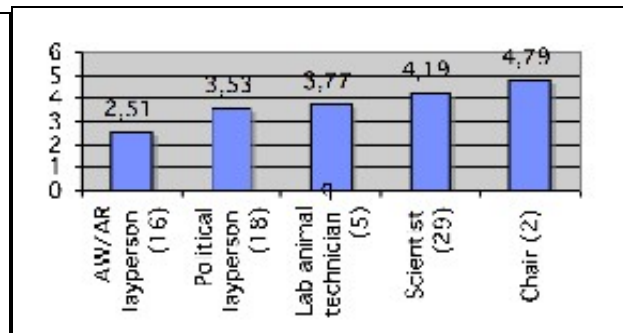


Chart 11. Average experience (grading 1-5) of plenary meetings.

Factors affecting the evaluation

The respondents also graded how much they thought different factors (included in the legislation) affect decision-outcome (question 18). Results show that the animals' potential suffering was deemed as the most important factor followed by the potential benefit and purpose of the proposed study (see chart 12). The potential benefit for the environment and the options for alternative methods were on the other hand considered the least important.

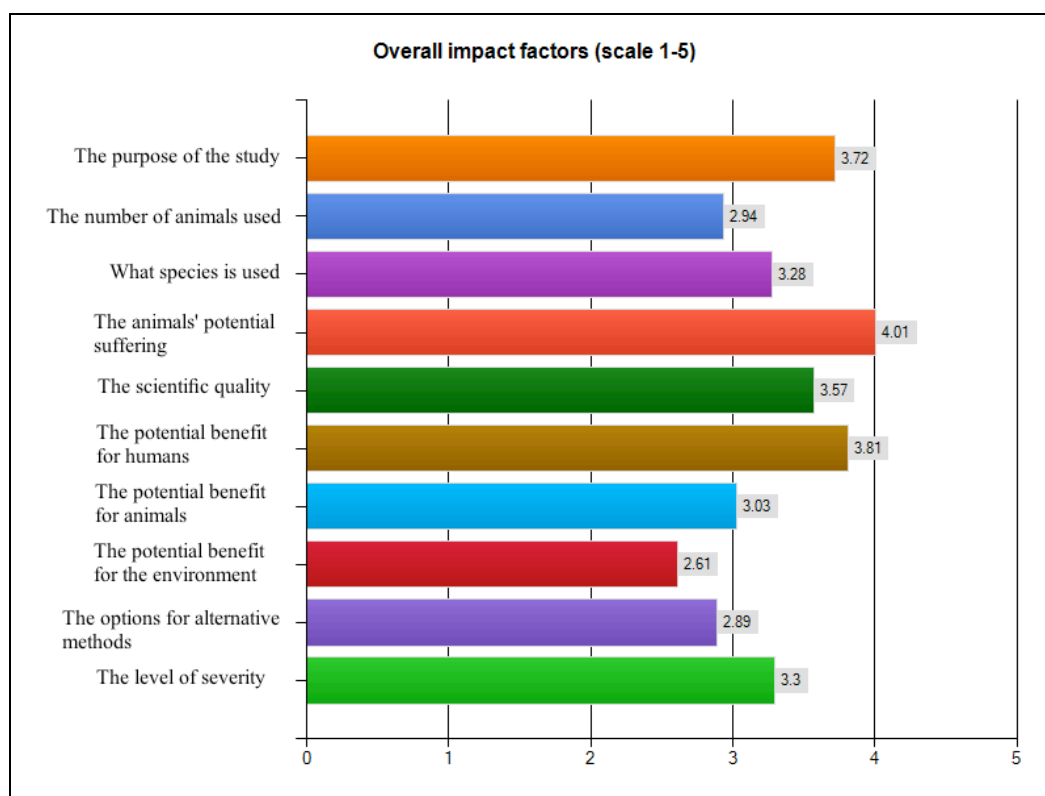


Chart 12. All respondents' combined average grading of different factors potentially affecting the ethical evaluation.

Gender differences

Looking at the results from a gender perspective, 68.3 % of all women while 48.5 % of all men said they saw themselves as representing the animals' interest. Men said they were less emotionally involved in the committee work (question 22a, f average score 3.4 vs. m 2.87) and respond a bit more negatively to animal suffering (question 22c, f average score 3.6 vs. m 3.3). There was also a tendency for women to score higher on a question regarding whether they generally value human and animal suffering equally (question 22h, f average score 3.28 vs. m 2.47 scale 1-5). Men scored slightly higher on whether they think ethical decision-making should be based on rationality rather than emotion (question 22e, m average score 3.89 vs. f 3.59). Statistical tests are however needed to confirm these differences. Such tests were only carried out on two of the most numerous respondent groups, scientists and AW/AR laypersons, and when comparing men and women within these two groups, no significant gender differences were found. The only significant result was a difference regarding imagining being in the animals' situation, where women scored higher (question 23d, $p=0.004$).

Interviews

Eight respondents were interviewed via telephone, representing all interest groups and five of the seven committees. Two committees were thus represented twice. Respondents were abbreviated according to the following scheme in order for them to remain anonymous, and the views of the interviewees are presented in this order below for the sake of clarity:

Scientist (Female, 68 years old) Abbreviated SF (Committee A)

Scientist (Male, 62 years old) Abbreviated SM (Committee B)

Layperson from political party (Female, 27 years old) Abbreviated LPF

Layperson from political party (Male, 60 years old) Abbreviated LPM (Committee B)

Layperson from animal rights or welfare organization (Female, 30 years old) Abbreviated LAF (Committee A)

Layperson from animal rights or welfare organization (Male, 57 years old) Abbreviated LAM

Veterinarian (Male, 51 years old) Abbreviated V

Patient organization representative (Female, 69 years old) Abbreviated P

Key terms from the content analysis are underlined.

Why research on animals is in the forefront regarding ethical evaluation

With this question I found three main themes in the answers: legitimization, researcher responsibility and public opinion/pressure from AR/AW groups. These responses are also somewhat linked to the respondents' views on the main function of the AEC evaluations.

SF sees the ethical evaluation as a support for the scientists and as "external review". She stresses the importance of scientists showing what they are doing and that everything is done correctly.

SM says that the ethical evaluation was originally an initiative of scientists themselves as an effort to maintain the public's trust. He emphasises that scientists have to communicate with the public and live up to the responsibility, as "animal research is a societal institution where it is under some conditions permitted to harm animals, something that is generally very taboo".

LPF says there has been a generally large opposition against "harmful research on animals" and that the development of alternatives has contributed to it.

According to LPM the main function of the AEC evaluations is to "realize the law".

According to LAF our legislation allows for suffering to a different extent with research compared to other forms of animal use, which creates a need for examination and regulation. One reason for a comparatively big public commitment to this issue could also according to her be that invasive operative procedures are seen as causing harm more directly and thus cause dislike. She also mentions that many of the animals used are "cute" and that the practices have been exposed to the public in ways that other forms of animal use haven't been.

LAM has a similar line of thought in that the law in the case of animal research justifies exposing animals to suffering. In his view the committees have a very important mission considering it is up to them to decide upon an upper limit for how much suffering that is allowed to be inflicted.

V thinks the public originally felt that the practices weren't transparent enough which might have lead to increased public pressure on this issue. He also thinks there might be more complex issues regarding research on animals compared to other forms of animal use.

P thinks that AR-organizations are to thank for the development and demands within the area as they have been successful in influencing opinion.

How the ethical evaluation is carried out

All interviewees discuss the weighing of harm/suffering and purpose/benefit as the primary mission of the committees. They all state that it is the questions surrounding the degree of suffering for the animals, how it can be estimated, how much is acceptable and so on that are the most central questions in the discussion. Many however stress that this is very difficult to predict and estimate. They also say that it is very difficult, especially for someone without necessary knowledge and insight into the relevant research, to know whether the purpose and methodology can be seen as justified or not. The interpretation of relevant factors such as suffering can also vary from person to person.

SF thinks the tricky part is mainly when "one forgets that an animal is an animal" and humanize too much in the discussion. She says we don't know exactly what an animal feels and that it is a problem that one therefore places one's own thoughts and reactions onto the animals. She says the committee members need to have some sort of background for one's reasoning as well as ethical and factual

knowledge in order to be able to discuss what is viable and not. She stresses the importance of the discussion and that a problem is when there is “fundamentalism in certain things”. Although there are different ethical views, and has to be different opinions present in order to achieve any progress, she says there has to be some level of convergence, “one cannot have completely differing ethical values if one is to be a member of this type of committee”.

SM thinks it is important for scientists to maintain respect for the animals. According to him the weighing of harm and benefit is a “simple principle” that goes a long way although the demarcations are never clear. He says that perhaps there is sometimes not enough focus on whether the benefit really outweighs the harm, that “it is a wording that isn’t evident every time, but should serve as a reminder of the task at hand”.

LPF says there is a lack of ethical discussions during the AEC meetings and that the majority of applications are routinely approved. She particularly lacked discussions about the purpose of the studies, and thought it seemed as if the applicants had trouble motivating their research and the AEC members had trouble questioning it. “It was a lot up to personal beliefs and opinions whether the experiment was seen as necessary or not in relation to the animals’ suffering”.

LPM says there are set demands for the evaluation but that there is also more “existential suffering that no-one can really evaluate”. He also stresses that methodological factors are essential to the ethical discussion. Although there is a strive to minimize the number of animals used, one can only do it so far in order for the studies to get good and useable results. According to him the legislators have decided to use a utilitarian approach to ethics, but the supposed benefit has to outweigh the supposed suffering by far. According to him however most studies don’t imply great pain for the animals, and when they do, high demands are set on the applicant. He says the AECs are often criticized for not dealing with enough ethics in the discussion, but that technical matters are part of this and that the application forms are constructed in order to ensure an ethically correct processing.

According to LAF much is approved based on tradition and common practice. She says science is protected and taboo to question, and that everyone takes for granted that research on animals is necessary and justified. “If you have an idea and a plan you have good reasons”, implying a high level of trust in the ones applying for approval. She also says “we are supposed to focus on the suffering but in practice we are unable to do so”, and says it is highly speculative even for the scientists involved. LAF and LAM both think that the ethical discussion is in reality practically absent. They also think that it isn’t clear what the evaluation is supposed to be based on, making it susceptible for interpretations.

LAM thinks that the committees don’t have the necessary conditions in order to develop a reasonable basis for decision. He thinks there is a lack of guidance and competence regarding how the weighing of harm and benefit is supposed to be made. “There hasn’t been any real discussion about how the ethical debate is supposed to be carried out”. Instead he thinks the underlying premises are that all applications are supposed to be approved. “The purpose of the research carries heavy weight in the discussion and can stump out most”.

V thinks it is quite clear what the ethical evaluation is supposed to be based on, but “to do it in reality is trickier”. He thinks that the applications should sometimes be investigated more thoroughly but that the members might be reluctant due to the need for efficiency. He stresses the need for knowledge, not least about alternative methods, and the importance of each member forming their own opinion. He says there is no objective truth as evaluations of pain and suffering are always subjective, and thinks that all members have some personal bias and their own view of what is reasonable or not. This might according to him be one reason why it is easier to focus the discussion on facts.

P says only medical research should be allowed and argues for the necessity of it. Although there is development taking place regarding alternative methods, she says such won’t be able to replace everything.

How the different roles in the committees are experienced

Differing views upon opportunities associated with the different roles in the committees were expressed. Many of the respondents emphasise that there are certain requirements in order to be taken seriously, and that a certain personality or a perceived lack of knowledge or experience can lead to exclusion from the debate.

SF says she has always been treated with respect and thinks work in the committee was very fun. She thinks there is a good balance of opinions and mutual respect in the committees. She says she even enjoyed discussions with “opponents” which she didn’t feel threatened by. According to her the chairperson has an important task in managing sometimes lively discussions and her experience is that they have good knowledge and give everyone space in the debate, while making sure the discussion is held “at the right level”. She doesn’t think that young people who lack experience of lab animals should be in the committee, but that laypersons perhaps cannot have the same demands.

SM also stresses the importance of experience in making decisions in the committee. From experience he says one may know whether a certain procedure causes suffering or not, which affects the amount of time spent investigating the matter as well as what the conclusion will be. He also states that awareness of the study directors and the level of trust in them, have an impact. He thinks that work in the committee is very exciting and important. He states that it is meaningful for him to defend research that is questioned, but that he would not defend “bad research”.

LPF thinks that the “role” you get in the committee is more linked to who you are as a person rather than your mandate. She says that “if you’re critical you’re no more than a thorn in the side” since you rarely gain support for your comments. In her view the main retention of being a political representative is that you gain insight and can let the public have some say. She thinks that without them the discussion would be even more one-sided and include even less reflection.

LPM is happy with his role. He says he works independently and sees his role as a “guardian”, making sure that the decisions made are sound and based on proper grounds. He sees this role as “uncomplicated” and states that “We don’t see our task as to sabotage for the scientists, instead we collaborate”. What he doesn’t like is “attacks from the animal rights people who condemn all scientists as evil persons who enjoy torturing animals, and all (political) laypersons as idiots who don’t know anything”.

LAF reports feeling very vulnerable in her role, and thinks the AW/AR laypersons generally do, due to that they are the only ones “explicitly there to question”. She says it seems as if they have the reputation of being ignorant and have to work hard in order to be taken seriously. She felt it was especially difficult joining the committee as a young woman, although she wasn’t easily dismissed, partly due to her personality but particularly due to her education and experience. She says the political representatives are easily confused by the scientists and lead in whatever direction they’re going. According to both LAF and LAM the political representatives are generally too passive and virtually always look to the scientists for advice since these are seen as most credible.

LAM states that everyone in the committee have the same missions but that their commitment vary a great deal. He states it is difficult for laypersons to evaluate highly scientific and technical information and language, and that “it is problematic that that many in the committees are very passive”. According to him the scientists are dominant as they master the language and vocabulary predominantly used, and the main discussions are between AR/AW representatives and scientists.

V thinks that he as a veterinarian gains acceptance and is listened to most of the time in his advisory function. He also stresses the importance of personality as people that are seen as credible and who have a strong personality gain more acceptance for their standpoints. “It has a lot to do with the relationships that people form, who are there and who demands attention”.

How the discussion climate in the AECs is perceived

The experience of the discussion climate seems to differ between member categories and probably also between committees. Some of the interviewees report a harsh discussion climate and a feeling of exclusion from the discourse, while others seem to think that everyone is free to express themselves during the meetings. Differing viewpoints appear to cause tension in some of the committees.

SF has never felt the meeting atmosphere to be hostile or unpleasant but thinks that there are good discussions and that they can even joke about differences of opinion during coffee breaks.

SM states that there are often lively discussions, but that this is the purpose as “some disagreement is built into the organization” which helps getting a balanced evaluation. He thinks that the diversity of the committees is their greatest strength, although it is important that everyone feels included and is active in the process. “If many different people are involved in the process and their views are balanced, the process becomes as good as it can be”.

LPF says there is quite a lot of consensus “on one side” and a minority that raises more critical questions. Her experience is that being critical isn’t very well received which is often noticeable through opportunities to speak, general form of address, looks etc., not least from the chairperson. She states that even though being factual in the criticism, she was reluctant to enter into an ethical discussion since there “wasn’t any point in doing so”.

LPM says there is often consensus but that there are some who stand out and generally always have differing opinions. He says the discussions generally take place in good spirit, but that sometimes “animal rights-people go too far which is tiring”.

LAF experienced an intolerant climate with disrespectful behaviour and jeering remarks being common. According to her “conditions are far from optimal for a constructive conversation”. She says personality and the relationships that people form have a great effect on the discussions and a person’s place in it. Remarks can be dismissed and ignored simply because “it came from her” (i.e. a certain person), and some people were even openly criticized during coffee breaks. She says having knowledge is what primarily makes the others respect you, but even so “...the scientists always get the final say”. “My experience is that it is the scientists who steer and the rest of us run behind trying to keep up with them”.

V thinks there is a good climate with open discussions and no unpleasant atmosphere. In his committee people are free to speak their minds although there are some that are more outspoken than others.

The general view upon emotions and possible influence of empathy

The view upon emotions in this context appears ambiguous. Several respondents stress that it is difficult to separate emotions from other deliberations in the ethical evaluation, although at the same time emphasizing that one has to be professional enough to not let them take over, not least in order to gain support for one’s comments. This implies that emotions generally have low status in the ethical evaluation.

SF says that it is difficult to avoid that emotions play a part in the decision-making process, and that sometimes it is difficult (for some) to be “neutral” in their judgments. Everybody has different opinions and values and it is “meant to be difficult”, otherwise the evaluation wouldn’t be needed. She thinks it is important to have a high level of empathy in the committees and experiences a lot of empathy, mainly for the animals but also for targeted patient groups. She says “I don’t think that one can have an acceptable ethical thinking if one isn’t empathic...it goes very much hand in hand”. But, she concludes, “sometimes animals have to suffer in order for good results and benefits to be made”.

SM sees emotions as a natural part of the process, where knowledge and experiences are mixed with some emotions. “If I feel malaise due to something, then it is hopefully for a reason”. However, it is important to be professional enough to not let your own emotions matter, although at the same time

“it would be very naïve to think that it is possible to be completely objective in every single case”. He says people have personal biases which they are sometimes aware of and sometimes not. He gives as an example that if he would think that rats are disgusting he would probably not have very much empathy for them. But he stresses that the composition of the group corrects for personal biases, and that if there are many different people making a decision through an open process, that is “as good as it gets”.

LPF thinks that the committee meetings are generally characterized by callousness, and that she felt as if there were generally no arguments based on emotions. She however thinks that this is understandable, as it would be difficult for the scientists to empathize with the animals and that in most professions “emotions are switched off when something is unpleasant”. She says “hopefully they still have some kind of ethical thought regarding the animals”, and still consider the animal’s situation on another level.

LPM says “it is not that we sit there and feel sorry for the animals...even though we are not cynics who don’t care”. To him it is important to understand the demands of science and to be realistic in terms of available alternatives. However, he also states that emotions may be more apparent in certain cases, and that there may be more emotional argumentation for example if the application involves cats or another species that is “close to us”. Otherwise he says that it is difficult to involve much emotions due to that everything is very abstract, and also that “everything and every animal rights-criticism cannot be considered since that would mean that we couldn’t have any testing on animals at all”. This is according to him demanded by the law and is thus outmost a political issue. “In many cases...these people (i.e. animal rights representatives) believe that we should sit there and be empathic with the animals and somehow cuddle with them...this to me is not a sophisticated ethical discussion”.

According to LAF “The more unemotional, strict and unobtrusive you are the more you are listened to”. Generally she thinks that this is an image that fits the scientists who are very clinical in their view upon the animals, thinks that “suffering can be graded and that all is measurable”. She describes how in comparison to one of her colleagues “I was more academic in my approach since I felt I wouldn’t otherwise get through”. She says her colleague used a more emotionally oriented language, making it easier to dismiss her. Being a woman she says it is even easier to be dismissed as a “sentimental person”. She thinks the degree of empathy has a great effect on the decision-making but that “one is jaded extremely fast”. For instance, she thinks the animal technicians have to shut off a lot of emotions since they otherwise won’t be able to do their job without feeling bad. In this way they become an instrument in the scientific procedure, otherwise they won’t last working in that environment. She also thinks that many scientists are jaded and somewhat blind to their own practices. She doesn’t think there is much room for compassion in the ethical evaluation, and that most who are empathic get depressed since it is “no use having it” except in some extreme cases. However, she says there is quite a lot of empathy for the applicants as scientists know each other and work in the same small academic realm. She says one who is well-known and experienced may not be questioned in the same way as someone who has a poorer reputation.

LAM has the same view as he states that there is a built in conflict of interest as scientists might include their own experiences of being applicants, be affected by collegiality etc.

V thinks there is limited space for emotions and that arguments based on facts generally gain more support. He says it is necessary to explain your position in a scientific way since this is the general tradition for scientists. More emotional argumentation may according to him be accepted if it is also supported by and related to facts, but “it isn’t enough to feel sorry for someone”.

Suggested improvements of the ethical evaluation

The respondents all stressed the need for sufficient information and knowledge which is required for the harm-benefit assessment and in order to be listened to. Many feel that this is often lacking today, particularly regarding alternative methods, and that resources and more feedback is needed in order

to gather it. It was suggested that improved leadership by chairpersons could help to achieve greater openness and inclusion of members in the committees.

SF thinks that Sweden has an optimal form of ethical evaluation compared to other countries, one of the strengths being that we have layperson representatives and thus good transparency. She however says that a main challenge is to know what natural behaviour is for an animal, especially one that has been bred as a lab animal. More aid might be needed to know what they really need.

SM is of a similar opinion as he emphasises that something that we perceive as very unpleasant might not be for the animals, and knowledge is needed in order to avoid this confusion. He suggests more education and more focus on overall principles and general viewpoints that can aid decision-making and consistency within as well as between committees. He also says more efficient administration as well as thorough panel work is the key to manage the often heavy work load.

LPF thinks the expected purposes need to be more clearly explained, as “If you don’t really know the purpose and if applications are generally inadequate, then you don’t really know what it is you’re considering. She says more use should be drawn from previous research and that more knowledge is needed about alternative methods and animal sentience and suffering. She suggests that having more aid by veterinarians, but also by administrative officers as is the practice in many other types of committees could help support and guide the AEC members so they have a better basis for their evaluation. She thinks it is a problem today that the scientists in the committee may know the applicants, as well as sometimes be applicants themselves, which may affect the decisions. Even further transparency is what she feels is mostly needed and something that would “aid the few critical voices in their struggle”. She also thinks the chairperson has a very important function and that there has to be an improvement regarding the view that one has the right to be critical.

LAF requests more information in the applications, with clearer statements about the expected suffering. She also mentions that it is often difficult to know whether applicants are correct in their evaluation, and suggests contact with them could be improved, making it easier to ask questions also about applications assigned to other panels. Increased feedback could also help the members determine whether applications are reasonable or not. She further thinks that discussion climate in the committees has to be improved and that it is vital that there are positive and constructive group dynamics. She says committee leadership needs to be improved and emphasises that the composition of the committees is thought to be democratic but really isn’t. She also thinks that the political laypersons take up important spots without contributing to the discussion. LAF and LAM both want more ethological knowledge considering suffering isn’t just pain but also other states such as stress and psychological agony that have to be estimated differently.

LAM doesn’t think that applications are really questioned and evaluated based on legislation, something that the chairperson should systematically go through and make sure of. He says it is important that he or she leads and guides the discussion based on the commission, which is something that can and should be improved. According to him it is a problem that there are no consequences for deficient or faulty decisions based on unclear grounds. As there is much knowledge needed in order to be able to make decisions based on the least possible suffering, he also suggests increased officer-support, which could help make sure that committee members are up to date on for instance alternative methods and current 3R-progress. He also requests better ethical competence.

V thinks the common critique that few applications are denied is unjust, since they are generally scrutinized in several steps before they reach the committees. He however states that it is difficult for the committee members to evaluate whether they have all necessary information available, and suggests that they should be aided in searching for and finding necessary information. He thinks that more guidance is necessary and points to the guidelines developed in other countries in different research fields, stating established methods, certain basics and assessment criteria that should be used. Databases with alternative methods are another thing that he thinks could be of help.

P says that patient organizations should have representatives in the AECs as they could contribute to the discussion with important experience and knowledge.

Discussion

Methodological considerations

There are certain problems associated with using self-assessment questionnaires as well as grading of a Likert-type scale. There is for instance often an inclination towards choosing the middle number, and it can be difficult to know what this middle number really means. It could reflect uncertainty and difficulty in making the assessment, or really a score that is neither high nor low but simply average. With a grading of, for instance, 1-5 as in this study it is also difficult to make exact comparisons and thereby drawing exact conclusions, as the steps in the scale may be interpreted differently by different people and it is not certain that the steps between the numbers of the scale are the same (e.g. what is the real difference between a 5 and a 3). I have not had the possibility to make a meta study of the respondents' exact interpretations, but want to stress that these issues need to be considered when interpreting the results. It is however possible to observe general trends and patterns, and the complementary comments and interviews in this study aid in the interpretation and understanding of the respondents' reasoning behind their scoring.

1. Ethical issues with animal research and how they are dealt with

Research on animals appears to be the form of animal use with the most extensive demands for ethical evaluation. Although there are most likely many reasons for this, a common answer seems to be that harm is more directly inflicted, and on purpose, compared to other forms of animal use. Research on animals can be said to have somewhat of a "free pass" in the legislation from a moral prohibition of inflicting harm onto animals that normally applies, which is being managed through the ethical evaluation. This has of course created opportunities for research, but at the same time set high demands on the scientific community as well as legislators, not least to respond to critique from the public who might not always agree with prevailing procedures. Today the ethical review process is supposed to make sure that all studies are ethically acceptable. An approved application is supposed to be considered ethically sound. Several interviewees in this study thought of the AECs as ethical guards, merging responsible science with public concern and creating a platform to discuss the problems. These have certainly contributed to highlighting the moral issues involved in research on animals, and dealing with them in a more serious and organized way. Common moral objections to research on animals, such as subjecting them to suffering although they possess qualities that we have agreed entitles some moral value, or their autonomy and intrinsic value being disrespected are all complicated matters that need to be dealt with. Throughout this study it has become clear that there are different underlying premises for dealing with these issues that need to be illuminated. Previous concerns that the AECs might not be functioning optimally were also investigated and affirmed.

Several authors such as Steneck (1997) have criticized the AECs for having virtually impossible demands on their members, particularly the vast amount of necessary expertise required to fulfil the evaluation task in a sufficient way. Many respondents in the current study stressed that it is a lot up to each individual member and his or her commitment to assimilate this knowledge, if it even exists. In both the survey comments and interview results, respondents also criticized others, primarily the political laypersons for not contributing enough. Perhaps the requirements are so high that all represented groups cannot participate fully, and it was highlighted that even the most briefed scientists cannot possibly know all that is needed in order to make a fully-informed evaluation. Houde et al. (2003) however concluded that it is generally the laypersons that have a clear disadvantage, because they are not as familiar with scientific methods and jargon, which, in turn, lead to a risk of exclusion from the discussion. What happens is that all other committee members need to try to keep up with the scientists' knowledge and terminology in order to be taken seriously (Ideland, 2009). This, according to her, undermines an objective ethical evaluation since not all

parties are equally influential. At the same time a layperson in a study by Schuppli (2011) pointed to the paradox of needing to understand scientific and technical procedures in order to be included in the discussion, while at the same time not wanting to be “fully initiated” in the scientific and technical sphere, since that would mean losing the public perspective she was supposed to have. The question is thus what is expected of the AEC laypersons, and whether they are meant to be able to contribute as “equals” to the scientists or not albeit with different perspectives.

Due to the fact that a majority of the respondents in the present survey said they have both sufficient scientific and ethical knowledge in order to carry out their task, results are a bit ambiguous. A majority of the respondents namely at the same time reported some level of insecurity in the evaluations, and many requested more information and knowledge. It was found that scientists feel more certain as how to evaluate different factors in the ethical review, particularly when compared to the AW/AR laypersons. A problem with this, once again, is that it implies that the different member groups are not participating as equals, which undermines the idea of a balanced representation and thus an “impartial” evaluation. Generally the most insecurity was expressed regarding options for alternative methods. Related to this was probably the finding that options for alternative methods were deemed one of the factors least influencing the outcome of the evaluation. Although alternative methods are probably also considered at an early stage of the process, it isn’t explicit in the legislation that it is the role of the responsible scientists at each facility to make this evaluation. Instead this consideration of is in fact stated as a main task for the AECs. Lack of knowledge of alternative methods is a problem that has been highlighted in previous studies, and that needs to be addressed in order to live up to the requirements set by legislation.

2. The ethical evaluation in practice

In some ways, this legislation should be clarified. Forsman (1992) noted that there isn’t any reasoning on ethical principles in any official document, even though the foundation of the ethical review process is based upon these. This might lead to a lot of insecurity and frustration for the AEC members. Several survey respondents in this study did express frustration regarding how they are supposed to know what suffering can be deemed necessary and not, and referred to the harm-benefit analysis as a “guessing-game” rather than a factually based evaluation. There also seem to be differing notions regarding how suffering, i.e. the harm is (supposed to be) interpreted, measured and valued, something that according to many respondents need to be clarified. Additionally, several respondents referred to the incommensurability mentioned by e.g. Orlans (1993), in that the harm and benefit cannot either be measured or compared, and that human benefit in practice virtually always outweighs animal suffering. According to Dahlborn (2006), in reality the main outcome of the ethical reviews is that some tests are made less harmful, but the basic notion that it is moral to use animals in research is not questioned. Ideland (2009) found that focus is placed on reducing the suffering since this is what is practically achievable for the committees and what everyone can agree upon regardless of ethical stance. This view was confirmed by the respondents in this study.

Swedish legislation on animal research is built on the principle that humans have a special status but that animals do have value expressed for example by legal rights to be protected from suffering (Alexius Borgström, 2009). Implicit in the cost-benefit-approach most commonly used is a utilitarian approach to ethics. However, it is nowhere discussed or justified why this should be the supreme and unquestionable ethical stance, neither is it specified what kind of utilitarianism should be used (Forsman, 1992). Interesting to note is that this differs from human ECs which could almost be described as anti-utilitaristic (Forsman, 1992). The question is whether or not an ethical argumentation is really being held in the AECs or whether the premises are already decided upon in advance. If there are underlying premises that affect the review outcome to a large extent, everyone have to at least be aware of them and preferably also accept them. Underlying notions such as that it is morally justifiable to use animals for human purposes need to be explained to society in general

and to the ones who are commissioned to make the ethical evaluation in particular. If fundamental issues are already decided upon, it will namely be very problematic to participate in the AEC evaluation with a differing ethical opinion. It seems relevant to make the different ideologies and underlying viewpoints that may accompany different roles in the committees visible, since these can imply vastly differing bases for the discussion and make it difficult for the AEC members to communicate and reach conclusions in a constructive way. For example, people adhering to an animal rights ideology generally see it as unethical to use animals in testing altogether, while people for whom science has the highest value would deem it unethical to refrain from research on animals. It is clear that it is not easy for these two different perspectives to be reconciled, which also seem to affect the discussion climate in the committees.

Discussion climate

A study by Hansen et al. (2012) found that AEC members had very differing interpretations regarding ethical issues related to animal research, some related to their roles in the groups (i.e. member categories). These differences were also found in this study, and it was clear that they cause some tension and frustration. Scientists, to a larger extent than other groups, thought that the committee members share a similar view upon ethical aspects related to animal research, and that all of these are considered during the review process. AW/AR laypersons were generally not of this opinion, and seem to highlight the differences of opinion to a larger extent. In relation to this I tested some key statements aimed at identifying possible differences in underlying ethical viewpoints. Scientists agree to a higher extent that all benefits for humans derived from animal research can be seen as necessary and thus justified. A basic view upon animal suffering was also tested in the statement “I believe mice and rats can suffer in a way equivalent to humans”, which AW/AR laypersons agreed with to a bigger extent. Unspoken underlying differences like this are probably responsible for much conflict and difficulties in communication during committee meetings. Scientists were also significantly happier with the discussion climate and felt that they have more influence during committee meetings, compared to the AW/AR laypersons. Interesting to note was that the ones feeling the least happy with the discussion climate were also the ones feeling the least certain in the evaluations. This could be due to many reasons but perhaps feeling excluded and not feeling very influential affects the level of confidence. Or the fact that you think the issues are very complex make you less comfortable with the meeting situation. Schuppli & Fraser (2007) say the chairperson has a crucial role in facilitating an open and respectful discussion climate. Dahlborn (2006) agrees and states that the way he or she acts towards members and how well he or she listens and gives time for questions, have great effects on the outcome. In the interviews and survey comments many respondents stressed this impact by the chairperson, and some laypersons reported negative experiences. If committee members tend to feel intimidated, isolated or the group has “problematic power dynamics” or a poor leadership by the chairperson, there is according to Schuppli & Fraser (2007) an eminent risk that an effective and reliable review process is hindered. According to Forsman (1992) it is highly important to make sure there is a healthy discussion climate in the AECs, as a committee with very narrow views and closed climate where opposing views are suppressed, can only be seen as formally fulfilling the demands for ethical review.

Group dynamics

Moreno (1995) claims that in order to understand ethical committees it is just as important to understand group dynamics as understanding ethical principles. Hansen et al. (2012) agrees and has emphasised how personal and political dynamics among members influence the decisions to a great extent. AW/AR laypersons were generally less satisfied with committee meetings, both in panels but primarily in plenary. According to Forsman (1992) it is highly relevant to discuss status and conditions of power in the AECs, and she mentions several ways of exerting power and minimizing opposition such as “othering”, generalization and demonization”. “Othering” is defined by a selective process of who is fit for debate and who is not (Michael & Birke, 1994). An example of this

is the common referral to AW/AR laypersons as “animal rights activists” which came up repeatedly in the replies in this study. The term activist has become something very negative due to its reference to illegal actions (in spite of its original meaning simply being advocating for a particular issue). It is problematic to use this reference for all people committed to defending animals’ interests in society, as it demotes them and gives them the impression of being radicals that cannot be argued with (Ideland, 2009). If some people associate all priority of animal interests with illegal, hostile and destructive extremists, actual legitimate discussions and questioning of research on animals gets overshadowed and undermined (Ideland, 2009). She says associations can in this sense be very detrimental to an open discussion and an open group climate. It is important to counteract polarization on all sides and I believe this can be achieved both through a clearer basis for the evaluation, a better understanding for different ethical viewpoints and a more even knowledge level in the committees. Dahlborn (2006) concluded that the AEC chairperson and his or her qualities are important in order to make everyone feel included in the discussion (see also Schuppli & Fraser, 2007). In policy it is primarily specified that the chairperson’s role is to make sure the procedure is juridically correct, however, as leader of the meetings the functions in practice become much more multifaceted. He or she needs to have good leadership skills and navigate through different discussions and decide whether certain questions should be given time or not.

3. The role of emotions in the decision-making process

According to Holmberg (2008) many studies have shown that those advocating for animals are commonly seen as overly emotional. Emotionality is in this sense seen as something negative and used to denote and dismiss people with certain views. In this study, several respondents report factual arguments being the only valid ones during AEC meetings, while more emotional arguments being dismissed as unprofessional and irrelevant. AW/AR laypersons were in this study the ones claiming to be emotionally involved to the biggest extent, and at the same time the ones feeling the least influential during AEC plenary. These connections need to be investigated further in order to really understand cause and effect, however, a possible reason for the seemingly low status of emotions might be that prevailing scientific norms are dominant and therefore become adopted. There were however also several scientists who acknowledged the role of emotions and said it just wouldn’t be ethics without them. A study by Michael & Birke (1994) indicated that scientists may have ambiguous views upon emotions, which were also somewhat indicated in the current study. Several scientists seemed to think that emotions are inevitable but at the same time shouldn’t be given precedence in ethical elaborations. This ambiguity was also expressed by other member categories which all seemed to agree that decisions should be made primarily based on reason rather than emotions. Overall, this indicates that all member categories generally think emotions have an inferior role in the decision making process.

As argued in this paper, however, emotions have a crucial role in decision-making and for ethical sensibility, and perhaps this ambiguity (between status and actual impact) causes confusion in the AECs. Furthermore, according to Loewenstein (2005) people generally judge their behaviour as less affected by emotions in a decision-making process than they actually are. That people make errors in predicting themselves also lead to faulty predictions and misconceptions of others, and could imply that people have a hard time connecting with others who are in different affective states. It thus seems important for the people involved in ethical evaluations to be aware of and able to deal with their own emotions in an informed and honest way.

Empathy

Due to the importance of familiarity and proximity, meaning that it is easier to relate to and connect with someone who is similar and close to you (remember de Waal, 2009), it is probably also difficult to empathize in an AEC setting. In this and in previous studies, i.e. one by Holmberg (2011) it was found that animal technicians are often more critical of experiments using animals than are scientists.

This is probably due to the fact that the technicians are the ones who deal most closely with the animals and therefore are closest to their suffering. This closeness is thought to facilitate an empathetic response. This was confirmed in the current study as animal technicians were the ones second to AW/AR laypersons mostly claiming to feel with and imagine being in the situation of the animals, and to be most negatively affected by the animals' suffering. Most other persons involved in the evaluation are far from the actual research settings and the animals that are being used. Some AEC members might not even be familiar with what the facilities or involved procedures actually look like. (Dahlborn (2006) has previously recommended AEC members visiting facilities.) Simply put, there is little to aid imagination which is required in order to empathize with the individuals affected negatively (and positively) by the research. Furthermore, in the AEC-context the animals most commonly involved are rodents or fish, both of them being very different from humans. Although mice and rats are mammals they have traditionally not been favoured for close relationships such as pets, but seen as pests, something that highly reduces the identification necessary for an emotional connection. Fish are not even mammals and thus very difficult for us to relate to (Driessen, 2013). This most likely implies that we are less likely to invest morally in these species.

However, most of the respondents in this study claim to empathize with animals to a quite large extent. The question and perhaps a matter for future research, is whether this empathy is really expressed and considered in the ethical evaluation process or not. One of the survey respondents stressed that it is possible that one feels empathy for someone involved in the proposed studies, but that it doesn't necessarily mean that one acknowledges that feeling. In order for it to be acknowledged the cost cannot be too high, in terms of for example social pressure. It was also confirmed that the different affiliations between certain member categories and interests affect levels of empathy. When comparing scientists and AW/AR laypersons it was found that scientists empathize significantly more with scientists and AW/AR laypersons with animals. Scientists do however seem to see themselves as representing animals to a considerable extent, and also empathize with them. But perhaps this emotional connection is at risk of getting lost somewhere in the harm-benefit analysis when other factors affect the priorities that need to be made. These feelings and considerations may also be rationalized and thereby disregarded. As showed above there are many authors who argue that we have a natural emotional connection to animals that is undermined in different ways and hindered by social and political institutions in our society. More research is needed in order to fully understand how our empathy for animals is steered, and what affects it has for our conduct and moral considerations towards them. In terms of the different interest groups that are apparently represented by the different member categories in the committees, it might also be wise to consider whether all interests are supposed to be equally represented, and if that is really the case today.

4. How to increase clarity and credibility

As previously mentioned, a primary step towards increasing credibility in the AEC evaluations and to reduce confusion is to clarify policy and give more aid in how the weighting is supposed to be done in a feasible way. It also has to be discussed why a particular kind of ethical school of thought is considered supreme to all others. As discussed above there are problems with a strictly utilitarian model, mainly related to the difficulty of weighing animal harm and human benefit due to initially unequal weights and the lack of necessary knowledge. We should at least begin to realize that the utilitarianism that the scientific community and our legislation have traditionally favoured is not as simple, self-evident and objective as is sometimes argued (but mostly just implied). Considering this and the vast literature suggesting a faulty separation between reason and emotion, as well as the necessity of including empathy in ethical elaborations, it might be time to broaden the ethical approach to these complex issues. Numbing and suppressing our emotions is according to Callahan (1988) at least as bad for our moral ability as being completely absorbed by excessive emotions. He

claims that what we lack is not reason, as particularly in our technology-dominated society the greatest moral danger isn't sentimentality but devaluing and ignoring emotions related to morality. He states that emotions induce us to broaden our moral perspectives beyond the known and obvious and thus enables to make a more inclusive review, and suggests that emotions and reason should be "continually checked and mutually adjusted" by each other. This seems like a more constructive view than the struggle between the two that appear to still exist in the AEC context today. Loewy (1996) argues in line with this that it might be unwise both to use rigid systems with rules and regulations as well as emotions alone as a basis for ethical decision-making (see also Nussbaum e.g. 2000). A solution would be to combine both which would represent a complementary application of ethics of justice and ethics of care. This could also facilitate the expression of empathy, which seems to be naturally there in the ethical evaluations and fills important moral functions, but is not allowed much influence.

To use a broader spectrum of ethical perspectives than the one traditionally favoured by science might also be a way of making the AEC evaluation more independent. An ethicist or philosopher could have an advisory or even a guiding role in making sure the ethical issues are highlighted and processed thoroughly, as well as facilitate logical and coherent argumentation (without steering the decision). In order to make ethical discourse and evaluation more credible, we should according to Biller-Andorno (2002) start admitting that our decisions are based on limited knowledge, from a narrow, personal and human-centered perspective and on attempts to balance preferences and conflicting interests. Several authors (e.g. Nordgren & Röcklinsberg, 2005; Dahlborn, 2006; Schuppli, 2011) as well as many of the respondents in this study have also highlighted that purposes and expected benefits with proposed animal research is difficult to estimate, and that more feedback regarding the actual outcome of the experiments in terms of public good and the suffering inflicted on the animals, could help progress the ethical review. Many respondents in the current study also demanded more aid in acquiring the vast amount of information and knowledge necessary in order to make informed decisions. An example and one of the biggest challenges in AEC evaluations according to Schuppli (2011) is the required understanding of crucial concepts such as pain and suffering in animals. We are learning more and more about affective states such as suffering or pleasure in animals, although more knowledge in this area is constantly needed. The fact that many of the AEC members feel uncertain to some extent regarding how to evaluate the different factors that are supposed to go in to the evaluation according to the legislation, is certainly something that needs to be addressed.

Ideland (2009) further suggested that there should be less focus on and strive towards conformity in the AECs, and that there could be benefits from at least allowing for conflicts in the discussions. This would also imply a better aptness for debate, perhaps more suitable for some individuals and personality types than others (Ideland, 2009). A quite fascinating idea put forth by Lo (1987) was to have one or two members of the committee who were responsible for questioning the status quo of the group, thus making sure that more perspectives were always considered. Several authors however point to that it takes a lot of personal courage and persistence to speak your mind in a group where you are in minority. Schuppli and Fraser (2007) also suggest improved education for chairpersons, considering their evident impact, as this may improve functioning of the AECs. Since they are the ones leading the meetings, they have a great responsibility in making sure discussions are balanced and that everyone feels respected. These suggestions were supported by findings and remarks in this study. It is also clear that knowledge about alternative methods is lacking and need to be made available to the AEC members, but also the legislator's claim to take alternatives into consideration need to be better executed. Our morality regarding laboratory animals is very restricted, both within the prevailing value-system that surrounds it and material and economical "borders" (e.g. Forsman, 1992; Holberg, 2008). This leads to the view in practice that virtually all benefits for humans justify using animals in research, and might lead to little emphasis on alternative methods. Perhaps it has to

be clarified what the role really is for the AEC committee members. Are they in fact there to routinely affirm the underlying notion that animal interest weigh less than human and that they could thus be used for virtually anything, or are they there as a group of people detached from the scientific community, with different ethical stances, trying to problematize and reach as sound decisions as possible for every single case?

Conclusion

The AEC evaluation in Sweden was initiated by scientists over three decades ago in response to increasing public critique towards the use of animals in research. Although we have come a long way in dealing with the ethical issues that inevitably rise from such research, it seems we have a bit left before we can really call the ethical evaluation of it all-inclusive and objective as is often implied. More efforts are needed in order to make sure that what the legislators initially intended is comprehended, but also in fact what is executed in practice. The utilitarian analysis that constitutes the basis of the ethical evaluation is in practice problematic at best and impossible at worst. Different interpretations cause confusion and frustration for many committee members in today's evaluation process. Existing literature also points to the importance of emotional factors such as empathy for making moral judgments. In this study it was indicated that the AEC members are far from devoid of emotions in their tasks, but that there is ambivalence in how to include them in their decision making. Reason and emotion are not separate but constantly work to enforce each other, and a balanced decision resulting from a full ethical evaluation should according to many scholars always consider both. The empathic connection many of us feel with animals and our concern for their wellbeing, but also for other groups affected by research on animals, need to be included in any moral situation we may stand before. This connection shouldn't be devalued or dismissed as is often the case today, something that can possibly be understood by looking at traditional scientific norms that are still dominant in this context.

A main task ahead is how to motivate a utilitarian line of ethics as the only possible and adequate option for the legally mandated evaluation, considering it fails to incorporate other aspects that naturally and inevitably affect our moral judgments, and is in fact quite unfeasible in practice. We also need to acknowledge all the different factors that go into the AEC evaluation, such as personal attitudes, group dynamics, and contextual norms which together form the outcome. Better understanding of this is the starting point for eliminating current pit falls and improving the credibility of the animal ethics committees. This is a long-term process of making sure we take ethical issues regarding our use of animals seriously. What we could do right away, however, is to provide better guidance as to how the utilitarian analysis required by legislation is best carried out, to educate chairpersons for them to better lead the ethical review process and make all voices equally heard, as well as aiding committee members in finding all necessary information so that all can participate in a more equal way.

“Even a constant struggle and uncertainty will be more satisfying than a false safety and moral self-complacency” (Biller-Andorno, 2002:48).

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References

- Alexius Borgström, K. 2009. Djuren läkarna och lagen – en rättslig studie om djurförsöksetik. Uppsala, Iustus förlag.
- Angantyr, M. 2008. Självklart känner folk mer empati för människor...eller? Två experiment om empati för människor och djur. C-uppsats i psykologi, Mälardalens Högskola.
- Arluke, A. 1988. Sacrificial symbolism in animal experimentation: Object or pet. *Anthrozoös* 2(2), 98-117.
- Ascione, F. R. 1992. Enhancing children's attitudes about the humane treatment of animals: generalisation to human directed empathy. *Anthrozoös* 5, 176-191.
- Audi, R. 1997. Moral knowledge and ethical character. New York, Oxford University Press.
- Baron-Cohen, S. 2012. Zero degrees of empathy. London, Penguin Books.
- Bateson, P. 2011. Ethical debates about animal suffering and the use of animals in research. *Journal of Consciousness Studies* 18, 186-208.
- Batson, C.D. 1990. How social an animal? The human capacity for caring. *American Psychologist* 45, 336-346.
- Batson, C.D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. 1997. Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology* 73, 495-509.
- BBSRC The Biotechnology and Biological Sciences Research Council. 1996. Ethics, morality and animal biotechnology. Available online at: http://www.bbsrc.ac.uk/web/FILES/Policies/animal_biotechnology.pdf
- Beu, D.S., Buckley, M.R. & Harvey, M.J. 2003. Ethical decision-making: a multidimensional construct. *Business Ethics: A European Review* 12, 88-107.
- Beauchamp, T.L. & Childress, J.F. 1994. Principles of biomedical ethics, 4th ed. New York, Oxford University Press.
- Benton, T. 1996. Animal rights: an eco-socialist's view. In: *Animal rights: the changing debate*. Ed. Robert Garner. Hampshire, UK.
- Biller-Andorno, N. 2002. Can they reason? Can they talk? Can we do without moral price tags in animal ethics? In: Gluck, J. P., DiPasquale, T. & Orlans, B. (Eds.) *Applied ethics in animal research: Philosophy, regulation, and laboratory applications*. Purdue University Press e-books OLD. Paper 16. http://docs.lib.purdue.edu/press_ebooks/16
- Birke, L. 2003. Who (or what) is the laboratory rat (or mouse)? *Society and Animals*, 11(3), 207-224.
- Botes, A. 2000. *Journal of Advanced Nursing*, A comparison between the ethics of justice and the ethics of care. Philosophical and ethical issues 32(5), 1071-1075.
- Bradshaw, J.W.S. & Paul, E.S. 2010. Could empathy for animals have been an adaptation in the evolution of Homo sapiens? *Animal Welfare* 19, 107-112.
- Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 77-101.
- Brehm, S. S., Kassir, S. M. & Fein, S. 2002. *Social psychology*. Boston, Houghton Mifflin.
- Broida, J., Tingley, L., Kimball, R. & Miele, J. 1993. Personality differences between pro- and anti-vivisectionists. *Society & Animals* 1, 129-144.

- Broglia, R.S., 2009. Animal welfare in science and society. In Smulders, F. J. M. & Algers, B., 2009. Food Safety assurance and veterinary public health. Volume 5. Welfare of production animals: assessment and management of risks. Wageningen, Wageningen Academic Publishers.
- Buchanan, A. 2002. Social moral epistemology. *Social Philosophy and Policy* 19(2), 126-152.
- Callahan, S. 1988. The role of emotion in ethical decision making. *The Hastings Center Report* 18(3), 9-14.
- Clark, S.R.L. 1997. Animals ecosystems and the liberal ethic. In: *Animals and their moral standing*. Red. Stephen Clark. London, Routledge.
- Dahlborn, K. 2006. PM om de djurförsöksetiska nämndernas arbetssätt. Skara, Djurskyddsmyndigheten, Dnr 2006-0183.
- Decety, J. & Jackson, P.L. 2004. The Functional Architecture of Human Empathy. *Behavioral and Cognitive Neuroscience Reviews* 3(2), 71-100.
- De Waal, F. 2009. *The age of empathy – nature’s lessons for a kinder society*. New York, Three Rivers Press.
- Donovan, J. 1996. Attention to suffering: sympathy as a basis for the ethical treatment of animals. In: *Beyond animal rights*. Eds. Carol Adams & Josephine Donovan. New York, Continuum Publishing Company.
- Donovan, J. & Adams, C.J. (Eds.) 2007. *The feminist care tradition in animal ethics*. New York, Columbia University Press.
- Driessen, C.P.G. 2013. In awe of fish? Exploring animal ethics for non-cuddly species. In *The ethics of consumption: The citizen, the market and the law. Proceedings from Eursafe 2013*. Eds. Röcklinsberg, H & Sandin, P. Wageningen Academic Publishers.
- Eisenberg, N. & Lennon. R. 1983. Sex differences in empathy and related capacities. *Psychological Bulletin* 94(1), 100-131.
- Eisenberg, N. 2000. Emotion, regulation and moral development. *Annual Review of Psychology* 51, 665–697.
- Eisenberg, N., Cumberland, A., Guthrie, I.K., Murphy, B.C., & Shepard, S.A. 2005. Age changes in prosocial responding and moral reasoning in adolescence and early adulthood. *Journal of Research on Adolescence* 15, 235-260.
- Ellis, B. 2011. Humanism and morality. *SOPHIA* 50, 135–139.
- Eurobarometer, 2005. Attitudes of consumers towards the welfare of farmed animals. European Commission Public Opinion Report 229.
- Europaparlamentets och rådets direktiv 2010/63/EU av den 22 september 2010 om skydd av djur som används för vetenskapliga ändamål.
- FELASA Federation of European Laboratory Animal Science Associations. 2005. Principles and practice in ethical review of animal experiments across Europe. A report prepared by the FELASA Working Group on Ethical Evaluation of Animal Experiments. Available online at: <http://www.felasa.org/recommendations.htm>
- Fenwick, N., Griffin, G. & Gauthier, C. 2009. The welfare of animals used in science: How the “Three Rs” ethic guides improvements. *Canadian Veterinary Journal* 50(5), 523-530.
- Ferris, G.R., Dulebohn, J.H., Frink, D.D., George- Falvy, J., Mitchell, T.R. & Matthews, L.M. 1997. Job and organizational characteristics, accountability, and employee influence. *Journal of Managerial Issues* 9(2), 162–175.
- Finsen, L. 1988. Institutional animal care and use committees: A new set of clothes for the emperor? *The Journal of Medicine and Philosophy* 13, 145-158.
- Forskningsetisk policy och organisation i Sverige. (F.d. Medicinska forskningsrådets nämnd för forskningsetik) 2003. Riktlinjer för etisk värdering av medicinsk humanforskning

- Forsman, B. 1992. Djurförsök – forskningsetik, politik, epistemology. Göteborg, Almqvist & Wiksell.
- Franck, O. 2002. Djurens liv och vårt om att värdera liv. Stockholm, Runa Förlag.
- Garner, R. 2010. Animals, ethics and public policy. *Political Quarterly* 81, 123-130.
- Gaudine, A. & Thorne, L. 2001. Emotion and ethical decision-making in organizations. *Journal of Business Ethics* 31(2), 175-187.
- Gavin, S.L. & Herzog, H.A. 1992. The Ethical Judgment of Animal Research. *Ethics & Behavior* 2(4), 263-286.
- Gjeris, M. & Sandøe, P. 2009. Transgenic animals. In JB Callicott & R Frodeman (eds), *Encyclopedia of environmental ethics and philosophy*. vol. 2, Gale Cengage Learning. New York, Macmillan Reference.
- Gluck, J. P., DiPasquale, T. & Orlans, B. (Eds.) 2002. *Applied ethics in animal research: Philosophy, regulation, and laboratory applications*. Purdue University Press e-books OLD. Paper 16.
http://docs.lib.purdue.edu/press_ebooks/16
- Goleman, D. 1995. Känslans intelligens. (Emotional Intelligence) Om att utveckla vår emotionella kapacitet för ett tryggare och mänskligare samhälle. Stockholm, Wahlström & Widstrand.
- Graneheim, U.H. & Lundman, B. 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* 24(2), 105-112.
- Greene, J. & Haidt, J. How (and where) does moral judgment work? 2002. *Trends in Cognitive Sciences* 6(12), 517-523.
- Gruhn, D., Rebucal, K., Diehl, M., Lumley, M. & Labouvie-Vief, G. 2008. Empathy across the adult lifespan: Longitudinal and experience-sampling findings. *Emotion* 8(6), 753–765.
- Guerrini, A. 2003. Experimenting with humans and animals: From galen to animal rights. *Johns Hopkins Introductory Studies in the History of Science*. Baltimore, Johns Hopkins University Press.
- Gålmark, L. (Ed.) 2001. *Djur och människor*. Nora, Nya Doga.
- Göthlin, K. & Lanz, G. 1993. *Rum för etik om etiska grupper i sjukvården*. Stockholm, Vårdetiska institutet och förlagshuset Gothia.
- Haidt, J. 2001. The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review* 108(4), 814-834.
- Hajar, R. 2011. Animal testing and medicine. *Heart Views* 12(1), 42.
- Hamberger, J. & Hewstone, M. 1997. Inter-ethnic contact as a predictor of blatant and subtle prejudice: Tests of a model in four West European nations. *British Journal of Social Psychology* 36, 173-190.
- Hansen, L.A., Goodman, J.R. & Chandna, A. 2012. Analysis of animal research ethics committee membership at American Institutions. *Animals* 2(1), 86-75.
- Harrison, M.A. 2010. Anthropomorphism, empathy, and perceived communicative ability vary with phylogenetic relatedness to humans. *Journal of Social, Evolutionary, and Cultural Psychology* 4(1), 34-48.
- Hedlund, M. 2007. *Demokratiska genvägar, Expertinflytande i den svenska lagstiftningsprocessen om medicinsk genteknik*. Lund Political Studies 150, Lund University.
- Hemsworth, P. H. 2007. Ethical stockmanship. *Australian Veterinary Journal* 85, 194- 200.
- Herzog, H. 1988. The moral status of mice. *American Psychologist* 43(6), 473-474.
- Herzog, H.A. & Galvin, S. 1997. Common sense and the mental lives of animals: An empirical approach. In *Anthropomorphism, Anecdotes and Animals*, ed. R.W. Mitchell. Albany, State University of New York Press.

- Hills, A.M. 1993. The motivational bases of attitudes towards animals. *Society and Animals* 1(2), 111-128.
- Hills, A.M. 1995. Empathy and belief in the mental experience of animals. *Anthrozoös* 7(3), 132-142.
- Hoff, D. 2003. Varför etiska kommittéer? Lund studies in sociology of law 20. Sociologiska institutionen, Lunds universitet.
- Hoffman, M.L. 2000. Empathy and moral development. Implications for caring and justice. Cambridge, Cambridge University Press.
- Holm, U. 1991. Kan empatisk förmåga mätas? *Socialmedicinsk tidskrift* 9-10, 429.
- Holmberg, T. 2008. A Feeling for the Animal: On Becoming an Experimentalist. *Society and Animals*. 16, 316-335.
- Holmberg, T. 2011. Mortal love: Care practices in animal experimentation. *Feminist Theory* 2, 147-163.
- Houde, L., Dumas, C., & Leroux, T. 2003. Animal ethical evaluation: An observational study of Canadian IACUCs. *Ethics & Behavior* 13, 333-350.
- Håkansson Eklund, J. 2006. Empathy and viewing the other as subject. *Scandinavian Journal of Psychology* 47, 399-409.
- Höglund, A.T. 2005. Inga lätta val. Om riktlinjer och etisk kompetens vid prioriteringar i vården. En studie i empirisk etik. *Uppsala Studies in Faiths and Ideologies* 15. Uppsala, Acta Universitatis Upsaliensis.
- Ideland, M. 2009. Different views on ethics. How animal ethics is situated in a committee culture. *Journal of Medical Ethics* 4(35), 258-261.
- Jackson, P.L., Meltzoff, A.N. & Decety, J. 2005. How do we perceive the pain of others? A window into the neural processes involved in empathy. *NeuroImage* 24, 771-779.
- Jones, T. M. 1991. Ethical decision making by individuals in organizations: An issue-contingent model. *Academy of Management Review* 16(2), 366-395.
- Katz, D. 1960. The functional approach to the study of attitudes. *Public opinion quarterly* 24, 163-204.
- Kellert, S.R. & Berry, J.K. 1987. Attitudes, knowledge, and behaviors towards wildlife as affected by gender. *Wildlife Society Bulletin* 15, 363-371.
- Kennett, J. 2002. Autism, empathy and moral agency. *The Philosophical Quarterly* 52(208), 340-357.
- Klein, G. 1998. Sources of power: How people make decisions. Cambridge, MIT Press.
- Koenigs, M., Young, L., Adolphs, R., Tranel, D., Cushman, F., Hauser, M. & Damasio, A. 2007. Damage to the prefrontal cortex increases utilitarian moral judgments. *Nature* 446, 908-11.
- Laible, D.J., Carlo, G., & Roesch, S.C. 2004. Pathways to self-esteem in late adolescence: The role of parent and peer attachment, empathy and social behaviors. *Journal of Adolescence* 27, 703-716.
- Lieberman, A. & Chaiken, S. 1996. The direct effect of personal relevance on attitudes. *Personality and Social Psychology Bulletin* 22, 269-279.
- Lindström, N. 2012. Förhållandet mellan praxis och teori inom etiken. Lund studies in ethics and theology 16. Lund University.
- Linzey, A. 2009. Why animal suffering matters: Philosophy, theology, and practical ethics. Oxford, Oxford University Press.
- Lo, B. 1987. Behind closed doors, promises and pitfalls of ethics committees. *New England Journal of Medicine* 317, 46-50.

- Loe, T.W., Ferrell, L. & Mansfield, P. 2000. A review of empirical studies assessing ethical decision making in business. *Journal of Business Ethics* 25, 185–204.
- Loewenstein, G. 2005. Hot–Cold Empathy Gaps and Medical Decision Making. *Health Psychology* 24(4), 49-56.
- Loewy, E.H. 1996. *Textbook of Healthcare Ethics*. New York, Plenum Press.
- Lukes, S. 1985. *Marxism and morality*. Oxford, Oxford University Press.
- Lund, V. & Röcklinsberg, H. 2001. Outlining a conception of animal welfare for organic farming systems. *Journal of Agricultural and Environmental Ethics* 14(4), 391-424.
- Lundmark, F., Berg, C. & Röcklinsberg, H. 2013. Unnecessary suffering as a concept in animal welfare legislation and standards. In: *The ethics of consumption – the citizen, the market and the law*. Eds: Röcklinsberg, H. & Sandin, P. Wageningen Academic Publishers.
- Lurie, Y. 2004. Humanizing business through emotions: On the role of emotions in ethics. *Journal of Business Ethics* 49(1), 1-11.
- Lynch, M. 1988. Sacrifice and the transformation of the animal body into a scientific object: laboratory culture and ritual practice in the neurosciences. *Social Studies of Science* 18(2), 265-89.
- Maibom, H.L. 2009. Feeling for others: Empathy, sympathy, and morality. *Inquiry* 52(5), 483–499.
- Mattison, M. 2000. Ethical decision making: The person in the process. *Social Work* 45(3), 201-212.
- McPhedran, S. 2009. A review of the evidence for associations between empathy, violence and animal cruelty. *Aggression and Violent Behavior* 14, 1–4.
- MencI, J. & May, D.R. 2009. The effects of proximity and empathy on ethical decision-making: an exploratory investigation. *Journal of Business Ethics* 85(2), 201-226.
- Mercer, P. 1972. *Sympathy and ethics: a study of the relationship between sympathy and morality with special reference to Hume’s treatises*. Oxford, Clarendon Press.
- Michael, M. & Birke, L. 1994. Enrolling the core set: The case of the animal experimentation. *Social Studies of Science* 24(1), 81-95.
- Mikula, G., Scherer, K.R. & Athenstaedt, U. 1998. The role of injustice in the elicitation of differential emotional reactions. *Personality and Social Psychology Bulletin* 24, 769–83.
- Mitchell, J.P., Banaji, M.R. & Macrae, C.N. 2005. The link between social cognition and self-referential thought in the medial prefrontal cortex. *Journal of Cognitive Neuroscience* 17, 1306–15.
- Moreno, J.D. 1995. *Deciding together: Bioethics and moral consensus*. Oxford, Oxford University Press.
- Nordgren, A. & Röcklinsberg, H. 2005. Genetically modified animals in research: An analysis of applications submitted to ethics committees on animal experimentation in Sweden. *Animal Welfare* 14, 239-248.
- Nussbaum, M. 2000. *Känslans skärpa, tankens inlevelse: Essäer om etik och politik*. Eslöv, Brutus Östlings Bokförlag Symposion.
- Nussbaum, M. 2001. *Upheavals of thought, the intelligence of emotions*. Cambridge, Cambridge University Press.
- Nwachukwu, S.L.S. & Vitell, S.J. 1997. The influence of corporate culture on managerial ethical judgments. *Journal of Business Ethics* 16, 757–776.
- O’Fallon, M.J. & Butterfield, K.D. 2005. A Review of the empirical ethical decision-making literature: 1996-2003. *Journal of Business Ethics* 59(4), 375 - 413.

- Orlans, F.B. 1993. In the name of science: Issues in responsible animal experimentation. New York, Oxford University Press.
- Orlans, F.B. 2002. Ethical Themes of National Regulations Governing Animal Experiments: An International Perspective. In Gluck, J. P., DiPasquale, T. & Orlans, B. (Eds.) 2002. Applied ethics in animal research: Philosophy, regulation, and laboratory applications. Purdue University Press e-books OLD. Paper 16. http://docs.lib.purdue.edu/press_ebooks/16
- Paul, E.S. 2000. Empathy with animals and with humans: Are they linked? *Anthrozoös* 13(4), 194-202.
- Pizarro, D. 2000. Nothing more than feelings? The role of emotions in moral judgment. *Journal for the Theory of Social Behavior* 30, 354-375.
- Pizarro, D.A. & Salovey, P. 2002. On being and becoming a good person: The role of emotional intelligence in moral development and behavior. In J. Aronson (Ed.) *Improving academic achievement: Impact of psychological factors on education* (pp. 247-266). San Diego, Academic Press.
- Prop. 1987/88:93. Regeringens proposition 1987/88:93 om djurskyddslag m.m.
- Prop. 2001/02:93. Regeringens proposition 2001/02:93 Ändringar i djurskyddslagen, m.m.
- Regan, T. 1983. The case for animal rights. Berkeley, University of California Press.
- Rest, J. 1986. Moral development. Advances in research and theory. New York, Praeger.
- Reynolds, S. J. 2006. Moral awareness and ethical predispositions: Investigating the role of individual differences in the recognition of moral issues. *Journal of Applied Psychology* 91(1), 233-243.
- Rollin, B.E. 2006. The regulation of animal research and the emergence of animal ethics: A conceptual history. *Theoretical Medicine and Bioethics* 27, 285-304.
- Röcklinsberg, H. 2001. Das Seufzende Schwein. Zur Theorie und Praxis in deutschen Modellen zur Tierethik. Harald Fischer Verlag, Erlangen.
- Sandoe, P. & Christiansen, S.B. 2008. Ethics of animal use. Oxford, Blackwell Publishing.
- Sapontzis, S. 2012. Subjective morals. Lanham, University Press of America.
- Scher, S.J. 1997. Measuring the consequences of injustice. *Personality and Social Psychology Bulletin* 23, 482-97.
- Schicktanz, S. 2006. Ethical considerations of the human-animal-relationship under conditions of asymmetry and ambivalence. *Journal of Agricultural and Environmental Ethics* 19, 7-16.
- Schuppli, C.A. & Fraser, D. 2007. Factors influencing the effectiveness of research ethics committees. *Journal of Medical Ethics* 33, 294-301.
- Schuppli, C.A. 2011. Decisions about the use of animals in research: Ethical reflection by animal ethics committee members. *Anthrozoös* 24(4), 409-425.
- Serpell, J.A. 2004. Factors influencing human attitudes to animals and their welfare. *Animal Welfare* 13(1), 145-151.
- Shamay-Tsoory, S.G., Aharon-Peretz, J. & Perry, D. 2009. Two systems for empathy: A double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain* 132, 617-627.
- Singer, P. 1975. Animal Liberation. New York, Harper Collins.
- Slovic, P. 2006. Affect, reason, risk and rationality. Newsletter of the European Working Group Multicriteria for Decisions 3, 1-5.

- Smith, J.A., Boyd, K.M. (eds.) 1991. *Lives in the Balance: The ethics of using animals in biomedical research*. Oxford, OUP.
- SOU 1989:75. Etisk granskning av medicinsk forskning. De forskningsetiska kommittéernas verksamhet: En underlagsstudie från den forskningsetiska utredningen. Statens Offentliga Utredningar.
- SOU 1998:75. Djurförsök. Statens Offentliga Utredningar.
- SOU 2007:57. Etiskt godkännande av djurförsök – nya former för överprövning. Betänkande av 2006 års djurförsöksetiska utredning. Statens Offentliga Utredningar.
- Sparks, J.R. & Hunt, S.D. 1998. Marketing researcher ethical sensitivity: Conceptualization, measurement, and exploratory. *Journal of Marketing* 62(2), 92-109.
- Sprinkle, J.E. 2008. Animals, empathy, and violence: Can animals be used to convey principles of prosocial behavior to children? *Youth Violence and Juvenile Justice* 6, 47-58.
- Stafleu, F.R. 1994. The ethical acceptability of animal experiments as judged by researchers. PhD Thesis, Utrecht University.
- Staub, E. 1987. Commentary on Part I. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 103-115). Cambridge, Cambridge University Press.
- Steneck, N.H. 1997. Role of the institutional animal care and use committee in monitoring research. *Ethics and Behavior* 7(2), 173-184.
- Stone, V. 2006. The moral dimensions of human social intelligence. *Philosophical Explorations: An International Journal for the Philosophy of Mind and Action* 9(1), 55-68.
- Swedish Board of Agriculture. 2009. Djurskydd och Försöksdjur. Available online at <http://www.jordbruksverket.se/download/18.72e5f95412548d58c2c80001718/Djurskydd+och+F%C3%B6rs%C3%B6ksdjur+2009+PDF.pdf>.
- Swedish Board of Agriculture, 2013:1. Rapport angående användningen av försöksdjur i Sverige under 2009, 2010 och 2011. Dnr: 31- 834/12.
- Swedish Board of Agriculture. 2013:2. <http://www.jordbruksverket.se/amnesomraden/djur/olikaslagsdjur/forsoksdjur/etiskprovning.4.7850716f11cd786b52d80002146.html>. Accessed online 130806.
- Tangney, J.P. & Dearing, R. 2002. *Shame and guilt*. New York, Guilford.
- Taylor, N. & Signal, D.T. 2005. Empathy and attitudes to animals. *Anthrozoös* 18(1), 18-27.
- Thomas, J.B. Clark, S.M. & Gioia, D.A. 1993. Strategic sensemaking and organizational performance: Linkages among scanning, interpretation, action, and outcomes. *Academy of Management Journal* 36, 239-270.
- Tjärnström, E. 2010. Ethical impact on EU animal welfare policies: the example of Article 13. Student report 336, Swedish University of Agricultural Sciences, Skara 2010.
- Uppdrag om alternativa metoder till djurförsök. 2012. Redovisning från Statens jordbruksverk, Sveriges lantbruksuniversitet – Nationellt centrum för djurvälstånd och Vetenskapsrådet.
- Verhoog, H. 1989. Ethical committees In: *Animal Experimentation: Legislation and Education* (Eds. van Zutphen LFM, Rozemond H, Beynen AC). Utrecht, Veterinary Public Health Inspectorate.
- VR, Vetenskapsrådet. 2011. God Forskningssed. Vetenskapsrådets rapportserie 1:2011.
- Watley, L.D. & May, D.R. 2004. Enhancing moral intensity: The roles of personal and consequential information in ethical decision-making. *Journal of Business Ethics* 50(2), 105-126.

- Webster, A.B. 2007. Animal care guidelines and future directions. *Poultry Science* 86, 1253-1259.
- Wiggins, D. 1988. Needs, values, truth. Oxford, Clarendon Press.
- Wolf, J.C. 1992. Tierethik: Neue Perspektiven für Menschen und Tiere. Freiburg, Paulusverlag.
- Zamir, T. 2006. Killing for knowledge. *Journal of Applied Philosophy* 23(1), 14-40.
- Zhou, Q., Eisenberg, N., Losoya, S., Fabes, R. A., Reiser, M., Guthrie, I. K., Murphy, B., Cumberland, A. & Shepard, S. A. 2002. The relations of parental warmth and positive expressiveness to children's empathy-related responding and social functioning: A longitudinal study. *Child Development* 73, 893–915.

Appendix 1. Survey (in Swedish)

En enkät om beslutsfattande i etiska frågor

Allmänt

1. Jag är: Kvinna Man
2. Födelseår:

Frågor om uppdraget i den etiska nämnden

3. Jag tillhör följande nämnd:
4. Tid i nämnden: <1 år 1-3 år 4-6 år 7-9 år >10 år
5. Vilken roll har du i nämnden? Jag är: Forskare Försöksdjurstekniker Lekman från politiskt parti
Lekman från djurskydds- eller djurrättsorganisation Ordförande eller vice ordförande

Kryssa för de alternativ som stämmer in på dig

6. Jag har högskoleutbildning (även kortare kurser) inom: Humanmedicin, Veterinärmedicin, Biologi, Etologi, Försöksdjursvetenskap, Djurskydd, Djurvård, Filosofi, Etik, Teologi, Juridik
7. Jag har gått gymnasium eller andra typer av kurser inom: Humanmedicin, Veterinärmedicin, Biologi, Etologi, Försöksdjursvetenskap, Djurskydd, Djurvård, Filosofi, Etik, Teologi, Juridik
8. När jag började i nämnden fick jag utbildning relaterad till etisk bedömning: Ja Nej
9. Jag har deltagit i utbildningsdagar för nämndledamöter arrangerade av Jordbruksverket: Ja Nej
10. Jag upplever att jag har tillräcklig naturvetenskaplig kunskap för mitt uppdrag i nämnden:
11. Jag upplever att jag har tillräcklig kunskap i etik för mitt uppdrag i nämnden: Ja Nej
12. Flera intressen kan sägas representeras i nämnderna. Jag ser mig själv som huvudsakligen representant för (välj ett eller flera alternativ): Vetenskapen, Allmänheten, Patienterna, Djuren
Annat:

13. Eventuella kommentarer:

14. Dessa påståenden gäller din upplevelse av beredningsgruppsmötena:

- | | Instämmer inte alls | Instämmer helt |
|---|---------------------|----------------|
| a. Jag upplever att det råder ett gott diskussionsklimat: | 1 | 2345 |
| b. Jag upplever att man lyssnar på mig: | | |
| c. Jag upplever att mina inlägg tas på allvar: | | |
| d. Jag upplever att jag har möjlighet att påverka: | | |
| e. Jag upplever att det är relevanta diskussioner: | | |
| f. Jag upplever att det finns tillräckligt med utrymme för etiska diskussioner: | | |
| g. Jag upplever att varje ansökan ges tillräckligt med tid: | | |

15. Dessa påståenden gäller din upplevelse av plenarsammanträdena:

- | | |
|---|-------|
| a. Jag upplever att det råder ett gott diskussionsklimat: | 12345 |
| b. Jag upplever att man lyssnar på mig: | |
| c. Jag upplever att mina inlägg tas på allvar: | |
| d. Jag upplever att jag har möjlighet att påverka: | |
| e. Jag upplever att det är relevanta diskussioner: | |

- f. Jag upplever att det finns tillräckligt med utrymme för etiska diskussioner:
g. Jag upplever att varje ansökan ges tillräckligt med tid:

16. Eventuella kommentarer:

Frågor kring den etiska bedömningen

17. Ange den siffra mellan 1 och 5 som bäst indikerar huruvida du instämmer eller inte för följande påståenden

	Instämmer inte alls	Instämmer helt
	1	5

- a. Jag känner mig säker på hur jag ska tolka vilken nytta med ett försök som kan anses angelägen ur allmän synpunkt:
b. Jag känner mig säker på hur jag ska bedöma om alternativa metoder till djurförsök skulle kunna användas:
c. Jag känner mig säker på hur jag ska bedöma om de föreslagna metoderna skulle kunna förfinas:
d. Jag känner mig säker på hur jag ska bedöma om ett rimligt antal djur används:
e. Jag känner mig säker på hur jag ska bedöma om det potentiella lidandet är större än vad som är 'absolut nödvändigt' (definition enligt djurskyddslagen):
f. Jag känner mig säker på hur jag ska bedöma vad som är en rimlig avbrytningspunkt:

18. Hur mycket upplever du att följande aspekter av en ansökan påverkar bedömningen?

	I mycket liten grad	I mycket hög grad
	1	5

- a. Projektets syfte:
b. Antal djur som används:
c. Vilket djurslag som används:
d. Djurens potentiella lidande:
e. Den vetenskapliga kvalitén:
f. Den potentiella nyttan för människor:
g. Den potentiella nyttan för djur:
h. Den potentiella nyttan för miljön:
i. Möjligheterna till alternativa metoder:
j. Huruvida försöket är kategoriserat som av ringa, måttlig, avsevärd eller terminal svårighet:
Eventuella kommentarer:

19. Jag upplever att alla de föregående aspekterna belyses under mötena: Ja Nej

20. Jag upplever att vi i nämnden har ungefär samma tolkningar av de etiska aspekterna av djurförsök: Ja Nej

Eventuella kommentarer:

21. Då jag väger djurens potentiella lidande mot försökets potentiella nytta, gör jag generellt följande bedömning:

	Instämmer inte alls	Instämmer helt
	1	5

- a. Alla försök på djur som kan gynna oss människor på något sätt är nödvändiga och därmed berättigade:
b. Alla försök på djur som kan leda till botemedel mot mänskliga sjukdomar är nödvändiga och därmed berättigade:
c. Alla försök på djur som inte direkt syftar till botemedel mot mänskliga sjukdomar utan snarare kan klassas som grundforskning är nödvändiga och därmed berättigade:
d. Endast de försök på djur som kan gynna djur är nödvändiga och därmed berättigade:
e. Endast de försök på djur som kan gynna miljön är nödvändiga och därmed berättigade:
f. Jag bedömer att möss och råttor kan lida på ett sätt motsvarande människor:

- g. Jag värderar generellt människors lidande (fysiskt och psykiskt) högre än djurs:
- h. Jag värderar generellt människors och djurs lidande (fysiskt och psykiskt) lika:

Eventuella kommentarer:

Frågor kring våra känslors roll i etiskt beslutsfattande

22. Ange den siffra mellan 1 och 5 som bäst indikerar huruvida du instämmer eller inte för följande påståenden

	Instämmer inte alls	Instämmer helt
	1	2 3 4 5

- a. Jag blir ofta känslomässigt engagerad i mitt arbete som nämndledamot:
- b. Jag reagerar ofta positivt över ett projekts potentiella nytta:
- c. Jag reagerar ofta negativt över djurens potentiella lidande:
- d. Jag tycker att jag generellt fattar beslut utan att påverkas av känslor:
- e. Jag tycker att synpunkter och beslut ska vara baserade på rationalitet snarare än känsla:
- f. Jag försöker se allas sidor i en fråga innan jag fattar ett beslut:
- g. Mina känslor påverkas lätt av stämningen och andras känslor i nämnden:

23. Ange den siffra mellan 1 och 5 som bäst indikerar huruvida du instämmer eller inte för följande påståenden

- a. Jag känner med de människor som kan gynnas av studierna vi tar ställning till:
- b. Jag tänker mig in i dessa människors situation:
- c. Jag känner med djuren som används till försök:
- d. Jag tänker mig in i dessa djurs situation:
- e. Jag känner med forskarna som ansöker om etiskt godkännande:
- f. Jag tänker mig in i dessa forskares situation:
- g. Jag känner med personalen som utför djurförsök:
- h. Jag tänker mig in i dessa människors situation:

Eventuella kommentarer:

24. Eventuella förslag på förbättringar vad gäller den djurförsöksetiska prövningen:

25. Eventuella synpunkter på enkäten:

Appendix 2. Interview questions (in Swedish)

1. Djurförsök är det område där vi använder djur som kommit allra längst vad gäller lagstadgad etisk prövning, varför tror du att det är så?
2. Vilken är den viktigaste funktionen med den etiska prövningen, skulle du säga?
3. Vilken är den viktigaste respektive svåraste etiska frågan vad gäller djurförsök, tycker du?
4. Vilken kunskap tycker du är viktigast för att kunna göra den etiska bedömningen?
5. Vad skulle du säga att den etiska bedömningen är *tänkt* att baseras på?
 - Stämmer detta överens med vad du anser att den *bör* baseras på?
 - Är detta tydligt för de som ska göra den?
 - Kan det finnas olika tolkningar?
 - Hur gör nämnden rent praktiskt vid bedömningen av nytta vs. lidande?
 - Finns det någon faktor som du tycker verkar mest avgörande, något som ytterst påverkar besluten?
6. Hur upplever du rollen som ... i nämnden?
 - Upplever du att du företräder något särskilt intresse?
7. Hur hanterar nämnden olika intressen och utgångspunkter i diskussionen?
 - Hur anser du att dessa *bör* hanteras?
8. Vad finns det för syn på känslor/känslomässighet i nämnderna?
 - I vilken grad tror du att känslor som medlidande eller låg grad av medlidande påverkar besluten?
9. Hur tycker du att den etiska prövningen fungerar idag?
10. Är det något du anser bör förbättras?

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