HUMAN RIGHTS QUARTERLY

Animals Are People Too: Explaining Variation in Respect for Animal Rights

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ABSTRACT

In this article, we empirically test explanations for variation in support for animal rights at the individual level and across the United States. We draw on a combination of national public opinion surveys and cross-sectional data on animal rights laws from the fifty US states. We find a strong connection between recognition of human rights and animal rights both at the individual attitude level and at the US state policy level. Our results demonstrate that support for animal rights strongly links to support for disadvantaged or marginalized human populations, including LGBT groups, racial minorities, undocumented immigrants, and the poor.

I. INTRODUCTION

Although the philosophical debate about whether—and to what extent—humans ought to recognize the rights of non-human animals has been ongoing for hundreds of years, scholars have yet to conduct a comprehensive and systematic analysis of why some people or polities do, or do not, support animal rights. It is well documented, however, that views on whether animals deserve rights, and exactly what rights they deserve, vary widely amongst individuals, local political communities, cultures, and nations.[1] According to Gallup's "Values and Beliefs Survey" conducted in 2017, for example, 51 percent of Americans agreed that medical testing on animals is morally

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1. Throughout this article, we will refer to non-human animals as "animals."

acceptable, while 44 percent thought it was morally wrong.[2] In the same survey, 57 percent of Americans said they believed that buying and wearing clothing made of animal fur is morally acceptable, while 39 percent felt that it was morally wrong.[3] A 2015 Gallup poll reported that 32 percent of Americans agreed that "animals deserve the exact same rights as people to be free from harm and exploitation,"[4] and the 1994 General Social Survey found that around 25 percent of Americans believed that "animals should have the same moral rights that human beings have."[5] Approximately 2 percent of Americans opt for a vegan diet,[6] which does not harm animals, while 11 percent are active hunters,[7] and another 26 percent think hunting animals for sport should be prohibited by law.[8]

Similarly, although in recent years there has been a notable surge in the number of animal protection laws enacted by most US states, this phenomenon has not affected all states uniformly.[9] As can be seen in Figure 1.1, according to the Humane Society of the United States, the same animals receive considerably more legal protection in some states, such as California, Colorado, and Oregon, than they do in others, like Arkansas, Wyoming, and Alabama. In Arizona, for example, gestation crates—small metal enclosures used in intensive hog farming—are banned for breeding sows, while Kansas permits them.[10]

The recognition of and respect for animal rights also varies widely at the international level. A 2003 Gallup poll, for example, showed that 54

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2. Jeffrey M. Jones, *Americans Hold Record Liberal Views on Most Moral Issues*, Gallup (11 May 2017), https://news.gallup.com/poll/210542/americans-hold-record-liberal-views-moral-issues.aspx.
3. *Moral Issues*, Gallup, https://news.gallup.com/poll/1681/moral-issues.aspx.
4. Rebecca Riffkin, *In U.S., More Say Animals Should Have Same Rights as People*, Gallup (18 May 2015), https://news.gallup.com/poll/183275/say-animals-rights-people.aspx.
5. Tom W. Smith et al., *General Social Survey, 1972–2014*, GSS Data Explorer, https://gssdataexplorer.norc.org/variables/4727/vshow (data accessed from the GSS Data Explorer website).
6. Frank Newport, *In U.S., 5% Consider Themselves Vegetarians*, Gallup (26 July 2012), https://news.gallup.com/poll/156215/consider-themselves-vegetarians.aspx.
7. John Hayes, *National Survey Shows Continued Support For Hunting and Shooting Sports*, Pittsburgh Post-Gazette (11 Dec. 2011), http://www.post-gazette.com/sports/hunting-fishing/2011/12/11/National-survey-shows-continued-support-for-hunting-and-shooting-sports/stories/201112110233.
8. *11/24: Americans Oppose Big Game Hunting… More Than Six in Ten Favor Legal Ban*, Marist Poll (24 Nov. 2015), http://maristpoll.marist.edu/1124-americans-oppose-big-game-hunting-more-than-six-in-ten-favor-legal-ban/#sthash.wie1AYzR.RktKXdlh.dpbs.
9. Stephan K. Otto, *State Animal Protection Laws—The Next Generation*, 11 Animal L. 131, 131 (2005).
10. *State Rankings 2013*, The Humane Soc'y of the U.S., http://www.humanesociety.org/about/state/humane-state-ranking-2013.html; The Humane Soc'y of the U.S., An HSUS Report: Welfare Issues with Gestation Crates for Pregnant Sows (2013), https://www.humanesociety.org/sites/default/files/docs/hsus-report-gestation-crates-for-pregnant-sows.pdf. Gestation crates are also banned in the European Union, Australia, and New Zealand (this information is in the updated report).

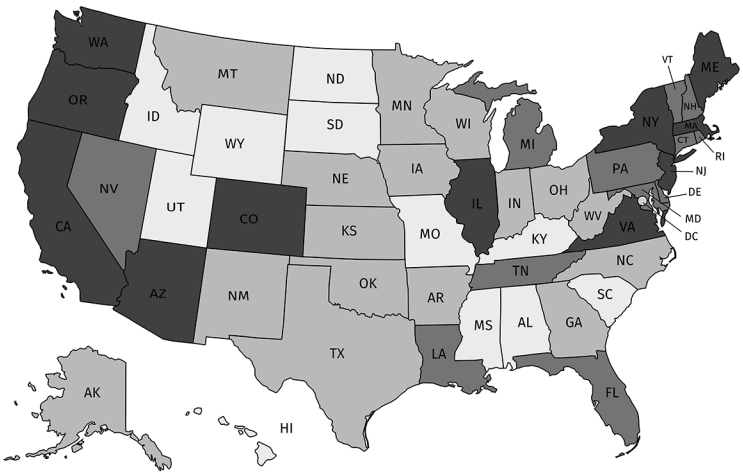

Figure 1. Humane Society of the United States (HSUS) Map of the United States: states with darker colors have stricter and more extensive animal protection laws, and thus have scored better on the 2013 Humane State Ranking conducted by the Humane Society of the United States (HSUS).[11]

percent of British respondents agreed that "medical testing on animals was morally wrong," but only 36 percent of Canadians thought so.[12] Over the last twenty-five years, more and more countries have chosen to ban "battery cages" for hens, the small housing system for industrially farmed birds that leaves hens unable to spread their wings, dust bathe, and nest. Switzerland banned battery cages in 1992, but the cages are still widely used in the United States today.[13] Countries like Sweden and the Netherlands have also banned battery cages, but France, Italy, Spain, and many other EU member countries have not done so fully.[14]

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11. *State Rankings 2013*, *supra* note 10.
12. Heather Mason Kiefer, *Americans, Britons at Odds on Animal Testing*, Gallup (2 Sept. 2003), http://www.gallup.com/poll/9178/americans-britons-odds-animal-testing.aspx.
13. Peter Singer, Animal Liberation: The Definitive Classic of the Animal Movement 112 (2009).
14. Martin Hickman, *The End of Battery Farms in Britain – But Not Europe*, Independent (27 Dec. 2011), https://www.independent.co.uk/news/uk/home-news/the-end-of-battery-farms-in-britain-but-not-europe-6281802.html. In the United States, only seven states—Oregon, Massachusetts, Washington, Michigan, Ohio, Rhode Island, and California—have laws restricting the use of battery cages. Kitty Block, *Victory! Rhode Island Bans Battery Cages for Egg-laying Hens*, The Humane Soc'y of the U.S. (13 July 2018), https://blog.humanesociety.org/2018/07/victory-rhode-island-bans-battery-cages-for-egg-laying-hens.html.

What explains why different people perceive the same creatures as deserving such disparate degrees of welfare and protection? In this article, we examine and empirically test several potential explanations for the variation in recognition of and respect for animal rights, including agricultural interests, wealth, religious beliefs, and political ideology. We also explore the intriguing possibility that attitudes and public policies about animal rights and human rights might be linked to individuals' underlying orientations to the expansiveness of rights—both in terms of what kinds of creatures deserve rights and what kinds of rights those creatures should enjoy. To test these hypotheses, we draw on a combination of public opinion surveys and cross-sectional data on animal rights laws from the fifty US states. We find support for several of these explanations. At the individual level, we find that conservatives and more religiously active Americans are less likely to support animal rights. We also find strong evidence that support for animal rights links to support for disadvantaged or marginalized human groups, including LGBT individuals, racial and ethnic minorities, undocumented immigrants, and the poor. At the US state level, we find that states that provide greater rights and protections to LGBT groups, undocumented immigrants, and victims of hate crimes also tended to extend stronger legal protections for animals. Additionally, we find that Democratic leaning states are more likely to have stricter animal welfare laws, while states that derive higher proportions of their economic output from agriculture were less likely to enact such laws.

Understanding variation in support for animal rights is important for two main reasons. First, supporters of animal rights constitute a significant, but relatively understudied, social movement. People for the Ethical Treatment of Animals (PETA), for example, claims over 6.5 million members and supporters.[15] By comparison, the National Association for the Advancement of Colored People (NAACP) and the American Civil Liberties Union (ACLU) each claim about 500,000 members and Greenpeace claims 2.8 million members worldwide.[16] In the United Kingdom, over 7 percent of all charitable giving goes to organizations focused on animal welfare—more than the percentage that goes toward helping disabled and homeless people combined.[17] Second, and perhaps more importantly, a better understanding of views about animal rights offers a potential window into Americans' attitudes about human rights. Beliefs about animal rights afford insight into the emergence of rights for politically powerless groups, since animals lack direct political

15. *About PETA: Our Mission Statement,* PETA, https://www.peta.org/about-peta/.
16. *Nation's Premier Civil Rights Organization,* NAACP, https://www.naacp.org/nations-premier-civil-rights-organization/; *About,* Greenpeace, https://www.greenpeace.org/usa/about/.
17. Charities Aid Foundation (CAF), CAF UK Giving 2017: An Overview of Charitable Giving in the UK 13 (2017), https://www.cafonline.org/docs/default-source/about-us-publications/caf-uk-giving-web.pdf.

representation or standing—while protection and enforcement of their rights can incur significant costs to humans. Some scholars, like Tibor Machan, contend that the idea of animal rights is simply "a category mistake—it is, to be blunt, to unjustifiably anthropomorphize animals, to treat them as if they were what they are not, namely, human beings."[18] Others, however, assert that the difference between humans and animals is one of degree, rather than kind. Peter Singer, the foremost academic proponent of animal rights, for example, argues that "the mere difference of species cannot in itself determine moral status,"[19] and that the reasons we deploy to explain why humans should have rights ought to inform our views about animal rights as well. If human rights and animal rights are closely connected and the support for each is strongly correlated, then beliefs about animal rights may be a reflection of humans' underlying conception of the nature and origins of rights themselves, as opposed to a simple parochial concern of animal lovers. If so, understanding the nature of beliefs about animal rights may help us understand how people think about who (or what) deserves rights, as well as which specific rights they deserve. This may be especially relevant to understanding how people and polities think about the rights of politically, socially, or economically marginalized groups and individuals, such as physically or mentally disabled citizens, foreign residents, racial and ethnic minorities, or LGBT citizens.

II. THE EXISTING LITERATURE ON VARIATION IN RESPECT FOR ANIMAL RIGHTS

A great deal of scholarly attention has been devoted to the question of why animals might, or might not, deserve rights and what the content of those rights should be. Some scholars argue that sentience, or the capacity to suffer, constitutes the source of moral standing for animals. Others argue that the concept of rights is distinctively human and that only humans hold the requisite traits that are morally relevant, such as rational agency and the capacity for reciprocal recognition of rights.[20] Most of these scholars are

18. Tibor R. Machan, *Do Animals Have Rights*?, 5 Pub. Aff. Q. 163, 163 (1991).
19. Peter Singer, *Speciesism and Moral Status*, 40 Metaphilosophy 567, 567 (2009).
20. For a review of the major debates about the sources of animal rights, see Animal Rights and Human Obligations (Tom Regan & Peter Singer eds.,1976); Animal Rights: Current Debates and New Directions (Cass R. Sunstein & Martha C. Nussbaum eds., 2004). For the argument that animal rights derive from sentience and capacity for suffering, see Jeremy Bentham, *A Utilitarian View*, *in* Animal Rights and Human Obligations, *supra*, at 129–30; Singer, *supra* note 13, at 8; Lesley J. Rogers & Gisela Kaplan, *All Animals Are Not Equal: The Interface between Scientific Knowledge and Legislation for Animal Rights*, *in* Animal Rights: Current Debates and New Directions, *supra*, at 175–77; James Rachels, *Drawing Lines*, *in* Animal Rights: Current Debates and New Directions, *supra*, at 162–65; Martha C.

philosophers who approach the subject from a normative perspective—forwarding arguments about how we *ought* to treat animals, rather than seeking to explain empirically why we treat them the way we do. Some normative scholars do offer arguments and hypotheses that might help explain the current state of animal rights attitudes or policies, but they do not test these arguments with systematic empirical evidence.

Other scholars have explored particular examples of animal rights movements and attempted to explain the historical, organizational, or political reasons for their success or failure.[21] These scholars, however, tend to focus primarily on idiosyncratic contextual factors or the tactical choices of animal rights activists, rather than generalizable explanations for variation in animal rights attitudes or laws across individuals or polities.

Only a handful of studies have sought to provide empirical evidence to test different hypotheses regarding the variation in support for animal rights. Danielle Deemer and Linda Lobao, for example, studied variation in public attitudes towards farm animal welfare, but did not explore other kinds of animal rights. Nor did they explore whether the factors that influence individual attitudes towards farm animals also explain variation in animal rights laws in different polities.[22] David Nibert examined the connection between attitudes toward animal rights and beliefs about human social issues—including questions about women's rights, race, and acceptance of homosexuality.[23] He found that support for animal rights correlated more so with progressive positions on each of these issues. Nibert's study marked an important contribution, but it is limited in several ways. First, it used only a single measure of support for animal rights—asking subjects whether "animals have rights that people should respect"[24]—but without specifying the extent of such rights. Second, Nibert reported only a series of bi-variate correlations between survey responses on human rights and animal rights, without controlling for other factors, like political ideology or education, which are

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Nussbaum, *Capabilities and Human Rights*, 66 Fordham L. Rev. 273, 286–88 (1997) (discusses the criteria with which species ought to be selected for particular rights). For major arguments against the concept of animal rights, see Carl Cohen, *Do Animals Have Rights?,* 7 Ethics & Behav. 91, 91 (1997); Peter Carruthers, The Animals Issue: Moral Theory in Practice 1–2, 113 (1992); Elizabeth Anderson, *Animal Rights and the Values of Nonhuman Life, in* Animal Rights: Current Debates and New Directions, *supra*, at 277; Jan Narveson, *A Case Against Animal Rights, in* Advances in Animal Welfare Science 1986/87, at 191, 198–203 (Michael W. Fox & Linda D. Mickley eds., 1986).

21. *See generally* Robert Garner, *Political Animals: A Survey of the Animal Protection Movement in Britain*, 46 Parliamentary Aff. 333 (1993); Hilda Kean, Animal Rights: Political and Social Change in Britain Since 1800 (1998).
22. Danielle R. Deemer & Linda M. Lobao, *Public Concern with Farm-Animal Welfare: Religion, Politics, and Human Disadvantage in the Food Sector*, 76 Rural Soc. 167, 167 (2011).
23. David A. Nibert, *Animal Rights and Human Social Issues*, 2 Soc'y & Animals 115, 116–18 (1994).
24. *Id.* at 117.

likely to influence both. As a result, it is impossible to know whether views on animal rights are merely a proxy for other liberal attitudes. Finally, as the survey relied on a sample drawn entirely from a single county in Ohio, the generalizability of Nibert's results is impossible to ascertain.

The literature on animal rights, therefore, still lacks a solid empirical foundation to explain why some people believe animals are worthy of more rights than others, and why animals receive greater or lesser protections from different political communities. Nevertheless, it is important to review the extant arguments about variation in respect for animal rights since we seek to test these theories empirically later in this article. Below, we identify and review five main categories of explanations for variation in individual support for animal rights and variation in formal legal protections for animals enacted by states.

III. ANIMAL AGRICULTURE INTERESTS

Perhaps the most commonly articulated explanation for variation in respect for animal rights focuses on humans' economic relationships with animals. According to this explanation, the extent to which societies and individuals exploit animals for sustenance or economic gain shapes their attitudes and policies about animal rights. Many animal rights advocates blame the livestock industry, in particular, for blocking efforts to provide greater protections to animals.[25] Although this argument is forwarded most commonly to explain variation in animal protection laws across different nations or states, it might also explain variations in individual attitudes towards animal rights within societies. If so, we would expect that individuals who earn a living by farming animals, using animal labor, or working with animal products should be less likely to support animal protections than people working in other economic sectors.[26] These individual attitudes might stem from farmers' motivated need to avoid the cognitive dissonance that would result from recognizing animals as beings worthy of rights while continuing to harm and exploit them for profit.[27] Alternately, they could simply be the natural conse-

25. Singer, *supra* note 13, at 95; Jim Mason, *Making a Killing: The Power and Influence of Animal Agriculture in America, in* A Primer on Animal Rights: Leading Experts Write about Animal Cruelty and Exploitation 199, 201 (Kim W. Stallwood ed., 2002); David J. Wolfson & Mariann Sullivan, *Foxes in the Hen House: Animals, Agribusiness, and the Law: A Modern American Fable, in* Animal Rights: Current Debates and New Directions, *supra* note 20, at 205, 205–06. *See generally* Robert Garner, Animals, Politics and Morality (1993).
26. Robert Garner, The Political Theory of Animal Rights 42 (2005).
27. Some evidence for this mechanism is suggested by a German survey conducted by Petra Veser, Kathy Taylor, & Susanne Singer, *Diet, Authoritarianism, Social Dominance Orientation, and Predisposition to Prejudice: Results of a German Survey*, 117 Brit. Food J. 1949, 1949 (2015). They found that meat-eaters were more inclined toward authoritarianism, social dominance, and prejudice towards minority groups than vegetarians and vegans. *Id.*

quence of living in close proximity to animals, where individuals are likely to become desensitized to the routine killing and exploitation of animals.

This logic suggests the following hypothesis:

> *Hypothesis 1*: Individuals or polities with a greater degree of involvement in industrialized agriculture will be less likely to recognize and protect animal rights.

A. Wealth

Scholars have frequently cited economic wealth as a potential explanation for variation in attitudes toward animals. Robert Garner, for example, argues that concerns for animal rights in affluent societies has increased in modern times as "material needs have been largely taken care of" and "attention has been directed towards non-material quality of life issues and moral concerns."[28] More affluent people and societies, this perspective suggests, enjoy the "privilege of concern" for animal rights.[29] This argument aligns closely with Ronald Inglehart's research on "post materialist" values, which claims that the values and concerns of society tends to expand with increasing material wealth.[30] Indeed, scholars have found that animal rights activists tend to be disproportionately middle-class rather than poor, suggesting a connection between wealth and concern for animal welfare.[31]

This leads to the following hypothesis:

> *Hypothesis 2*: Wealthier individuals or polities will be more likely to recognize and protect animal rights.

B. Religious Beliefs

It is impossible to ignore the connection between religious beliefs and attitudes about animals.[32] Most of the world's major religions explicitly prescribe the proper relationship between humans and animals. In the Old Testament, for example, God grants man "dominion over the fish of the sea and over the birds of the heavens and over the livestock and over all the earth and over every creeping thing that creeps on the earth."[33] The Hindu scripture, the Yajur Veda, on the other hand, dictates that "you must not use

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28. Garner, Animals, Politics and Morality, *supra* note 25, at 61.
29. *Id.* at 62.
30. Ronald Inglehart, Culture Shift in Advanced Industrial Society 167 (1990).
31. Wesley V. Jamison & William M. Lunch, *Rights of Animals, Perceptions of Science, and Political Activism: Profile of American Animal Rights Activists*, 17 Sci., Tech. & Hum. Values 438, 452 (1992); Garner, *supra* note 25, at 62.
32. *See generally* Lisa Kemmerer, Animals and World Religions (2011).
33. *Genesis* 1:26.

your God-given body for killing God's creatures, whether they are human or animal."[34] Singer and Lynn White contend that the Judeo-Christian tradition is at least partially to blame for the general disregard for animal welfare in the West because the Bible seems to imply that God created animals for the benefit of people.[35]

Religiosity is one of the few correlates of views on animal rights that previous public opinion surveys confirm. A national survey conducted by Stephen Kellert and Joyce Berry,[36] for example, showed that individuals who rarely or never attended church tended to be more supportive of the general concept of animal rights than those who attended church regularly. Deemer and Lobao provided further evidence for this relationship with their analysis of surveys on Americans' attitudes toward the welfare of farm animals.[37] Likewise, in a survey of veterinary and animal science faculty members, Camie Heleski[38] also reported a negative correlation between religiosity and concern for farm animal welfare.

This discussion suggests the following hypothesis:

> *Hypothesis 3*: Individuals and polities with a higher degree of Christian religiosity will be less likely to recognize and protect animal rights.[39]

C. Political Ideology

A handful of previous studies have explored the connection between political ideology and individual views about animals. John Broida,[40] for example, found that college students who were more liberal in political orientation (on the US liberal-conservative spectrum) were more likely to oppose animal experimentation.[41] Similarly, Julio Videras' study of a 2002 Florida ballot

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34. *Yajur Veda* 12:32.Article does not explicitly make connection between concern for animal welfare and wealth. cle.
35. Peter Singer, Writings on an Ethical Life 87–89 (2001); Lynn White, Jr., *The Historical Roots of Our Ecologic Crisis*, 155 Sci. 1203, 1205 (1967). *See generally* Robin Attfield, A Theory of Value and Obligation (1987); Matthew Scully, Dominion: The Power of Man, the Suffering of Animals, and the Call to Mercy (2003). However, Scully argues that Christianity actually teaches compassion for animals and stewardship rather than exploitation. *Id.* at 4.
36. Stephen R. Kellert & Joyce K. Berry, Knowledge, Affection and Basic Attitudes Toward Animals in American Society: Phase III 102 (1980).
37. Deemer & Lobao, *supra* note 22, at 167–68. *See also* Julio Videras, *Religion and Animal Welfare: Evidence From Voting Data*, 35 J. Socio-Econ. 652, 653 (2006).
38. Camie R. Heleski et al., *Stakeholder Attitudes Toward Farm Animal Welfare*, 19 Anthrozoös 290, 290 (2006).
39. Due to the very small number of non-Christians in the US population, we were unable to examine the effect of other religions on support for animal rights.
40. John Broida et al., *Personality Differences Between Pro- and Anti-Vivisectionists*, 1 Soc'y & Animals 129, 133 (1993).
41. Some studies, however, have reported little relationship between political values and animal-welfare concern. Sarah Knight et al., *Attitudes Towards Animal Use and Belief in Animal Mind*, 17 Anthrozoös 43, 56 (2004).

proposal limiting cruel pig farming practices, found a positive effect of liberal political ideology on support for the proposal banning gestation crates.[42] The reason for the connection between liberal political values and animal rights, however, is not well developed in the existing literature. One possibility is that liberals might be more likely to support animal rights and animal protections because liberal ideology places a greater emphasis on equality and on the protection of individual rights.[43] Another potential explanation is that liberals tend to be stronger supporters of government regulation over business interests, such as agricultural corporations that may have an interest in exploiting animals. Recent psychological research also found that liberals and conservatives appear to operate from different moral foundations that could influence attitudes towards animals. Self-described liberals are more likely to base their ethical judgements primarily on considerations of fairness and "nurturing, and protecting vulnerable individuals from harm," while conservatives place a greater emphasis on loyalty to one's group, respect for authority, and virtues of purity and sanctity.[44] Thus, liberals may be more inclined to see animals as "vulnerable individuals" and conservatives may be more likely to see animals as part of an out-group that deserves fewer rights and protections.

This suggests the following hypothesis:

Hypothesis 4: More politically liberal individuals and polities will be more likely to recognize and protect animal rights.

D. Gender

The correlation between the female gender and support for animal rights is also well established at the individual level.[45] Scholars posit several potential explanations for the relationship. Corwin Kruse, for example, argues that men "exhibit much more support than do women for the exploitation and control of the natural world. Women, by contrast, consistently express greater affection toward animals and concern for ethical relations with nature."[46] Other scholars, such as Charles Peek, Nancy Bell, and Charlotte Dunham,

42. Videras, *supra* note 37, at 653, 659.
43. *See generally* Gerald Gaus, Shane D. Courtland, & David Schmidtz, *Liberalism, in* The Stanford Encyclopedia of Philosophy (Edward N. Zalta ed., 2018).
44. Jesse Graham, Jonathan Haidt, & Brian A. Nosek, *Liberals and Conservatives Rely on Different Sets of Moral Foundations*, 96 J. Personality & Soc. Psychol. 1029, 1031 (2009).
45. Harold A. Herzog, *Gender Differences in Human-Animal Interactions: A Review*, 20 Anthrozoös 7, 7 (2007); Rachel L. Einwohner, *Gender, Class, and Social Movement Outcomes: Identity and Effectiveness in Two Animal Rights Campaigns*, 13 Gender & Soc'y 56, 56 (1999); Heleski et al., *supra* note 38.
46. Corwin R. Kruse, *Gender, Views of Nature, and Support for Animal Rights*, 7 Soc'y & Animals 179, 181 (1999).

draw on feminist theory to argue that "egalitarian gender ideology arising from women's structural experiences with oppression and domination generates more concern for animal rights."[47] Similarly, the animal rights group PETA explains on its website that "[h]aving been subjected to discrimination, oppression, and violence throughout the ages simply because of their gender, women can easily relate to the plight of animals, who are exploited simply because of the number of legs, fins, or wings they possess."[48] Since most polities have a roughly equal number of male and female citizens, however, this explanation applies only at the individual level, rather than in comparisons across different political communities.[49]

This suggests the following hypothesis:

> *Hypothesis 5*: Women will be more likely to recognize and support animal rights than men.

E. Beliefs about Human Rights

Many scholars speculate that there may be a link between peoples' views about human rights and views about animal rights. Proponents of this view frequently argue that many justifications for human rights suggest that at least some of these rights ought to be extended to animals as well. Peter Singer popularized perhaps the most famous form of this argument, often called the "argument from marginal cases." Singer begins by noting that science has shown that at least some animal species (e.g., chimps and dolphins) possess intellectual capacities equivalent to very young human children or severely mentally disabled adults.[50] Yet people overwhelmingly agree that these "marginal" human groups have at least basic rights, such as the right to be protected from physical harm or exploitation. "If possessing a higher degree of intelligence does not entitle one human to use another for his or her own ends," Singer argues, "how can it entitle humans to exploit nonhumans for the same purpose?"[51] Advocates of animal rights claim that nonhuman animals ought to have moral standing, with certain inalienable rights, or

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47. Charles W. Peek, Nancy J. Bell, & Charlotte C. Dunham, *Gender, Gender Ideology, and Animal Rights Advocacy*, 10 Gender & Soc'y 464, 465 (1996).
48. Alisa Mullins, *Brava! How "Feminism" as the Word of the Year Helps Women and Animals*, PETA (13 Dec. 2017), http://www.peta.org/blog/do-women-make-better-animal-rights-activists-ingrid-e-newkirk-animal-rights-feminism/.
49. One potentially valuable avenue for future research, however, would be to analyze the voting patterns of male and female state or federal legislators on animal rights issues or to explore the relationship between the percentage of female legislators in state legislative bodies and the extent of state-level animal rights protections.
50. Singer, *supra* note 13, at 18.
51. *Id.* at 6.

at least interests that are comparable to those of humans.[52] "Speciesism" is often likened to racism and sexism, and humans are urged to acknowledge that nonhuman animals belong within the circle of rights-holders. Some scholars draw analogies between the suppression of historically marginalized human groups and the current widespread exploitation of animals, arguing that repulsion to the former should necessitate objection to the latter. Jeremy Bentham, for example, likened mistreatment of animals to racial discrimination, arguing that:

> The day *may* come, when the rest of the animal creation may acquire those rights which never could have been withholden from them but by the hand of tyranny. The French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor. It may come one day to be recognised, that the number of the legs, the villosity of the skin, or the termination of the *os sacrum*, are reasons equally insufficient for abandoning a sensitive being to the same fate.[53]

The empirical literature documenting the link between attitudes about human rights and attitudes about animal rights, however, is limited. Some scholars document that human rights activists often express support for, or even campaign for, animal rights causes. Leah Leneman, for example, finds links between vegetarianism and the women's suffrage movement, and Kathleen Kete points to the active participation of suffragists in the anti-vivisection movements in England.[54] More recently, in June 2015, following the US Supreme Court decision granting same-sex couples the right to marry, PETA proclaimed on its website that "progress in women's rights, gay rights, and other social justice movements shows that change *is* possible."[55]

Several observational studies and experiments using surveys also suggest a positive connection between animal abuse and violence against humans. Amy Fitzgerald, Linda Kalof, and Thomas Dietz, for example, analyzed the relationship between the numbers of people a community employed in slaughterhouses and the community's crime rate.[56] Even after controlling for other known correlates of crime, they found a positive correlation between the two measures, implying that the cruelty in slaughterhouses might be

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52. Tom Regan, The Case for Animal Rights 266–71 (1983).
53. Jeremy Bentham, 1 An Introduction to the Principles of Morals and Legislation 311 (Clarendon Press New ed. 1823).
54. *See generally* Leah Leneman, *The Awakened Instinct: Vegetarianism and the Women's Suffrage Movement in Britain*, 6 Women's Hist. Rev. 271 (1997); Kathleen Kete, *Animals and Ideology: The Politics of Animal Protection in Europe*, *in* Representing Animals 19 (Nigel Rothfels ed., 2002).
55. *Victory for Gay Rights Gives Hope to Animal Rights Movement,* PETA (2015), http://www2.peta.org/site/MessageViewer?em_id=176222.0 (emphasis in original).
56. Amy J. Fitzgerald, Linda Kalof, & Thomas Dietz, *Slaughterhouses and Increased Crime Rates: An Empirical Analysis of the Spillover from "The Jungle" into the Surrounding Community*, 22 Org. & Env't 158, 158 (2009).

spilling over into the surrounding community. Using surveys of battered women, Frank Ascione found that women who have suffered abuse are eleven times more likely than other women to report their pets as having been abused or threatened in the household.[57] Similarly, Sarah DeGue and David DiLillo, show that about 60 percent of students who had witnessed animal cruelty had also experienced either maltreatment or inter-parental violence as a child.[58]

Using a survey on attitudes about the treatment of farm animals, Deemer and Lobao found evidence that "[c]oncern with animal welfare is significantly related to greater concern with human welfare."[59] Their study, however, did not measure concern for human rights directly, but instead relied on subjects' support for fair treatment and payment of food workers and willingness to pay more for fair-trade products to assess "concern for human welfare."

> *Hypothesis 6*: Individuals and polities that support a greater degree of rights for marginalized human groups should be more likely to recognize and protect animal rights.

F. Research Design

We use two main methods to test the above hypotheses about support for animal rights. The first method focuses on explaining variation in individual attitudes about animal rights and relies on data gathered from national public opinion surveys. The second method focuses on explaining variation among US states and relies on cross-sectional data on animal rights laws in the fifty US states. We describe each method in greater detail below.

IV. METHODS AND RESULTS: INDIVIDUAL LEVEL VARIATION IN RESPECT FOR HUMAN RIGHTS

To explore individual level variation in support for animal rights, we draw on survey data collected by the General Social Survey (GSS) between 1993 and1994 and in 2008.[60] The GSS is a long-running poll that tracks changes

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57. Frank R. Ascione et al., *Battered Pets and Domestic Violence: Animal Abuse Reported by Women Experiencing Intimate Violence and by Nonabused Women*, 13 Violence Against Women 354, 354 (2007).
58. Sarah DeGue & David DiLillo, *Is Animal Cruelty a "Red Flag" for Family Violence? Investigating Co-Occurring Violence Toward Children, Partners, and Pets*, 24 J. Interpersonal Violence 1036, 1036 (2009).
59. Deemer & Lobao, *supra* note 22, at 188.
60. Tom W. Smith et al., *General Social Survey, 1972–2014*, ICPSR (14 Mar. 2016), https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/36319.

in US social, cultural, and political attitudes using a nationally representative sample since 1972.[61] It is one of the few publicly available surveys that (at least periodically) asks questions about animal rights and human rights in the same survey, making it possible to explore potential relationships between the two attitudes.[62]

The GSS fields two main questions relevant to support for animal rights. The first question asks directly whether "animals should have the same moral rights that human beings do." The second question asks whether "scientists should be allowed to do research that causes pain and injury to animals like dogs and chimpanzees if it produces new information about human health problems."[63]

The GSS measures income, gender, political ideology, and religiosity using standard question wording (reproduced in appendix 1). To measure respondents' economic interest in animal agriculture, we used information on whether the respondent reported employment in "agricultural production, livestock, fishing, hunting, and trapping, etc., meat products, or dairy products." We also included variables measuring age, race (white vs. non-white), and education as controls. To capture respondents' attitudes about human rights, we drew on questions inquiring about attitudes towards women, African Americans, homosexuals, aid to the poor, and undocumented immigrants. These questions are reproduced in Table 1 below.

Because our dependent variables are ordinal, we used ordered probit regression to analyze data from the GSS survey. Table 2 reports the results of the model using attitudes about animal rights as the dependent variable. We examined the relationship between views on animal rights and views on each of the six specific human social issues in six separate models. Table 3 reports the results using views on animal experimentation as the dependent variable. The 2008 GSS surveys that included the animal experimentation question did not include the question about undocumented immigrants, so Table 3 includes only five models.

We found strong support for several of the key hypotheses described above.[64] As expected, political conservatives and highly religious respon-

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61. For information on GSS polling methodologies, see *Methodological Reports*, The Gen. Soc. Surv., http://gss.norc.org/get-documentation/methodological-reports.
62. The exact wording of the questions and the response options provided for the GSS surveys are recorded in the Cumulative Codebook of General Social Surveys, 1972–2008. *GSS Documentation*, The Gen. Soc. Surv., http://gss.norc.org/get-documentation.
63. Both questions were asked using a standard 5-point response scale: strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. Overall, 29.8 percent of respondents agreed with the first question and 39.5 percent agreed with the second.
64. Among our control variables, we found that older and more highly educated respondents were significantly less likely to support for animal rights and less likely to oppose animal experimentation in Tables 2 and 3. Non-whites were more likely to support animal rights in Table 2, although the result was only significant in one out of six models. Interestingly, non-whites were significantly less likely to oppose animal experimentation in all models in Table 3.

Table 1.
Measures of Attitudes about Human Rights (GSS)

- If your party nominated a woman for President, would you vote for her if she were qualified for the job?
- What about sexual relations between two adults of the same sex—do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all?
- Should they [undocumented immigrants] be entitled to have their children continue to qualify as American citizens if born in the United States, or not?
- Are we spending too much, too little, or about the right amount on assistance to the poor?
- Some people think that blacks have been discriminated against for so long that the government has a special obligation to help improve their living standards. Others believe that the government should not be giving special treatment to blacks. Where do you place yourself on this scale, or haven't you made up your mind about this?
- In general, some people think that it is the responsibility of the government in Washington to see to it that people have help in paying for doctors and hospital bills. Others think that these matters are not the responsibility of the federal government and that people should take care of these things themselves. Where would you place yourself on this scale, or haven't you made up your mind on this?

dents were consistently less likely to support animal rights in all models in Table 2. Political conservatism and religiosity were also negatively correlated with opposition to animal experimentation in all the models in Table 3 (with the exception of conservativism in model 5), although the results were not consistently significant in those models. Respondents employed in animal agriculture were also less likely to express support for animal rights in all six models in Table 2 and in all five models in Table 3, although the relationship was only statistically significant in four models.[65] Women, on the other hand, were significantly more likely to support animal rights and oppose animal experimentation in every model we estimated, providing strong support for the gender hypothesis.

The results for income were less consistent. Contrary to the expectations of the wealth hypothesis, more affluent respondents were actually less likely to support animal rights in all six models in Table 2, although this relationship was only strongly significant in one model (support for a female president). Interestingly, however, wealthier respondents were significantly *more* likely to oppose animal experimentation in all but one model in Table 3. This suggests that wealthier respondents dislike animal experimentation, but not necessarily because they are more likely to believe that doing so violates

65. The lack of more strongly significant results for this measure is likely due at least in part to the fact that less than 2 percent of respondents reported working in animal agriculture, lowering the statistical power of these tests.

Table 2.
Individual-Level Analysis of Support for Animal Rights (Ordered Probit)

VARIABLES	*1. Homosexuals*	*2. Undocumented Immigrants*	*3. Female President*	*4. Welfare*	*5. Help Blacks*	*6. Help Sick*
Tolerance of homosexuality	0.0506**					
	(0.0234)					
Citizenship for US born child of undocumented immigrant		0.221***				
		(0.0672)				
Acceptability of female president			0.134			
			(0.104)			
Support for government assistance to the poor				0.0742**		
				(0.0265)		
Support for government assistance to blacks					0.0544**	
					(0.0243)	
Support for government assisted healthcare						0.132***
						(0.0239)
Age	-0.00919***	-0.00712***	-0.00840***	-0.00973***	-0.0117***	-0.0108***
	(0.00179)	(0.00218)	(0.00176)	(0.00145)	(0.00179)	(0.00177)
Income	-0.0205*	-0.00372	-0.0228**	-0.0173*	-0.0109	-0.00922
	(0.0123)	(0.0149)	(0.0115)	(0.00970)	(0.0117)	(0.0117)
Female	0.311***	0.229***	0.335***	0.296***	0.254***	0.249***
	(0.0563)	(0.0670)	(0.0552)	(0.0457)	(0.0559)	(0.0559)
Conservative Political Ideology	-0.103***	-0.130***	-0.0732***	-0.100***	-0.106***	-0.0929***
	(0.0215)	(0.0248)	(0.0206)	(0.0171)	(0.0210)	(0.0213)
Religiosity	-0.0801***	-0.0847**	-0.0653**	-0.0921***	-0.122***	-0.113***
	(0.0307)	(0.0366)	(0.0297)	(0.0244)	(0.0296)	(0.0296)
Education	-0.0698***	-0.0495***	-0.0622***	-0.0628***	-0.0672***	-0.0635***
	(0.0106)	(0.0125)	(0.0102)	(0.00844)	(0.0102)	(0.0103)
Non-white	0.110	0.115	0.157**	0.0961	0.0839	0.0907
	(0.0741)	(0.0880)	(0.0747)	(0.0611)	(0.0795)	(0.0748)
Occupation in animal industry	-0.292	-0.701**	-0.282	-0.337*	-0.235	-0.273
	(0.231)	(0.284)	(0.228)	(0.190)	(0.224)	(0.225)
Observations	1,503	1,041	1,538	2,260	1,523	1,533

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3.
Individual-Level Analysis of Opposition to Animal Experimentation (Ordered Probit)

VARIABLES	*1.Homosexuals*	*2. Female President*	*3. Welfare*	*4. Help Blacks*	*5. Help Sick*
Tolerance of homosexuality	0.0522*				
	(0.0309)				
Acceptability of female president		0.00832			
		(0.143)			
Support for government assistance to the poor			0.106***		
			(0.0348)		
Support for government assistance to blacks				-0.0146	
				(0.0302)	
Support for government assisted healthcare					0.0583**
					(0.0289)
Age	-0.000915	-0.00252	-0.00296*	-0.00318	-0.00303
	(0.00228)	(0.00206)	(0.00167)	(0.00206)	(0.00206)
Income	0.0492***	0.0230	0.0402***	0.0332**	0.0389***
	(0.0161)	(0.0157)	(0.0124)	(0.0153)	(0.0149)
Female	0.651***	0.613***	0.578***	0.531***	0.525***
	(0.0757)	(0.0679)	(0.0553)	(0.0679)	(0.0677)
Conservative Political Ideology	-0.0501*	-0.00589	-0.0145	-0.00770	0.00134
	(0.0277)	(0.0242)	(0.0202)	(0.0256)	(0.0257)
Religiosity	-0.0218	-0.0357	-0.0641**	-0.117***	-0.114***
	(0.0378)	(0.0327)	(0.0268)	(0.0334)	(0.0330)
Education	-0.0307**	-0.0170	-0.0238**	-0.0281**	-0.0354***
	(0.0136)	(0.0118)	(0.00962)	(0.0119)	(0.0121)
Non-white	-0.208**	-0.332***	-0.320***	-0.273***	-0.340***
	(0.0961)	(0.0833)	(0.0694)	(0.0898)	(0.0859)
Occupation in animal industry	-0.0147	-0.475	-0.581**	-0.684**	-0.695**
	(0.348)	(0.293)	(0.258)	(0.331)	(0.331)
Observations	877	1,073	1,623	1,086	1,095

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

animals' moral rights. Our data do not allow us to explain this pattern, but it is possible that wealthier respondents are simply more willing to accept the added expense that might result from conducting medical experimentation without animal testing.

Perhaps most interestingly, however, our results confirm that people with a more expansive conception of human rights and welfare are also more likely to support animal rights and oppose animal experimentation. As can be seen in Table 2 and 3, opinions on tolerance of homosexuality, universal healthcare, welfare for the poor, improving conditions of African Americans (Table 2 only), and the rights of the US-born children of undocumented immigrants correlate strongly with views about animal rights.[66] The correlation between the acceptability of a female president and views on animal rights was also positive, but was not statically significant for either of our two dependent variables.

Figure 2 presents the marginal effects of each of the significant variables from Table 2 on support for animal rights. This chart (Figure 2) reports the predicted change in the likelihood of supporting animal rights as we shift each explanatory variable from its tenth percentile to ninetieth percentile (with higher values indicating a more expansive view of rights), while holding all other variables constant at their medians.[67] Changes in support for, and opposition to, animal rights are not perfectly inverted because the dependent variable also contained an intermediate response category, "neither agree nor disagree." The magnitudes of the effects were quite large. Respondents who favored increasing assistance to the sick, for example, were 55 percent more likely to support animal rights than those who did not support an increase. Respondents who worked in animal industries, on the other hand, were 60 percent more likely to *oppose* animal rights.

V. ANALYSIS OF VARIATION IN STATE POLICIES ON ANIMAL RIGHTS

The results above shed light on the sources of variation in individual views about animal rights, but can these same factors help explain variation in real-world animal rights practices across different polities? To answer this question, we examined the varying degrees of protection animals receive under the law in each of the fifty US states (and Washington D.C.).

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66. The relationship between tolerance of homosexuality and views on animal experimentation was only marginally significant however (p=.09).
67. The prediction of the change in likelihood as described was made using the clarify package by Michael Tomz, Jason Wittenberg, and Gary King. *See* Michael Tomz et al., *Clarify: Software for Interpreting and Presenting Statistical Results*, 8 J. Stat. Software 1, 3 (2003).

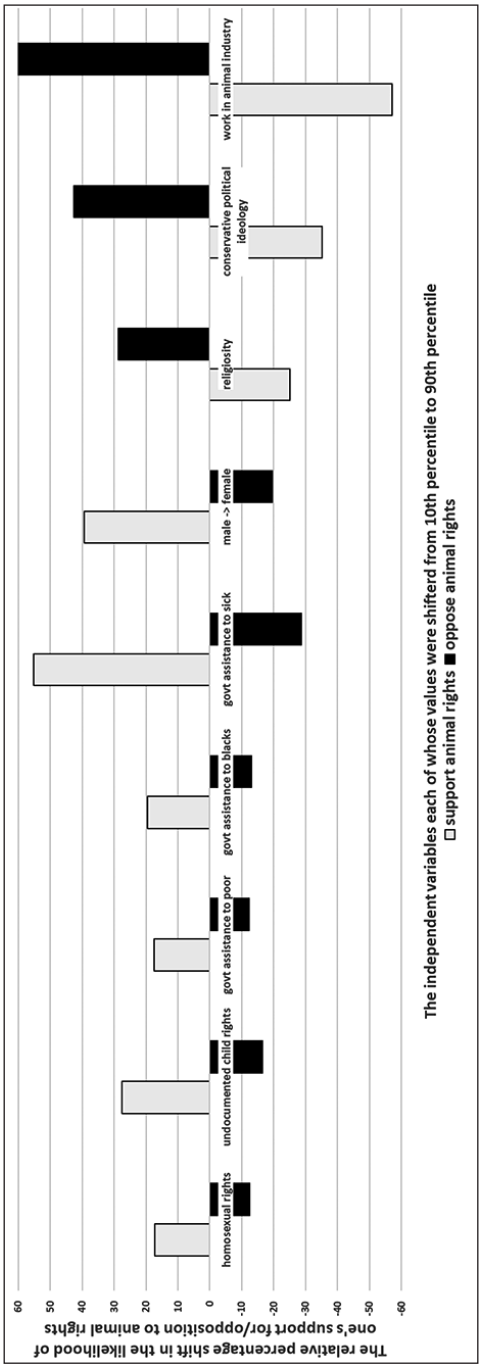

Figure 2. Substantive effects of independent variables on the support for animal rights ("animals should have the same moral rights that human beings do.")

To measure animal welfare laws, we relied on the Humane Society of the United States' (HSUS) "Humane State Ranking" scores. Since 2009, HSUS releases an annual report ranking the animal protection laws of fifty states, plus Washington D.C. The organization reviews more than four thousand state laws and examines seventy-five different animal welfare policy issues in ten major categories, ranging from laws prohibiting animal fighting to the treatment of farm animals.[68] Each state is scored on a scale of 0 to 100 (in 2013, the actual scores ranged from thirteen to seventy-three) with higher scores representing greater protection for animals.

In these analyses, we used four variables to measure each state's degree of commitment to human rights. First, we calculated each state's 2013 "LGBT policy tally" using the data and methodology provided by Movement Advancement Project (MAP).[69] MAP tracks and records various laws and policies that promote or obstruct LGBT equality across different states in the United States. Starting in 2015, the group began to publish a LGBT policy tally for each state, counting the number of supportive state laws and policies that help promote equality for LGBT people. MAP reduces the tally by a point for each law that harms or deliberately targets LGBT people for differential treatment. The major categories of laws covered by this policy tally include marriage and relationship recognition, laws on adoption and parenting, non-discrimination, safe schools, health and safety, and the rights of transgender people to correct the gender marker on their identity documents.[70] We created the 2013 version of the tally based on the methodology MAP used for its 2015 tallies and the 2013 state laws across LGBT topics collected by MAP. The tally ranges from a possible -4 to a high of 21.5.

Second, we coded the scope and depth of each state's anti-hate crime legislation. For this measure, we rely on the Anti-Defamation League's (ADL) 2011 data, which records various dimensions of state hate crime statutes. The dataset records whether state hate crime statutes cover crimes against groups based on gender, disability, sexual orientation, race, religion, ethnic-

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68. Wayne Pacelle, *Where Does Your State Stand on Animal Welfare?*, The Humane Soc'y of the U.S. (15 Jan. 2013), https://blog.humanesociety.org/2013/01/humane-state-ranking-animal-welfare.html?credit=blog_post_010318_id9490. For the latest aggregated score of US states' animal protection statutes and the disaggregated data on the specific animal protection laws that are considered in the scoring, see the lists referenced in Wayne Pacelle, *California, Again, Ranks as the Nation's Most Humane State, While the Dakotas, Mississippi at Bottom of List*, The Humane Soc'y of the U.S. (3 Jan. 2018), https://blog.humanesociety.org/2018/01/california-ranks-nations-humane-state-dakotas-mississippi-bottom-list.html.
69. For the methodology for calculating the tallies from the state laws, see Movement Advancement Project (MAP), Mapping LGBT Equality in America 22–35 (2015), http://www.lgbtmap.org/file/mapping-equality.pdf.
70. MAP emphasizes that these tallies consider only the existing legal framework—not the broader social climate or potential for future change in each state. *Id.* at 1.

ity, and other characteristics.[71] It also records whether states implement each of three different enforcement policies—data collection, criminalization of bias-motivated violence and intimidation, and hate crime training for law enforcement personnel. Lastly, the data also includes which states have statutes criminalizing bias-motivated violence, or intimidation, and which states have provisions that create a civil cause of action for such acts. We created a "hate crime statute index," giving states a point for each group that receives legal protection against hate crimes, an extra point for each of the three enforcement measures (such as criminalization of bias-motivated violence) that a state implements, and a point for each state statute that requires criminal penalty and creates a cause of civil action for hate crimes. The final variable ranged from 0 (Wyoming) to 10 (California).[72]

Third, to capture the extent of policies affecting the poor, we used states' income eligibility limits for Medicaid. Each state sets its own income eligibility limit for applications for Medicaid, with higher limits indicating a broader definition of poverty and, consequently, support for larger numbers of people. The Kaiser Family Foundation maintains a comprehensive dataset recording of each state's eligibility limit. This variable is measured as the percentage of the federal poverty line (FPL) above which individuals are no longer eligible for Medicaid.[73]

Fourth, to capture attitudes about the rights of non-citizens, we created an "undocumented student" variable coded as one if a state provides in-state tuition for undocumented students and zero if it does not. Although all states are required to provide all students—regardless of immigration status—kindergarten through twelfth grade public education, in most states this provision does not extend beyond high school.[74] Currently, just eighteen states offer in-state tuition rates to undocumented students. In general, undocumented students must still attend a specified number of years at an in-state high school to qualify for in-state tuition for college.[75] Issues regard-

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71. For the complete table of state hate crime statutory provisions, see Anti-Defamation League, Anti-Defamation League State Hate Crime Statutory Provisions (2011), http://www.adl.org/assets/pdf/combating-hate/state_hate_crime_laws.pdf.
72. We follow ADL's convention of grouping race, religion, and ethnicity as one category for tally purposes and using the "other" category to denote the inclusion of political affiliation, age, and transgender or gender identity in the statutes.
73. *See* The Henry J. Kaiser Family Found., Where are States Today? Medicaid and CHIP Eligibility Levels for Children and Non-Disabled Adults 1 (2013), http://kaiserfamilyfoundation.files.wordpress.com/2013/04/7993–03.pdf. There is little variation in eligibility limits for children's health coverage and health coverage for pregnant women, and very few states give Medicaid benefits at all to non-disabled adults without dependent children. *Id.* at 1–2. Therefore, we focus on income eligibility limits for non-disabled adults with dependent children.
74. *Undocumented Student Tuition: Overview*, Nat'l Conference of State Legislatures (29 Oct. 2015), http://www.ncsl.org/research/education/undocumented-student-tuition-overview.aspx.
75. *Id.*

ing undocumented youth are sometimes viewed as human rights issues because minors' immigration status is not a result of their own actions and intentions, but rather those of their parents.

To measure the extent of each state's economic dependency on animals, we used the value of production of animal agriculture in each state. This value—aggregated by Agralytica Consulting[76] for each state using National Agricultural Statistics Service (NASS) data—accounts for production of cattle, calves, hogs, pigs, broilers (chickens bred for meat), turkeys, eggs, and milk in 2012.[77] To measure political ideology, we utilized the percentage of votes won by Barack Obama in the 2012 Presidential election.[78] To measure wealth at the state level, we used Gross State Product (GSP) per capita for each state in 2013.[79] To measure religiosity at the state level, we drew on state-level respondent data from the Pew Research Center's 2014 Religious Landscape Study, which surveyed more than 35,000 Americans about their religious beliefs and practices.[80] This variable is coded as one if respondents described religion as "very important" in their lives and zero otherwise.[81] To measure race, we used the 2010 Census estimates for the percent of non-white population in each state.[82]

To examine our hypotheses about variation in state-level protections for animal rights, we estimated four separate linear regression equations—one for each of the main variables measuring human rights—using the HSUS animal protection score as the dependent variable. We report the results in Table 4 below.

Despite the fact that our models had only fifty-one observations available for analysis, we found a surprising number of notable and statistically significant results. As in our individual level analyses, we discovered support for hypotheses on the economic importance of agriculture, political ideology, and the link between human rights and animal rights.

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76. Agralytica Consulting, Animal Agriculture Economic Analysis: 2002–2012 (2013), http://unitedsoybean.org/wp-content/uploads/animal-agriculture-economic-analysis-2002–2012.pdf.
77. *Id.* at 1–4. These data were not recorded for Washington D.C., so we replaced D.C. with a value of zero since it is unlikely that any significant animal agriculture is conducted within the almost entirely urban district. *Id.*
78. For the 2012 presidential election data, see *Federal Elections 2012: Election Results for the U.S. President, the U.S. Senate, and the U.S. House of Representatives*, Fed. Election Comm'n, https://transition.fec.gov/pubrec/fe2012/federalelections2012.shtml.
79. We use the 2013 GSP per capita as published by the Bureau of Economic Analysis, under the U.S. Department of Commerce. *See Regional Economic Accounts: Download,* Bureau Econ. Analysis, http://www.bea.gov/regional/downloadzip.cfm.
80. *U.S. Public Becoming Less Religious: Modest Drop in Overall Rates of Belief and Practice, but Religiously Affiliated Americans Are as Observant as Before,* Pew Research Ctr. (3 Nov. 2015), http://www.pewforum.org/2015/11/03/u-s-public-becoming-less-religious/.
81. Thus, the final variable represents the percentage of respondents in each state who reported that they consider religion "very important."
82. For the 2010 Census data, see *Decennial Census of Population and Housing: By Decade*, US Census Bureau, https://www.census.gov/programs-surveys/decennial-census/decade.2010.html.

Table 4.
State-Level Analysis of Support for Animal Rights (OLS)

VARIABLES	*1. LGBT Tolerance*	*2. Hate Crime Statutes*	*3. Undocumented Students*	*4. Medicaid Cutoff*
LGBT policy tally	0.574**			
	(0.254)			
Hate crime statute index		2.020***		
		(0.524)		
In-state tuition for undocumented students			8.911***	
			(2.493)	
Medicaid income eligibility level				-0.0147
				(0.0166)
GSP per capita (2013)	-0.000124	-0.000102	-0.000135	-0.000137
	(8.82e-05)	(8.09e-05)	(8.16e-05)	(9.23e-05)
2012 Obama popular vote percentage	0.276	0.276	0.595***	0.694***
	(0.234)	(0.188)	(0.171)	(0.217)
Animal agriculture (as % of GSP)	-2.702***	-2.893***	-2.603***	-2.681***
	(0.769)	(0.705)	(0.715)	(0.806)
Religiosity	-10.62	-24.17	-17.92	-26.17
	(18.30)	(15.87)	(16.23)	(18.42)
Percentage of non-whites	-0.0561	-0.0807	-0.133	-0.124
	(0.136)	(0.122)	(0.125)	(0.141)
Constant	42.79***	40.66***	33.57**	38.56**
	(14.52)	(13.19)	(13.52)	(15.14)
Observations	51	51	51	51
R-squared	0.604	0.669	0.657	0.565

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Perhaps least surprisingly, our results show that states whose animal agriculture industries have a bigger impact on the economy were significantly less likely to enact laws protecting animal rights and welfare. Increasing the output of animal agriculture as a percentage of GSP from its tenth percentile (0.05 percent) to its ninetieth percentile (3.84 percent), decreases a state's HSUS Humane State Ranking score by an average of ten points across the four models.[83] This drop is enough to decrease the rank of a median-ranked state sixteen places—from the twentieth most humane to the forty-first.[84]

83. The average HSUS score change here and the ones that follow were rounded to the nearest integer as the scores themselves are integers.
84. To provide a point of reference the HSUS humane state score has a mean of 42.61 and a standard deviation of 13.46.

We also found support for the link between political ideology and animal rights. Across all four models, states where Obama won a larger share of the popular vote in 2012 were more likely to have stronger laws protecting animal rights. This relationship, however, was only statistically significant in the models including the variables measuring state laws on undocumented tuition and Medicaid eligibility (models 3 and 4). Substantively, increasing Obama's percentage of the popular vote from its tenth percentile (35.54 percent) to its ninetieth percentile (61.97 percent) increases a state's animal protection score by an average of seventeen points. This shift in Obama's vote share is enough to move a state with the median ranking up nineteen places—from the twentieth rank to the sixth.

Religiosity, state GSP per capita, and the percentage of the non-white population were all negatively associated with animal rights policies across all four models—although none of these results were statistically significant at conventional levels. For religiosity and income, the direction of the relationships is generally consistent with the results presented in our analyses of individual attitudes towards animal rights presented above in Table 2. For race, the results are more consistent with the analysis of attitudes towards animal experimentation presented in Table 3 (i.e., higher percentages of non-whites were associated with lower HSUS scores).

Finally, as in our individual analyses, we again found very strong evidence for a connection between animal rights and human rights at the state level. Variables measuring LGBT rights, in-state tuition for undocumented college students, as well as the measures of the breadth and enforcement of hate-crime statues were all statistically significant. Only our measure of Medicaid eligibility was not statistically significant.[85]

The magnitude of the effect of a state's human rights policies on its animal protection laws was quite large. For example, increasing the LGBT policy tally from its tenth percentile (-3) to the ninetieth percentile (19.5) yields a thirteen-point boost in the HSUS score. This would be enough to move a state with the HSUS median ranking up thirteen places—from the twenty-fifth most humane state to the twelfth. Similarly, increasing a state's hate crime statute index from its tenth percentile (2) to its ninetieth percentile (9) yields a fourteen-point increase in the HSUS humane state score, enough to move the median-ranked state up fourteen places. Extending in-state college tuition rate to undocumented immigrants is associated with a nine-point increase in the HSUS score—equivalent to moving a median-ranked state up eight places.

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85. This could suggest that most Americans see poverty as the result of laziness and incompetence, while factors such as race, sexual orientation, or children's immigration status are seen as resulting from factors outside of their control.

VI. CONCLUSION

Our findings shed new light on the sources of variation in the recognition and respect for animal rights. Some of our findings, such as the negative association between employment in agriculture and recognition and respect for animal rights, suggest that an instrumental logic motivates views about our relationships with animals. Other findings, such as the positive association between liberal political views and views about animal rights or the negative relationship between religiosity and animal rights, suggest an explicitly ideological basis for beliefs about the proper relationship between animals and humans. Most interestingly, however, our findings strongly suggest that humans' views about human rights and animal rights are tightly linked. People who believe in extending greater rights and protections to disadvantaged and marginalized groups, such as homosexuals, non-citizens, and racial minorities, also tend to be more supportive of animal rights. This connection persists even when controlling for political ideology and other potentially relevant factors, such as gender, income, age, education, and religiosity, and is reflected in individual attitudes as well as state laws.

These results suggest that individuals may possess underlying, likely unconscious, views about the expansiveness of rights that influence their beliefs about both humans and animals. For people who embrace a more expansive view of rights, being human does not appear to be a critical requirement for deserving at least some rights. For them, animals are people too. This finding has important implications for the way we understand the historical evolution of attitudes about human rights. Perhaps the most important progress in human rights over the last 200 years has come not from the expansion of the *number* of different rights to which humans are entitled, but from the expansion in the categories of humans who have been accepted as worthy of enjoying the same set of rights as socially dominant groups. The abolition of slavery, women's suffrage, the civil rights movement, the disability rights movement, and the LGBT movement did not create new rights, but simply sought to ensure that previously marginalized groups could share the same rights that others were already enjoying. Our results suggest that future progress on human rights will be determined in part by the degree to which individuals adopt a more expansive view of what kind of beings, perhaps including non-humans, are worthy of receiving rights.

Interestingly, it is also possible that the relationship between beliefs about human rights and animal rights flows the other way—from animals to humans. Charles Patterson, for example, argues that intergroup prejudice and violence among humans is driven, in part, by belief systems that developed to help humans justify the exploitation of animals.[86] According to Patterson,

86. Charles Patterson, Eternal Treblinka: Our Treatment of Animals and the Holocaust (2002).

the enslavement/domestication of animals affected the way humans related to their captive animals and in turn to each other and "once animal exploitation was institutionalized and accepted as part of the natural order of things, it opened the door to similar ways of treating other human beings."[87]

Likewise, Kimberly Costello and Gordon Hodson argue that "fundamental beliefs in a human–animal divide set the foundation for outgroup dehumanization. […] Specifically, beliefs in a human–animal divide allow people to exclude some humans from the realm of humanity by likening them to 'inferior' animals."[88] Indeed, Costello and Hodson found that exposing college students to information highlighting the similarities of animals to humans, decreased dehumanizing attitudes and increased positive and inclusive attitudes towards immigrants.[89]

Our findings also suggest several potentially promising directions for future research. First, although this article explored variation in animal rights protections among the fifty US states, a much greater diversity of views on both human rights and animal rights exists at the international level. Extending this research to examine the variation in animal rights laws between nations, therefore, may also provide insight into the factors that account for the variation of human rights protection from one country to another. To do so, it will first be necessary to collect a comprehensive dataset of animal rights attitudes or laws across a wide range of countries.[90]

Second, this article raises the question of why some people and polities have more expansive views of rights in the first place. Understanding why some people and polities have incurred costs on themselves to protect the rights of powerless and marginalized groups of humans or non-human animals might illuminate the deeper sources of our evolving views about rights. For those seeking to protect and extend human rights, this knowledge could provide critical in convincing other humans to continue to expand the circle of human rights.

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87. *Id.* at 10, 12.
88. Kimberly Costello & Gordon Hodson, *Explaining Dehumanization Among Children: The Interspecies Model of Prejudice*, 53 Brit. J. Soc. Psychol. 175, 178 (2014).
89. Kimberly Costello & Gordon Hodson, *Exploring the Roots of Dehumanization: The Role of Animal-Human Similarity in Promoting Immigrant Humanization*, 13 Group Proc. & Intergroup Rel. 3, 7–8 (2009). For related findings, see Brock Bastian, Kimberly Costello, Steve Loughnan, & Gordon Hodson, *When Closing the Human-Animal Divide Expands Moral Concern: The Importance of Framing*, 3 Soc. Psychol. & Personality Sci. 421 (2012).
90. Perhaps the best single source on foreign animal laws is the Animal Legal and Historical Center of Michigan State University, which collects and publishes laws from several countries on its website. *See* Animal Legal & Historical Ctr., https://www.animallaw.info/. The International and Foreign Animal Law Research Guide of Georgetown Law Library also provides links to animal laws of around forty countries. *See International and Foreign Animal Law Research Guide*, Georgetown L. Libr., http://guides.ll.georgetown.edu/InternationalAnimalLaw. World Animal Protection, an international animal rights NGO, has also begun to collect information on animal rights legislation in fifty countries around the world. *See* World Animal Prot., https://www.worldanimalprotection.us/.

APPENDIX. GENERAL SOCIAL SURVEY QUESTIONS USED FOR INDIVIDUAL-LEVEL ANALYSIS.[91]

Years	*Questions*
1993–1994	**[VAR: ANRIGHTS]** Animals should have the same moral rights that human beings do. **[VAR: UNDOCKID]** Should they be entitled to have their children continue to qualify as American citizens if born in the United States, or not?
1993–1994, 2008	**[VAR: FEPRES]** If your party nominated a woman for President, would you vote for her if she were qualified for the job? **[VAR: HOMOSEX]** What about sexual relations between two adults of the same sex—do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all? We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount. First (READ ITEM A) . . . are we spending too much, too little, or about the right amount on (ITEM)? **[VAR: NATRACE]** Improving the conditions of Blacks **[VAR: NATFARE]** Assistance to the poor Look at CARD BE. In general, some people think that it is the responsibility of the government in Washington to see to it that people have help in paying for doctors and hospital bills. Others think that these matters are not the responsibility of the federal government and that people should take care of these things themselves. **[VAR: HELPSICK]** Where would you place yourself on this scale, or haven't you made up your mind on this? **[VAR: SEX]** CODE RESPONDENT'S SEX **[VAR: EDUC]** RESPONDENT'S EDUCATION **[VAR: RELITEN]** Would you call yourself a strong (PREFERENCE NAMED IN RELIG) or a not very strong (PREFERENCE NAMED IN RELIG)? **[VAR: POLVIEWS]** We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal—point 1—to extremely conservative— point 7. Where would you place yourself on this scale? **[VAR: INCOME]** In which of these groups did your total family income, from all sources, fall last year before taxes, that is? **[VAR: AGE]** RESPONDENT'S AGE **[VAR: RACE]** What race do you consider yourself? **[VAR: INDUS80]** RESPONDENT'S INDUSTRY
2008	**[VAR: ANSCITST]** Scientists should be allowed to do research that causes pain and injury to animals like dogs and chimpanzees if it produces new information about human health problems. (Do you strongly agree, agree, disagree, or strongly disagree?)

91. For the wording for the response options for each question, see Smith et al., *supra* note 60.