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Animal Welfare: Measuring Strategies for Improving Lives

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Animal Welfare:
Measuring Strategies for Improving Lives

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS IN LEADERSHIP STUDIES

UNIVERSITY OF SOUTHERN MAINE

BY

ELSBETH K. PAIGE-JEFFERS

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FINAL APPROVAL FORM

THE UNIVERSITY OF SOUTHERN MAINE

May, 2017

We hereby recommend that the thesis of Elsbeth K. Paige-Jeffers entitled *Animal Welfare: Measuring Strategies for Improving Lives* be accepted in partial fulfillment of the requirements for the Degree of Master in Leadership Studies.




Advisor



Second Reader

Accepted



Director, Leadership Studies Program

This work is dedicated to all the animals I love and have loved,
with special thanks to Watson, Nigel, Molly, and Alice,
for their love and companionship.

Abstract

Animals are sentient creatures entitled to humane treatment and lives of dignity. There are many fields which address this notion, including animal welfare science, ethics, law, policy, and veterinary science. Such a multi-disciplinary approach to animal welfare reveals numerous best practices which can be used to improve the way animals are conceived of and treated by both specialists and the public. However, despite this faceted consideration of animal welfare, there is a dearth of quantitative means to assess entities' adherence to best practices. As such, the purpose of present study is to develop and refine an instrument which could be used by various entities to measure their use of best practices. These entities may include animal welfare departments, K9 units, shelters and humane societies, veterinary practices, and more. Envisioned uses for this instrument include determining how a given area addresses the welfare of its animal population, as well as how an individual agency makes use of best practices.

Keywords: animals, animal welfare, humane, best practices, survey, instrument

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Animal Welfare:

Measuring Strategies for Improving Lives

Animal cruelty is a global pandemic (World Animal Protection [WAP], 2016). Worldwide, animals suffer both alongside and at the hands of humans. Arguably, this is unacceptable. Numerous researchers have found links between animal and human violence, and there is considerable evidence that all forms of violence are learned and self-perpetuating behaviors, suggesting that a decrease in animal cruelty will correlate with a decrease in human violence as well (Ascione et al., 2007; Krienert, Walsh, Matthews, and McConkey, 2012; Parmenter, 2003; Tallichet & Hensley, 2005; Vaughn et al., 2009). Beyond this relationship between animal and human violence, animals are sentient creatures entitled to humane treatment and lives of dignity in the same way that humans are (WAP, 2016). Large-scale efforts to impact the global welfare of animals are continually pursued. For example, in 1978, a Universal Declaration of Animal Rights (UDAR) was drafted and ratified by the United Nations (Spangenberg, 2014). As recently as 2011, a new draft of the 2003 Universal Declaration of Animal Welfare (UDAW) was presented to a United Nations committee for approval, which is still pending (Spangenberg, 2014). This latter document, envisioned by World Animal Protection and other global animal rights agencies, is an attempt to establish a global standard of animal treatment similar to that established for humans by the Universal Declaration of Human Rights (UDHR). However, the proclamation of such a standard may never be realized, and if it is, such a broad action may take years to translate into laws, policies, and practices which impact animal welfare within different communities

and jurisdictions. Given this, in an attempt to target animal welfare on a smaller scale, the present research will identify strategies for enhancing the welfare of animals within the existing literature, and will then develop an instrument which measures animal welfare entities' use of these strategies. In this way, the present research seeks to develop an instrument that will help animal welfare entities measure their adherence to best practices, and by extension improve animal welfare outcomes in their services areas through enhancement of their practices. Unlike a top-down approach which may eventually result from implementing the UDAW, the creation of such an instrument will allow those individuals and organizations who seek to impact animal welfare to improve their practices using a bottom-up approach. Ultimately, the purpose of the present study is to enhance the welfare of animals by developing an instrument which enables animal welfare entities to measure their use of best practices. Such measurement may help these entities to implement the most effective strategies for improving animal lives.

Review of the Literature

The animal welfare field has become increasingly popular over the past few decades. Various disciplines have approached this topic with the aims of impacting trade and agricultural economics, improving the quality of animal life, and reducing the commission of crime against both animals and humans. Traditionally, animal welfare has been viewed purely as an economic issue, with animal well-being characterized as a measure of animal productivity (Lund, Coleman, Gunnarsson, Appleby, & Karkinen, 2006). However, new philosophical approaches to animal welfare have also been introduced into the literature, with researchers insisting that ethics and science are

inextricably linked when it comes to an examination of animal welfare (Rollin, 2015).

Additional researchers have engaged the issue of animal welfare from disciplines such as animal welfare science, ethics, animal bio-psychology, economics, law, interpersonal violence, policy, veterinary medicine, shelter management, and leadership. For example, Ohl and van der Staay (2012) explore the interactions between societal values systems and biometric evaluations of animal well-being with the goal of identifying effective animal welfare regulation practices, highlighting that “every definition of animal welfare is influenced by the moral or ethical standards of society” (Ohl & van der Staay, 2012, p. 13). Numerous other researchers have examined similar topics and interactions, all contributing to the broader field of understanding and impacting animal welfare.

The findings of such studies are diverse, however there is a general lack of research which specifically examines how various entities target animal welfare, and whether these practices are based in the literature. As different organizations may use diverse methods to impact animal welfare, it is the goal of the present literature review to democratically include any study or interpretation which may have a bearing on how to improve animal welfare in various contexts. The present literature review is organized by field, including: (1) Ethics, (2) animal psychology, (3) economics, (4) law, (5) human violence, (6) policy, (7) the influence of various groups on policymaking, (8) animal shelter/rescue and humane society activities, and (9) instrument development. Each section includes a brief exploration of how findings may inform various animal welfare entities’ approaches to animal well-being, and by extension the present study’s instrument development.

Approaching Animal Welfare from Multiple Disciplines

Lund et al. (2006) identify the need for multi-, inter-, and trans-disciplinary approaches to not only understanding human-animal interactions, but to improving the outcomes of those interactions. They indicate that in the past, much of the scientific research on animal welfare has been dominated by the biological sciences, with animal well-being being determined by biometric markers (Lund et al., 2006). They also point to concern over the “efficiency” of agricultural animals, which is ultimately rooted in economic and trade matters (Lund et al., 2006, p. 40).

Animal welfare and trade regulations. Animal welfare regulations within international trade do exist. Indeed, “[i]n February 2004, the World Organization for Animal Health (OIE, Office International des Epizooties) declared that it had taken on the task of developing animal welfare standards for international trade agreements, thus preparing the ground for applying animal welfare requirements when trading in animal products or live animals” (Lund et al., 2006, p. 38). However, the authors who acknowledge these regulations also assert that this conception of animal welfare, and the associated biological metrics, must be adapted to include other disciplines, specifically within the social sciences.

Animal welfare in the social sciences. By including social scientists, such as cognitive specialists, in the research process, animal welfare may be conceptualized through cognitive or emotional markers (Lund et al., 2006). This would provide a scientific justification for the Treaty of Amsterdam, which in 1997 declared animals “sentient beings” within the European Union (EU) (Lund et al., 2006, p. 39). It would

also serve as a platform for demanding humane emotional conditions for animals based on an understanding of their behavioral needs, rather than merely their physical ones. This suggests that entities seeking to improve animal welfare should consider animals' cognitive-emotional and behavioral needs when assessing their well-being. By extension, assessing animals' well-being beyond physiological metrics would require the development of assessments which capture their cognitive-emotional states. As alluded to by Mench (1998), whose work serves as a basis for that of Lund et al. (2006), these assessments must measure both positive and negative affect.

Positive affect. In an early paper within the field of animal welfare, Mench (1998) emphasizes that consideration of animal well-being must extend beyond simple avoidance of suffering to include consideration of positive emotions. She highlights that the study of human psychology has increasingly focused on “the positive aspects of the life experience” and that consideration of animal psychology should follow this trend (Mench, 1998, p. 95).

Mench (1998), like Lund et al. (2006), in part attributes this shift in the psychological conceptualization of animal welfare to interactions among the ethical and scientific fields, pointing out that “ethical and scientific questions about welfare are strongly intertwined, perhaps inextricably” (Mench, 1998, p. 92). Expanding upon this, Lund et al. (2006) assert that further such consideration of animal welfare can only be accomplished through trans-disciplinary work.

Individual versus non-individual approaches to animal welfare. Building upon the work of Lund et al. (2006), Yeates (2013) examines the justification for

individual versus non-individual considerations of animal welfare. Yeates (2013) points out that biological scientists often look at animals from a non-individual, or group perspective. This perspective considers animal well-being in terms of herd health, as opposed to the psychological health of each animal, which is a more individual approach. Both approaches have benefits. For example, non-individual approaches are often more practical or financially feasible, making it easier to apply them on a broad scale with the hopes of improving animal welfare across the board. Conversely, individual approaches can help to explain discrepancies in animals' responses to certain interventions and help to identify different animal welfare tactics for different species. These assorted benefits suggest that when seeking ways to impact animal well-being, animal welfare entities should attempt both non-individual and individual approaches. In order to make use of and bridge these two different approaches, Yeates (2013) echoes the work of Lund et al. (2006) by advocating for multi-, inter-, and trans-disciplinary approaches to animal welfare. Similarly, Lundmark, Berg, Schmid, Behdadi, and Röcklinsberg (2014) reference Lund et al. (2006) in asserting that any meaningful creation of policy or legislation concerning animal welfare must take into consideration several disciplines, including “scientific, ethical, economic, and political” dimensions (Lundmark et al., 2014, p. 994).

Once an approach for trans-disciplinary work in the field of animal welfare science is established, it may serve as a basis for the inclusion of other disciplines, such as philosophy and ethics. Drawing upon the work of Mench (1998) and others, Lund et al. (2006) argue that it has already been established that the scientific and ethical facets of

animal welfare are intrinsically intertwined: “Collaboration with philosophers has implied that the value dimension in animal welfare science has been [recognized], and that the concept of animal welfare as such is now better understood” (p. 42). Ultimately, these authors assert that a trans-disciplinary approach to animal welfare is the best way to affect positive changes in both the lives of animals and in human-animal interactions (Lund et al., 2006). This assertion establishes a precedent that guides the present study, being that animal welfare may be meaningfully informed by research in various fields and through collaborative approaches among different disciplines.

Animal Welfare and Ethics

Rollin (2015) brings an interesting perspective to this notion of research-informed animal welfare. Like Mench (1998) and Lund et al. (2006), he indicates that as it pertains to animal welfare, science and ethics are inextricably linked. Scientific research, Rollin (2015) posits, cannot preclude ethical considerations. For example, science may inform us *how* we can crowd animals into shared housing, but cannot answer whether we *ought* to do so. In a phrase which aptly captures his overall argument, Rollin (2015) asserts:

Questions of animal welfare are at least partly “ought” questions, questions of ethical obligation. The concept of animal welfare is an ethical concept to which, once understood, science brings relevant data. When we ask about an animal’s welfare, or about a person’s welfare, we are asking about what we owe the animal, and to what extent. (p. 760)

This ethical perspective inherently includes consideration of not only an animal’s biological welfare, but its cognitive-emotional welfare as well, which is in alignment with

the assertions of other researchers who believe that animal welfare must be considered from various disciplines (Lund et al., 2006; Lundmark et al., 2014; Mench, 1998; Yeates, 2013). Rollin (2015) further concurs with Lund et al. (2006) in his statement that conceiving of animal welfare exclusively as a feature of an animal's agricultural productivity is flawed.

Freedom from pain. Rollin (2015) points out that this ethical consideration of animal welfare is not novel, highlighting that Britain's Farm Animal Welfare Council (FAWC) in 1970 asserted that we owe animals a state of good welfare which includes consideration of both their physical and mental states, and that we must aim to provide them with physiological fitness and a sense of happiness. This is captured by the FAWC's "Five Freedoms," (Rollin, 2015, p. 761):

1. Freedom from Hunger and Thirst
2. Freedom from Discomfort
3. Freedom from Pain, Injury[,] or Disease
4. Freedom to Express Normal Behavior
5. Freedom from Fear and Distress

Rollin (2015) goes on to elaborate that it is therefore impossible to quantify an animal's well-being "along a single linear axis called pain" (p. 762). Given this, animal welfare is not a dichotomous discrete variable that can be classified as being either present or absent; rather, similar to the way we conceptualize human welfare, it exists along various complex dimensions. This suggests that for organizations seeking to improve animal lives, the notions captured by the "Five Freedoms" should be considered

independently and not conflated as simply the construct of “pain” when attempting to evaluate animal welfare.

Overall, Rollin (2015) asserts that there is no way to consider animal welfare from a purely scientific perspective: “[A]nyone engaged in ‘animal welfare science’ with the hope of affecting policy, must integrate the facts they adduce with the social ethical principles used to judge the facts morally” (p. 764). This suggests that any consideration of how to impact animal welfare may begin by establishing the moral expectations for the treatment of animals within a given community. This may actually relieve some of the burden on smaller localities that cannot afford to fund scientific research. Instead of collecting data on how to achieve certain animal welfare outcomes, they can draft and disseminate principles of how those animals *should* be treated.

Problems arising from ethical considerations of animal welfare. The work of Rollin (2015), Lund et al. (2006), Yeates (2013), and Lundmark et al. (2014) reflects that of Fraser (1999), who calls attention to the difficulties that have traditionally faced those approaching animal welfare from ethical and scientific perspectives. Fraser (1999) points out that despite a general consideration for animal welfare since the 1970s, scientists and ethicists/philosophers have created issues for each other. Ethicists have frustrated scientists by doing things such as considering individual animals instead of whole species and their impacts on ecosystems, seeking ethical solutions without referencing empirical knowledge, and conflating different animal taxonomies by placing them in broad moral categories (Fraser, 1999). Similarly, scientists have offended ethicists by saying that the cognitive-emotional welfare of animals is a construct impossible to examine through

empirical scientific inquiry (Fraser, 1999). Lund et al. (2006) would certainly contend this latter statement, arguing that such a claim illustrates the need to incorporate social scientists into the animal welfare science sphere. In addition to the possibility that we can indeed assess animals' cognitive-emotional well-being, Fraser (1999) highlights that some studies have already attempted to converge philosophical and scientific approaches. In a statement with which the abovementioned authors would agree, Fraser (1999) asserts that "neither empirical information nor ethical reflection can, by itself, answer questions about our proper relationship to animals of other species" (p. 172).

Animal Psychology

Advancing towards this convergence of philosophical and scientific approaches to animal welfare, Boissy et al. (2007) suggest that empirical analysis of animal cognitive-emotional welfare is not only a possibility, but a field which has already progressed to a conceptual frontier similar to that of human psychology. They argue that "[i]t is now widely accepted that animals can feel pain and suffering, and methods to assess pain and suffering have been developed" (Boissy et al., 2007, p. 376). Aligning themselves with Mench (1998) and Rollin (2015), Boissy et al. (2007) argue that the next step in assessing animal emotion is developing an understanding of and ability to assess *positive* animal emotions. This would bring animal psychology up to par with human psychology, which already has assessment measures for both negative and positive emotions (Boissy et al., 2007).

Positive indicators of animal welfare. It might delight strict empiricists to know that Boissy et al. (2007), in considering positive animal emotion, analyze cognitive,

neurobiological, behavioral, and physiological markers that “support the existence of positive emotions in animals” (p. 377). Put otherwise, these authors make a very strong empirical case for using animal emotions to assess their well-being and improve their welfare. They also use their multi-disciplinary consideration of animal emotions to suggest various ways animal welfare could be assessed: “[P]lay behavior or typical signs of satisfaction indicate that the animal is not deprived of important sources of pleasure and that other needs are being met. That is why such behaviors are good candidates for welfare indicators” (Boissy et al., 2007, p. 382). It follows that animal welfare entities seeking indicators of animal well-being should look for play and satisfaction behaviors in both individual and groups of animals. By referencing play behaviors and other markers of positive emotions, Boissy et al. (2007) echo Rollin’s (2015) assertion that animal welfare cannot be determined along a single dimension of pain. Importantly, the work of Boissy et al. (2007) also demonstrates that the issue of animal welfare can be approached from and informed by robust studies incorporating multiple disciplines.

Animal Welfare and Economics

As alluded to by Lund et al. (2006), animal welfare is often assessed from an economic perspective. This often leads to negative outcomes for animals, with their welfare being defined exclusively by their productivity. However, Harvey and Hubbard (2013) provide an alternative view to this economic issue. They argue that there are two forces at play regarding the welfare of agricultural animals. Firstly, there is the willingness of consumers to pay for products delivered using higher standards of animal

welfare, and secondly, there is the agricultural sector's ability to meet not only those standards, but also the standards of production (Harvey & Hubbard, 2013).

The animal welfare “sweet spot.” Harvey and Hubbard (2013) argue that there is an interaction effect between agricultural productivity and animal welfare, and that ultimately there is a “sweet spot” where both productivity and welfare will be high. This is exemplified by the dairy industry, which in the EU experienced an increase in productivity following an increase in animal welfare (Harvey & Hubbard, 2013). In practice, this means that agricultural businesses should seek to improve their methods of production while simultaneously improving the welfare of their animals, with each effort enriching the other.

The “animal welfare development road.” Harvey and Hubbard (2013) also offer an “animal welfare development road,” which conceptualizes the path the economic animal welfare issue will take over time. (For a visual of this road, please see Appendix A.) This path takes the following steps:

1. Increasing compliance with legislation
2. Raising awareness
3. Product development
4. Mainstreaming
5. Integration with other issues

These steps lay a useful framework for those entities working in the agricultural sector seeking to improve the lives of animals. Additionally, while these authors mention integration with other issues specifically within the agri-economy, there is nothing to

suggest that their “road” may not ultimately lead to integration with other issues impacting animal welfare from within numerous disciplines. As such, their model is a useful way of conceptualizing the way various stakeholders may become involved in improving animal welfare outcomes.

Animal Welfare and the Law

While economic approaches may certainly yield positive results, other attempts to regulate the actual treatment of animals will likely involve the law. Parmenter (2003) makes a strong argument that animal cruelty should be a felony in all 50 states and the District of Columbia, not only to improve the treatment of animals, but also to address the cycle in which animals and humans are co-victimized. Additionally, he notes that animal cruelty statutes must be rigorously enforced (Parmenter, 2003). As such, non-profits, law enforcement agencies, and other entities seeking to improve animal welfare may focus their efforts on making these changes within the legislature and the criminal justice system.

Animal cruelty in Maine. Parmenter (2003) highlights the fact that Maine was the first state to have an animal cruelty statute, which was enacted into law in 1821, but which was ultimately ineffective because it did not coincide with the establishment of a public organization which would help to enforce that law (Parmenter, 2003). Despite this ineffective past, current animal welfare entities in Maine today may promote the fact that Maine was the first state to pass an anti-animal-cruelty statute as a means of encouraging the humane treatment of animals in contemporary times. Mainers tend to be fiercely

independent and proud of their state identity, and linking that identity to the notion that caring for animals is humane and just may have positive outcomes within the state.

Prosecuting animal cruelty. Other states have attempted to prosecute animal cruelty through a variety of means. Some have argued that animals are property, and therefore to harm another's animal is to damage that owner's property, however this approach ignores wild, stray, and feral animals. Some have argued that animal abuse is a threat to public peace, and should be prosecuted accordingly (Parmenter, 2003).

Unfortunately, neither of these approaches is rooted in an understanding that animal abuse and human abuse are linked, and that animals deserve safety from harm on a philosophical basis.

The link between animal and human violence. In contrast to the above two prosecutorial approaches, Parmenter (2003) emphasizes that animal and human abuse are inextricably linked:

Studies indicate that the violent behavior of animal abusers will likely evolve into violence against domestic partners, children, and the general public. Even more telling is the fact that many serial killers and mass murderers have a history of animal cruelty. (p. 829)

As such, as Parmenter (2003) asserts, even minor acts of animal abuse, committed by either adults or children, should be taken very seriously and prosecuted to the full extent of the law. This suggests that successful prosecution of animal-based crimes should be a priority for law enforcement agencies and other organizations that work within the criminal justice system. After advocating for the serious prosecution of animal

abuse, Parmenter (2003) goes on to highlight research which backs up his assertion, including a study that indicates that those who have committed animal abuse are five times more likely to commit another form of violent crime, as well as another study which indicates that among non-criminals, there were *zero* reported incidents of animal abuse (Parmenter, 2003, pp. 830-831). This goes to show that, despite wide usage of the term, there is *no such thing* as “minor animal abuse,” and that those who commit any form of animal cruelty, minor or adult, should be seen as a threat to society.

Animal Abuse and Human Violence

Even for those who philosophically do not agree that animals deserve the same treatment as humans, there is still strong evidence that links the abuse of animals to the abuse of children and domestic partners. Indeed, as Parmenter (2003) points out, there are many researchers who assert that animal abuse is symptomatic of an unhealthy family structure in which children, domestic partners, and animals are all potential victims and in which abusive behaviors are often learned and passed on. This makes the need for interventions which address animal abuse through legal recourse essential to preventing future animal abuse, child abuse, and domestic violence. Parmenter (2003) goes on to suggest ways in which the state of Iowa and other municipalities may address incidents of animal abuse, many of which are applicable on both large and small scales and which may be used as models for entities trying to improve animal welfare in their service areas. One such suggestion is that sentencing for animal abuse should include heavy fines to be donated to local animal welfare agencies (Parmenter, 2003).

Correlates of animal cruelty. Parmenter's (2003) assertion that animal abuse co-occurs with gender-based violence, child abuse, and other violent crime is echoed across the literature. In 2009, Vaughn et al. identified correlates of animal cruelty using data obtained through a national survey (the National Epidemiological Survey on Alcohol and Related Conditions [NESARC]). Their findings were very telling. *All* markers of antisocial behavior, as operationalized by the NESARC, correlated with animal abuse (Vaughn et al., 2009). These included behaviors such as bullying and pushing people, lying a lot, starting a fire on purpose, robbing or mugging someone, forcing someone to have sex, getting into a fight that "came to swapping blows with someone like a husband, wife, boyfriend[,] or girlfriend," hitting someone so hard that you injure them, and physically hurting others on purpose (Vaughn et al., 2009, p. 1216). This survey was only administered to adults 18 years and older, and taken in conjunction with Parmenter's (2003) research, may be an indication that the individuals who displayed these antisocial behaviors escalated to such cruel and criminal acts after childhood histories of animal abuse. This reinforces the need to address animal abuse promptly and aggressively.

Vaughn et al. (2009) also examined other correlates of animal cruelty, including sociodemographic characteristics and psychiatric disorders. These findings would likely be useful for animal welfare entities attempting to target perpetrators of animal cruelty within a specific community or service area. Additionally, while the study of Vaughn et al. (2009) does not prove a causal link between these correlates and animal cruelty, it does suggest that by targeting these correlates, a decrease in animal cruelty may be realized. Targeting these correlates might include prosecuting criminal antisocial

behaviors, as Parmenter (2003) suggests, or by increasing affordable access to mental health services for those with psychiatric disorders. These approaches could be tailored to meet specific community needs.

Animal abuse and interpersonal violence. Parmenter (2003) and Vaughn et al. (2009) are apt to have emphasized the connection between animal and human violence. Numerous other researchers have examined the link between animal cruelty and gender-based violence and child abuse, including Ascione et al. (2007), who indicate that women living in domestic violence shelters were approximately 11 times more likely to have had a pet hurt or killed by a partner than women who had never experienced domestic violence. Additionally, they point out that children in abusive homes who witness this animal cruelty report being disturbed by the abuse (Ascione et al., 2007).

Animal abuse and domestic violence shelter. Ascione et al. (2007) also call attention to the fact that many women who are domestic violence victims deliberately delay seeking shelter because of concern for their pets. Expanding on this notion, Krienert et al. (2012) assessed a national sample of domestic violence service providers, concluding that a lack of available services for pets is a serious barrier for victims of domestic violence seeking shelter and other services. This suggests that considering the issue of animal welfare through the lens of gender-based violence is useful and revealing. It also suggests that conceiving of animal welfare as a social justice issue may enhance understanding of it and could ultimately reveal impactful methods of addressing it. More specifically, these findings indicate that animal welfare may be indirectly improved by

targeting human violence correlates of animal abuse, as well as by providing domestic and family violence shelters which are animal-friendly.

Animal Welfare and Policy

The “animal welfare policy tree.” Several of the preceding authors have suggested ways to impact animal welfare via scientific inquiry, ethical consideration, law making, and policy development. As it concerns policy, Ingenbleek, Immink, Spoolder, Bokma, and Keeling (2012) point out that the use of policy which adopts a “‘one size fits all’ solution” will be ineffective (p. 690). To address this problem, they developed a “policy tree” intended to guide policy makers in the EU through a decision-making process by which they can discover policy approaches and instruments best suited to their needs. (To see the complete policy tree, please see Appendix B, or find the original work published in *Food Policy*, volume 37.)

This model is relatively complex, considering facets to the animal welfare system such as law enforcement, veterinary health, compliance, and more. This highlights the many elements that contribute to animal welfare, which may seem daunting, but which can also be perceived as an opportunity to address the problem through numerous avenues. The tree itself may also serve as a type of meta-model into which aspects of any given service area can be entered, ultimately assisting local entities in identifying policy mechanisms which will be most valuable to their communities.

Veterinary culture. The multifaceted model posited by Ingenbleek et al. (2012) emphasizes the need to do more to address animal welfare. Hewson (2005) underlines the need for proactivity regarding animal welfare by referencing leading animal welfare

scientist Dr. Mike Appleby's appeal: "'What should we do about animal welfare? ... 'The answer, ladies and gentlemen, is 'More'''" (p. 78). Indeed, it seems that the field is ripe with possibilities, and that entities both large and small have the capacity to impact positive change. Hewson (2005) discusses specifically how veterinary institutions can improve animal welfare by establishing leadership standards that shift the professional veterinary culture towards one of proactivity and caring. She indicates that this trend is already happening, pointing out that "[m]any [veterinary] students today are much more aware of welfare issues than were faculty members when they were students" (Hewson, 2005, p. 77). Hewson effectively emphasizes the impact culture can have on animal welfare outcomes. In doing so, she reveals a potential meta-approach to improving the treatment of animals on the local level. In addition to enacting policy and law which encourages the ethical treatment of animals and criminalizes animal abuse, local entities can seek to impact the culture within their communities through more subtle methods, shifting the values of the culture towards ones which are inherently more respectful of life. This shift may ultimately result in improved animal and human welfare outcomes.

Animal Welfare on Varying Levels

National versus local. When considering animal welfare policy, it is crucial to take into account both the scope and the service area of that policy. Many local animal welfare entities develop grassroots policies which impact their most immediate service area. However, there is also evidence that local entities are often influenced by their broader organizations. For example, in the United States (US), the federalist system of power creates an interesting dynamic in which the national government can influence

policy on a smaller scale, but in which states also have the power to act independently of the national government (Allen, Pettus, & Haider-Markel, 2004). This begets the question of how to implement national policy on the local level. Allen et al. (2004) examine this issue using three case studies. While none of these case studies pertain specifically to animal welfare policy, they do reveal some interesting results. Perhaps quite obviously, states are more likely to adopt national policies when the federal government provides financial incentives to do so (Allen et al., 2004). However, state localities are also more likely to adopt certain policies if the national government “sends strong, clear signals to the states concerning rewards, punishments, and the likelihood of future national government actions” regarding those policies (Allen et al., 2004, p. 319). The national government can send unambiguous signals through Supreme Court decisions or by mandating states to adopt specific policies (Allen et al., 2004). Overall, it is interesting to note that one of the most powerful ways to impact policy on the local level is for the national government to take firm, unambiguous stances regarding those policies. However, as Allen et al. (2004) also highlight, where the national government does *not* take an unambiguous stance, such as when there is partisan divide, states are increasingly likely to adopt their own policies. As such, without a clear, federal agenda regarding the treatment of animals or funding to implement said agenda, local entities must be self-reliant when it comes to impacting animal welfare.

Interestingly, Allen (2005) also notes that past research has shown that partisan competition on the state level actually leads to the adoption of more liberal policies, such as pro-animal welfare statutes. Taken in conjunction with Allen et al. (2004), this

suggests that where there is partisan competition on both the national and the local level, states are more likely to implement policies which positively impact animal welfare. However, this also indicates that where there is partisan divide on the national level, but not on the local level, states will adopt policies which align with their own, internal local politics.

One potential exception to the above is when regional interests impact state interests (Allen, 2005). Put otherwise, when a state is bordered by states who have adopted positive animal welfare policies, that state is more likely to adopt similar policies (Allen, 2005). Therefore, even without direct national influence, states may still be influenced by their broader, regional communities.

Interest groups and animal welfare policy. In addition to contrasting influences on national and local policymaking, Allen (2005) also examines the ways in which interest groups can impact local animal welfare policies. She indicates that traditional interest groups, including businesses and organized labor organizations, hold the most influence over state interests (Allen, 2005). However, at times other groups are also able to impact animal welfare policymaking. Of note is the Humane Society of the United States (HSUS). Allen (2005) found that states with higher HSUS membership were more likely to adopt policies which positively impact animal welfare. Therefore, the HSUS, being a national organization with local branches, may serve as a useful conduit between national and local policymaking. This suggests that to improve animal welfare on the local level, small scale entities should encourage local residents to join the HSUS or similar groups and to become active in any local branches.

Additionally, Allen (2005) found that hunting interest groups have a negative impact on state likelihood of adopting pro-animal welfare policies. Hunters versus animal rights activists may seem an obviously rivalry, however Allen's work (2005) does not distinguish between different types of hunters. For example, it may be that in states where hunters hunt for sport, hunting interest groups are more likely to negatively impact the adoption of pro-animal welfare policies. In contrast, it may be that in states where hunters hunt for sustenance, hunters and animal rights activists are aligned in their desire to improve animal welfare. All this suggests that an avenue for organizations to improve animal welfare is to identify and reconcile any differences that may exist between hunting and animal welfare interest groups. It may be that in more rural areas, where sustenance hunting is more prevalent, different strategies for improving local animal welfare must be adopted.

Rural versus urban. Expanding upon this notion of differences between rural and urban communities, Tallichet and Hensley (2005) found significant variations in how convicted inmates learned criminal behaviors directed towards animals, as well as which animals they targeted. Perhaps unsurprisingly, they found that inmates who had witnessed somebody hurt or kill an animal were more likely to do so themselves (Tallichet & Hensley, 2005). This builds upon the findings of many other researchers who have indicated that human and animal violence are not only correlated, but are also learned behaviors (Ascione et al., 2007; Krienert et al., 2012; Parmenter, 2003; Vaughn et al., 2009). However, Tallichet and Hensley (2005) also found that inmates from rural areas were more likely to have learned animal abuse from family members, whereas

inmates from urban areas were likely to have learned animal abuse from friends and acquaintances in addition to family members. Furthermore, they found that rural inmates were most likely to target cats as the victims of their abuse, whereas urban inmates were equally likely to target cats, dogs, and wild animals (Tallichet & Hensley, 2005). These authors speculate that the former difference may be a result of rural residents' lack of exposure to social groups beyond their families, whereas the latter difference may be due to varying philosophical approaches to animal life:

In many rural areas, hunting with dogs is not only socially acceptable but also is valued and taught as a skilled activity. Thus, dogs and wild animals may not be appropriate targets for cruelty based on their utility to humans, whereas cats may be perceived as being more materially expendable. (p. 722)

This interpretation may also be relevant to the findings of Allen (2005), who found that hunting interest groups were generally against pro-animal welfare policies. This indicates that, especially in rural areas, attempts to improve animal welfare should target the intersections of hunting and animal welfare interests. Additionally, animal welfare entities should attempt to influence learned social behaviors by promoting positive messages regarding animals in both rural and urban areas.

Shelters, Rescues, and Humane Societies

Beyond seeking to impact the ways in which people think about and interact with animals, animal shelters, rescues, and humane societies also have to deal with providing animal care on a daily basis. These organizations are governed by different laws and statutes based on their jurisdictions. However, most shelters, rescues, and humane

societies in the U.S. are non-profits with governing Boards of Directors. The literature is replete with suggestions regarding the best ways for these organizations to provide compassionate and sustainable care, while also ensuring positive outcomes for animals. Of course, basic animal needs must be met, including access to food and water and a clean, warm living space (Association of Shelter Veterinarians [ASV], 2010). Additionally, shelters should have positive relationships with veterinarians who can provide advanced, professional medical care for animals (ASV, 2010). While shelter staff may be trained in basic medical care, such as administering vaccinations, services like spaying and neutering, other surgical care, dental care, and targeted treatment for illnesses and injuries should be conducted by the appropriate veterinary professional (ASV, 2010).

Shelters should also endeavor to prevent disease outbreaks in animal populations, control against pests, allow animals to fall into their natural circadian rhythms by controlling light sources, reducing noise, and providing living space which is appropriate to each animal (ASV, 2010). For example, prey and predatory species should be separated. The ability to see, smell, or hear predatory animals can negatively impact the well-being of prey animals, causing them stress and fear (ASV, 2010). Separation of these types of species also minimizes the risk that a predatory animal will actually be able to kill or harm a prey animal. Additionally, cats should have at least two feet of triangulated space between their resting place, litter box, and eating space (ASV, 2010). (For a visual of cat space triangulation, please see Appendix C.) Cats also benefit from vertical environments, so efforts should be made to house them off the ground and

provide them with elevated platforms (ASV, 2010). Unlike cats, dogs do not mind being housed on the floor, but special consideration should be made for large dogs, fearful dogs, and injured or elderly dogs (ASV, 2010).

Additionally, all animals benefit from having a place to hide (ASV, 2010). There are many ways to provide animals with hiding places, such as providing boxes or crates within living spaces or hanging towels to provide privacy. Being able to hide is one factor in an animal's ability to control its environment, which is crucial to its physical and mental well-being. Indeed, "lack of control over one's environment is one of the most profound stressors for animals" (ASV, 2010, p. 26). This suggests that animals should be provided opportunity to control their environments as much as possible, and with species-specific consideration. For example, as mentioned above, cats benefit from vertical environments. Additionally, perches should be provided to birds, and opportunities to burrow should be provide to certain types of rodents. Overall, shelters should recognize the biodiversity of animals and make every effort to enable them to express normal, species-typical behaviors (ASV, 2010).

In addition to these general considerations for animal well-being, there are several factors which have been shown to have a significant impact on the welfare of animals in a shelter or rescue setting, including length of stay, provision of enrichment, and adoption options.

Length of stay. Length of stay refers to the amount of time an animal remains in a shelter, and has been identified as the most predictive risk factor for illness in cats and dogs in US shelters (ASV, 2010; Dinnage, Scarlett, & Richards, 2009; Edinboro, Ward,

& Glickman, 2004; University of California, Davis Koret Shelter Medicine Program [UCDKSMP], 2015a; UCDKSMP, 2015b).

The longer an animal is confined, the greater the demand for sufficient space, interaction and environmental enrichment to prevent confinement-related stress and behavioral disorders. However, longer stays also mean more crowded shelters, reducing the availability of space and care for each animal. Ultimately, the longer the stay per animal, the higher the costs as well. (UCDKSMP, 2015b)

Length of stay is intimately related to shelter capacity. Shelter capacity does not refer simply to the number of living spaces for animals, but also to the number of staff members or volunteers who can care for those animals (UCDKSMP, 2015a). Staffing ability typically relies on shelter budgets, therefore, when attempting to minimize animal length of stay, numerous factors must be considered. Length of stay may be impacted by shelter capacity, animal health, animal adoptability, and local laws requiring stray or surrendered animals be held for a certain amount of time before adoption (ASV, 2010; UCDKSMP, 2015a; UCDKSMP, 2015b). However, generally, length of stay should be limited to one or two weeks (ASV, 2010).

There are times when a longer stay may be necessary or beneficial for an animal (ASV, 2010; UCDKSMP, 2015b). For example, when a family cannot be adopted together, nursing puppies and kittens should be kept with their mothers until they are able to be safely separated. Additionally, animals receiving targeted medical care which requires consistency or which may place a substantial financial burden on potential adopters should be considered for longer stays. Also, animals who need a consistent

environment to recover from neglect or abuse might be appropriate candidates for longer stays. When a longer stay will enrich an animal's life, accommodations should be made to keep that animal in shelter. However, generally, the time an animal spends in shelter between intake and adoption should be minimized.

Enrichment. In addition to minimizing animal length of stay, enrichment should be provided to shelter and rescue animals. "Enrichment refers to a process for improving the environment and behavioral care of confined animals within the context of their behavioral needs" (ASV, 2010, p. 28). Generally, enrichment consists of exercise, mental stimulation, and social contact (ASV, 2010). Each of these types of enrichment should be provided according to species-specific needs. For example, dogs should be taken for walks, provided toys for chewing, and (where possible) be allowed to socialize with other dogs.

Exercise and mental stimulation. All animals need exercise and mental stimulation (ASV, 2010). Even injured animals may require exercise. Mental stimulation may take the form of playing games with humans, receiving training, engaging in puzzle-solving, or being allowed to explore interesting environments. Oftentimes, exercise and mental stimulation will occur simultaneously. In all circumstances, animals should be offered exercise and mental stimulation which adheres to species-typical needs.

Social contact. Animals should be provided with the opportunity to have social contact with other animals and humans, where appropriate. A primary exception is feral animals (ASV, 2010). Where animals are healthy and pose low physical and

epidemiological risk to each other, social contact among animals of the same species is often appropriate. This may be especially true for dogs, who often learn behaviors from each other. For example, a timid or abused dog may learn to trust humans by observing a better-adjusted dog playing with shelter staff. Shelter staff can provide social contact by playing with and training animals, as well as by varying their feeding methods. For example, dogs may occasionally be fed through a “chase and eat” method, where their kibble is thrown along the ground, allowing them to “hunt” it. Additionally, to enhance the utility of social contact, shelters may create home-like environments where animals can adjust to what their future adoptive homes may look like (ASV, 2010).

Enrichment should be a high priority for young puppies and kittens (ASV, 2010). These animals require social contact for proper development, as well as to teach them behaviors which will make them more adoptable.

Adoption options. The ideal goal for all shelter animals is adoption into a loving home (ASV, 2010; UCDKSMP, 2015a; UCDKSMP, 2015b). There are many ways for shelters to promote this outcome for animals. As mentioned above, animals should be kept in good health and properly socialized. However, adoption may also be facilitated through a variety of strategies, including fast-tracking the most adoptable animals (UCDKSMP, 2015b). The most adoptable animals tend to be juveniles who are “old enough for adoption [and] young enough to be maximally cute” (UCDKSMP, 2015b). Rapidly adopting these animals will free up shelter capacity for higher-need animals.

Additionally, shelters may increase their adoption rates by having an ideal number of adoptable pets available to the public. Ideally, shelters will be able to “keep a

minimum number of animals to provide a reasonable variety available at all times,” which increases the likelihood that all potential adopters will find an animal who meets their needs (UCDKSMP, 2015a). However, this number of animals should not grow too large, as “too many choices will have a detrimental or even paralyzing effect on the ability to choose” (UCDKSMP, 2015a). This suggests that for each shelter, an ideal number of animals exists which will increase the likelihood of meaningful animal-human matches, as well as reduce the chance that potential adopters will be paralyzed by too many animal options.

Ultimately, shelters play a crucial role in improving animal welfare because they care for animals on a daily basis. Shelters and rescues also have the opportunity to model appropriate animal welfare behaviors within their communities and service areas. Whatever their effectiveness, shelters sit at the crux of provision of animal care and improvement of animal welfare ideology, and therefore shelter and rescue capability should be included in any assessment of animal welfare.

Developing an Assessment Scale

When assessing animal welfare, animal welfare entities, and the capacity of those entities to impact animal welfare in their localities, several sensitive topics must be broached. For example, regarding the findings of Tallichet and Hensley (2005) that dogs are less often the targets of animal cruelty in rural areas, an animal welfare assessment may seek to capture the incidence of cruelty towards cats and other “expendable” animals (Tallichet & Hensley, 2005, p. 722). Given these types of sensitive metrics, the savvy researcher must take into consideration the bias of the respondent. At times when

developing a survey, researchers will seek to control for social desirability bias. Social desirability bias represents a respondent's inclination to respond to questions in a way s/he thinks will please the interviewer or rater, rather than responding truthfully. Crowne and Marlowe (1960) developed the original Social Desirability Scale consisting of 33 true-or-false items and indicating which responses suggest social desirability bias. Any inventory items which correlate significantly with social desirability should be eliminated when developing a consistent and reliable survey. For example, in developing a scale which measures personal development competitiveness, Ryckman, Hammer, Kaczor, and Gold (1996) eliminated any survey items which "showed substantial contamination with social desirability, $r > .30, p < .001$ " (p. 376). This is a rather stringent criterion for survey item inclusion. However, given the nature of the questions which would likely be included on an instrument measuring animal welfare agencies' adherence to best practices, it seems probable that social desirability bias would impact several survey items. This presents an interesting challenge to the application of the above literature review findings to the development of a survey instrument.

Taken together, the abovementioned studies highlight the many avenues which can be used to address the issue of animal welfare. The goal of the present research is to develop an instrument that may serve as a means to capture these avenues through its assessment of animal welfare entities' adherence to these strategies. By extension, this instrument may be used to improve the practices of these entities and therefore the welfare of animals in their service areas.

Research Design

The goal of the present research is to develop an instrument which measures animal welfare entities' adherence to best practices as identified in the existing literature, enabling these entities to enhance their practices. By extension, it is the aim of the present research to improve animal welfare outcomes.

Theoretical Framework

This research takes a pragmatist and transformational worldview. It is pragmatist in that it seeks to develop a way to measure the practices used to impact a specific community outcome (animal welfare). However, the present research is also transformational because animal welfare resides in the social justice sphere and is impacted by other social justice markers and the broader situational context. Indeed, a strategy which works in one context may not in another. Therefore, social context must be considered in order to understand the problem, its correlates, and to begin to address it.

Methodology

Type of design and underlying assumptions. The research approach most appropriate for this topic is a multiphase mixed methodology (Creswell, 2013). For the present study, this mixed methodology began with a qualitative phase, which informed the creation of an instrument, which was then piloted using quantitative methodology. Put otherwise, the elements of this mixed methods research approach informed each other throughout the course of the present study. Given this, the mixed methodology of the present research can be said to have a development orientation, with one phase enhancing the next.

Mixed methods research is a relatively new approach to scientific inquiry (Creswell, 2013). However, it is becoming more popular because it offers many benefits. Because mixed methods research employs elements of both qualitative and quantitative inquiry, it can yield robust findings which help to answer complex research questions (Creswell, 2013). Mixed methods research can be difficult to conduct, as both qualitative and quantitative methods must be followed scrupulously. Additionally, the collection of these two types of data can generate large data sets which may be difficult to manage. However, mixed methods research, through an analysis of both qualitative and quantitative data, can reveal meaningful findings (Creswell, 2013). For example, a quantitative analysis may identify independent variable effects on a dependent variable, while a qualitative analysis may help to explain these effects. Ultimately, mixed methodology is a useful research tool.

Multiphase dynamic mixed methodology. This type of mixed methods research involves interactive qualitative and quantitative phases of research (Creswell, 2013). The goal of this design is to use both qualitative and quantitative inquiry to inform each other, thereby enhancing subsequent phases of research and the overall research outcome. (For a visual flowchart of an example of a multiphase mixed methods design, please see Appendix D.) For the present research, the goal was to use both qualitative and quantitative inquiry methods to develop and refine an instrument which can be used by animal welfare entities to assess their use of best practices.

As mentioned above, the present study consisted of a qualitative phase followed by a quantitative phase. In the qualitative phase, data collection consisted of the literature

review included above. This literature review was then used to inform the creation of a quantitative instrument, which was piloted during a quantitative phase. (For a flowchart of this methodology, please see Appendix E.) In the future, this instrument may be enhanced by additional qualitative data-gathering or by further quantitative analysis.

Data Collection

For the present study, the qualitative data were collected via a literature review, while the quantitative data were collected via pilot survey administration.

Qualitative literature review. The qualitative data collection consisted of a content analysis of the existing academic literature. This wealth of literature was searched for models and methods which may be used to target and improve animal welfare. The contents of the literature were not be coded; rather, the qualitative data were left in narrative form in order to retain the robustness of the models and methods presented. That narrative form was then captured by the items on the instrument developed.

Saturation sampling was used to examine as many articles as possible in the various fields which apply to animal welfare, such as agricultural policy, legal approaches to the prosecution of animal cruelty, animal welfare science, and more. As many fields as were feasible were examined in order to identify as many different approaches for improving animal welfare as possible. All models and methods for improving animal welfare across various dimensions were considered for inclusion on the instrument.

Quantitative sampling. The aim of the pilot survey was to improve the instrument whose design is the purpose of the present research. A survey design was appropriate for this phase of study because it enabled quantitative analyses by asking participants to identify themselves along pre-determined markers and to respond to closed-ended questions. A survey design was also appropriate because it captured existing trends and avoided the ethical issues associated with applying certain treatment conditions when the dependent variable is the welfare of animals. In the future, open-ended qualitative data may be collected to enhance the design of the instrument.

The pilot survey was administered to a cross-sectional sample purposively selected using convenience sampling. Respondents were asked to complete a draft instrument with three parts (see Appendix F). Part I included descriptive statistics, asking respondents to describe themselves and their organizations. Part II included Likert scales, prompting respondents to respond to statements regarding themselves, their organizations, and their views on animal welfare. The end of Part II included five items which were unrelated to animal welfare, for the purposes of validating the instrument. Lastly, Part III included the aforementioned Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). This 33-item scale poses true-false questions, and certain answers are indicated by Crowne and Marlowe (1960) to correspond with social desirability bias.

Delimitations. Respondents who held roles and worked in the organizations mentioned in Part I of the draft instrument (see Appendix F) were deliberately targeted for the pilot survey. Any individual engaged professionally or on an official volunteer

basis in improving animal welfare was considered for inclusion. While no attempts were made to survey representative samples of animal control officers, animal welfare advocates, etc., these professionals were targeted as sample participants. The sample size was also determined by convenience. A target sample size of $n = 30$ was set, and that target was met.

Limitations

One weakness inherent in this method of obtaining data was that the sample size for the pilot study was rather small ($n = 30$), due to the availability and willingness of targeted pilot participants. Certain statistical analyses could not be conducted given the n -value of 30. However, the data could nonetheless be used to refine the instrument, as such providing groundwork for broader studies in the future.

Instrumentation

The ultimate goal of the present research is the development of a survey instrument which can be used to measure animal welfare entities' adherence to best practices. As mentioned above, a draft survey instrument was developed for the purposes of a pilot study (please see Appendix F). The data collected during the pilot study were then used to refine and improve this draft instrument. The data were not used for any other purposes, nor will they be.

Refining the instrument. The pilot data were primarily used to conduct statistical analyses to suggest which items should be altered or eliminated from the instrument. As mentioned above, the results of these analyses will not be distributed, and

were only used to improve the instrument. The pilot study was designed to be confidential and anonymous, and no incentives were provided to participants.

Data analysis. Data analysis occurred in three primary phases. First, a Principal Components Analysis (PCA) was conducted to reveal which individual instrument items clustered together and how they loaded onto their respective components. Cronbach's Alpha was then calculated for these components to determine their internal validity. Secondly, the Marlowe-Crowne Social Desirability Scale items were scored, and correlations among those scores and all other instrument items were determined using Pearson's Correlation Coefficient. Lastly, correlations among the five unrelated items at the end of Part II (see Appendix F) and the other Likert scales were determined using Pearson's Correlation Coefficient.

Principal Components Analysis. Data analysis began with a Principal Components Analysis (PCA). The resulting scree plot was analyzed to determine how many components had Eigenvalues of 1 or greater (see Appendix G). While the scree plot indicated that about 9 components had Eigenvalues of 1 or greater, the most precipitous drop in Eigenvalues occurred around 5 components. As such, the PCA was re-run, this time with the number of components pre-set to 5.

Cronbach's Alpha. The five indicated components were not given specific names, as they did not correspond with clusters identified or expected prior to data analysis. Cronbach's Alpha was calculated for each unnamed component to determine the internal consistency of each. With the exception of Component 3, each component had a significant measure of internal consistency (for Components 1, 2, 4, and 5, $\alpha \geq$

0.850). However, Component 3 consisted of only two instrument items, one of which was an unrelated question inserted into the instrument to determine its discriminant validity (question 111, see Appendix F). As such, the lack of internal consistency between item 111 and the other (question 55) reflects favorably on the validity of item 55 specifically. Therefore, item 55 was left in the revised instrument.

Social Desirability Scale. Part III of the draft instrument consisted of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). This scale, which can be seen in Part III of the draft instrument (Appendix F), indicates which responses correspond to social desirability bias. Specifically, for the true-false version of the scale, either “true” or “false” is indicated as the desirable response. Each desirable response is given a value of 1, after which all responses are summed to determine an overall social desirability score for each respondent. The correlations between these social desirability response scores and each item on the draft instrument were determined using Pearson’s Correlation Coefficient. Any question for which the r -value was significant ($p < 0.05$) was removed from the revised instrument. These questions included numbers 46, 57, and 58. Each of these questions asked respondents to indicate on a 7-point Likert scale whether they agreed with the following statements: (46) My organization seeks to influence the criminal justice system so those who have been convicted of animal-based crimes will receive strict sentences; (57) My agency seeks to improve animal welfare by targeting groups with a history of antisocial behaviors; and (58) My agency seeks to improve animal welfare by targeting psychiatric disorders which correlate with animal cruelty. Each of these questions asks about the respondents’

organizations' intentions. It may be that individuals desire to display a substantial knowledge of their organization's operations, leading the participants of the pilot study to respond to these items with social desirability bias.

Correlations. Items 109-114 of the draft instrument were inserted to establish discriminant validity of the instrument. These items ask respondents to indicate on a 7-point Likert scale whether they agreed with statements having nothing to do with the constructs the instrument attempts to capture. These statements are as follows: (109) My favorite color is blue; (110) I enjoy sushi; (111) I think the printed word is the most meaningful medium for storytelling; (112) I think my parents' generation is more level-headed than my own; (113) I think everyone should learn to speak at least two languages; and (114) Human colonies on Mars are desirable and inevitable. The correlations among each of these items and each of the other questions in Part II of the draft instrument, which consisted exclusively of Likert scales (see Appendix F), were calculated using Pearson's Correlation Coefficient. Any items with statistically significant r -values ($p < 0.05$) were eliminated from the revised instrument. These items included questions 24, 27, 45, 52, 60, 63, 67, 73, 88, 89, and 97. These items included the following statements: (24) My organization considers freedom to express normal behavior when assessing an animal or animals' welfare; (27) My organization holds the belief that animals are entitled to humane and just treatment; (45) My organization seeks to influence the criminal justice system so animal-based crimes will be prosecuted more often; (52) My organization is a veterinary practice, and requires all practitioners to report suspected animal-based crimes to the appropriate authorities; (60) My agency seeks to improve

animal welfare indirectly; (63) My agency seeks to improve animal welfare by targeting perpetrators of family violence; (67) My organization seeks to impact the local culture regarding animal abuse and respect for life; (73) My organization, which operates on the federal level, provides grant funds to entities seeking to improve animal welfare on the local level; (88) My organization actively attempts to teach people in the service area social behaviors regarding the treatment of animals; (89) I believe the welfare of cats is generally worse than other animals in my area; (97) My agency enlists the help of veterinary professionals. In addition to the items just listed, items 109-114 were also eliminated from the revised instrument.

The lack of ubiquitous, significant, negative *r*-values for the correlations of the remaining items on the draft instrument with items 109-114 may be due to the fact that the total sample size was $n = 30$. This relatively small sample size may account for the dearth of such negative correlations. However, for the purposes of the present research, eliminating items which positively and significantly correlate with meaningless items is satisfactory.

Instrument feedback. In addition to the eliminations resultant from the abovementioned data analysis, other changes were made to the instrument based on participant feedback. Many participants pointed out words or phrases they did not understand, or wrote in brief comments regarding certain items. Some participants also failed to answer difficult questions, or asked for assistance in responding to certain items. Though this feedback was unsolicited, based on this experience with participants, several

other changes were made to the instrument in order to make it more manageable. These changes are detailed below.

Part I. In Part I (see Appendix F), the directions were clarified for respondents who may hold more than one role or belong to more than one organization. Additionally, the descriptive inquiries regarding participants and their organizations were separated into two different sections (A and B). For items 19 and 20, participants are now instructed to select only one of these two boxes. Furthermore, the distinction between pets and non-pet, working or service animals is now made clear. In Section B, a category for commercial enterprises, such as doggy daycares and grooming facilities, was added.

Part II. In Part II, the instructions were clarified and the sample scale removed. Additionally, a box was added to each question for participants who wish to respond “do not know” or “does not apply.” This way, each researcher employing the instrument can choose how to code or include such responses during analysis. Furthermore, and perhaps most notably, each Likert scale was altered to include the same descriptors corresponding to each value on the scale. In the revised instrument, all values correspond to agree/disagree statements (see Appendix H).

For items 12-19, a clarifying phrase was added regarding the types of animals being assessed. For example, item 12 shifted from “My agency has a consistent and reliable means of assessing the general well-being of animals” to “My agency has a consistent and reliable means of assessing the general well-being of animals. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)”

For item 20, the clarifying adjective of “animal” was added to describe group norms, in order to indicate that the question attempts to capture how a specific animal is treated relative to other animals, not based on human social behavior.

For items 28 and 29, text was added which clarifies the meaning of “sentient.” For example, question 28 (which is question 26 on the revised instrument, see Appendix H) now reads “I believe animals are sentient creatures, capable of feeling pain and consciously experiencing their own existences.”

Items 39 and 40, which are specific to Maine, were eliminated to make the survey more inclusive.

Items 41-43 were modified so that those from law enforcement agencies can respond based on support they receive from other law enforcement agencies. For example, question 41 (which is question 37 on the revised instrument, see Appendix H) now reads “My agency receives support from law enforcement entities. If you are a law enforcement agency, please indicate if you receive support from other law enforcement entities.”

Item 56 was eliminated because it included language which confused most participants. This language centered around use of the term “sociodemographic.” Because this term is rather complex and faceted, elimination was considered preferable to inserting the text necessary to explain it into the instrument. For those without a strong, prior understanding of the notion of sociodemographics, responses to this item are unlikely to be accurate measures of the target construct.

In item 94, synonyms for “codified” were added to clarify the use of that term. This item (which is question 78 on the revised instrument, see Appendix H) now includes the terms “systematic” and “deliberate” to help participants understand what the item is trying to capture.

Item 107 was altered to indicate that a variety of animal *personalities* should be available for adoption at any given time, not a variety of animal breeds or species.

A final item (question 92 on the revised instrument, see Appendix H) was added to determine if respondents feel they know enough about their organizations. A plethora of “neutral” or “I don’t know” responses, in conjunction with a positive response on item 92, may indicate that a particular participant is under-informed about her/his agency. However, “neutral” responses without positive responses on item 92 may indicate genuine neutrality.

The eliminations and edits to the draft instrument reduced its length from 196 total items to 142. This represents a reduction of approximately 28%, making the instrument much shorter and more manageable.

Component separation. An anticipated concern regarding the refining of this instrument is why the revealed components were not separated into different portions of the instrument. This separation might enable participants to fill out only the instrument sections that correspond to their roles and organizations, thereby making the instrument even more manageable in implementation. Additionally, reorganizing the instrument by components may be a logical arrangement. Despite these points, the refined instrument maintains the previous order of questions, for a variety of reasons. Firstly, some of the

components overlap. While the items which appear under more than one component load onto each differently, this does beget the question of how to order these particular items. Furthermore, the current order of items follows a logical linguistic progression, such that neighboring items should make conceptual sense to respondents. However, and perhaps most importantly, refusal to re-organize the instrument by factors avoids the problem of respondents bringing *a priori* notions of which sections may apply to them to their responses. For example, a respondent working in the criminal justice system may choose to answer only questions which pertain to that line of work. Questions related to this line of work include items 40 and 41, among others (see Appendix H). However, this respondent may not realize that her/his agency could improve the welfare of animals in her/his service area by adopting new inter-organizational policies. By only answering questions which respondents *already* feel are relevant, they close themselves off to potential revelations which could lead to improved animal welfare outcomes in their service areas. If a respondent truly feels an item does not apply to her/him, s/he can always check the newly-provided “does not apply” box. Additionally, asking respondents to complete the entirety of the instrument may reveal interesting trends and useful suggestions for further refinement of the instrument, future research, and improved animal welfare practices.

Envisioned Uses of the Instrument

It is the hope of the present researcher that the refined instrument will be used in two primary ways. Firstly, the instrument may be used at the request of a specific animal welfare entity to determine the degree to which it adheres to best practices. This degree

of adherence, both generally and within certain domains captured by the instrument, may then be used to suggest improvements to that entity's operations. Improved operations may in turn improve the welfare of animals in that organization's service area.

Secondly, the instrument may be used by researchers to determine the general adherence to best practices for all animal welfare entities within a given area. Again, this degree of adherence may be used to suggest improvements to these organizations' operations, which may in turn impact animal welfare outcomes within that specific area. By limiting data collection to a specific area which is self-contained in some way, longitudinal studies of whether the improvements suggested by the instrument actually impact animal welfare outcomes may be conducted.

Ultimately, it is the goal of the present research that the developed instrument will serve as a tool in the repertoire of animal welfare researchers and advocates who may use it to improve their own or others' practices, or who may employ it in ways not yet envisioned by its author.

Discussion

Significance of Study

The development of an instrument which measures animal welfare entities' adherence to best practices is a valuable endeavor for several reasons. Firstly, animals are sentient creatures, and as such are aware of their own suffering and maltreatment (WAP, 2016). It is therefore our duty as researchers to use our skills to try to help them. Furthermore, we must never let our scientific consideration of animals preclude our ethical consideration of their welfare. Indeed, animal welfare science and ethics are

inextricably linked (Lund et al., 2006; Mench, 1998; Rollin, 2015). When considering animals and their welfare, we must first assess their quality of life, and then ask ourselves if that quality attains our ethical standards. This quality of life should be considered from both biological and cognitive-emotional perspectives (Lund et al., 2006; Lundmark et al., 2014; Mench, 1998; Yeates, 2013). Just as we cannot assess an animal's biological well-being "along a single linear axis called pain" (Rollin, 2015, p. 762), an animal's life cannot be measured purely by its physiological or agricultural output (Harvey & Hubbard, 2013). Rather, an animal's well-being should include consideration of its happiness, its ability to display species-specific behaviors, and its overall quality of life (ASV, 2010; Lund et al., 2006; Mench, 1998). Only after such consideration may we use science to inform interventions which may impact that quality of life (Rollin, 2015). Ultimately, ethics must always sit at the foundation of any scientific inquiry regarding the welfare of animals.

Additionally, the development of an instrument which measures animal welfare entities' adherence to best practices is valuable because animals have a unique relationship to humans in an increasingly developed world. Wild animals come into contact with humans as we expand our habitats into theirs; livestock are kept by and sustain us; pets are treated as members of our families; and various people and institutions rely on service animals for functioning and survival. Interaction with animals is inevitable, and we need parameters for how to have these interactions in ways which are respectful of both human and animal. These parameters may take the form of policy, law, methods for scientific inquiry, and more.

Such interactions may be especially important when they reveal destructive behaviors which harm both animals and humans, which is often the case. As highlighted by Vaughn et al. (2009), all markers of antisocial behavior correlate with animal cruelty. Indeed, animal abuse may even serve as a precursor to violence against humans (Parmenter, 2003). As such, Parmenter (2003) advocates that the legal system implement policies which lead to higher conviction rates for animal abuse, as well as harsher penalties for offenders. This may help to combat the reality that “the violent behavior of animal abusers will likely evolve into violence against domestic partners, children, and the general public” (Parmenter, 2003, p. 829). In this way, there is no such thing as “minor animal abuse,” and recognition of such may help improve outcomes for both animals and humans.

Furthermore, violence against animals and humans often co-occurs with other social justice issues. This suggests that developing an instrument which can measure use of animal welfare best practices may reveal methods for improving conditions for both animals and humans. For example, existing literature on domestic and gender-based violence indicates that in abusive settings, intimate partners, children, and family pets are typically all victims of abuse, yet many women who are victims of gender-based violence often delay seeking shelter out of fear for their pets or because local domestic violence shelter providers do not offer services to animals (Ascione et al., 2007; Krienert et al., 2012; Parmenter, 2003; Vaughn et al., 2009). However, serious interventions against animal abuse may help to prevent gender-based violence and other antisocial behaviors in the first place, lessening the need for shelter services.

Ultimately, the value of developing an instrument which assesses animal welfare entities' use of best practices lays in its ability to reveal ways to improve the lives of both animals and humans.

Expectations

Pilot phase. During the pilot phase of the present research, no predictions were made regarding participants' survey responses. This is because the intended use of the data was instrument refinement, not analysis of best practice use. However, during the pilot phase, it was expected that most sample participants would be non-profit volunteers or single-person animal control units. This was a feature of the primary researcher's experience with the types of individuals observed donating their time to causes involving animals. While the former expectation proved accurate, more law enforcement officers, including K9 officers, served as sample participants than animal control officers. This is perhaps due to the fact that most animal control units are indeed operated by single officers.

Future use. When the refined instrument is deployed in the future, it is expected that where individual animal welfare agents receive little or no support from their agencies/organizations, their general adherence to best practices will be poor. Furthermore, where animal welfare organizations have little support from the law enforcement community, it is expected that their adherence to best practices will be low and that their perceptions of animal welfare outcomes will be poor. It is additionally expected that animal welfare practices will be poorest in rural communities, especially in those that do not target the interactions between animal welfare and hunting practices.

Lastly, it is expected that animal welfare practices will be poor in communities where there are few services which target the interactions between animal abuse and gender-based/family violence.

Conversely, where animal welfare practices are comprehensive, consider the many facets of animal well-being, and conceive of animal welfare as a part of a system of social justice, it is expected that adherence to best practices will be high and that perceptions of animal welfare outcomes will be high.

For the Future

As with much research, the present study will likely raise additional questions and demand further research, which is the goal. The topic of measuring and improving animal welfare has not been appropriately or extensively studied. Much of the knowledge surrounding animal welfare outcomes may be anecdotal or based in non-profit and volunteer organizations. These organizations' goals may be to rescue or rehabilitate animals, but not to implement strategies such as public policy, law, social justice interventions, and more. As such, the present research may serve as a stepping stone for addressing animal welfare on increasingly larger scales. Conversely, much research does address strategies such as public policy, law, and agricultural interventions on a broad scale, but does not discuss how to implement those strategies on the local level. Therefore, the present research may also serve as a type of narrowing lens which suggests ways for applying broad strategies on a smaller scale. Several questions for future inquiry include:

- 1) How do different entities define animal welfare?

- 2) Do differences in the definition and conceptualization of animal welfare influence practices?
- 3) What are the primary correlates of animal welfare in a given service area?
- 4) What is the relationship between animal welfare and its correlates?
- 5) Is there a way to target the correlates of animal welfare which may also target the treatment of animals?
- 6) How do the correlates of animal welfare help us to conceptualize the maltreatment of animals as a social justice issue?

In conclusion, it is hoped that the present study will accomplish two primary goals: (1) That it will reveal useful strategies for improving the welfare of animals through its review of the literature, and (2) that it will produce a meaningful survey instrument which can be used to measure animal welfare entities' use of those strategies. It is also hoped that the results of such measurement will be used to improve animal welfare outcomes. Ideally, future research will use the developed instrument to assess use of animal welfare best practices in conjunction with other inquiries regarding animal welfare outcomes and correlates within the social justice sphere.

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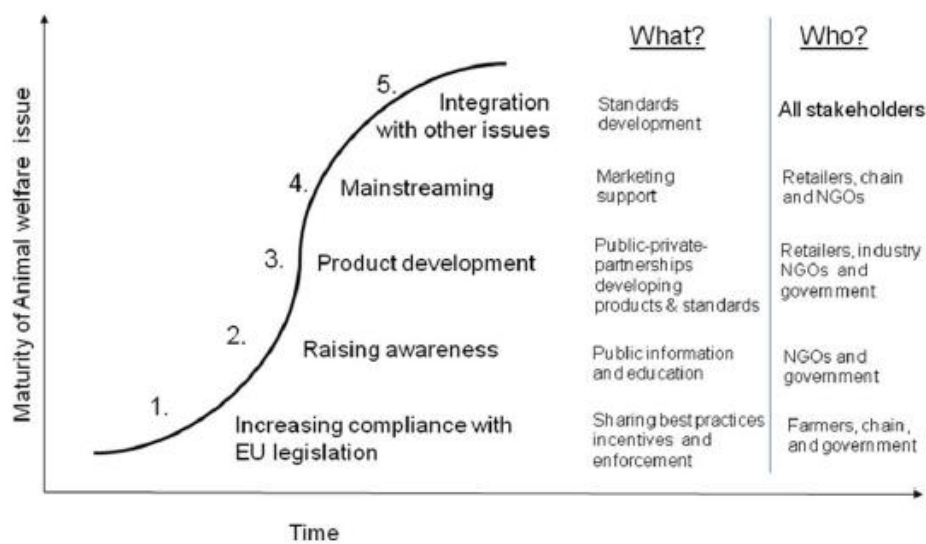
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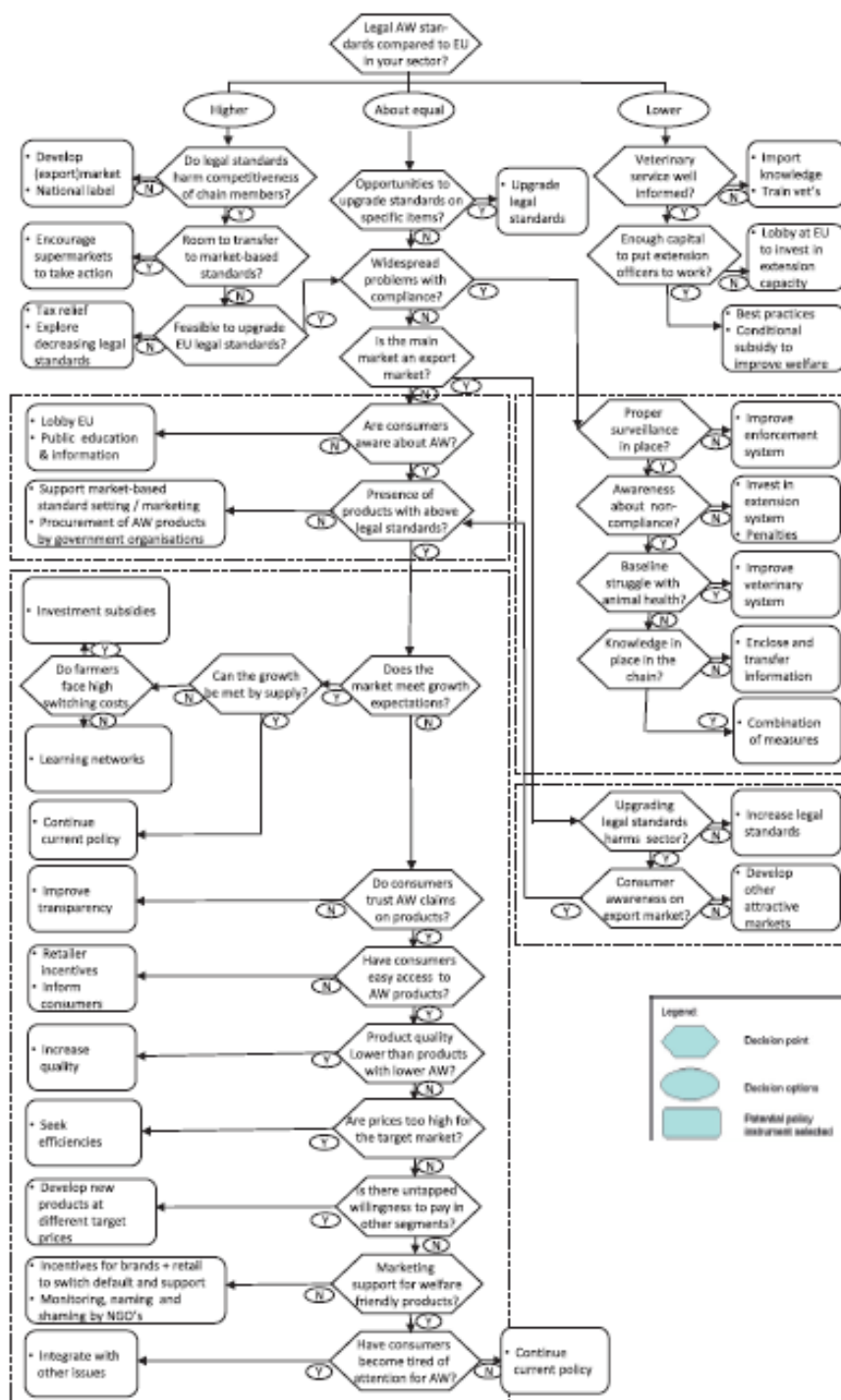
Appendix A

Animal Welfare Development Road

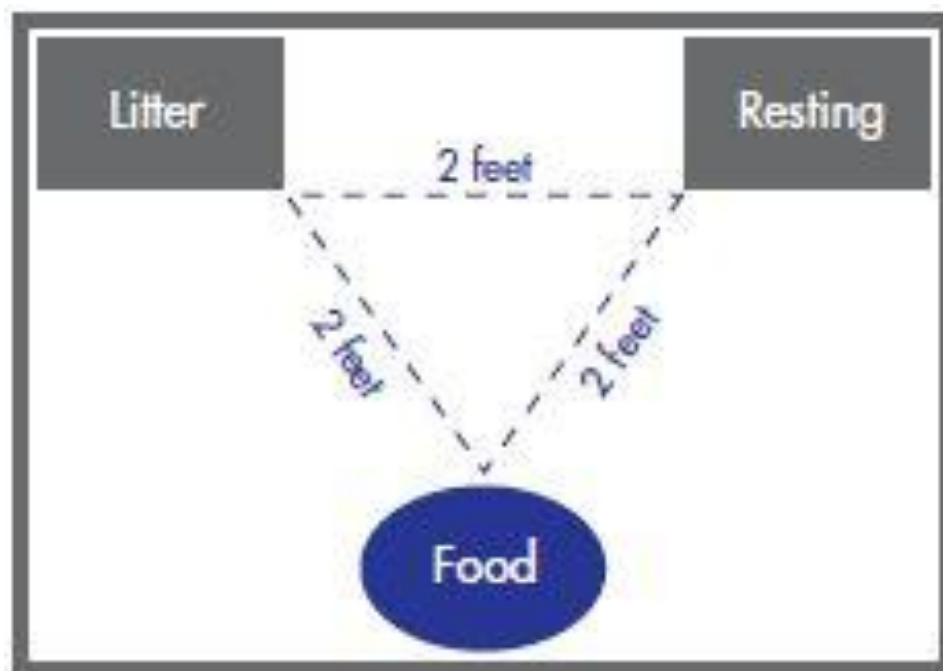
Figure 1. Animal welfare development road [3].



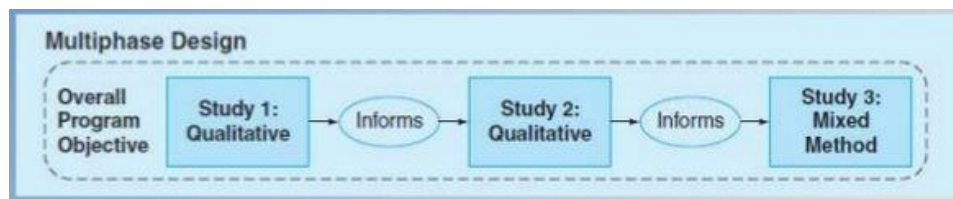
Appendix B Policy Tree



Appendix C
Cat Space Triangulation



Appendix D
Multiphase Mixed Methods Design Example



Appendix E
Research Design Flowchart

Qualitative Methods



Quantitative Methods

Appendix F
Draft Survey Instrument

Animal Welfare Instrument

Please complete the following survey to the best of your ability. There will be instructions preceding each section. Some of the questions may seem unusual, but please answer them as honestly as possible as they serve to validate the survey. All answers are confidential.

Date:

Part I
Descriptive Inquiry

For the following questions, please check off all the boxes which apply to **you**:

- 1) I am a law enforcement officer. ☐
- 2) I am a K9 officer. ☐
- 3) I am a game warden. ☐
- 4) I am a marine, fisheries, and/or wildlife officer. ☐
- 5) I am a park ranger. ☐
- 6) I am an animal control officer. ☐
- 7) I am a humane officer. ☐
- 8) I am a shelter staff member. ☐
- 9) I am a farmer. ☐
- 10) I am a veterinarian or veterinary technician. ☐
- 11) I am a victim services provider. ☐
- 12) I am a volunteer. ☐
- 13) I work in the non-profit sector. ☐
- 14) I work at the local/municipal level. ☐
- 15) I work at the county level. ☐
- 16) I work at the state level. ☐
- 17) I work at the federal/national level. ☐
- 18) I work internationally. ☐
- 19) My job/volunteer work primarily involves dealing with animals. ☐
- 20) My job/volunteer work primarily involves dealing with humans. ☐
- 21) I like and respect animals. ☐

- 22) I enjoy working with animals. ☐
- 23) I own animals. ☐
- 24) I own pets. ☐
- 25) My role is not captured by these categories. ☐

For the following questions, please check off all the boxes which apply to **your organization/agency**:

- 1) My agency is/has a law enforcement unit. ☐
- 2) My agency is/has a K9 unit. ☐
- 3) My agency is/has a game warden service. ☐
- 4) My agency is/has a marine, fisheries, and/or wildlife service. ☐
- 5) My agency is/has a park service. ☐
- 6) My agency is/has an animal control unit. ☐
- 7) My agency is a humane society. ☐
- 8) My agency is a shelter or rescue. ☐
 - a. My shelter/rescue is licensed/registered. ☐
 - b. My shelter/rescue has an advisory board. ☐
- 9) My agency is a farm. ☐
- 10) My agency is a veterinary practice. ☐
- 11) My agency is a domestic violence shelter. ☐
- 12) My agency is primarily operated by volunteers. ☐
- 13) My agency is a non-profit organization. ☐
- 14) My agency operates at the local/municipal level. ☐
- 15) My agency operates at the county level. ☐
- 16) My agency operates at the state level. ☐
- 17) My agency operates at the federal/national level. ☐
- 18) My agency operates internationally. ☐
- 19) The role of my agency primarily involves dealing with animals. ☐
- 20) The role of my agency primarily involves dealing with humans. ☐
- 21) The culture of my agency is one of respect for animals. ☐
- 22) I feel my colleagues respect animals, either on the job or at home. ☐
- 23) I feel my colleagues enjoy working with animals. ☐
- 24) My organization is not captured by these categories. ☐

Part II

Likert Scales

Please indicate to what degree the following statements are representative of you or your agency/organization. An example scale is below.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 1) My agency contributes to the improvement of animal welfare at the local level.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 2) My agency contributes to the improvement of animal welfare beyond the local level.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 3) My agency is a leader in the animal welfare field on broad scale.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 4) My job/volunteer work should deal with animal-related issues more often. (For example, investigating animal cruelty, investigating hunting- or poaching-related crimes, removing animals from neglectful situations, rehabilitating animals, etc.)

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 5) My job/volunteer work should deal with animal-related issues less often.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 6) I contribute to the improvement of animal welfare through the role I serve within my agency.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 7) I contribute to the improvement of animal welfare without any support from my agency.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 8) My agency is generally underfunded.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 9) The departments in my agency that work with animals are underfunded.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 10) My agency is supportive of those who want to work to better the lives of animals, either domesticated or wild.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 11) My agency is neglectful of or actively undermines my efforts or my colleagues' efforts to better the lives of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 12) My agency has a consistent and reliable means of assessing the general well-being of animals.

1-----2-----3-----4-----5-----6-----7
 No interest in developing None, but may develop Some in development Some exist Implemented somewhat Implemented broadly Implemented and consistently updated

- 13) My agency has a consistent and reliable means of assessing animal happiness.

1-----2-----3-----4-----5-----6-----7
 No interest in developing None, but may develop Some in development Some exist Implemented somewhat Implemented broadly Implemented and consistently updated

- 14) My organization considers animals' cognitive-emotional needs when assessing their welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 15) My organization has a way of measuring animals' cognitive-emotional well-being.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

- 16) My organization only considers biological/physiological metrics when assessing animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 17) My organization considers animals' behavioral needs when assessing animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 18) My organization only considers agricultural productivity when assessing animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 19) My organization considers animal suffering as a component of animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 20) My organization considers group norms when assessing animal welfare. (For example, it considers the general treatment of all pets in the service area when considering the well-being of one, specific dog.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 21) My organization considers freedom from hunger and thirst when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 22) My organization considers freedom from discomfort when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 23) My organization considers freedom from pain, injury, or disease when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 24) My organization considers freedom to express normal behavior when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 25) My organization considers freedom from fear and distress when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 26) I believe animals are entitled to humane and just treatment.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 27) My organization holds the belief that animals are entitled to humane and just treatment.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 28) I believe animals are sentient creatures.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 29) My organization holds the belief that animals are sentient creatures.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 30) I have a set of moral principles which governs how I treat animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 31) My organization has a set of moral principles which governs how we expect others to treat animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 32) My organization looks for play behaviors and other markers of satisfaction when assessing animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 33) My organization seeks to comply with legislation promoting the well-being of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 34) My organization, through its marketing and/or practices, seeks to raise awareness about animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 35) My organization actively develops products which are more humane to produce.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 36) My organization works towards mainstreaming humane animal products.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 37) My organization seeks to integrate animal welfare with agricultural and economic issues.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 38) My organization seeks to integrate animal welfare with issues beyond agriculture and economics.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 39) My organization emphasizes the fact that Maine was the first state to introduce an animal welfare statute.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 40) My organization appeals to a sense of Maine identity when promoting positive animal welfare.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 41) My agency receives support from law enforcement entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 42) My agency contributes to the improvement of animal welfare without any support from law enforcement.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 43) My agency is actively stymied in its efforts to improve animal welfare by law enforcement entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 44) My organization takes the prosecution of animal-based crimes, such as animal abuse, very seriously.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 45) My organization seeks to influence the criminal justice system so animal-based crimes will be prosecuted more often.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 46) My organization seeks to influence the criminal justice system so those who have been convicted of animal-based crimes will receive strict sentences.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 47) My organization either is or works with law enforcement entities to facilitate the prosecution of animal-based crimes.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 48) My organization issues fines against those who perpetrate animal-based crimes.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 49) My organization seeks to influence the criminal justice system so those who have been convicted of animal-based crimes will be severely fined.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 50) My organization donates fines levied against those who commit animal-based crimes to animal welfare entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 51) My organization is a part of the criminal justice system, and requires that sentencing of those convicted of animal-based crimes include a severe fine to be donated to animal welfare entities.

0-----1-----2-----3-----4-----5-----6-----7
 Does not apply Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 52) My organization is a veterinary practice, and requires all practitioners to report suspected animal-based crimes to the appropriate authorities.

0-----1-----2-----3-----4-----5-----6-----7
 Does not apply Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 53) My organization encourages or requires the reporting of suspected animal-based crimes to the appropriate authorities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 54) I suspect or am aware of colleagues who have been involved in animal-related crime, such as animal neglect, animal cruelty, trafficking of exotic animals, etc.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 55) I suspect or am aware of colleagues who have been involved in crime which could be characterized as domestic violence, sexual assault, child abuse, elder abuse, child neglect, or hate crime.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 56) My agency seeks to improve animal welfare by targeting sociodemographic groups with a history of cruelty towards animals.

0-----1-----2-----3-----4-----5-----6-----7
 I don't know Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 57) My agency seeks to improve animal welfare by targeting groups with a history of antisocial behaviors.

0-----1-----2-----3-----4-----5-----6-----7
 I don't know Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 58) My agency seeks to improve animal welfare by targeting psychiatric disorders which correlate with animal cruelty.

0-----1-----2-----3-----4-----5-----6-----7
 I don't know Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

59) My agency addresses the intersection of human and animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

60) My agency seeks to improve animal welfare indirectly.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

61) My agency seeks to improve animal welfare by targeting perpetrators of gender-based violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

62) My agency seeks to improve animal welfare by serving victim/survivors of gender-based violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

63) My agency seeks to improve animal welfare by targeting perpetrators of family violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

64) My agency seeks to improve animal welfare by serving victim/survivors of family violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

65) My agency is a domestic violence shelter, and welcomes the pets of victim/survivors.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

66) My agency is an animal shelter, and welcomes the pets of domestic or family violence victims while those individuals are in shelter.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

67) My organization seeks to impact the local culture regarding animal abuse and respect for life.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

68) My agency has a mission and/or vision statement regarding the treatment of animals.

1-----2-----3-----4-----5-----6-----7
 No interest None, but Some in Some exist Implemented Implemented Implemented and
 in developing may develop development somewhat broadly consistently updated

69) My agency has policies in place which govern the treatment of animals.

1-----2-----3-----4-----5-----6-----7
 No interest None, but Some in Some exist Implemented Implemented Implemented and
 in developing may develop development somewhat broadly consistently updated

70) My agency has policies in place which govern the investigation and/or prosecution of animal-related crimes.

1-----2-----3-----4-----5-----6-----7
 No interest None, but Some in Some exist Implemented Implemented Implemented and
 in developing may develop development somewhat broadly consistently updated

71) My organization is a veterinary school, and imparts lessons on proactively improving animal welfare within the field.

0-----1-----2-----3-----4-----5-----6-----7
 Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

72) My organization, which operates on the federal level, sends strong, clear signals regarding animal welfare policies to states and other local constituencies.

0-----1-----2-----3-----4-----5-----6-----7
 Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

73) My organization, which operates on the federal level, provides grant funds to entities seeking to improve animal welfare on the local level.

0-----1-----2-----3-----4-----5-----6-----7
 Does not apply Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

74) My organization looks to federal entities for guidance on how to impact animal welfare within its service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

75) My organization looks to regional entities for guidance on how to impact animal welfare within its service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree Agree

- 76) My organization encourages locals to enroll in national animal welfare organizations, such as the Humane Society of the United States.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 77) My organization encourages locals to enroll in regional animal welfare organizations.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 78) My organization encourages locals to enroll in local animal welfare organizations.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 79) My organization is located in/serves an area where hunting is prominent.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 80) My organization is located in/serves an area where sustenance hunting is prominent.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 81) My organization is located in/serves an area where non-sustenance, sports hunting is prominent.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 82) My organization attempts to reconcile differences between hunting and animal welfare practices.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 83) My organization is located in/serves a rural area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 84) My organization is located in/serves an urban area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

- 85) My organization is located in/serves a suburban area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

86) Most people in my service area learn their social behaviors, including how to treat animals, from their families alone.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

87) Most people in my service area learn their social behaviors, including how to treat animals, from groups beyond the family.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

88) My organization actively attempts to teach people in the service area social behaviors regarding the treatment of animals.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

89) I believe the welfare of cats is generally worse than other animals in my area.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

90) I believe the welfare of dogs is generally better than other animals in my area.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

91) I believe animal welfare outcomes in my service area are positive.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

92) I believe I contribute to positive animal welfare outcomes in my service area.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

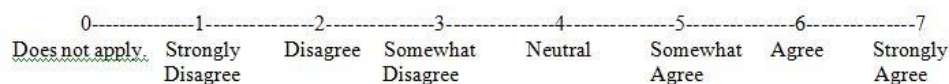
93) I believe my agency contributes to positive animal welfare outcomes in my service area.

1-----2-----3-----4-----5-----6-----7
Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
Disagree Disagree Agree Agree

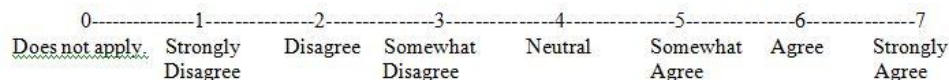
94) My agency has codified strategies for improving animal welfare in its service area.

1-----2-----3-----4-----5-----6-----7
No interest None, but Some in Some exist Implemented Implemented Implemented and
in developing may develop development somewhat broadly consistently updated

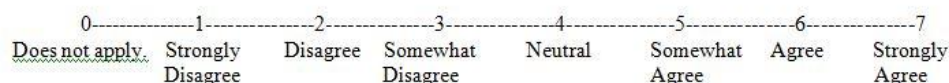
95) My agency provides appropriate amounts of food and water to animals.



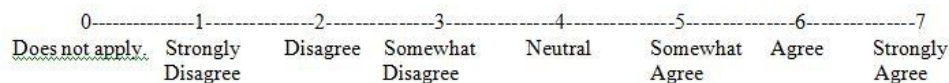
96) My agency provides clean and warm living spaces to animals.



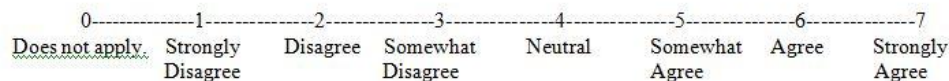
97) My agency enlists the help of veterinary professionals.



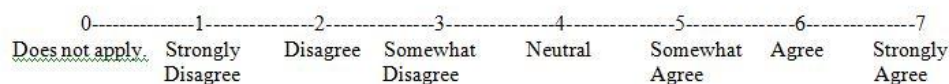
98) My agency separates the living areas of prey and predatory species in our facility.



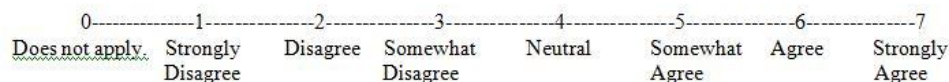
99) My agency provides species-appropriate housing to animals.



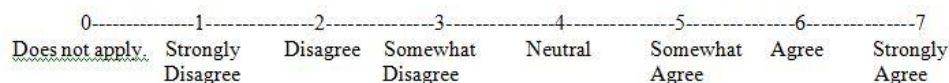
100) My agency provides animals with opportunities to control their environments.



101) My agency provides animals with places to hide in their living quarters.



102) My agency attempts to reduce animal lengths of stay in our facility to two weeks or less.



- 103) My agency takes into consideration individual animals' needs when determining how long they should be kept in our facility.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 104) My agency provides exercise-based enrichment to the animals in our facility.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 105) My agency provides mental stimulation-based enrichment to the animals in our facility.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 106) My agency provides socialization-based enrichment to the animals in our facility.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 107) My agency keeps a variety of animals available for adoption at any given time.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 108) My agency does not provide an overwhelming number of animals available for adoption at any given time.

0-----1-----2-----3-----4-----5-----6-----7
Does not apply Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

- 109) My favorite color is blue.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

- 110) I enjoy sushi.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Disagree Agree Agree

111) I think the printed word is the most meaningful medium for storytelling.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

112) I think my parents' generation is more level-headed than my own.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

113) I think everyone should learn to speak at least two languages.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

114) Human colonies on Mars are desirable and inevitable.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

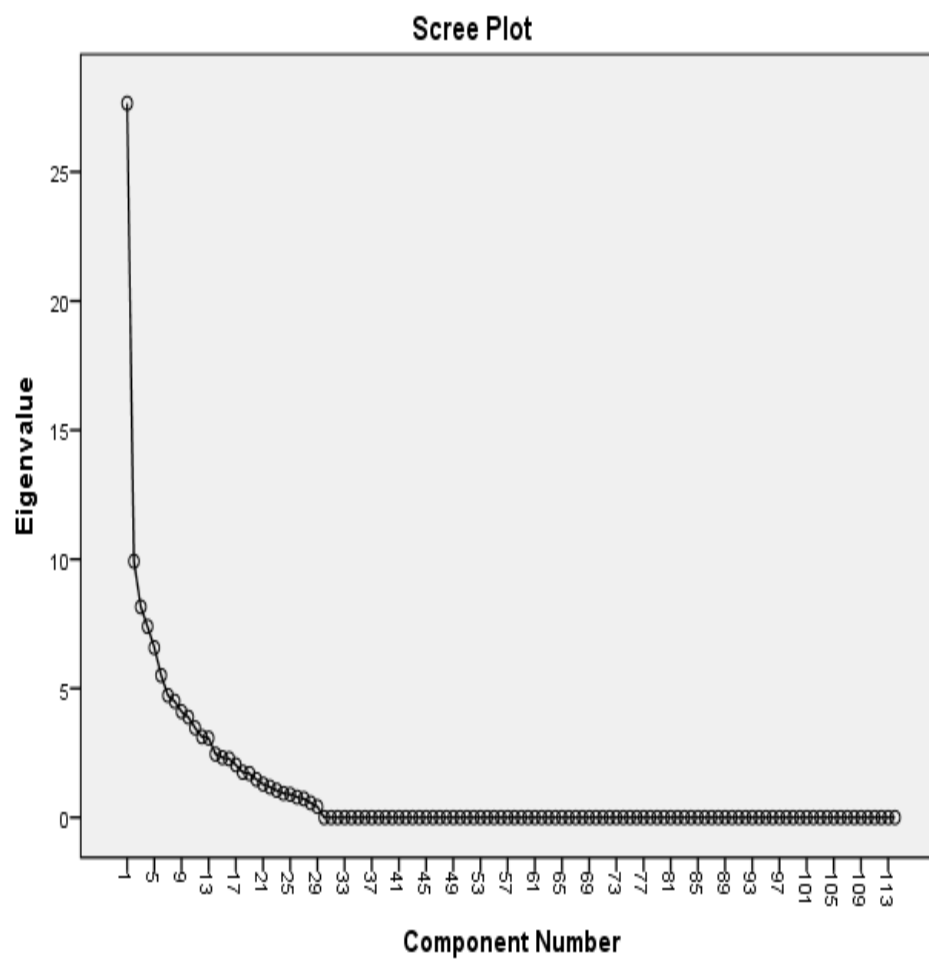
Part III*True or False*

For the following section, please indicate whether the statements are mostly true of you, or mostly false. Please be as honest as possible. All answers are confidential.

- 1) Before voting, I thoroughly investigate the qualifications of all the candidates.
True ☐ False ☐
- 2) I never hesitate to go out of my way to help someone in trouble.
True ☐ False ☐
- 3) It is sometimes hard for me to go on with my work if I am not encouraged.
True ☐ False ☐
- 4) I have never intensely disliked anyone.
True ☐ False ☐
- 5) On occasion, I have doubts about my ability to succeed in life.
True ☐ False ☐
- 6) I sometimes feel resentful if I don't get my way.
True ☐ False ☐
- 7) I am always careful about my manner of dress.
True ☐ False ☐
- 8) My table manners at home are as good as when I eat out in a restaurant.
True ☐ False ☐
- 9) If I could get into a movie without paying and be sure I was not seen, I would probably do it.
True ☐ False ☐
- 10) On a few occasions, I have given up doing something because I thought too little of my ability.
True ☐ False ☐
- 11) I like to gossip at times.
True ☐ False ☐
- 12) There have been times when I felt like rebelling against people in authority even though I knew they were right.
True ☐ False ☐
- 13) No matter whom I'm talking to, I'm always a good listener.
True ☐ False ☐
- 14) I can remember "playing sick" to get out of something.
True ☐ False ☐
- 15) There have been occasions when I took advantage of someone.
True ☐ False ☐
- 16) I'm always willing to admit it when I make a mistake.

- True ☐ False ☐
- 17) I always try to practice what I preach.
True ☐ False ☐
- 18) I don't find it particularly difficult to get along with loud-mouthed, obnoxious people.
True ☐ False ☐
- 19) I sometimes try to get even rather than forgive and forget.
True ☐ False ☐
- 20) When I don't know something, I don't at all mind admitting it.
True ☐ False ☐
- 21) I am always courteous, even to people who are disagreeable.
True ☐ False ☐
- 22) At times I have really insisted on having things my own way.
True ☐ False ☐
- 23) There have been occasions when I felt like smashing things.
True ☐ False ☐
- 24) I would never think of letting someone else be punished for my wrong-doings.
True ☐ False ☐
- 25) I never resent being asked to return a favor.
True ☐ False ☐
- 26) I have never been irked when people expressed ideas different from my own.
True ☐ False ☐
- 27) I never make a long trip without checking the safety of my car.
True ☐ False ☐
- 28) There have been times when I was quite jealous of the good fortune of others.
True ☐ False ☐
- 29) I have almost never felt the urge to tell someone off.
True ☐ False ☐
- 30) I am sometimes irritated by people who ask favors of me.
True ☐ False ☐
- 31) I have never felt that I was punished without cause.
True ☐ False ☐
- 32) I sometimes think when people have a misfortune they only got what they deserved.
True ☐ False ☐
- 33) I have never deliberately said something that hurt someone's feelings.
True ☐ False ☐

Appendix G
Principal Components Analysis Scree Plot



Appendix H
Revised Animal Welfare Instrument

Animal Welfare Instrument

Part I

Section A

*For the following questions, please check off all the boxes which apply to **you**. If you hold more than one role, pick one and answer all questions accordingly.*

- 1) I am a law enforcement officer. ☐
- 2) I am a K9 officer. ☐
- 3) I am a game warden. ☐
- 4) I am a marine, fisheries, and/or wildlife officer. ☐
- 5) I am a park ranger. ☐
- 6) I am an animal control officer. ☐
- 7) I am a humane officer. ☐
- 8) I am a shelter staff member. ☐
- 9) I am a farmer. ☐
- 10) I am a veterinarian or veterinary technician. ☐
- 11) I am a victim services provider. ☐
- 12) I am a volunteer. ☐
- 13) I work in the non-profit sector. ☐
- 14) I work at the local/municipal level. ☐
- 15) I work at the county level. ☐
- 16) I work at the state level. ☐
- 17) I work at the federal/national level. ☐
- 18) I work internationally. ☐
- 19) My job/volunteer work primarily involves dealing with animals. (If this box is selected, you may not select the box below in item 20.) ☐
- 20) My job/volunteer work primarily involves dealing with humans. (If this box is selected, you may not select the box above in item 19.) ☐
- 21) I like and respect animals. ☐
- 22) I enjoy working with animals. ☐
- 23) I own pets. ☐

24) I own non-pet working or service animals. ☐

25) My role is not captured by these categories. ☐

Section B

*For the following questions, please check off all the boxes which apply to **your organization/agency**. If you belong to more than one organization, please respond according to the role you indicated in Section A.*

- 1) My agency is/has a law enforcement unit. ☐
- 2) My agency is/has a K9 unit. ☐
- 3) My agency is/has a game warden service. ☐
- 4) My agency is/has a marine, fisheries, and/or wildlife service. ☐
- 5) My agency is/has a park service. ☐
- 6) My agency is/has an animal control unit. ☐
- 7) My agency is a humane society. ☐
- 8) My agency is a shelter or rescue. ☐
 - a. My shelter/rescue is licensed/registered. ☐
 - b. My shelter/rescue has an advisory board. ☐
- 9) My agency is a farm. ☐
- 10) My agency is a veterinary practice. ☐
- 11) My agency is a commercial enterprise, such as a doggy daycare or a grooming facility. ☐
- 12) My agency is a domestic violence shelter. ☐
- 13) My agency is primarily operated by volunteers. ☐
- 14) My agency is a non-profit organization. ☐
- 15) My agency operates at the local/municipal level. ☐
- 16) My agency operates at the county level. ☐
- 17) My agency operates at the state level. ☐
- 18) My agency operates at the federal/national level. ☐
- 19) My agency operates internationally. ☐
- 20) The role of my agency primarily involves dealing with animals. ☐
- 21) The role of my agency primarily involves dealing with humans. ☐
- 22) The culture of my agency is one of respect for animals. ☐
- 23) I feel my colleagues respect animals, either on the job or at home. ☐
- 24) I feel my colleagues enjoy working with animals. ☐
- 25) My organization is not captured by these categories. ☐

Part II

For each of the following questions, please indicate to what degree the following statements are representative of you or your agency/organization. Please check the box if you do not know or if a question does not apply to you or your organization.

- 1) My agency contributes to the improvement of animal welfare at the local level.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

- 2) My agency contributes to the improvement of animal welfare beyond the local level.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

- 3) My agency is a leader in the animal welfare field on broad scale.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

- 4) My job/volunteer work should deal with animal-related issues more often. (For example, investigating animal cruelty, investigating hunting- or poaching-related crimes, removing animals from neglectful situations, rehabilitating animals, etc.)

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

- 5) My job/volunteer work should deal with animal-related issues less often.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

- 6) I contribute to the improvement of animal welfare through the role I serve within my agency.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 7) I contribute to the improvement of animal welfare without any support from my agency.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 8) My agency is generally underfunded.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 9) The departments in my agency that work with animals are underfunded.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 10) My agency is supportive of those who want to work to better the lives of animals, either domesticated or wild.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 11) My agency is neglectful of or actively undermines my efforts or my colleagues' efforts to better the lives of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

- 12) My agency has a consistent and reliable means of assessing the general well-being of animals. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

- 13) My agency has a consistent and reliable means of assessing animal happiness. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

- 14) My organization considers animals' cognitive-emotional needs when assessing their welfare. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

- 15) My organization has a way of measuring animals' cognitive-emotional well-being. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

- 16) My organization only considers biological/physiological metrics when assessing animal welfare. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 17) My organization considers animals' behavioral needs when assessing animal welfare. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 18) My organization only considers agricultural productivity when assessing animal welfare. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 19) My organization considers animal suffering as a component of animal welfare. (If your organization works with a specific type of animal, respond based on that animal type, and not based on others unrelated to your organization.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

- 20) My organization considers animal group norms when assessing animal welfare. (For example, it considers the general treatment of all pets in the service area when considering the well-being of one, specific dog.)

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

21) My organization considers freedom from hunger and thirst when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

22) My organization considers freedom from discomfort when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

23) My organization considers freedom from pain, injury, or disease when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

24) My organization considers freedom from fear and distress when assessing an animal or animals' welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

25) I believe animals are entitled to humane and just treatment.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

26) I believe animals are sentient creatures, capable of feeling pain and consciously experiencing their own existences.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

27) My organization holds the belief that animals are sentient creatures, capable of feeling pain and consciously experiencing their own existences.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

28) I have a set of moral principles which governs how I treat animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

29) My organization has a set of moral principles which governs how we expect others to treat animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

30) My organization looks for play behaviors and other markers of satisfaction when assessing animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

31) My organization seeks to comply with legislation promoting the well-being of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

32) My organization, through its marketing and/or practices, seeks to raise awareness about animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

33) My organization actively develops products which are more humane to produce.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

34) My organization works towards mainstreaming humane animal products.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

35) My organization seeks to integrate animal welfare with agricultural and economic issues.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

36) My organization seeks to integrate animal welfare with issues beyond agriculture and economics.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

37) My agency receives support from law enforcement entities. If you are a law enforcement agency, please indicate if you receive support from other law enforcement entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

38) My agency contributes to the improvement of animal welfare without any support from law enforcement. If you are a law enforcement agency, please indicate if you lack support from other law enforcement entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

39) My agency is actively stymied in its efforts to improve animal welfare by law enforcement entities. If you are a law enforcement agency, please indicate if you are actively stymied by other law enforcement entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

40) My organization takes the prosecution of animal-based crimes, such as animal abuse, very seriously.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

41) My organization either is or works with law enforcement entities to facilitate the prosecution of animal-based crimes.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

42) My organization issues fines against those who perpetrate animal-based crimes.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

43) My organization seeks to influence the criminal justice system so those who have been convicted of animal-based crimes will be severely fined.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

44) My organization donates fines levied against those who commit animal-based crimes to animal welfare entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

45) My organization is a part of the criminal justice system, and requires that sentencing of those convicted of animal-based crimes include a severe fine to be donated to animal welfare entities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

46) My organization encourages or requires the reporting of suspected animal-based crimes to the appropriate authorities.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

47) I suspect or am aware of colleagues who have been involved in animal-related crime, such as animal neglect, animal cruelty, trafficking of exotic animals, etc.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

48) I suspect or am aware of colleagues who have been involved in crime which could be characterized as domestic violence, sexual assault, child abuse, elder abuse, child neglect, or hate crime.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

49) My agency addresses the intersection of human and animal welfare.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

50) My agency seeks to improve animal welfare by targeting perpetrators of gender-based violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

51) My agency seeks to improve animal welfare by serving victim/survivors of gender-based violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

52) My agency seeks to improve animal welfare by serving victim/survivors of family violence.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

53) My agency is a domestic violence shelter, and welcomes the pets of victim/survivors.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

54) My agency is an animal shelter, and welcomes the pets of domestic or family violence victims while those individuals are in shelter.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

55) My agency has a mission and/or vision statement regarding the treatment of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

56) My agency has policies in place which govern the treatment of animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

57) My agency has policies in place which govern the investigation and/or prosecution of animal-related crimes.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

58) My organization is a veterinary school, and imparts lessons on proactively improving animal welfare within the field.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

59) My organization, which operates on the federal level, sends strong, clear signals regarding animal welfare policies to states and other local constituencies.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

60) My organization looks to federal entities for guidance on how to impact animal welfare within its service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

61) My organization looks to regional entities for guidance on how to impact animal welfare within its service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

62) My organization encourages locals to enroll in national animal welfare organizations, such as the Humane Society of the United States.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

63) My organization encourages locals to enroll in regional animal welfare organizations.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

64) My organization encourages locals to enroll in local animal welfare organizations.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

65) My organization is located in/serves an area where hunting is prominent.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

66) My organization is located in/serves an area where sustenance hunting is prominent.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

67) My organization is located in/serves an area where non-sustenance, sports hunting is prominent.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

68) My organization attempts to reconcile differences between hunting and animal welfare practices.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

69) My organization is located in/serves a rural area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

70) My organization is located in/serves an urban area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

71) My organization is located in/serves a suburban area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

72) Most people in my service area learn their social behaviors, including how to treat animals, from their families alone.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

73) Most people in my service area learn their social behaviors, including how to treat animals, from groups beyond the family.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Disagree Somewhat Disagree Neutral Somewhat Agree Agree Strongly Agree

Check here if you do not know or if this question does not apply to you. ☐

74) I believe the welfare of dogs is generally better than other animals in my area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

75) I believe animal welfare outcomes in my service area are positive.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

76) I believe I contribute to positive animal welfare outcomes in my service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

77) I believe my agency contributes to positive animal welfare outcomes in my service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

78) My agency has codified/systematic/deliberate strategies for improving animal welfare in its service area.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

79) My agency provides appropriate amounts of food and water to animals.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

80) My agency provides clean and warm living spaces to animals.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

81) My agency separates the living areas of prey and predatory species in our facility.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

82) My agency provides species-appropriate housing to animals.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

83) My agency provides animals with opportunities to control their environments.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

84) My agency provides animals with places to hide in their living quarters.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

85) My agency attempts to reduce animal lengths of stay in our facility to two weeks or less.

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly	Disagree	Somewhat	Neutral	Somewhat	Agree	Strongly
Disagree		Disagree		Agree		Agree

Check here if you do not know or if this question does not apply to you. ☐

86) My agency takes into consideration individual animals' needs when determining how long they should be kept in our facility.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

87) My agency provides exercise-based enrichment to the animals in our facility.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

88) My agency provides mental stimulation-based enrichment to the animals in our facility.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

89) My agency provides socialization-based enrichment to the animals in our facility.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

90) My agency keeps a variety of animal personalities available for adoption at any given time.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

91) My agency does not provide an overwhelming number of animals available for adoption at any given time.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

92) I feel I know adequately about my organization.

1-----2-----3-----4-----5-----6-----7
 Strongly Disagree Somewhat Neutral Somewhat Agree Strongly
 Disagree Disagree Agree Agree

Check here if you do not know or if this question does not apply to you. ☐

Elsbeth K. Paige-Jeffers is an animal lover working in the leadership, policy, and advocacy fields. She has a B.A. in Visual Art and French from Bowdoin College, a B.A. in Social and Behavioral Sciences from the University of Southern Maine, and a M.A. in Leadership Studies from the University of Southern Maine. Elsbeth is passionate about using her expertise and advocacy to reach underserved populations, including animals. She also plays, referees, and coaches rugby, cultivating her compassion, communication, and leadership. Elsbeth lives in Maine with her wife and dog.