

# Animals in world society: Constitutional and legislative incorporation, 1972–2020

International Journal of  
Comparative Sociology  
1–22

© The Author(s) 2022  
Article reuse guidelines:

sagepub.com/journals-permissions  
DOI: 10.1177/00207152221112850  
journals.sagepub.com/home/cos



**Mike Zapp** 

University of Luxembourg, Luxembourg

**David John Frank**

University of California, Irvine, USA

**Marcelo Marques**

Hertie School, Germany

## Abstract

This article analyzes cross-national and longitudinal variations in the incorporation of nonhuman animals into country constitutions and legislation. We argue that incorporation follows from the scientific rationalization and human rights-based ontological elaboration of nonhuman animals in world society, carried by a growing number of intergovernmental agreements and international nongovernmental organizations (INGOs). To test our ideas, we use event-history analyses on original data from 195 countries for the period 1972–2020. The models of constitutional incorporation show mixed results, with positive effects from human rights and INGOs but negative effects from science and intergovernmental agreements. The models of legislative incorporation show consistent positive effects from world factors, even when controlling for a range of domestic factors. Legal incorporation suggests an extension of the boundaries of “society,” driven by the rising prominence of highly rationalized and elaborated models of nonhuman animals, replete with dignity, sentience, and even tentative forms of rights and personhood.

## Keywords

Animals and society, constitutional and legislative change, law and society, nonhuman animal protection and welfare, nonhuman animal rights and personhood

## Introduction and background

We join here a long-standing conversation about the relationship between human and nonhuman animals and the inclusion of the latter in models of society (e.g. Regan, 1983; Singer, 2011). We make two contributions to this conversation. First, we offer original cross-national and longitudinal

---

### Corresponding author:

Mike Zapp, Department of Social Sciences, University of Luxembourg, 1511 Esch-sur-Alzette, Luxembourg.  
Emails: [mike.zapp@uni.lu](mailto:mike.zapp@uni.lu); [mike.zapp@ifen.lu](mailto:mike.zapp@ifen.lu)

data on the legal incorporation of nonhuman animals. Second, we offer an original argument about the roots of such incorporation in wider world society.

The legal incorporation of nonhuman animals across countries is at the core of our empirical analyses—both at the level of constitutions and at the level of legislation. The constitutions of many countries, such as the United States, make no mention of animals whatsoever. The constitutions of other countries, such as India's, adopted in 1949, incorporate animals directly but do so on a very limited basis, focusing on their natural-resource qualities (Constitution of India, 1949, Article 48). The constitutions of still other countries, such as Germany's, amended in 2002, cast a much wider net, incorporating animals on elaborated grounds, not only as suppliers of goods but also as integral to the bases of life:

Article 20(a): Mindful also of its responsibility toward future generations, the state shall protect the **natural foundations of life and animals** by legislation [ . . .]. (Basic Law for the Federal Republic of Germany, 2002, emphasis added)

Lower down the legal staircase at the level of legislation we look beyond the anti-cruelty statutes that emerged in the 19th century to protect domestic animals from abuse, which retain an anthropocentric view of animals as things. We focus on more recent forms of legislation that acknowledge animals as beings in their own right—recognizing their dignity, inherent worth, and even sentience—as specified in animal welfare and protection acts, civil and criminal codes, and precedent-setting court decisions (Eisen, 2018).

The legislation of many countries, such as China, makes no mention of animal dignity, inherent worth, or sentience. The legislation of some other countries, such as Tanzania, does so on a limited basis, vis-à-vis domestic animals (namely farm animals, companion animals, working animals, and animals used in scientific research). The Tanzania Animal Welfare Act of 2008, for example, assigns to domestic animals the so-called Five Freedoms, developed in the United Kingdom in 1965 and subsequently promulgated by international organizations such as the World Organization for Animal Health:

(i) Freedom from hunger, thirst, and malnutrition; (ii) Freedom from fear and distress; (iii) Freedom from physical discomfort; (iv) Freedom from pain, injury, and disease; and (v) Freedom to express normal patterns of behavior. (Tanzania Animal Welfare Act, 2008)

The legislation of a small number of other countries, such as Denmark, goes even further, breaking through the boundary between domestic and wild. The new Denmark Animal Welfare Act, adopted in 2020, recognizes that all animals, even wild ones, are sentient beings with inherent worth and behavioral needs that must be respected.

We observe, in short, dramatic cross-national and longitudinal variations in the incorporation of nonhuman animals into nation-state laws and legal frameworks (see Linzey and Tutu, 2013). It is this variation we seek to explain and, by this, contribute to larger debates about the expansion of society and the diffusion of ideas and norms around the world (Dobbin et al., 2007; Zapp and Dahmen, 2017). We argue that the rise of legal incorporation reflects a substantial redefinition of nonhuman animals in world models of society, resulting from ongoing processes of scientific rationalization and human rights-based ontological elaboration. The former bonds humans and animals in chains of causal interrelationship, and the latter charters a taxonomy of rights-bearing entities, extending notions of rights, membership, and even personhood. Both are promulgated by a rapidly growing number of intergovernmental agreements and international (non-) governmental organizations. Scientific rationalization and human rights-based ontological elaboration are

institutionalized in world society, and country exposure to them conditions the likelihood of legal incorporation, alongside domestic factors such as economic development and green political mobilization.

To test these arguments, we compiled and coded a unique dataset on the incorporation of nonhuman animals into nation–state constitutions and legislation for the period 1972–2020. Our data clearly show an expansive trend of legal inclusion of nonhuman animals across a highly variable set of countries. The constitutional incorporation of nonhuman animals surged in the early 1990s and now comprises  $N=53$  countries, followed by a surge in legislation that grants autonomous being to animals (e.g. animal sentience) in the 2000s, now encompassing  $N=42$  countries.

Event-history models show that country participation in the global human-rights regime and linkages to animal protection INGOs speed animal incorporation into constitutions, even when controlling for a range of domestic (i.e. economic, religious, and political) factors. The same variables speed the rate at which animals are incorporated into legislation, and so do country participation in intergovernmental agreements and world scientific activity. While it may be premature to describe the changes at hand as the bona fide juridification of nonhuman animal rights and personhood, we nevertheless see signs of a profound global process that has the potential to reset the boundaries around society and reshuffle the millennia–old human–animal binary.

## **Prevailing domestic factors explaining legal incorporation**

Most standing approaches to legal incorporation stress domestic factors. In the following section, we review the main lines of argument as they apply to animal protection.

### *Domestic economic factors*

Economic development is generally linked to the modernization of legal codes and innovation, and several strands of the prevailing argument suggest a positive relationship between national economic development and nonhuman animal incorporation into the law. The central idea is that higher levels of economic development foster so-called post-material values, such as self-expression, gender equality, and environmentalism (Delhey, 2010; Inglehart and Welzel, 2005) and perhaps also respect for animal welfare and animal rights (Jamison and Lunch, 1992). The value shift may represent the latter stage of an animal-welfare Kuznets (1955) curve, in which early-stage economic development increases animal exploitation but later-stage economic development reverses course (see the reviews in Caviglia-Harris et al., 2009; Holst and Martens, 2016). These arguments suggest the proposition that economic development positively impacts the incorporation of nonhuman animals into nation-state laws and legal frameworks.

### *Domestic religious factors*

Buddhist and Hindu religions are known for granting special status to nonhuman beings, with potential implications for the legal codes of countries in which they are dominant. Based on concepts such as karma and rebirth, these religious views decenter the hierarchical order of beings (with humans at the top) and challenge the notion that animals are soul-less and subservient (Austin and Flynn, 2015; Singer, 2001, 2015). A Hindu scripture, for example, commands that “you must not use your God–given body for killing God’s creatures, whether they are human or animal” (Yajurveda, 12:32). While Buddhist and Hindu thoughts are complex—with sometimes contradictory views of the relationship between humans and animals (Ohnuma, 2017)—and while religious beliefs do not automatically shape legal structures (Rollin, 2019), previous empirical

research suggests that in those societies where specific religious ethics are held by a large share of the population, they penetrate politics and legislation as an expression of dominant cultural beliefs (Park and Valentino, 2019). This leads to the proposition that countries with greater shares of Buddhist and Hindu adherents are more likely to incorporate nonhuman animals into nation-state laws and legal frameworks.

### *Domestic political factors*

Mainstream arguments from political science stress the impact of domestic political factors on animal incorporation. In particular, we highlight the relationship between party politics and the law (Downs, 1957; Krehbiel et al., 2015). Green parties, in particular, have established themselves as hubs of environmental and animal concerns since their origins in the early 1970s (Grant and Tilley, 2019), with direct implications for animal law (e.g. Natrass, 2004). We expect that countries with stronger green party vote shares are more likely to incorporate nonhuman animals into nation-state laws and legal frameworks.

### *Domestic animal professionals*

Domestic professional groups have been shown to play a major role in institutional change (DiMaggio, 1991; Greenwood et al., 2002). They carry norms, set standards, theorize practices, legitimate, and certify change. Veterinary professionals, in particular, promote animal health and protection<sup>1</sup> and exert influence in many ways. They are stakeholders and consultants in relevant government agencies (e.g. on food inspection), they help developing codes of practices (e.g. for the treatment of livestock) and contribute to their monitoring. They produce position statements and, as individual practitioners and teachers, educate client animal owners and veterinary students (Berry, 2014; Ladewig, 2008). These points would suggest that a large veterinary infrastructure is associated with early incorporation of strong animal protection.

All these domestic arguments are plausible, and we expect them to help explain the cross-national and longitudinal variations on which we focus. We operationalize and treat them as controls in our own empirical analysis. However, they leave on the table world-level changes that also inform the likelihood of animal incorporation on a broad global basis.

## **Global factors explaining legal incorporation**

Our own point of departure is based on the general assumption that countries and their legal systems are “open systems” that derive their contents and organization from the wider global context (Meyer, 2010; Meyer et al., 1997; Negro and Longhofer, 2018; Teubner, 1997). This is not to say that constitutions and legislation are not impacted by domestic contexts and legal traditions—certainly they are. But they also draw heavily on global ideas and norms and globally institutionalized models (Boyle and Meyer, 1998; Halliday and Shaffer, 2014; Thornhill, 2016). Indeed, recent comparative scholarship demonstrates the impact of international regimes and global institutions on national constitutions, regulations, and policies in such sectors as the environment and human rights (Beck et al., 2012, 2019; Boyd, 2011; May and Daly, 2014; Meyer et al., 1997b).

Here, we stress exogenous global models of constitutions and legislation. In the following section, we offer three interrelated arguments about the world-level factors that constitute the incorporation of nonhuman animals into nation-state laws and legal frameworks.

## Human rights

Human rights are rights accorded on the basis of simple humanity—not contingent on citizenship in any particular nation-state—for example, the right to life and the right to equality before the law. They have undergone massive formalization and diffusion worldwide over the post-Second World War period (Cole, 2012, 2016). Starting with the 1948 Universal Declaration of Human Rights, a global human-rights regime has grown to address racial discrimination (1965); civil and political rights (1966); economic, social, and cultural rights (1966); women (1979); children (1989); migrants (1990); persons with disabilities (2006); and so on. More social entities have gained more protections along more dimensions over time (Elliott, 2007, 2011).

We extend this argument following Singer (2011) who argues that the circle of entities whose concerns and interests are valued equally to one's own has successively expanded over the course of history, including first family, clan, and tribe, later the nation, and eventually all other human beings. Extending the circle to animals is a plausible next step in this evolution if sentience is the yardstick of inclusion.

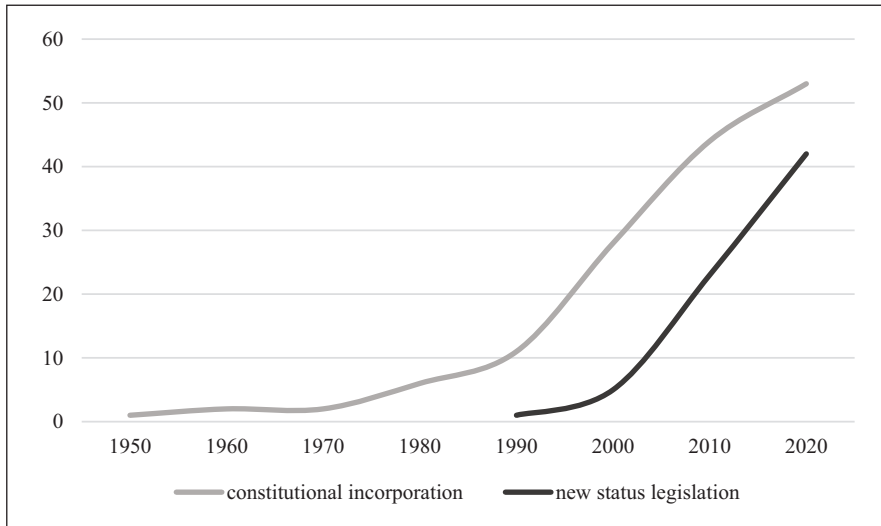
In our view, the human-rights regime impacts nonhuman animal incorporation into the law with a two-sided ontological elaboration. First, it offers a cultural-legal framework that assails status boundaries, including the one between humans and animals, arising as it does with definitive indifference to race, religion, and so on, as the antithesis of, for example, Nazi codes that thereupon justified genocide. Second, it offers a cultural-legal framework that asserts standing and legitimated entitativity beyond citizenship, initially in the form of personhood for humans and potentially also in the form of sentience-based proto-personhood for animals, grounded in the capacity to feel, perceive, and experience subjectively. The human-rights regime's extension to animals indeed is latent from the first, and attitudinal data reveal a tight link between human and animal rights (Park and Valentino, 2019). Nonhuman animal rights advocates compare speciesism (i.e. human dominion over nonhumans) with racism and sexism and call for a legal charter protecting inalienable animal rights (Francione, 2014; Regan, 1983; Singer, 2001; Wrenn, 2014). The earliest candidates for inclusion are the animals with whom we share our domestic lives and those closest to humans in the evolutionary chain: the nonhuman great apes, including chimpanzees, bonobos, gorillas, and orangutans (Karcher, 2009). Next come other mammals and eventually reptiles, amphibians, birds, and fish (see Huntingford et al., 2006, for a discussion of fish as rights-bearing, sentient beings).

Based on this ontological elaboration, we expect participation in the global human-rights regime to facilitate animal incorporation into nation-state laws and legal frameworks. The carriers include international nongovernmental organizations (INGOs), such as World Animal Protection, which has proposed a draft Universal Declaration on Animal Welfare (Gibson, 2011), highlighting animal sentience and promoting national legislation to protect the five freedoms (see above; Vapnek and Chapman, 2010). The carriers also include domestic advocates, who use tools such as legal guardianship—developed vis-à-vis children—to promote animal reforms, for example, in Spain, Argentina, and the United States (The Economist, 2018). These points motivate our first main hypothesis:

*Hypothesis 1.* We expect country-level participation in the human-rights regime to elevate the incorporation of nonhuman animals into nation-state laws and legal frameworks.

## Global embeddedness

Global embeddedness arguments rest on the basic sociological premise that context matters. Global and phenomenological versions of this premise envision nation-states as derivative, or socially



**Figure 1.** Constitutional and new-status legislative incorporation of nonhuman animals worldwide (cumulative), 1947–2020.

constructed, of globally institutionalized models and blueprints (e.g. Pope and Meyer, 2016). Such models arise in international workspaces and carry the authority and legitimacy of disinterested otherness (Hironaka, 2014; Meyer and Jepperson, 2000). From world society, they diffuse most rapidly to countries with the deepest ties to world culture and organizations, notably international nongovernmental and governmental organizations and international agreements (Cole, 2005; Cole and Ramirez, 2013; Lerch, 2019; Nardi, 2018; Zapp and Dahmen, 2017). Indeed, the animal cause has come a long way since early pioneers such as the British Vegetarian Society and the American Society for the Prevention of Cruelty to Animals arose in the middle of the 19th century. While prior to 1960s animal protection was the cause of a few affluent philanthropists, since then the movement has expanded dramatically (see Figure 1 in the Appendix). Today, for example, more than 1,100 international NGOs devote themselves to issues of animal welfare and health and reach far beyond their predecessors, which rarely viewed animal welfare as an institutional problem (Regan, 1983).

In contemporary world society, the process impacts nonhuman animal incorporation first by enriching the global supply of models of constitutional and legislative recognition. The Constitutions Project at World Animal Net, for example, seeks to promote the official recognition of animals as sentient beings by including animal protection in international, national, and regional constitutions and charters. The Nonhuman Rights Project, meanwhile, works with attorneys worldwide to conduct comprehensive legal research on nonhuman personhood to determine the most promising avenues for installing “actual legal rights for nonhuman animals” (Shtiegman, 2017).

Global embeddedness impacts nonhuman animal incorporation second by distributing models to embedded nation-states. This occurs diffusely through ties to the international nongovernmental and intergovernmental arenas of world society: countries implanted in global soils are more likely to pick up the seeds of animal incorporation. It occurs directly through nation-states’ ties to those international nongovernmental and intergovernmental entities that prioritize nonhuman animals and the natural environment. Such legal groundwork is often coupled with moral pressure and

direct activism. Case studies from around the world show both direct and indirect effects of animal rights activism on national legislation (e.g. Evans, 2010, 2016)

*Hypothesis 2:* We expect country-level ties to international nongovernmental and intergovernmental entities that prioritize nonhuman animals and the natural environment to elevate the incorporation of nonhuman animals into nation-state laws and legal frameworks.

## Science

Science is the epistemological lodestar of modern societies and a universalistic medium of truth. Based on rules of observation and evidence, it reveals—or assembles—the causal infrastructures that underlie imagined reality and imbues them with global cosmopolitan authority. In every conceivable sector, from hunger to climate change, science has become a pervasive force and touchstone of global governance and national policy (Drori et al., 2009; Zapp, 2020). It features prominently in animal-related legal debates, for example, at the World Trade Organization and the International Court of Justice, where scientific findings are routinely brought forward to influence decisions in favor of animals (Sykes, 2016a, 2016b).

Science impacts nonhuman animal incorporation into the law with pervasive rationalization, bridging the old cultural divide between humans and animals with elaborate webs of causal interconnection and weakening notions of externality (Dunlap and Catton, 1994). Thickening chains of interdependence bond human and nonhuman animals, collapsing the distance between the two and enabling the annexation of animals into the body of laws and legal institutions. Just as science erodes the postulate that humans stand beyond the reach of natural laws, so it also undermines the assumption that animals are—and should be—beyond the reach of human laws.

The mechanisms at work here—scientific research and advocacy, expert advice and consulting, and professional guidance and policy formation—partake of a universalism that gives them global resonance, beyond particular country settings. Their core orientations are cosmopolitan. Scientists articulate in broad terms the implications of evidence for the legal standing of human and nonhuman animals, for example in the Declaration of Rights for Cetaceans (The Helsinki Group, 2010) and the Declaration on Consciousness, the latter of which proclaims that “non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors” (Low et al., 2012). Branches of ethology, medicine, neuroscience, biology, zoology, and others—despite controversies with animal testing—shape our understandings of human and animal interdependence, intelligence, sentience, and wellbeing (Mellor et al., 2009). These ideas lead to our third main hypothesis:

*Hypothesis 3.* We expect the world-level accumulation of scientific research on topics related to animal protection to elevate the incorporation of nonhuman animals into nation-state laws and legal frameworks.

## Data and methods

The sources for our dependent variables—documenting the incorporation of animals into constitutions and legislation—consist of four databases, which we use to complement and cross-validate one another. We mainly rely on the UN Food and Agriculture Organization’s Legal Office and its FAOLEX database (FAO, 2020), one of the world’s largest collections of nation-state regulations of food, agriculture, livestock, and natural resources. FAOLEX contains data on legal



incorporation for  $N=173$  countries. Second, we draw on the Global Animal Law Project (GALP, 2020), a Swiss-based NGO that collaborates with lawyers specialized in animal protection around the world. The GALP database contains legislative information on  $N=114$  countries. Our third source is the World Animal Net's (WAN, 2020) Animal Protection Legislation Database, which covers animal incorporation into the laws of  $N=74$  countries. Fourth, we rely on data from the Constitute Project (2020) covering all constitutional documents including prior versions and amendments from around the world.

Almost 90 percent of our legal text corpus is available as official English language transcripts. An additional 6 percent was available in Spanish, Portuguese and French, which was translated by the authors. An additional 4 percent was available in Arabic and Russian, for which coding was done by native speakers at the University X (anonymized).

### *Dependent variables*

We measure legal incorporation with two dependent variables, which despite differences in legal traditions can be found across countries worldwide. One draws on constitutions, which set forth countries' governing principles and define the relationship between the government and its agencies and the public. Most countries have written constitutions, and most of those that do not have ensembles of constitutional laws and principles that comprise constitutional orders. The other draws on ordinary law, namely statutes and legislation. While these legal codes are often considered subordinate to constitutional law, their scope and relevance for individual and collective action can be considered more immediate.

Our first dependent variable is the year of constitutional incorporation. We checked all existing constitutions and their amendments against one another in order to identify which version cites nonhuman animals for the first time. We only include explicit references to animals, excluding broader mentions of nature and the environment. Our observation period starts in 1972, the year of the United Nations Conference on the Human Environment, the first world conference to put environmental issues on the global agenda. Only two countries incorporated nonhuman animals into their constitutions earlier: India in 1949 and Malaysia in 1957.

Our second dependent variable is legislative incorporation, which may take the form of animal welfare and protection acts, civil and criminal codes, or precedent-setting court decisions in common-law countries. We relegate our attention to legislation that explicitly recognizes nonhuman animals as independent beings, protecting animals *qua* animals not as the property of humans. Legislation may recognize the physical and mental needs of nonhuman animals, their dignity and inherent worth regardless of human use, or scientific evidence of sentience. It may even assert animal personhood. We call this new-status legislation for short.

Table 1 provides examples of new-status legislation, some of which came into being to remedy earlier codes that did not grant such status to animals. As with constitutions, the advantage of legal texts is that their lifecycle—that is, the chronology of amendments and revisions—is well documented, which facilitates the collection of data. The observation period for legislative incorporation begins in 1992, the year of the United Nations Conference on Environment and Development (the so-called Rio or Earth Summit), which marks the beginning of intensified global environmental governance. Only one country adopted new-status legislation earlier: Austria in 1988.

Constitutional law carries great symbolic weight, but we expect much of the substantive shift in the legal ontology related to nonhuman animals to appear in legislation, where revisions are easier to enact and applications are broader. Legislation addresses a range of human-animal interactions and types of nonhuman animals—farm, zoo, entertainment, research, service, domestic, and so on—and reflects the wider discourse on nature and the environment. Only 14 of the 53



**Table 1.** Variants of new-status legislation for nonhuman animals.

Status variants	Example
Sentience	<i>Animals as sentient beings are not things</i> (Bill 172 of 2016 that reforms the National Animal Protection Statute Law (1989) Colombian Civil Code, Criminal Code and the Criminal Procedure Code)
feel mental and physical pain (five freedoms or rights)	<i>Freedom from hunger and thirst; Freedom from discomfort; Freedom from pain, injury and disease; Freedom to express normal behavior; Freedom from fear and distress</i> (Mali, Animal Welfare Act 2012)
living beings (not things or objects)	<i>The animal as a live creature, capable of suffering, is not a thing. The human being should respect, protect and provide care to it</i> (Poland, Animal Protection Act 1997)
dignity of animals	<i>The purpose of the Act is to protect the dignity and welfare of animals (Article 1), and dignity is the inherent worth of the animal that must be respected when dealing with it (Article 3)</i> (Switzerland, Animal Welfare Act 2005)
equality of animals	<i>All animals are born equal and have a right to life</i> (Turkey, Animal Protection Act 2004)
inherent value	<i>Animals have value, regardless of the use humans have for them</i> (Sweden, Animal Welfare Act 2018)
animals are not property	<i>Plants and animals do not constitute tangible property</i> (Azerbaijan, Civil Code 2000, Art. 135.3.)
legal personhood	<i>It is necessary to recognize [Sandra] an orangutan as a subject of rights, as nonhuman subjects (animals) are holders of rights, to it imposes her protection.</i> (Argentina's Federal Chamber of Criminal Cassation 2014)

nation-states with constitutional incorporation also have legislative incorporation; and only 12 of the 42 nation-states with legislative incorporation also have constitutional incorporation (see Table 2 for descriptive statistics). Different legal systems clearly present different opportunities. Also, the two measures have different emphases. Constitutional incorporation is broadly construed—involving any mention of animals whatsoever. Legislative incorporation is much narrower—counting only laws that recognize the subjectivity, autonomy, and dignity of nonhuman animals.

### *Independent variables*

**Domestic economic factors.** We use annual GDP per capita (in current US\$), logged, from the The World Bank (2020) to measure economic development in the period 1972–2020.

**Domestic religious factors.** We rely on data from the CIA (2020) World Fact Book and the Pew Research Center (2012) to measure shares of Hindus or Buddhists by country. Longitudinal data on religious composition is not available for the entire observation period, so we keep the predictor constant over time. Religious demographics tend to be stable, but our results should be interpreted with caution.

**Domestic political factors.** To gauge the strength of green parties, we use a unique dataset from Grant and Tilley (2019) on 347 parliamentary elections from 32 countries over the course of 45 years. Most appear late. The dataset provides comprehensive evidence on green party participation, enabling us to include a time-varying metric of green party vote share by country.<sup>2</sup> We code countries with very small vote shares (under 5 %) as 0s, given that significant legislative change requires a solid party base, and we otherwise treat the green party share as a continuous variable.

*Domestic animal science.* We measure the role of the domestic animal science through the institutionalization of veterinary education.<sup>3</sup> We rely on the International Association of Universities' World Higher Education Database (WHED) to retrieve data on the number of veterinary schools per country. The WHED contains information on all study programs per university and country for 4-year institutions and over time.<sup>4</sup> We created a time-dependent measure of the number of veterinary schools adjusted by population at a given time point. Alternative models with a measure adjusted by the size of the higher education system show no changes (available upon request).

*Global rights.* We rely on data from the Office of the High Commissioner for Human Rights in order to measure a country's status of ratification of the nine core human-rights instruments as well as the optional protocols (OHCHR, 2020).<sup>5</sup> We compute these as a time-varying variable measuring the number of a country's ratifications at the time of incorporation.

*Global embeddedness.* We use two indicators of global embeddedness, one measuring intergovernmental and the other measuring international nongovernmental connections. The first comes from the FAOLEX dataset and represents cumulative country ratifications of international environmental agreements (e.g. treaties, conventions) (FAO, 2020). FAOLEX data includes year of ratification by country. We count all kinds of environmental treaties and collected data for all countries in our sample to create a time-varying metric of cumulative ratifications.<sup>6</sup> The second indicator of global embeddedness comes from the Union of International Association (UIA, 2020) *Yearbook of International Organizations*. It measures ties between each country's citizens (and other nongovernmental entities) and a set of INGOs (logged) that prioritize the welfare, health, protection, and rights of nonhuman animals, such as the Global Animal Welfare Development Society.

*Global science.* In order to gauge the influence of science, we draw on a world-level count of scientific publications related to animal protection. We rely on Scopus (2020) data on relevant scientific articles from various disciplines (e.g. veterinary medicine, biology, law, agriculture, etc.). Our keyword search is based on the co-occurrence of the fixed strings "animal" in relation to "health," "protection," "rights," "welfare," and "intelligence" as well as "sentience" yielding  $N=46,920$  research article results for October 2020. Following our theorization of science as a border-crossing, global force, we use a globally aggregated number of publications (logged).

### *Additional measures and limitations*

Cross-national legal change is a complex phenomenon and we tested a number of additional variables and measures to check the robustness of our findings. These include measures of animal-based production and exports (e.g. meat and dairy), constitutional flexibility (measured as the number of constitutions and constitutional amendments per decade), possible contagion effects (measured as the number of previous incorporations), and constitutional incorporation as an independent variable in the new-status legislation models. We also ran models with lagged independent variables ( $t-5$ ) accounting for a possible delay in effects as well as variants of green party share (<5%) and Hindu and Buddhist share (<50%). Finally, we tested for democracy (based on the Polity IV) as well as the number of national parks as a proxy for animal preservation awareness. All these alternative specifications and predictors have very little effect on our main models presented here, and some produce large numbers of missing values or collinearity problems (e.g. democratic polity and human rights). They are available upon request.

We also point out some limitations of our data and analyses. As we restrict our dependent variable to national constitutions and legislation of national scope, many subnational phenomena

remain out of focus. For example, a number of federalist countries have seen state-level legislation outpace the national legal consensus. Prominently, Catalan, Mallorquin, and Andalusian law exceeds national Spanish legislation in terms of status granted to animals, Quebec that of Canada's, and Nueva Leon that of Mexico's. The same can be said for many states in India. However, collecting data for these subnational entities proves difficult (both for independent and dependent variables) and presents additional challenges in terms of comparability. We thus restrict our analysis to national or federal lawmaking. Furthermore, while we believe that constitutional and legal incorporations represent measurable and significant phenomena that signify important cross-national change, we also emphasize that these measures say little about implementation in daily practices (i.e. decoupling), which ultimately depend on the concrete enforcement of law. Furthermore, these legal changes sometimes represent compromises negotiated between activists, policy-makers, and affected sectors or industries. These compromises may or may not lead to improved animal welfare arrangements (see Evans, 2016 for a discussion and empirical case study of the ambiguity of policy change).

## Method

We use Cox regression (or Cox proportional-hazard models) to analyze the hazard of legal change. Cox regression is the standard method to deal with right-censored longitudinal data, that is, no "event" has occurred until the end of the observation period. The dependent variable in all of our analyses is the hazard rate for countries to change their constitution or legislation during consecutive years of observation starting in 1972 (constitutions) and 1992 (legislation) for those countries in existence or any later year for countries founded later. The hazard rate describes the probability of an event occurring within a given time interval. Throughout all models, we use time-dependent covariates at both the country and global level (except for religious demographics) and estimate survival model-based hazard functions which describe how the hazard rate changes over time at baseline levels of covariates and how the size of the hazard rate depends on explanatory covariates (Aalen et al., 2008). Our model has the following general form:

$$h_i(t) = h_0(t) \times \exp(\beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n)$$

where  $h_i(t)$  is the hazard function at time point  $t$  for country  $i$ ,  $h_0(t)$  is the baseline hazard function when all exploratory variables are set to 0,  $\exp(\beta_n)$  is the hazard ratio that can be interpreted as the predicted change in the hazard for a unit of increase in the predictor,  $n$  describes the count of predictors in the model, and  $x_j, j = 1 \dots n$  are the covariates. The closer the hazard ratio for a predictor is to 1 the less that predictor affects survival. To ease readability, we, however, present logarithmic coefficients instead of hazard ratios. Appendix A provides correlation checks, additional descriptive data, and a test of the proportionality of hazards assumption. We observe only a few small significant correlations (Table A3). Given our large  $N$ , we consider these as negligible. The following section presents the results of our analysis.

## Results: animal protection worldwide

### *Global trends in the legal incorporation of nonhuman animals*

Constitutional incorporation starts in the late 1940s when India makes the first reference to nonhuman animals in its constitution. Further incorporation is slow until the 1970s when animals are constitutionalized in Latin-American countries such as Cuba and Panama. Starting in the 1990s,

**Table 2.** Descriptive statistics.

Variables	constitution (1972–2020)			legislation (1992–2020)		
	N/Obs	Mean	SD	N/Obs	Mean	SD
legal incorporation	195	0.27		124 <sup>a</sup>	0.20	
GDP/cap (log)	9555	2.911	1.327	5655	3.366	0.949
Hindu & Buddhist share (%)	9555	0.027	0.156	5655	0.027	0.156
green party share (%)	9555	0.491	12.081	5655	0.799	15.610
vet schools/100.000 cap	9126	0.193	0.294	5633	0.196	0.283
human rights treaty ratifications	9555	5.315	4.618	5655	7.878	4.183
environmental treaty ratifications	9555	14.773	27.943	5655	21.90	34.054
animal protect INGOs (log)	9555	2.147	1.042	5655	2.541	0.803
world count animal protect science pubs (log)	9506	2.062	0.866	5655	2.768	0.431

<sup>a</sup>smaller N as some countries have no codified animal welfare legislation and were excluded from the population.

the proliferation of constitutional references to animals gains striking momentum with  $N=17$  countries making such a reference over the decade. In the two subsequent decades, another  $N=25$  countries incorporate an explicit reference to animals into their constitutional texts.

By contrast, the legal incorporation of a new status for nonhuman animals—as beings not things—begins decades later. The first country to change its civil code is Austria (Bürgerliches Gesetzbuch § 285a) in 1988. The 1990s see a steady increase in legal recognition of the subjectivity of animals, a process that intensifies in the 2000s when almost half of all changes ( $N=22$ ) take place. The adoption rate remains strong and the observation period closes with Denmark's adoption of a new animal welfare act in 2020.

### *Determinants of constitutional incorporation of nonhuman animals*

Turning to our event–history analyses, Table 3 presents log odds ratios for the hazard rate of constitutional incorporation of nonhuman animal references worldwide (1972–2020) with stepwise inclusion of the main variables. Model 1 includes only domestic controls. Models 2, 3, and 4 add country ties to human-rights treaties, country ties to environmental treaties and animal INGOs, and global scientific production, respectively. Model 5 includes all the variables together. Results are quite consistent across models.

Among the domestic factors, only two show significant effects. Economic development slows the rate at which nation-states incorporate nonhuman animals into their constitutions, contra perspectives highlighting the role of development on postmaterialist values. Hindu and Buddhist populations, by contrast, speed the rate at which nation-states incorporate nonhuman animals into their constitutions. The other domestic variables, namely green party strength and veterinary schools, show no significant effects.

Among the factors measuring ties to and changes in the global context, two have positive and significant effects, and two have the opposite. Country ratifications of human-rights treaties and country ties to animal protection INGOs both show the anticipated positive and significant effects on the rate at which nation-states incorporate nonhuman animals into their constitutions. To ease interpretation, for example, for every unit increase in the human-rights variable (i.e. every additional HR instrument ratified), countries are 1.65 times more likely to change their constitutions

**Table 3.** Event-history analysis of the hazard rate at which nation-states incorporate nonhuman animals into their constitutions, 1972–2020 (log odds ratios).

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Domestic economic factors</b>					
GDP/cap (log)	−0.486*** (0.083)	−0.514*** (0.087)	−0.394** (0.088)	−0.287*** (0.094)	−0.297** (0.101)
<b>Domestic cultural factors</b>					
Hindu and Buddhist share	1.038*** (0.332)	0.997** (0.334)	0.833* (0.336)	0.604* (0.367)	0.601 (0.404)
<b>Domestic political factors</b>					
Green party share	−0.024 (0.490)	−0.024 (0.491)	−0.024 (0.497)	−0.025 (0.635)	−0.026 (0.654)
<b>Domestic animal science</b>					
Vet schools/100,000 cap	0.199 (0.270)	0.099 (0.283)	0.397 (0.256)	0.205 (0.273)	0.185 (0.277)
<b>Global rights</b>					
Human-rights treaty ratifications		0.502* (0.368)			0.852* (0.414)
<b>Global embeddedness</b>					
Environmental treaty ratifications			−0.019*** (0.006)		−0.022*** (0.006)
Animal protect INGOs (log)			0.340*** (0.111)		0.257* (0.140)
<b>Global science</b>					
World count animal protect science pubs (log)				−0.938*** (0.134)	−0.775*** (0.153)

Note:  $N = 195$ ; Standard errors in parentheses. GDP = gross domestic product; INGO = international nongovernmental organization.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

( $B = .502$  represents a hazard ratio = 1.652). However, country ratifications of environmental treaties and world-level scientific productivity have unexpected negative effects. They both slow the rate at which nation-states incorporate nonhuman animals into their constitutions. These findings suggest a divergence between environmental protection and scientific productivity writ large and the constitutional incorporation of nonhuman animals. Perhaps, the ecosystems imagery that is dominant in environmental and scientific imageries diverts attention from animals per se.

On the whole, the results in Table 3 provide only partial support for our perspective. They support our arguments about the relationship between the global ontological elaboration of nonhuman animals—animal personhood—and legal incorporation. But they call into question our arguments about the relationship between the global rationalization of nonhuman animals—integration and purpose—and legal incorporation. At this point, we caution against strong conclusions, however, since this first measure of legal incorporation is quite general, counting any constitutional mention of nonhuman animals, relative to the second presented below, counting only legislation that recognizes the autonomy and dignity of nonhuman animals.

**Table 4.** Event-history analysis of the hazard rate at which nation-states grant autonomy to nonhuman animals in legislation, 1992–2020 (log odds ratios).

	Model 6	Model 7	Model 8	Model 9	Model 10
Domestic economic factors					
GDP/cap (log)	0.953*** (0.147)	0.793*** (0.145)	0.189* (0.172)	0.788*** (0.150)	-0.123 (0.186)
Domestic cultural factors					
Hindu and Buddhist share	0.163 (0.693)	0.144 (0.703)	0.214 (0.695)	-0.038 (0.709)	-1.330 (0.750)
Domestic political factors					
Green party share	-0.026 (0.545)	-0.026 (0.593)	-0.027 (0.721)	-0.027 (0.675)	-0.025 (0.585)
Domestic animal science					
Vet schools/100.000 cap	0.979*** (0.238)	0.247 (0.270)	0.629* (0.272)	0.755** (0.256)	-0.264 (0.316)
Global rights					
Human-rights treaty ratifications		6.221*** (0.967)			5.574*** (0.939)
Global embeddedness					
Environmental treaty ratifications			0.003* (0.001)		-0.007* (0.003)
Animal protect INGOs (log)					
			0.912*** (0.099)		1.266*** (0.166)
Global science					
World count animal protect science pubs (log)				2.167*** (0.299)	1.185*** (0.310)

Note: N= 195; Standard errors in parentheses. GDP=gross domestic product.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### *Determinants of legislative incorporation of nonhuman animals as subjective beings*

We now turn to the legislative incorporation of nonhuman animals as sentient and autonomous rights-bearing beings. Table 4 presents log odds ratios for the hazard rate of legislative incorporation (1992–2020) with stepwise inclusion of the main variables. Model 6 includes only domestic controls, while models 7, 8, and 9 add country ties to human rights, country ties to environmental treaties and animal INGOs, and global scientific production, respectively. Model 10 includes all the variables together.

Two of the four domestic variables show significant effects in Models 6–9—though their significance levels disappear and signs flip in Model 10. Both economic development and veterinary schools/capita speed the rate at which nation-states incorporate sentient and autonomous nonhuman animals into their legislation, in line with perspectives highlighting the relationship between development and postmaterialism and those that envision domestic animal scientists and professionals as leading advocates for animal incorporation. The remaining domestic variables, namely Hindu and Buddhist share and green party strength, show no significant effects.

In models 7–9, country ties to human-rights treaties, country ties to environmental treaties and animal INGOs, and global scientific production all show positive and significant effects on the rate at which nation-states incorporate sentient and autonomous nonhuman animals into their



legislation. Specifically, in Model 7, country human-rights commitments massively increase the likelihood of incorporation. Many of the early adopters, such as Austria and New Zealand, are deeply embedded in the world human-rights regime. In model 8, country connections to the global environmental regime show small but positive and significant effects on the adoption of new-status legislation. The same model indicates that country ties to animal INGOs significantly increase the likelihood of legislative change: each unit increases in INGO ties more than doubles event probability (hazard ratio=2.489). Model 9 adds the world count of animal protection scientific publications, which shows a strong positive effect on legislative incorporation, suggesting that science play a role in redefining animal nature, animal needs, and animal rights. These effects remain consistent in Model 10 when all the variables are thrown in together with the exception of country ties to environmental treaties—the error term of which rises and the sign of which flips. The pattern generally lends support to our global phenomenological perspective, and especially human rights, animal protection INGOs, and animal protection science remain consistently strong predictors of changes in national animal welfare legislation.

### **Discussion: a new legal ontology of nonhuman animals?**

The relationship between human and nonhuman animals has always been complex and evolving, mingling elements of worship and cruelty, bonding and exploitation. We argue that this relationship is undergoing yet another turn at the end of the 20th and the beginning of the 21st centuries. We find two novel legal trends. First, countries increasingly grant nonhuman animals constitutional standing—a process that intensifies in the 1980s and even more so in the 1990s. Second, a growing number of countries acknowledge the autonomy, worth, dignity, and sentience of nonhuman animals in animal legislation. The latter change began in the 1990s and gained momentum in the 2000s. The temporal patterns of both processes are striking, yet also in line with prior research that finds an intensified global debate about the fragility of the biosphere, threats to biodiversity, and the fate of animals in industrial agriculture since the early 1990s (Frank et al., 2000; Hironaka, 2014). While the number of countries for both legal phenomena is still small, there is clearly a rising global trend toward the legal incorporation of nonhuman animals.

In order to explain this shift and the remaining variation in the legal ontology of nonhuman animals, we have analyzed the effects of domestic and global factors. Our findings show that global factors matter in addition to domestic conditions in explaining the observed legal re-evaluation. While some models suggest that country religious composition, veterinary education, and economic development affect animal incorporation into the law, their effects diminish once they compete with additional global factors that stress the permeability and isomorphic evolution of legal systems cross-nationally (Beck et al., 2012, 2019; Boyd, 2011; May and Daly, 2014).

Our models yield support for the argument that forces operating in the global context facilitate the incorporation of nonhuman animals into nation-state laws and legal frameworks. In both instances of a qualitatively new legal ontology of nonhuman entities—through constitutions and ordinary law—a country's commitment to the core catalog of human-rights instruments turns out to be the strongest predictor. This strong link may seem surprising at first glance, yet we advance two lines of explanation. One is the expansive tendency of the global human-rights regime, which since 1948 has accorded more rights along more dimensions to more kinds of beings (Cole, 2012, 2016). Analyzing all human-rights instruments recognized by the Office of the United Nations High Commissioner for Human Rights, Elliott (2007) shows a spectacular buildup since the 1990s, encompassing, for example, children, women, the disabled, and refugees. As human exceptionalism falters, one may ask why such an expansive legal ontology should not also become the basis of inclusion for nonhuman entities considered worthy and in need of protection. With the force of

law, particularly the granting of rights, becoming a paramount mechanism of social regulation and inclusion in modern societies (Boyle and Meyer, 1998), it is almost natural for legal instruments to formalize the claims of the nonhuman animals that cannot act on their behalf.

Second, and related, the link between human rights and the growing juridification of animal concerns can also be made at the micro-level of individual attitudes. Park and Valentino (2019) find that those respondents who are in favor of granting more protective rights to disadvantaged and marginalized groups (e.g. lesbian, gay, transgender, bisexual, queer (LGTBQ), non-citizens, racial minorities) also tend to support the extension of animal rights even when controlling for demographic, ideological, and religious variables. There seems to be an underlying view among people that rights are grantable above and beyond the established categorical entity. This links back to the previous argument that, historically, the expansion of human rights does not entail a greater number of rights but a greater number of groups or categories of humans which—in many cases, dehumanized in an earlier period—are increasingly deemed worthy of rights and become included in the expanding circle of altruism (Singer, 2011; also Sparks, 2020).

Indeed, animal law has become a solid segment in the legal landscape of many countries. Around 200 universities worldwide now offer animal law degrees and within less than 20 years, the large majority of US law schools has started to offer animal rights courses (Peters, 2020; Waldau, 2016). Law firms specializing in animal law have burgeoned (e.g. Advocates for Animals), and a number of animal law journals have emerged in the past decades (e.g. *Animal Law Review*, \*1994; *Derecho Animal*, \*2010; *Global Journal of Animal Law*, \*2012; *UK Journal of Animal Law*, \*2017). Examples of national courts granting natural rights and even legal personhood to animals (e.g. in Pakistan and Argentina) can also be seen as an indicator of the expansion of legal inclusiveness beyond an anthropocentric focal point.

Importantly, this burgeoning rights-based debate is carried and spearheaded by a growing number of (I)NGOs. Once the province of affluent philanthropists, by now, a global associational infrastructure has emerged. On top of the 17,000-odd local and national associations (WAN, 2020), there are thousands of INGOs working the grassroots in spay and neuter programs, wildlife conservation, and legal support, often with immediate impact (see Figure A1 in the Appendix). Our finding is that INGO ties positively affect the rate of constitutional and legislative reform, with a stronger effect on the latter given that these associations often operate in direct dialog with practitioners and undertake targeted actions (e.g. on fur production, animal testing, or zoo conditions). Some of these organizations, supported by legal scholars, even circulate draft welfare acts (e.g. WAN)—a very clear example of how INGO activities can influence national legislation and a finding that echoes earlier research on civil society impact on animal welfare legislation and its enforcement (Allen, 2005; Nurse, 2013). INGOs represent the guardians of animal concerns. This process of enacting agency for others, that is, non-actor entities, is sometimes referred to as “otherhood” and bears resemblance with the legal concept of guardianship (Meyer and Jepperson, 2000; Zapp, 2020). INGOs are norm diffusers and legal consultants; they use both the legitimacy of expertise and their moral authority to act on behalf of others, in this case, nonhuman animals. Case studies from Germany and Switzerland, for example, show how such agency unfolds in specific settings (Evans, 2016).

At the same time, we find little support for the importance of countries’ embeddedness in global environmental regulation structures for the incorporation of animals into constitutions and the recognition of animal autonomy in legislation (Carter, 2007; Hironaka, 2014). In only one of the four models in which it is included (Model 8 in Table 4) is the effect positive and significant, as expected (albeit small). In the other three models, the effect is negative and significant. While many environmental agreements entail animal protection, the agendas do not always align (Scholtz, 2019; for European Union (EU) law, see, for example, Simonin and Gavinelli, 2019). For example,

environmentalists may demand the extirpation of an invasive species that animal protectionists seek to safeguard. Clearly, the legal change observed in animal matters does not represent a mere continuation or extension of growing sensitivity toward ecological questions. Instead, it represents a substantively and ontologically distinct area of sociocultural change and, consequentially, legal response. Here, we encourage further research to investigate the changing character of the debate on animality that oscillates between contexts of the environment on one hand and human rights on the other hand.

Finally, our measure of global animal science shows divergent effects on constitutional incorporation (negative and significant) and legislative elevation (positive and significant). In substance, the global scientific discourse on animal health, intelligence, and sentience was virtually absent until the 1990s, yet shows dramatic growth ever since (see Figure A2 in the Appendix). Such growth is driven by both the expansion of extant scientific fields and disciplines (e.g. ethology, veterinary medicine) but also the creation of new ones such as animal welfare science and animal studies (Waldau, 2013). Universities around the world have started to offer degrees in Animal Studies and the recent publication of discipline-defining works such as the *Oxford Handbook of Animal Studies* (2014), the *Routledge Handbook of Human–Animal Studies* (2014), or the *Handbook of Historical Animal Studies* (2021) suggest scholarly maturity. As an expansive rationalizing and empowering force, science feeds back into social movements, INGO activism, policy-making and, perhaps most importantly, policy practice by providing new evidence on animal behavior and needs, which are now revolving around the “discovery” of animal intelligence and sentience (Sykes, 2016a). Such a shift postdates the rise of constitutional incorporation but clearly spurs the legislative elevation of animal personhood. While we cannot ascertain direct causal influence through our models, the strong association suggests that scientific expansion may matter in changing the legal codification of nonhuman animal welfare. Indeed, the very notion of sentience—now so prominently figuring in legal codes—is the result of scientific research *and* scientific activism (Mellor et al., 2009).

Of course, the current institutionalization of animal protection should not be seen as the fully-fledged granting of *rights* and legal personhood to animals (e.g. Francione, 2014). Importantly, legal incorporation does not equate actual improvement of the lot of animals across industries and sectors including laboratories, agriculture, or the entertainment industry. Legal incorporation and policy change often entail windows of opportunity for new standards, new actors joining the regulation, supervision, and monitoring of animal welfare (Evans, 2016), yet absent a forceful system of implementation and law enforcement across political levels and affected sectors such legal texts may remain lip service to the involved stakeholders and a disservice to animals. At the same time, aware of the dramatic implications of genuine rights and legal personhood for nonhuman animals, lawmakers around the world are treading carefully but breaking new ground.

## Conclusion and further research

This study analyzes cross-national legal change and expansion in animal protection as the result of profound transformations in world society, which we describe as shifts in the collective interpretation of societal and, indeed, humanhood boundaries. Carried by thickening associational structures (i.e. INGOs), and undergirded by a science-based extension of such key notions as intelligence, sentience, and dignity—long limited to describing humans’ unique status in and indeed separation from nature—those countries that subscribe most to the global human-rights charter are strong candidates for the legal incorporation of nonhuman animals.

The article at hand tracks the cross-national evolution of important legal changes in the protection and re-evaluation of nonhuman animals, yet we suggest future research may benefit from

zooming in on our bird's eye perspective. Additional insight can be gained by examining the legal change of animal welfare through detailed case studies to identify intended and unintended consequences of such policy change as well as instances of decoupling between legal text and local action. Such case studies may also help to specify the concrete mechanisms at play and the role of particular actors (e.g. INGOs and scientists). An additional focus on subnational legislation which often exceeds national legislation in scope and importance in decentralized countries—despite the challenges in collecting such data—would also help to paint a more complete picture of the worldwide change of nonhuman animal protection in contemporary world society. The boundaries of society itself are at stake, and so is the notion of personhood.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iD

Mike Zapp  <https://orcid.org/0000-0002-1055-1936>

## Supplemental material

Supplemental material for this article is available online.

## Notes

1. See, for example, the American Medical Veterinary Association's (AMVA, 2020) oath:  
Being admitted to the profession of veterinary medicine, I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health and welfare, the prevention and relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge.
2. We thank Zack Grant for sharing his dataset with us.
3. A count of veterinarians/capita would also be useful, but such data are not available for earlier periods. The correlation between veterinary education and recent data on the number of veterinarians for selected countries is, however, very high ( $r = .85$ ).
4. See Zapp and Lerch (2020) for additional information. The World Higher Education Database (WHED) is property of the University of Luxembourg.
5. These include the International Convention on the Elimination of Racial Discrimination; International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights; Convention on the Elimination of Discrimination against Women; Convention against Torture; Convention on the Rights of the Child; International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families; All Migrant Workers and Members of Their Families; International Convention for the Protection of All Persons from Enforced Disappearance; and the Convention on the Rights of Persons with Disabilities. We thank Wade Cole for sharing a version of this dataset with us.
6. We would like to thank Barbara Marosvary for helping in collecting the data.

## References

- Aalen O, Borgan O and Gjessing H (2008) *Survival and Event History Analysis: A Process Point of View*. Dordrecht: Springer.
- Allen MD (2005) Laying down the law? Interest group influence on State adoption of animal cruelty felony laws. *Policy Studies Journal* 33: 443–457.

- American Medical Veterinary Association (AMVA) (2020) Veterinarian's oath. Available at: <https://www.avma.org/policies/veterinarians-oath> (accessed 10 December 2020).
- Austin RL and Flynn CP (2015) Traversing the gap between religion and animal rights: Framing and networks as a conceptual bridge. *Journal of Animal Ethics* 5(2): 144–158.
- Basic Law for the Federal Republic of Germany (2002) Article 20(a).
- Beck CJ, Drori GD and Meyer JW (2012) World influences on human rights language in constitutions: A cross-national study. *International Sociology* 27(4): 483–501.
- Beck CJ, Meyer J, Hosoki R, et al. (2019) Constitutions in world society: A new measure of human rights. In: Shaffer G, Ginsburg T and Halliday T (eds) *Constitution-Making and Transnational Legal Order (Comparative Constitutional Law and Policy)*. Cambridge: Cambridge University Press, pp. 85–109.
- Berry J (2014) Animal welfare . . . What is the veterinarian's role? *The Canadian Veterinary Journal = La Revue Veterinaire Canadienne* 55(3): 203–206.
- Boyd DR (2011) *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights, and the Environment*. Vancouver, BC, Canada: UBC Press.
- Boyle E and Meyer J (1998) Modern law as a secularized and global model: Implications for the sociology of law. *Soziale Welt* 49(3): 213–232.
- Carter NT (2007) *The Politics of the Environment: Ideas, Activism, Policy*, 2nd edn. Cambridge: Cambridge University Press.
- Caviglia-Harris JL, Chambers D and Kahn JR (2009) Taking the “U” out of Kuznets: A comprehensive analysis of the EKC and environmental degradation. *Ecological Economics* 68(4): 1149–1159.
- CIA (2020) The world factbook. Available at: <https://www.cia.gov/the-world-factbook/> (accessed 10 December 2020).
- Cole WM (2005) Sovereignty relinquished? Explaining commitment to the international human rights covenants, 1966–1999. *American Sociological Review* 70(3): 472–495.
- Cole WM (2012) Human rights as myth and ceremony? Reevaluating the effectiveness of human rights treaties, 1981–2007. *American Journal of Sociology* 117(4): 1131–1171.
- Cole WM (2016) Human rights and the individual: Cross-cultural variation in human rights scores, 1980 to 2010. *Social Forces* 95(2): 721–752.
- Cole WM and Ramirez FO (2013) Conditional decoupling: Assessing the impact of national human rights institutions, 1981–2004. *American Sociological Review*: 78(4): 702–725.
- Constitute Project (2020) Dataset. Available at: [www.constituteproject.org](http://www.constituteproject.org) (accessed 10 December 2020).
- Constitution of India (1949) Article 48.
- Delhey J (2010) From materialist to post-materialist happiness? National affluence and determinants of life satisfaction in cross-national perspective. *Social Indicators Research* 97(1): 65–84.
- DiMaggio PJ (1991) Constructing an organizational field as a professional project: U.S. art museums, 1920–1940. In: Powell WW and DiMaggio PJ (eds) *The New Institutionalism in Organizational Analysis*. Chicago, IL: The University of Chicago Press, pp. 267–292.
- Dobbin F, Simmons B and Garret G (2007) The global diffusion of public policies: Social construction, coercion, competition, or learning? *Annual Review of Sociology* 33(1): 449–472.
- Downs A (1957) *An Economic Theory of Democracy*. New York: Harper Perennial.
- Drori GS, Meyer JM, Ramirez FO, et al. (2009) World society and the authority and empowerment of science. In: Krücken G and Drori GS (eds) *World Society: The Writings of John W. Meyer*. New York: Oxford University Press, pp. 261–279.
- Dunlap RE and Catton WR (1994) Struggling with human exemptionalism: The rise, decline and revitalization of Environmental Sociology. *The American Sociologist* 25: 5–30.
- Eisen J (2018) Animals in the constitutional state. *International Journal of Constitutional Law* 15(4): 909–954.
- Elliott MA (2007) Human rights and the triumph of the individual in world culture. *Cultural Sociology* 1(3): 343–363.
- Elliott MA (2011) The institutional expansion of human rights, 1863–2003: A comprehensive dataset of international instruments. *Journal of Peace Research* 48(4): 537–546.



- Evans EM (2010) Constitutional inclusion of animal rights in Germany and Switzerland: How did animal protection become an issue of national importance? *Society & Animals* 18(3): 231–250.
- Evans EM (2016) Stumbling blocks or stepping stones? The problems and promises of policy reform for the animal advocacy movement. *Sociological Perspectives* 59(4): 835–854.
- FAO (2020) FAOLEX database. Available at: <http://www.fao.org/faolex/en/> (accessed 10 December 2020).
- Francione GL (2014) Animal welfare and the moral value of nonhuman animals. In: Cederholm EA, Björck A, Jennbert K, et al. (eds) *Exploring the Animal Turn: Human–Animal Relations in Science, Society and Culture*. Lund: The Pufendorf Institute, pp. 57–72.
- Frank DJ, Hironaka A and Schofer E (2000) The nation-state and the natural environment over the twentieth century. *American Sociological Review* 65(1): 96–116.
- Gibson M (2011) The universal declaration of animal welfare. *Deakin Law Review* 16(2): 539–567.
- Global Animal Law Project (GALP) (2020) Global Animal Law Project. Available at: [https://www.globalanimallaw.org/foxes/index.html?fbclid=IwAR1Iq-AaMOpEOU\\_O1PiXfbTIFVg2jX0gxVHWK4HQ0yJxMm7lTIT8MKqZxE](https://www.globalanimallaw.org/foxes/index.html?fbclid=IwAR1Iq-AaMOpEOU_O1PiXfbTIFVg2jX0gxVHWK4HQ0yJxMm7lTIT8MKqZxE) (accessed 19 November 2020).
- Grant ZP and Tilley J (2019) Fertile soil: Explaining variation in the success of Green parties. *West European Politics* 42(3): 495–516.
- Greenwood R, Suddaby R and Hinings CR (2002) Theorizing change: The role of professional associations in the transformation of institutionalized fields. *The Academy of Management Journal* 45(1): 58–80.
- Halliday TC and Shaffer G (2014) *Transnational Legal Orders*. Cambridge: Cambridge University Press.
- Hironaka A (2014) *Greening the Globe: World Society and Environmental Change*. Cambridge: Cambridge University Press.
- Holst A and Martens P (2016) Determinants of animal protection policy: A cross-country empirical study. *Politics and Animals* 2: 1–14.
- Huntingford FA, Adams C, Braithwaite VA, et al. (2006) Current issues in fish welfare. *Fish Biology* 68(2): 332–372.
- Inglehart R and Welzel C (2005) *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Cambridge: Cambridge University Press.
- Jamison WV and Lunch WM (1992) Rights of animals, perceptions of science, and political activism: Profile of American animal rights activities. *Science Technology & Human Values* 17(4): 438–458.
- Karcher K (2009) The great ape project. In: Bekoff M (ed.) *The Encyclopedia of Animal Rights and Animal Welfare*, 2nd edn. Westport, CT: Greenwood, pp. 185–187.
- Krehbiel K, Meirowitz A and Wiseman A (2015) A theory of competitive partisan lawmaking. *Political Science Research and Methods* 3(3): 423–448.
- Kuznets S (1955) Economic growth and income inequality. *The American Economic Review* 45(1): 1–28.
- Ladewig J (2008) The role of the veterinarian in animal welfare. *Acta Veterinaria Scandinavica* 50(suppl. 1): S5.
- Lerch JC (2019) INGO memberships revisited: Local variation of receptor sites in the education sector. *International Journal of Comparative Sociology* 60(3): 117–139.
- Linzey A and Tutu D (2013) *The Global Guide to Animal Protection*. Urbana, IL: University of Illinois Press.
- Low P, Pankseep J, Reiss D, et al. (2012) The Cambridge declaration on consciousness. Available at: <https://static1.squarespace.com/static/57cf3049ebbd1a6e5b9f3a74/t/5cd991c76e9a7f28d088ff1f/1557762503955/The+Cambridge+Declaration+on+Consciousness.pdf> (accessed 21 November 2020).
- May JR and Daly E (2014) *Global Environmental Constitutionalism*. Cambridge: Cambridge University Press.
- Mellor D, Patterson-Kane E and Stafford KJ (2009) *The Sciences of Animal Welfare*. Hoboken, NJ: Wiley-Blackwell.
- Meyer JW (2010) World society, institutional theories, and the actor. *Annual Review of Sociology* 36: 1–20.
- Meyer JW and Jepperson RL (2000) The “actors” of modern society: The cultural construction of social agency. *Sociological Theory* 18(1): 100–120.
- Meyer JW, Bolli J, Thomas GT, et al. (1997a) World society and the nation-state. *American Journal of Sociology* 103(1): 144–181.



- Meyer JW, Frank D, Hironaka A, et al. (1997b) The structuring of a world environmental regime, 1870–1990. *International Organization* 51(4): 623–651.
- Nardi DJ Jr (2018) Can NGOs change the constitution? Civil society and the Indonesian Constitutional Court. *Contemporary Southeast Asia* 40(2): 247–278.
- Nattrass KM (2004) “. . . und die Tiere”: Constitutional protection for Germany’s animals. *Animal Law* 10: 283–312.
- Negro G and Longhofer W (2018) World society, legal formalism, and execution of legal procedures. *Social Forces* 97(2): 649–674.
- Nurse A (2013) Privatising the green police: The role of NGOs in wildlife law enforcement. *Crime Law and Social Change* 59: 305–318.
- Office of the High Commissioner for Human Rights (OHCHR) (2020) The core international human rights instruments and their monitoring bodies. Available at: <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx> (accessed 2 December 2020).
- Ohnuma R (2017) *Unfortunate Destiny: Animals in the Indian Buddhist Imagination*. Oxford: Oxford University Press.
- Park YS and Valentino B (2019) Animals are people too: Explaining variation in respect for animal rights. *Human Rights Quarterly* 41(1): 39–65.
- Peters A (ed.) (2020) *Studies in Global Animal Law*. Dordrecht: Springer.
- Pew Research Center (2012) The global religious landscape. Available at: <https://www.pewforum.org/2012/12/18/global-religious-landscape-exec/> (accessed 21 November 2020).
- Pope S and Meyer JW (2016) Local variation in world society: Six characteristics of global diffusion. *European Journal of Cultural and Political Sociology* 3(2–3): 280–305.
- Regan T (1983) *The Case for Animal Rights*. Berkeley, CA: University of California Press.
- Rollin B (2019) Animal welfare across the world. *Journal of Applied Animal Ethics Research* 1(1): 146–170.
- Scholtz W (ed.) (2019) *Animal Welfare and International Environmental Law: From Conservation to Compassion*. Cheltenham: Edward Elgar.
- Scopus (2020) Scopus abstract and citation database. *Elsevier*. Available at: <https://www.elsevier.com/solutions/scopus> (accessed 3 September 2020).
- Shtiegman S (2017) Building an international nonhuman rights movement. Available at: <https://www.nonhumanrights.org/blog/international-work/> (accessed 13 April 2021).
- Simonin D and Gavinelli A (2019) The European Union legislation on animal welfare: State of play, enforcement and future activities. In: Hild S and Schweitzer L (eds) *Animal Welfare: From Science to Law*. Paris: La Fondation Droit Animal, pp. 59–70.
- Singer P (2001) *Writings on an Ethical Life*. New York: Harper Perennial.
- Singer P (2011) *The Expanding Circle: Ethics, Evolution, and Moral Progress*. Princeton, NJ: Princeton University Press.
- Singer P (2015) *The Most Good You Can Do: How Effective Altruism Is Changing Ideas About Living Ethically*. New Haven, CT: Yale University Press.
- Sparks T (2020) Protection of animals through human rights: The case-law of the European court of human rights. In: Peters A (ed.) *Studies in Global Animal Law*. Berlin; Heidelberg: Springer, pp. 153–171.
- Sykes K (2016a) Globalization and the animal turn: How international trade law contributes to global norms of animal protection. *Transnational Environmental Law* 5(1): 55–79.
- Sykes K (2016b) The appeal to science and the formation of global animal law. *European Journal of International Law* 27(2): 497–518.
- Tanzania Animal Welfare Act (2008).
- Teubner G (1997) *Global Law without a State*. Dartmouth, MA: Dartmouth Publishing.
- The Economist (2018) Animals and the law. *The Economist*, 22 December. Available at: <https://www.economist.com/international/2018/12/22/gradually-nervously-courts-are-granting-rights-to-animals> (accessed 20 October 2020).
- The Helsinki Group (2010) Declaration of rights for cetaceans: Whales and dolphins. Available at: <https://www.cetaceanrights.org/> (accessed 29 November 2020).

- The World Bank (2020) GDP per capita (Database). Available at: <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD> (accessed 8 December 2020).
- Thornhill C (2016) *A Sociology of Transnational Constitutions: Social Foundations of the Post-National Legal Structure*. Cambridge: Cambridge University Press.
- Union of International Association (UIA) (2020) *The Yearbook of International Organizations 2020–2021*. Brussels: UIA.
- Vapnek J and Chapman M (eds) (2010) *Legislative and Regulatory Options for Animal Welfare*. Rome: Food and Agriculture Organization of the United Nations.
- Waldau P (2013) *Animal Studies: An Introduction*. Oxford: Oxford University Press.
- Waldau P (2016) Second wave animal law and the arrival of animal studies. In: Cao D and White S (eds) *Animal Law and Welfare—International Perspectives* (Ius Gentium: Comparative Perspectives on Law and Justice, vol. 53). Cham: Springer, pp. 11–43.
- World Animal Net (WAN) (2020) Animal protection legislation. Available at: <https://worldanimal.net/wan-resources/animal-protection-law-resources> (accessed 6 November 2020).
- Wrenn CL (2014) Abolition then and now: Tactical comparisons between the human rights movement and the modern nonhuman animal rights movement in the United States. *Journal of Agricultural and Environmental Ethics* 27(2): 177–200.
- Zapp M (2020) Constructing world society: International organizations, otherhood and the rise of global reporting. *Globalizations* 18(2): 212–236.
- Zapp M and Dahmen C (2017) The diffusion of educational ideas among international organizations: An event history analysis of lifelong learning, 1990–2013. *Comparative Education Review* 61(3): 492–518.
- Zapp M and Lerch J (2020) Imagining the world: Conceptions and determinants of internationalization in higher education curricula worldwide. *Sociology of Education* 93(4): 372–392.