Abstract

Big History allows us to ask whether human behavior merely reflects patterns already exhibited in the natural world by other social animals. While animal behavior can be interpreted through a prism that stresses ‘the struggle for existence’, territories and ranks in social animals require cooperative behaviors, with the ‘in-group’ often reserving its most aggressive competitive behaviors for other species and rival groups of the same species. In human history territoriality, hierarchy and cooperation combine in the institutions of the empire. The Spanish Empire, therefore, can be used to test the hypothesis proposed by David Christian, and elaborated by Russell Genet, that we are ‘the chimpanzees who would be ants’.

Keywords: Big History, Spanish Empire, chimpanzees, cooperation, human ethology.

Big History is not merely a cultural construction fabricated by some contemporary historians and scientists. There is a real empirical precedent for a Big Historical approach that reflects upon the human story in the context of natural history. Like other animals, we have evolved our own species-specific arrangement of Earth’s DNA, but we still share with all other terrestrial life forms the same nucleobases that define life on this planet. Big History allows us to ask whether human behavior merely reflects patterns already set in the natural world and exhibited phenotypically by other social animals. By exploring our accounts of interaction with other animals, and comparing human efforts to subordinate them and our fellow human beings, broad evolutionary patterns that impinge upon our behavior come to be detected in other time periods and cultures. From the days of the Roman Empire, with its slaugh-

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Abel A. Alves

The case study with which I am most familiar is that of the early modern Spanish Empire. Those involved in the construction of that imperial project were animals like ants or chimpanzees, only differentiated from other animals in a capacity for more elaborate reflection on their
actions – reflection which sometimes led to the evolving critique of imperial abuse so central to the writings of the Dominican priest Bartolomé de las Casas (c. 1484–1566). Of las Casas, Rolena Adorno has written, ‘His concerns evolved from his initial attempts in 1516 to protect the Indians while ensuring the economic prosperity of the crown, to his ultimate recommendation, made forty-eight years later, that Spain abandon altogether its rule of the Indies’ (Adorno 2011: 28–29). He also changed his position on the enslavement of Africans, initially wishing to eliminate abusive tributary demands made of Amerindians in the Caribbean islands by importing African slaves, and then regretting that he had ever made such a suggestion when he finally recognized the horrible abuses that Africans faced as slaves on Spanish estates (Clayton 2011: 79–81, 137–138, 146). Today, the moral reflections of Bartolomé de las Casas survive as part of our collective memory found in written records, and, as noted by David Christian in Maps of Time, this capacity for collective learning through symbolic language and abstraction may be exactly that which has enhanced our species’ ability to form the most elaborate and solid of communal bonds, generating our planetary dominance (Christian 2004: 146–148). Through fragile and complex social entities that balance competition and cooperation we have come to dominate and shape the biosphere, and that process clearly was accelerated by sixteenth-century Iberian expansion into the western hemisphere, with the Columbian Exchange in biota like wheat, maize, the smallpox virus, tobacco and horses, among other things (Crosby 1973: 52–58, 64–81, 170–171).

When alien conquerors from the Iberian Peninsula invaded the western hemisphere in 1492, they were accompanied by subjugated humans and animals. In the very act of using African slaves as tools of transformation, boundaries between humans and beasts of burden were invidiously blurred. Both the slave and the mule became ‘objects’ providing labor, but the sheer inappropriateness of reducing people in particular and sentient, conscious beings in general to the status of mere things was consistently contested by humans from Africa and animals from the eastern and western hemispheres. Slaves, cows and pigs all escaped at times, becoming cimarrones, ‘wild’ and ‘renegade’ in the eyes of the Spaniards (Real Academia Española 1963–1964, 1: 350). By escaping from Spanish ‘império’ – defined as ‘dominion’, ‘authority’ and ‘territory’ in the Spanish Royal Academy’s eighteenth-century Diccionario de Autoridades, originally published from 1726 to 1739 (Real Academia Española 1963–1964, 2: 224) – these cimarrones proved their agency. They
were fully animate beings and not insensible things. Empire, ‘império’, is an embodied confusion of categories that would reduce independent beings to nothing more than means to an end, rather than appreciating their status as actors who choose, compromise and are compelled. Spaniards were guilty of this confusion in their imperialism, but like the Africans and Amerindians whom they tried to control, Spaniards were both highly adaptive human beings and creatures like the ants that herd aphids and ‘milk’ them for their honeydew (Wilson 2000: 356; Hölldobler and Wilson 1994: 147, 149).

The reduction of another animal to a mere resource is not only a human behavior after all, and honey ants of the genus *Myrmecocystus* will raid neighboring colonies of their conspecifics to bring back larvae, pupae and honeypot ants who store food to be used by their sisters. The conquered and captured, often called ‘slaves’ by entomologists, go about enhancing the resources of their new anthill, with larvae and pupae raised to be coworkers with their conquerors (Kronauer, Miller, and Hölldobler 2003). The quest for domination and control of resources in nature has a long evolutionary history, and among our chimpanzee cousins, as shown in the 2012 film *Chimpanzee*, fruit- and nut-bearing trees can be warred over by two different communities (Linfield, Fothergill, and Hahn 2012). Chimpanzees will kill each other over the questions of territory and resources, with the first detailed study of a chimpanzee war being that between the Kasakela and Kahama communities of Tanzania in the 1970s (Goodall 1986: 503–514). By the end of 1977, Kasakela had completely eliminated its rival, even as the Roman republic razed Carthage to the ground in 146 BCE. With their woolbearing sheep, human slaves and imperial wars, the Spaniards replicated behavioral patterns already found in the rest of the natural world, but acts of violent domination do not themselves dominate nature. Cooperation between ascribed estates, mutual aid within hierarchy, helped to maintain the Spanish imperial project, even as the anthill and the beehive survive as cooperative superorganisms (Sober and Wilson 1998: 96–98, 147–149).

Bert Hölldobler and Edward O. Wilson define ‘superorganism’ as:

A society, such as a eusocial insect colony, that possesses features of organization analogous to the physiological properties of single organisms. The eusocial colony, for example, is divided into reproductive castes (analogous to gonads) and worker castes (analogous to somatic tissue); its members may, for example, ex-
change nutrients and pheromones by trophallaxis and grooming (analogous to the circulatory system) (Hölldobler and Wilson 2009: 513).

As suggested by David Christian and elaborated by Russell Genet, we well may be ‘the chimpanzees who would be ants’ (Christian 2004: 250–252; Genet 2007: 51–53, 86, 93), but this already was recognized by early modern Europeans who referred to their hierarchical and cooperative societies as social organisms: ‘the body politic’ (Sober and Wilson 1998: 132–133; Alves 1989). They were aware of their place in nature, with the influential Jesuit professor Francisco Suárez (1548–1617) arguing that ‘... “humanity” is really a certain sensitive nature and has in this fact some agreement and similarity with the nature of “horse” and of “lion”, taken in the abstract; for all are the integral principle of “being sentient”...’ According to Suárez, there is ‘a certain analogy of proportionality’ whereby ‘animal’ can be applied equivocally to humans and horses in that both integrate sentience and sensitivity into their very natures. They are alike in genus, though essentially different in species.

As with Aristotle, humanity is ‘rational animality’, and Spanish political thinkers like the diplomat Diego de Saavedra Fajardo (1584–1648) readily drew on his culture’s perceptions of the behavior of everything from lions to bees in the advice he offered princes (Suárez 1964: 117, 101; Aristotle 1992: 60; Berns 1976; Saavedra Fajardo 1947: 113–114, 171–173).

In the Iberian Peninsula itself, Spaniards were shaped by their economic domination of nonhuman animals like sheep, goats and cows – and by the ranked human society that cooperatively maintained the Spanish economy. To Miguel Caja de Leruela (also Caxa de Leruela), a seventeenth-century official of Castile’s shepherding guild, the Mesta, a Spain without livestock would be an impoverished land since nonhuman animals plowed the fields and provided their hides and fleece for clothing. Spain without herds would be a place where rural children would be abandoned by poor parents because they were no longer needed to tend livestock (Caja de Leruela 1975: 17–25, 177–178). Paternalistically demonstrating concern, Caja de Leruela worried about the poor who owned a few animals being denied pasturage because of the enclosure of grazing lands by wealthier individuals (Ibid.: 88–90; Vassberg 1984: 172). Likewise, he argued against the killing of valuable oxen and cows before their time. He recommended that Spain adopt prohibitions on slaughtering fertile cows and oxen still capable of pulling plows and carts, saying that some ten years of life seemed reason-
able for these animals (Caja de Leruela 1975: 109; Vassberg 1984: 160, 162). Before being punished for damaging crops, livestock were also to be judged, with substantial evidence necessary to convict any culprit (Caja de Leruela 1975: 130–131). Harmony in Caja de Leruela’s Spain required a certain level of unequal reciprocity between human elites and the humans and other animals who labored for them. This was reflected in actual eighteenth-century Mesta laws that protected shepherding dogs from abuse and provided payment to human employees of the Mesta according to rank. Thus, fines as onerous as five sheep or more could be exacted from anyone who injured one of the Mesta’s sheepdogs, and each Mesta shepherd received two pounds of bread a day and another two pounds for his dog, with assistant shepherds in the eighteenth century earning anywhere from 6 to 18 ducats a year and the rebadán, or shepherd in command of subordinate herders, dogs and a rebaño of 1,000 to 1,500 sheep receiving 20 ducats a year in addition to the food allotment, which also included oil and tallow for all the shepherds (Klein 1920: 25; Phillips and Phillips 1997: 103–105).

From the level of the peasant village with its communal pasture lands, or dehesas, to that of the aristocratically dominated Mesta, with its individual flocks numbering in the thousands, Spaniards associated with livestock. But not all shepherds throughout the empire were valued equally. According to a 1748 report by the scholarly naval officers Jorge Juan (1713–1773) and Antonio de Ulloa (1716–1795), a flock of 500 sheep in Andalusia was tended by one shepherd and an assistant. The shepherd earned 24 pesos a year, and his helper 16 pesos. Bread, oil, vinegar, salt, donkeys and food for sheepdogs were also provided, with an overseer hired to supervise three flocks. For the care of 800 to 1,000 sheep, an eighteenth-century Amerindian shepherd in Peru earned 18 pesos annually. The document also says that goods were costlier in Peru than Spain, and that no food or paid assistant were provided to the Amerindian shepherd, with 8 of the 18 pesos going to annual tributary payments (Juan and Ulloa 1826: 273–275; 1978: 132–134). Indigenous American shepherds prejudicially were ascribed less remuneration than European shepherds for comparable amounts of labor. Veritable castes existed in the Spanish imperial superorganism, with different individuals and subgroups playing out their particular roles toward common societal goals, just as they do among the ants.

However, even as Andean shepherds adapted their methods of tending alpacas and vicuñas to sheep, Amerindians in general were able to express dominion over nonhuman animals, thereby finding a trun-
cated império in relation to nature. As early as the late sixteenth century, in Crown-commissioned reports known as relaciones, officials in the viceroyalty of New Spain noted the presence of American turkeys and Castilian chickens in Amerindian communities (Paso y Troncoso 1905, vol. 4: 20, 67, 103, 107, 112-113, 147, 180, 210, 241, 246; Paso y Troncoso 1905, vol. 5: 3, 109, 167; Paso y Troncoso 1905, vol. 6: 4, 18, 23, 25, 30, 33, 37, 92, 98, 104, 112, 121, 126, 130, 136, 143, 148, 151, 249, 280, 301, 307, 320; Gibson 1964: 344). In the sixteenth-century viceroyalty of Peru, relaciones reported both Castilian sheep and llamas and alpacas identified as ‘native sheep’ or ‘ovejas de la tierra’ (Jiménez de la Espada 1965a: 206; 1965b: 189, 213). Cows and pigs were also to be found in both viceroyalties (Paso y Troncoso 1905, vol. 4: 56, 75, 79, 84, 103, 113, 147, 210; Jiménez de la Espada 1965b: 170, 189, 213). Amerindians obviously dominated and used domesticated animals, from native turkeys and camelids to the new arrivals from Spain. And just as the fictional Quixotic squire Sancho Panza was capable of both using his donkey and embracing him as his friend and companion (Cervantes 1949: 858; 1998: 787), historical Amerindians demonstrated care and concern, as well as império vis-à-vis nature’s sentient beings.

Andeans kept dogs. While noting that Quito was a place where good meat could be found, the young Spanish explorer, intellectual and naval officer Antonio de Ulloa also noticed that the Amerindians of eighteenth-century Quito demonstrated great affection for their dogs, who reciprocated by offering intense loyalty and protection against Spaniards and mestizos who might threaten their masters. Ulloa made an interesting observation that Spaniards and mestizos, in turn, taught their dogs to guard against indios, whom they feared (Ulloa 1990, vol. 1: 369, 511-512). In a backhanded way, he recognized the educational capacity of dogs, even while he also made note of human xenophobia at work. In fact, he took some time to reflect on the ways in which humans associated with other animals in Quito, and he wrote that Amerindian women so loved the chickens they raised that they did not eat them and only sold them with great sorrow and regret if they were in dire need (Ulloa 1990, vol. 1: 512). A city whose population grew through migration in the sixteenth century, Quito was a locus for the accumulation of diverse Amerindian traditions, and while evidence points to the Eurasian chicken’s becoming a substitute for culturally preferred guinea pig meat among Quechua speakers, there are also sources that tell us of Amerindians who kept chickens as pets and suppliers of ornamental feathers (Powers 1995: 7-8, 13-43; Morales 1995: 13, 62; Seligmann 1987: 143; Nor-
densköld 1922: 9–12). Like other humans, Amerindians both used and loved nonhuman animals in a hierarchy of beings that jointly recognized human dominance and mutualistic symbiotic relationships with other animate, sentient beings in nature. As ‘chimpanzees who would be ants’, our species reflects on its interactions with other animals in ways that the ant who herds aphids probably cannot. However, primatologists like Frans de Waal do make note of how apes can empathize with the needs of other species. When a starling hit the glass of her enclosure and was stunned, the bonobo Kuni went out of her way to help the bird to fly again, while in a 1996 video shown around the world and still easily available on YouTube today, the Brookfield Zoo gorilla Binti Jua, carefully took a boy who had fallen into her enclosure to the access point where humans could enter her cage, guarding the boy from harm until she could hand him over (de Waal 2005: 2–3; NBC Chicago 1996). Like our ape cousins, and to the benefit of our societies, we are capable of intra- and interspecies care and concern, but that is certainly not the entire story where our complex ‘anthills’ are concerned.

Indeed, a conflicted relationship with nonhuman animals, and with other humans, characterized the Spanish Empire, as it characterizes us today. The Africans forcibly brought from their homeland across the Atlantic were tallied according to their ability to work. On slave ships, a pieza de India measured the labor done by a young, healthy male adult. Children, women and the old were horrifically counted up as fractions of one pieza (Curtin 1969: 22). Literally a ‘piece’ or material article, the ‘pieza’ also referred to game animals and, on occasion, Amerindian captives (Weber 2005: 235). In turn, when either a slave or a nonhuman animal like a cow or pig escaped Spanish subjugation, they were called ‘cimarrón’, wild and renegade (Real Academia Española 1963–1964, vol. 1: 350; Jiménez de la Espada 1965b: 296). Likewise, the Spaniards were concerned about the ‘casta’, or lineage, of both livestock and humans. Prejudicial concerns about racial mixtures arose along these lines, even as breeders of merino sheep judged the wool of newly born lambs to determine whether they were to be culled or not (Phillips and Phillips 1997: 116). The sad truth is that Spaniards, in ascribing value to sentient beings, leveled the difference between humans and other animals in ways we, appropriately, are not comfortable with today. Africans could be cimarrones like livestock, and children of mixed ethnicity might be judged by their lineage or casta. However, it is interesting to note that casta was also used to discuss the noble lineage of knights (Real Academia Española 1963–1964, vol. 1: 219–220). Many Spaniards
admitted their animality, but they usually insisted on a superior, more rational grade of being for those Spaniards, especially males, in positions of authority. Spanish dominion, *imperio*, involved its verbal dominance displays and outright brutal acts, even as dominance is put on display by other highly ranked individuals in the animal kingdom. However, just as an alpha male chimpanzee will alternatively food-share with an appropriately subordinate ape and pummel a rival, the Spanish *imperio* balanced compassion with competition in its pursuit of power. Different individuals play their roles, even as different roles exist among the eusocial insects.

The testimony taken at the 1660 process of beatification for Martín de Porres (1579–1639; canonized 1962) is consistent in identifying him as a man who tended to the sick and hungry regardless of rank, race or species. Multiple witnesses said he cared for Blacks, Spaniards and Amerindians, and that animals came to him to be cured ‘as though they had reason’ (*Proceso de beatificación* 1960: 100, 105, 125–129, 139, 194–195, 201, 206, 228, 245, 249, 252, 275, 291–293, 310–311, 318). The witnesses also said that he disciplined his body in the approved manner of the day, sleeping without a real bed, refusing to eat meat, and whipping himself (*Proceso de beatificación* 1960: 98, 136, 193, 299).

To some Fray Martín’s actions and his very being might have been transgressive, but to those around him, who later testified on his behalf at his 1660 beatification process, he was admired and saintly because of his behavior, with his humility always being raised in this context. According to one witness, he focused on his own *casta* status – his own biracial and boundary-challenging status as a ‘mulato’ – while praying and whipping himself, referring to himself as a *mulato* dog – ‘un perromulato’ (*Proceso de beatificación* 1960: 193).1 Whether the ‘perromulato’ incident occurred or not, de Porres’ charitable acts, testified to by many witnesses, illustrate a man who shared food, medicine and love regardless of how the prejudicial in his society judged the so-called purity of one’s blood, or *limpieza de sangre*.

1 During Martín de Porres’ own lifetime, the *castas* – racial lineages and mixtures that derived from Amerindians, Africans and Europeans – came to be an increasingly significant challenge to a Spanish American empire that initially saw itself as divided into a *república de los indios* and a *república de los españoles* (Elliott 2006: 170–171; Earle 2012: 179–186). The Diccionario de autoridades explicitly says that early modern Spaniards derisively compared the generation of ‘mulato’ to the generation of a *mulo* or mule (Real Academia Española 1963–1964, vol. 2: 628).
Indeed, by being a food-sharer and healer, Martín de Porres helped to illustrate and maintain one of the Spanish Empire's justifications for its very existence: that it provided aid and comfort to those in need, and that though there were ranks, there was sharing according to rank, with charity trying to minimize suffering (Alves 1989; 1996: 148–149, 157). In the Dominican priest Bernardo de Medina's seventeenth-century biography of Martín de Porres, the Dominicans' slaves at the hacienda of LimaTambo are included among those he cured, and it can be argued that de Porres thereby protected his order's economic interests while also performing a charitable act (Medina 1964: 88). A sort of reciprocal sharing among the ranks was maintained, with fundamental physical needs taken into account. Likewise, in sixteenth-century New Spain, while Amerindian production of wheat was tithed, the production of maize was not, and the old Mexican staple was consistently sold at lower prices than wheat, both establishing wheat as an elite Spanish grain and providing Amerindians with their culturally preferred grain at a charitably lower cost (Alves 1996: 154; Gibson 1964: 322–323). The Spanish imperial vision of a well-functioning body politic called for charitable donations of food to be dispensed from hospitals, and even Cortés, the conqueror of New Spain, provided a legacy for the hospital he founded, the Hospital de la Limpia y Pura Concepción de Nuestra Señora y Jesús Nazareno, in his last will and testament (Paso y Troncoso 1905, vol. 3: 23; Muriel 1956–1960, vol. 1: 40–43; Alves 1996: 183–211). In the Christian context, charity could become a display of power and worth, and by living Christian humility and service, Martín de Porres enhanced his own status, gaining respect and the liberty for an occasional criticism of what he perceived as heartless domination. Medina wrote that de Porres rebuked the Dominican in charge of his convent's food for having his smelly, old kitchen dog killed after years of loyal service. Challenging the man's lack of charity toward his loyal dog, Fray Martín still addressed him respectfully as 'padre'. After a night in San Martín's cell, the dog was restored to life and cured of his ill health and odor according to Medina. His new protector, Martín de Porres, then told the dog to avoid his ungrateful former master's pantry, which the dog did for the rest of his life (Medina 1964: 106–107). Far from being San Martín's only companion, this resurrected animal joined the future saint's multi-racial and multi-species community. When a dog and cat gave birth in a cellar of the convent, de Porres began to feed them, telling them, 'Eat and remain calm and don't fight'. And so... they appeared to be of one species in their conformity' (Proceso de beatificación 1960: 158; Medina 1964: 98).
This scene of a dog and cat eating together (and they would eventually be joined by a mouse as well) meant much to Spaniards as a metaphor of harmonious interaction regardless of race or rank (Cussen 1996: 141, 150–151, 172, 246; García-Rivera 1995: 4–5). However, it also presented a quiet challenge to the hierarchical boundaries between species.

San Martín’s example resonated with his fellow Dominicans, who bore laudatory witness on his behalf after his death. Today’s ethology presents cases of other-oriented behavior in our close relative the chimpanzee, including the adoption of the orphan Oscar by the alpha male Freddy in the movie Chimpanzee and the aunt-like care given a succession of infants by the infertile dominant female Gigi at Goodall’s Gombe site (Linfield, Fothergill, and Hahn 2012; Boesch et al. 2010; Goodall 1990: 154–160; Warneken et al. 2007). Even primates less closely related to us, capuchin monkeys, have demonstrated a conception of justice and reciprocity in experiments. If one capuchin is generous with a piece of cucumber, Frans de Waal has found that a second capuchin is more likely to share a piece of apple (de Waal 2005: 205). In his book entitled Good Natured, de Waal reminds us that social animals do cooperate as well as compete, and nature is not only ‘red in tooth and claw’ (de Waal 1996: 148). David Sloan Wilson and Edward O. Wilson argue that, from bacteria to humans, group selection can operate in such a way that an individual in a given community will sacrifice individual genetic fitness so that the community competes more successfully with other groups of conspecifics (Wilson D. and Wilson E. 2008; Wilson 2002: 9–25, 35–37, 138–140). Soldiers on the battlefield do sacrifice themselves for their fellows, and nuns fail to have children while often educating and tending to the offspring of others. Already in the early seventeenth century, Martín de Porres was demonstrating to his world a pattern of behavior that might earn respect without focusing on the aggressive pursuit of power. He also demonstrated that community might be built thereby, and that his community could include other animals as well as humans of different ranks. He was not able to discuss this or demonstrate this using the evidence of evolutionary biology, where species are far from hermetically sealed, but he lived in a world that had its own ways of discussing these principles. A number of the Dominicans around him would have been well aware of Biblical passages envisioning perfect peace through the wolf’s dwelling with the lamb (Isaiah 11: 6) and calls for communal harmony through all humans playing their roles to the common good in the mystical body of Christ (1 Corinthians 12) and feeding and clothing the least of Christ’s brethren (Matthew 25: 35–40). Ag-
gression and violence, dominance and brutality, were really not the only things imperial Spaniards embraced.

Social animals cannot live by dominance alone. The Spanish Empire was more than the sum total of its most brutal displays. It sometimes was the peaceful interaction of people, and other animals too – a play with acts full of communication, community and compassion, as well as atrocity and violence. It is time for us to recognize, as Miguel de Cervantes already did, that in the midst of their virtual reality Don Quijote and Sancho Panza always, ‘returned to their beasts and the life of beasts that they led’ (‘Volvieron a sus bestias, y a serbestias...’ Cervantes 1949: 703; 1998: 639). The pursuit of império is testimony enough of the basic animality we share across the centuries, but so too is the compassion of San Martín de Porres. In Mothers and Others, Sarah Blaffer Hrdy presents a strong case for the elaborate, complicated and convoluted achievements of human cultures being rooted in our ability to read each other’s needs, and that this is developed through human (and, perhaps, hominin) levels of allo-parenting not as pronounced in the other extant hominids: orangutans, bonobos, chimpanzees, and gorillas. According to her, at some point (i.e., perhaps starting with Homo ergaster, or early Homo erectus, some 1.8 million years ago), hominin infants were selected to read the intentions of multiple caregivers, including grandmothers, siblings, fathers and the completely unrelated. In the much studied foraging cultures of the twentieth century, this led to a nexus of cooperative behaviors that restrained extreme hierarchical construction and competition (Hrdy 2009: 4–5, 17, 76–78, 133–134, 179–180, 273–275, 278–286; Wood 2005: 23, 84–87). While variations obviously exist, our human cultural superorganisms are more complex elaborations on a natural hominid propensity for cooperation and group selection which struggles with our more competitive tendencies. We may not communicate chemically like ants, but communicate we do, constructing a highly adaptive collective consciousness of sorts (Christian 2004: 146–148; Hölldobler and Wilson 2009: 178–183; Grassie 2010: 89–90). Equality before the law, democratic institutions, universal human rights, the United Nations and the question of animal rights have become some of our twenty-first-century efforts at combating the competitive lust to dominate each other and what we term natural resources. Our twenty-first-century challenge is whether we will learn to emphasize our cooperative and self-effacing behaviors, or whether we only will use our cooperative capacity to form armies and compete violently over ever dwindling ‘resources’ in a natural world reduced to objects to be used
and used up. By reviewing historical case studies like the Spanish Empire in all its complexity, Big History accumulates data on both variations and flexible templates appearing in animal life and human history. Can group selection embrace Gaia and her multiplicity of ecosystems and life-forms, or will it continue to be community- and species-specific? Can reflection and learning in our highly adaptive species trump the competitive tendencies found in warring chimpanzees and anthills? Without being overly reductionist, it must be asked whether the twenty-first century will belong to San Martín de Porres or Caesar.

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Abel A. Alves


