

Natural Unity and Paradoxes of Legal Persons

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Abstract

This essay proposes an ontological model in which a legal person such as a polity possesses natural unity from group properties that emerge in the self-organization of the human population. Also, analysis of customary legal persons and property indicates noncontradictory paradoxes that include Aristotelian essence of an entity, relative identity over time, ubiquitous authority, coinciding authorities, and identical entities. Mathematical modeling helps to explain the logic of the paradoxes.

1. Introduction

Ancient Rome authorized the existence of legal persons/entities called *juristic persons*. A Roman juristic person was an organization that possessed rights and duties. Examples of the persons included tribunals, provinces, cities, towns, religious bodies, associations of government officials, associations of commercial proprietors, social associations, and universities. Juristic persons are also called *fictional persons* or *artificial persons*. However, the communities of local governments are in some way natural and necessary.² This natural necessity suggests that some types of juristic persons are natural while others are artificial.

This essay proposes an ontological model in which a legal person/entity such as a polity possesses natural unity from group properties that emerge in the self-organization of the human population. Also, noncontradictory paradoxes of a customary legal person include Aristotelian essence of an entity, identity over time, ubiquitous authority, coinciding authorities, and identical entities.³ Section 2 outlines the types of legal persons and property; section 3 defines the natural unity of legal persons; section 4 delineates the paradoxes.

¹ I dedicate this essay to the late Peter Thomas Geach (1916–2013). Also, I thank John Wilkins, Harry Deutsch, Michael Rea, reviewers from three other journals, and interlocutors at Dale Tuggy's blog for challenging comments about various concepts in this paper.

² George Long, "Universitas," In *A Dictionary of Greek and Roman Antiquities*, ed. William Smith (John Murray, 1875), 1214–1217, <http://www.ancientlibrary.com/smith-dgra/1221.html>.

³ See section 4 for the definition of a *paradox* and the nonexistence of absolute contradictions.

2. Legal Personality

2.1 Types of Legal Persons and Property

A legal person by definition possesses rights and duties. A primary right of a legal person is the right to own property. Legal persons originate by custom or statutory law. The legal persons originated by statutory law are artificial.

The two primary types of legal persons are a natural person and a juristic person.⁴ A natural person is a human who is a freeman and may own a proprietorship. Types of juristic persons include a public entity and a private business entity. The juristic persons may contain departments and divisions that may incorporate into juristic persons themselves.

Types of public entities are a polity, a political department, and a political official. Types of polities are a geopolitical entity and a geopolitical division. A modern geopolitical entity is a sovereign state. The Convention on Rights and Duties of States in 1933 defined that a sovereign state *factually* exists as a *person* if it contains (1) defined territory, (2) permanent population, (3) government and (4) a capacity to enter into relations with other sovereign states.⁵ Two primary types of geopolitical entities are a federation and a unitary state. A geopolitical division is a subnational entity that contains a human population, a defined territory, and a government. Types of geopolitical divisions are a province, a state, a territory, a city, a municipality, a district, a town, a village, and a hamlet. A political department is an agency of a polity. A political official is a natural person who is an agent of a polity or a political department.

Types of private business entities are an unincorporated proprietorship, a private corporation, and an unincorporated limited liability business entity that is a corporation-proprietorship hybrid such as a limited liability company. Types of unincorporated proprietorships are a sole proprietorship and a general partnership.

Private business entities contain private officials. An official of a proprietorship is a proprietor or a representative of a proprietor. A proprietor is inseparable from the

⁴ George F. Deiser, "The Juristic Person: 1," *The University of Pennsylvania Law Review and American Law Register* 57, no. 3 (1908): 131–142, <http://www.jstor.org/stable/3313312>; Deiser, "The Juristic Person: II," *University of Pennsylvania Law Review and American Law Register* 57, no. 4 (1909): 216–235, <http://www.jstor.org/stable/3313929>. Deiser, "The Juristic Person: III." *University of Pennsylvania Law Review and American Law Register* 57, no. 5 (1909): 300–314, <http://www.jstor.org/stable/3313740>.

⁵ Convention on Rights and Duties of States, December 26, 1933, http://avalon.law.yale.edu/20th_century/intam03.asp.

proprietorship. Types of proprietors are a sole proprietor of a sole proprietorship and a general partner of a general partnership. A private corporate official represents a corporation and is artificially separable from the corporation. An official of an unincorporated limited liability business entity is a member who is separable from the entity.

Legal property is tangible/corporeal or intangible/incorporeal. The two types of tangible property are real property and personal property. Real property is immovable real estate while personal property is movable. Types of intangible property include copyright, patents, and trademarks.

2.2 The Origin of Legal Personality

Conceivably, legal personality first emerged during an informal Upper Paleolithic Era / Later Stone Age band tribunal.⁶ Eventually, types of Neolithic / New Stone Age legal persons included a proprietorship, a town, a city, an autonomous state, and a political official.⁷

2.3 Legal Fiction

The legal term *fiction* notoriously developed when ancient Roman praetors in a court of law endorsed false procedural statements that extended a right of action beyond its intended scope.⁸ The modern definition of a *legal fiction* is "a proposition that is an indisputable fact in a legal system despite possible or definite falsity in the proposition." Despite the possibility of falsity, the concept of legal fiction does not intrinsically suggest mockery or injustice.

Legal fiction is also associated with statutory law that by definition is made by a legislature instead of custom. In examples of legal personality, a legal person originated by statutory law is fictitious or artificial and a legal person originated by custom is not fictitious or artificial. For instance, a customary proprietor is inseparable from the sole proprietorship or general partnership while various statutory laws permit a private

⁶ For Upper Paleolithic / Later Stone Age, see Joseph V. Ferraro, "A Primer on Paleolithic Technology," *Nature Education Knowledge*, 2012, <http://www.nature.com/scitable/knowledge/library/a-primer-on-paleolithic-technology-83034489>.

⁷ Michael Bang Peterson and Svend-Erik Skaaning, "Ultimate Causes of State Formation: The Significance of Biogeography, Diffusion, and Neolithic Revolutions," *Historical Social Research* 35, no. 3 (2010): 200–226, <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-310750>; Charles Keith Maisels, "Models of Social Evolution: Trajectories from the Neolithic to the State," *Man* 22, no. 2 (1987): 331–359.

⁸ Nancy J. Knauer, "Legal Fictions and Juristic Truth," *St. Thomas Law Review* 23, no. 1 (2010): 1–51, <http://www.stthomaslawreview.org/wp-content/uploads/2010/10/OFFICIAL-KNAUER-MACRO.pdf>.

corporation or an unincorporated limited liability business entity that separates a business owner from the business.⁹ Also, legal fiction typically does not define the legal personality of a geopolitical entity or a natural person.

2.4 Controversies of Business Entities

One might hear about controversies of private corporate personality in the news and misunderstand the legal personality of business entities. For example, various misguided news headlines suggest that private corporations recently gained or could lose their status of legal personality. However, no lawyer challenges the general legal personality of business entities, but extensive debate revolves around the extent of rights and duties for business entities and their owners.¹⁰

In the case of the United States (US), Supreme Court recognition of private corporations with rights and duties began in 1819 with *Dartmouth College*.¹¹ Later, the Supreme Court in 1888 stated that the 1868 Fourteenth Amendment secured the rights of personality for private corporations.¹² Since then, new breeds and hybrids of business entities formed according to the laws of the US states. For example, a limited liability company is an artificial unincorporated business entity formed according to various state laws that provides the members with separation from unlimited liability of their business while a basic old-fashioned sole proprietorship or general partnership provides the proprietors no separation from unlimited liability of their business. The different classes of business entities benefit from different levels of rights and duties while legislation and legal cases redefine the rights and duties. Despite the redefinitions, all legitimate business entities are nonetheless legal persons.

⁹ Savo Randazzo, "The Nature of Partnership in Roman Law," *Australian Journal of Legal History* 9, no. 1 (2005): 119–129; "Are Owners of a Partnership Personally Liable for Business Debts?" Nolo, accessed November 12, 2013, <http://www.nolo.com/legal-encyclopedia/partnership-faq-29130-5.html>; Uniform Partnership Act, February 4, 1997, http://www.uniformlaws.org/shared/docs/partnership/upa_final_97.pdf.

¹⁰ Deiser, "The Juristic Person: I"; Deiser, "The Juristic Person: II"; Deiser, "The Juristic Person: III."

¹¹ *Trustees of Dartmouth College v. Woodward*, 17 U.S. 518 (1819), http://www.law.cornell.edu/supct/html/historics/USSC_CR_0017_0518_ZS.html.

¹² *Pembina Consolidated Silver Min. & Milling Co. v. Commonwealth of Pennsylvania*, 125 U.S. 181 (1888), <http://www.law.cornell.edu/supremecourt/text/125/181>.

3. Self-organization of Geopolitical Entities

3.1 The Ontological Model

This essay proposes an ontological model in which a legal person such as a polity possesses natural unity from group properties that emerge in the self-organization of the human population. This subsection analyzes the self-organization. For example, measurable patterns of self-organization and collective behavior among vertebrates include (1) schools of fish, (2) flocks of birds, (3) herds/flocks of ungulate mammals, (4) human crowds, and (5) basic leadership and followership among fish, birds, ungulate mammals, primates, and human crowds.¹³ This indicates that patterns of self-organization among social vertebrates first emerged in the Paleozoic Era, 542 to 252 million years ago.¹⁴ The strong evidence of self-organization patterns among social vertebrates supports a theory of real/factual self-organized social vertebrate groups.

Self-organization is a process that involves numerous interactions among local-level components of a system that cause the emergence of global-level patterns.¹⁵ In the case of a self-organized social group, the organization involves the unity of multiple components while each component is in some context spatially disconnected from the other components. The spatial disconnection of the components within the group that possesses measurable self-organization suggests that the group possesses real undetected properties of unity. For example, if there are no real undetected properties of unity, then there are no real social groups such as schools of fish and flocks of birds. Also, if there are no real social groups, then there is no self-organization of a social group despite the measurements that suggest the existence of various self-organized social vertebrate groups. As stated earlier, this theory assumes that the strong evidence of self-organization patterns among social vertebrates indicates the real existence of various self-organized social groups.

Additional evidence comparable to the self-organization of social vertebrate groups includes the strong evidence that most primate populations develop organic social organization.¹⁶ Also, strong evidence indicates that humans who develop farming

¹³ Iain D. Couzin and Jens Krause, "Self-Organization and Collective Behavior in Vertebrates," In *Advances in the Study of Behavior: Vol. 32*, ed. Peter J. B. Slater et al. (San Diego: Academic Press, 2003): 1–75.

¹⁴ "International Chronostratigraphic Chart," International Commission of Stratigraphy, January 2013, <http://www.stratigraphy.org/ICSchart/ChronostratChart2013-01.pdf>.

¹⁵ Couzin and Krause, "Self-Organization."

¹⁶ Larissa Swedell, "Primate Sociality and Social Systems," *Nature Education Knowledge*, 2012, <http://www.nature.com/scitable/knowledge/library/primate-sociality-and-social-systems-58068905>.

technology possess an organic tendency to form the custom of a geopolitical entity.¹⁷ The customary geopolitical entities with all of their faults and virtues are organic while the human population is self-organized.

The existence of undetected properties of self-organization challenges various notions of organization. For example, one might say that a flock of sheep is individual sheep that are corporeal parts while the unity of the whole flock is a mind-dependent ideal and not a mind-independent/objective entity.¹⁸ However, a flock of sheep is a mind-independent/objective entity that is unified by natural self-organization.

The observation of self-organization in vertebrate groups as previously mentioned is limited to simple behavior. This suggests that self-organization does not determine complex behavior that *may* occur in respective groups. In this theory, the self-organization of a social group continues to exist during complex behavior that is beyond the statistical methods of self-organization research.

A point of caution is that policy of a natural polity can be moral or immoral or practical or impractical.¹⁹ For instance, immoral examples of custom included capturing humans into slavery while repressing the natural personhood of the humans. In cases of immoral or unnecessarily impractical custom, a polity should reform or amend policy.

3.2 Speculative Science of Undetected Properties

One might object to the existence undetected properties in the self-organization of social animal groups that by definition are outside of proper science. However, science constantly discovers new properties that were previously undetected. Also, proper science researches the effects of undetected properties while deductions about the undetected properties are in the realm of speculative science. For example, Albert Einstein predicted and observed the gravitational theory of general relativity but nobody has yet detected the source of gravity.²⁰

An interesting twist in science is that the Standard Model of particle physics makes amazing detectable predictions of positive-energy elementary particles such as the real existence of the Higgs boson, but the Standard Model offers no coherent model of gravity that is negative energy. Alternatively, various string theories predict that the

¹⁷ Peterson and Skaaning, "Ultimate Causes of State Formation"; Maisels, "Models of Social Evolution."

¹⁸ Long, "Universitas," 1215.

¹⁹ See moral realism in sections 3.3–4.

²⁰ Rahul Basu and Tanumoy Mandal, "Graviton Signals in Central Production at the LHC," *Advances in High Energy Physics* 2013, (2013): Article ID 652714, 17 pages, doi:10.1155/2013/652714.

source of gravity is extra-dimensional *graviton* particles. For example, string theory variant M-theory predicts three observable space dimensions and seven undetected space dimensions. Some string theorists hope to generate detectable gravitons in a high-energy particle accelerator and catch a brief glimpse of the gravitons that would rapidly disappear into extra dimensions. These gravitons are negative-energy gauge boson particles with a spin of 2 *if* gravitons factually exist.

Gravity and self-organization are part of speculative science. For example, a speculative physics theory proposes that the fundamental weak force causes various types of self-organization.²¹ In the case of self-organized social animal groups, perhaps the causal natural forces of the self-organization include neurobiological instinct for social interaction combined with the forces of space dimensions.

3.3 The Unity of a Natural Person

As previously mentioned, a natural person is a human who possesses rights and duties. The consensus of jurists and political scientists assumes the real/factual/objective/mind-independent existence of natural rights and morality in the context of natural law. Sophisticated statements of natural rights include The Universal Declaration of Human Rights.²² Alternatively, legal positivism assumes that rights exist only when custom or a legislature codifies the rights, which are legal rights. Other concepts that reject the realism of natural rights and morality include moral anti-realism and the similar notion of moral relativism.²³ In the case of a natural person, *natural rights realism* suggests real unity of a natural person while *natural rights anti-realism* suggests mind-dependent unity of a natural person. The scope of this essay excludes an extensive debate about the existence of natural rights, but this subsection outlines a model of natural rights based on moral realism. The natural rights realism supplements the section 3.1 model of self-organized geopolitical entities.

Natural rights, as stated above, tie into moral theory. Two major categories of moral theory that traditionally oppose each other are deontologism and consequentialism/utilitarianism. Deontologists say that moral rightness or wrongness of an action is based on the intrinsic qualities of the action. Consequentialists say that moral rightness or wrongness of an action is based on the consequences of the action.

²¹ Maurice Goodman, "Toward Linking Material Self-Organization and the Weak Force," *Speculations in Science and Technology* 20, no. 1 (1997): 33–44.

²² "The Universal Declaration of Human Rights," UN General Assembly, December 10, 1948, <http://www.un.org/en/documents/udhr/>.

²³ James Nickel, "Human Rights," *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2013, <http://plato.stanford.edu/archives/sum2013/entries/rights-human/>.

However, Henry Sedgwick and Derek Parfit advance partial harmony of deontology and consequentialism.²⁴ This outline of natural rights focuses on basic concepts of consequentialism that are compatible with deontology.

Traditional consequentialism is, more or less, naturalistic moral realism.²⁵ The moral theory evaluates the natural consequences of actions. Also, consequentialism assumes the existence of moral facts that reduce to the laws of nature. However, a deontologist may also strongly consider natural consequences of actions.

A basic concept of natural rights includes distinguishing between natural rights and legal rights. This model analyzes natural rights and legal rights in the examples of safety ethics and personal property.

3.3.1 Safety Ethics

Basic natural rights respect human life. For example, safety ethics and codes are an interesting example of respecting human life and limb that date back to at least the eighteenth-century-BC Code of Hammurabi.

Contemporary safety standards and legal codes develop from empirical research that evaluates the consequences of respective procedures. Example agencies of international safety standards include ASTM International and ISO.²⁶ The safety standards involve voluntary compliance while people from diverse backgrounds including religious and nonreligious alike adhere to safety standards and legal codes.

Safety ethics are based on safety standards and legal codes. Consider the following generalization of safety ethics: intentional adherence to safety standards that protect others is morally good while intentional neglect of safety standards that unnecessarily risks harm to others is morally wrong. One may find complicated exceptions to the generalization, but safety related procedures nonetheless involve ethics.

The empirical research of safety indicates strong evidence that some aspects of safety are objective/mind-independent. Likewise, safety ethics are, more or less, based on safety facts discovered by empirical research. Exceptions include safety myths that have been exposed by safety research. Regardless of the myths, the existence of safety facts and the universal concern for safety suggests a natural moral imperative to respect the

²⁴ Mark Schroeder, "Derek Parfit: On What Matters, Volumes 1 and 2," *Notre Dame Philosophical Reviews*, 2011.08.01, <http://ndpr.nd.edu/news/25393-on-what-matters-volumes-1-and-2/>.

²⁵ Peter Railton, "Moral Realism," *Philosophical Review* 95, no. 2 (1986): 163–207.

²⁶ See <http://www.astm.org/> and <http://www.iso.org/>.

safety of all humans. For example, The Universal Declaration of Human Rights: Article 25 says, "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family." This standard of living includes objectively safe buildings, roads, vehicles, appliances, and food.

3.3.2 Personal Property

Personal property, as stated in section 2.1, is a thing owned by a human or other legal person. Some personal property is a basic human need. For example, The Universal Declaration of Human Rights: Article 17 says that all humans possess the right to own property.

Rudimentary concepts of property ownership likely emerged among Paleolithic humans in the cases of food from hunting and gathering, stone tools, clothing, jewelry, and portable shelter.²⁷ This personal property was natural. Also, analogous to prehistoric human property is the ubiquitous non-human animal construction and protection of nests.

One might argue that an owner of personal property does not always visibly possess the property, so the ownership in these cases is a mind-dependent ideal instead of a mind-independent reality. However, the evidence of moral facts, the human need for some personal property, and the ubiquity of personal property ownership suggest the existence of an invisible natural force that causes property ownership regardless of the visiblens or invisiblens of the ownership.

3.3.3 Note on Moral Relativism

The American Anthropological Association (AAA) in 1947 exemplified moral relativism when their executive committee stated opposition to the progress of human rights that supposedly would represent values only from Western Europe and America and not values from Asia and Africa.²⁸ However, the AAA in 1995 reversed their position and started to support various cases of human rights through their Committee of Human

²⁷ For Paleolithic artifacts, see Ferraro, "A Primer on Paleolithic Technology."

²⁸ The Executive Board, American Anthropological Association, "Statement on Human Rights," *American Anthropologist* 49, no. 4 (1947): 539–543, <http://www.jstor.org/stable/662893>; Nickel, "Human Rights." (2013) J. JURIS. 35

Rights. For example, AAA members in 1999 adopted the "Declaration on Anthropology and Human Rights."²⁹

Consider the case of chattel slavery, which involved humans who were owned as property with no legal rights. Every nation eventually established laws that prohibit chattel slavery, but many great thinkers such as Aristotle had supported the institution of chattel slavery. For example, Aristotle said that some humans are natural slaves while other humans are natural freeman.³⁰ Aristotle somehow defended Grecian enslavement of humans including various skilled artisans and pedagogues. In this case, a moral relativist cannot say that chattel slavery in various societies was objectively wrong while a moral realist can say that chattel slavery was objectively wrong. For instance, the wrongness of chattel slavery was mind-independent despite the thoughts of great minds such as Aristotle.

4. Paradoxes of Legal Persons

Legal persons appear paradoxical because of the invisible properties. Despite the partial invisibility, the study of past and current phenomena indicates that legal persons sometimes generate enormous force. Great nations rise and fall. Government officials declare war and armies fight with tangible weapons. Legal persons buy and sell property. Universities grant academic degrees. A cartoon character is intangible property that generates multibillions of US dollars per year. Banks and law enforcement foreclose mortgages of family residences. Governments and economies around the world operate according to the logic of law.

Concerning paradoxes, this essay supposes the golden rule of philosophy that says there are no absolute contradictions. Likewise, a *paradox* is a thing that looks contradictory at some level while the thing is actually noncontradictory. For example, one may only partially comprehend a paradox because of limited information. Or debaters may defend contradictory positions. Or a set of legal codes may contain contradictions subject to amendment or termination. Regardless, there are no absolute contradictions.

The legal paradoxes in this section assume the real existence of geopolitical entities and natural persons. The paradoxes include Aristotelian essence of an entity, relative identity over time, ubiquitous authority, coinciding authorities, and identical entities. Mathematical modeling helps to explain the logic of the paradoxes.

²⁹ "Declaration on Anthropology and Human Rights," American Anthropological Association, June 1999, <http://www.aaanet.org/about/Policies/statements/Declaration-on-Anthropology-and-Human-Rights.cfm>.

³⁰ Aristotle, *Politics*, trans. Benjamin Jowett, 1.3—7, <http://classics.mit.edu/Aristotle/politics.1.one.html>. (2013) J. JURIS. 36

4.1 Origination, Termination, Essence, Accidents, and Identity

Legal paradox includes the *origination* and *termination* of entities. For example, in most legal systems, the birth of a human is the origination of a natural person while the permanent death of a human is the termination of the natural person. Similarly, various legal persons emerge and possibly terminate based on a declaration, contract, formal legislation, or war.

This origination and termination of entities resemble Aristotle's model of *essential* and *accidental/nonessential* properties of an *object/entity*. Aristotle distinguished between essential and nonessential changes of a thing/entity.³¹ Essential changes result in the instant origination or termination of an entity while nonessential changes impact but never terminate an entity. Likewise, every entity has its *essence* that is the minimal properties that define the *identity* of the entity while identity distinguishes an entity from everything else.

The criterion for distinguishing between an essential change and a nonessential change is straightforward. Essential changes originate or terminate an entity while nonessential changes do not. Complications occur when a nonessential change to an entity originates another entity. In these cases, the change is nonessential in relation to the former entity and essential in relation to the new entity.

4.1.1 Natural Persons

In the case of natural persons, the only essential changes of identity in most cases are birth and permanent death. Examples of nonessential changes include the following activity in the life of natural person N:

1. Constant movement of the elementary particles inside N's biological body and tangible property
2. Constant change in the thermodynamic processes of N's body and tangible property
3. Constant change in the biological cellular processes inside N's body
4. Constant change in the biological systems processes inside N's body
5. Many changes of N's tangible and intangible property ownership
6. Occasionally changes of N's career from one office to another office

4.1.2 Geopolitical Entities

³¹ Andre Gallois, "Identity Over Time," *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2012, <http://plato.stanford.edu/archives/sum2012/entries/identity-time/>.

Essential changes of geopolitical entities result from agreements or wars. The US is an interesting case of origination and nonessential changes. The US originated from thirteen United Kingdom (UK) colonies at war with the UK; the thirteen colonies turned into thirteen states that officially declared independence from the UK on July 4, 1776, which was an act of high treason. Nonessential changes of the US include:

1. Representatives from the thirteen states drafted the Articles of Confederation from 1776 to 1777 and the thirteen states ratified the Articles by early 1781.
2. The US Constitution replaced the Articles on March 4, 1789.
3. The first ten amendments to the Constitution known as the Bill of Rights were ratified in 1791.
4. Seventeen more amendments to the Constitution were ratified from 1795 to 1992.
5. US Supreme Court decisions since 1789 have defined and redefined constitutional law.
6. The US expanded from thirteen states in 1790 to fifty states and additional territories.
7. The population size of natural persons constantly changes.
8. Each natural person changes according to the example in subsection 4.1.1.
9. All material entities in the US have constant movement of elementary particles and constant changes of thermodynamic processes.
10. All juristic persons in the US are subject to change.

4.1.3 Theseus's Ship and Automobiles With a VIN

Plutarch in the first century cited that philosophers mused over the ship of the mythical Athenian king Theseus. Legend says that the city of Athens preserved Theseus's ship in the Athenian harbor for several centuries by replacing worn wooden planks with new planks. Eventually, the Athenians replaced every material part of the ship. Philosophers took sides if the vessel with all replaced material remained the same Theseus's ship or if the vessel became a mere replica of Theseus's ship.³²

Thomas Hobbes in the seventeenth century added to the identity puzzle by proposing the scenario of a custodian who stored all of the worn original material of Theseus's ship and then reassembled the original material. This resulted in two vessels while proposing two original Theseus's ships is absurd.³³

If one argues that the vessel in the Athenian harbor with all replaced material is a replica of Theseus's ship, then those proponents need to determine the criteria for

³² Plutarch, "Theseus," in *Plutarch's Lives: Vol. 1*, trans. Bernadotte Perrin (London: William Heinemann, 1914), 49–51, <http://www.archive.org/stream/plutarchslives01plutuoft#page/48/mode/2up>.

³³ Thomas Hobbes, *The Metaphysical System of Hobbes in Twelve Chapters From Elements of Philosophy Concerning the Body Together With Briefer Extracts From Human Nature and Leviathan*, 2nd ed. trans. Mary Whiton Calkins (Chicago: Open Court, 1913), 84–85, <http://archive.org/details/cu31924014604007>.

distinguishing the original from the replica. For example, what percent of replacement material would turn the original vessel into a replica? Would the original vessel turn into a replica after 1% replacement? Or is the criterion for the original turning into a replica 2% replacement, 3% replacement, 4% replacement, or so on to 100% replacement? Any such criterion is subject to debate. Alternatively, if one argues that the vessel in the Athenian harbor with all replaced material is Theseus's ship, then the vessel's identity is independent from the vessel's condition.

This essay adds a scenario of property law to this puzzle. The city of Athens is a legal person that owns Theseus's ship, which is tangible personal property. Per custom, the vessel in the Athenian harbor is Theseus's ship despite any number of times that all of the vessel's material is replaced. Also, the Hobbesian custodian of the original worn parts reassembles the parts into a replica of Theseus's ship. The sole Theseus's ship is the vessel with all new material despite an indefinite number of times that the vessel's replaced material is reassembled into a replica. No property law would say that the identity of the personal property changes because of repair. This supports that the vessel's identity is independence from the vessel's condition.

A similar modern day scenario of tangible personal property involves automobiles in North America, Europe, and Australia. All such vehicles possess a Vehicle Identification Number (VIN). Despite any amount of vehicle repair using replacement auto parts, the VIN remains the same even if the VIN label needs replacement. Likewise, if a mechanic replaces all material parts of a respective automobile, the VIN remains the same. Also, if the mechanic later reassembles the original auto parts into a vehicle for use on public roads, then the second vehicle made from the original auto parts needs its own new VIN.

4.1.4 Essence, Identity Over Time, and Mathematical Equality

Identity over time of tangible entities is paradoxical because tangible entities constantly change. For example, Leibniz's Law (LL) defines the concept of absolute identity / numerical identity and absolute identicalness. LL states that no two distinct things possess the same properties and no other properties. More specifically, the LL formula of absolute identicalness says: "If, for every property F , object x has F if and only if object y has F , then x is identical to y ."³⁴ However, tangible entities constantly change. Consider the subsection 4.1.1 case of natural person N's nonessential changes. N at point of time 1 (NT1) and N at point of time 2 (NT2) are nonidentical compositions of

³⁴ Peter Forrest, "The Identity of Indiscernibles," *Stanford Encyclopedia of Philosophy*, Winter 2012, ed. Edward N. Zalta, <http://plato.stanford.edu/archives/win2012/entries/identity-indiscernible/>.

the same identity. Likewise, $NT1 \neq NT2$ in the context of composition and $NT1 = NT2$ in the context of identity.

At face value, $NT1 \neq NT2$ in the context of composition is incompatible with LL. This indicates that $NT1 = NT2$ in the context of identity refers to a type of identity other than absolute identity.

One explanation for the compatibility of the respective $NT1 \neq NT2$ and $NT1 = NT2$ is mathematical equality. For example, mathematical equality indicates that $A = B$ means that A and B are nonidentical expressions that are an identical value. Comparatively, $NT1 = NT2$ means that $NT1$ and $NT2$ are nonidentical compositions that are an identical object. Also, the respective identicalness of the two nonidentical compositions necessarily involves identicalness other than their entire compositions. This identicalness other than their entire compositions supports a theory of essential properties or essence that by definition never changes apart from possible termination. This unchanging essence is the basis for identity over time despite changes of composition. In the case of N , the essence of $NT2$ is absolutely identical to the essence of $NT1$. In the case of the US, the essence of the nation has remained absolutely identical since July 4, 1776. In the case of Theseus's ship, the replacement of all the original material never changed its essence.

The mathematical equality and essence of $NT1$ and $NT2$ also compare to Peter Geach's formula logic of relative identity that says, " x and y are the same F but x and y are different G s."³⁵ For example, according to the theory of relative identity, $NT1$ is x ; $NT2$ is y ; F is a natural person; G s are compositions. Likewise, $NT1$ and $NT2$ are the same natural person and different compositions, which exemplifies relative identity over time. Similarly, the relative identity theory models identity over time for any entity that changes composition. Also, relative identity over time possibly corresponds to the Saul Kripke and Hilary Putnam concept called *causal theory of reference*.³⁶

The above examples indicate that universal customary law of natural legal personality and property suggests the existence of Aristotelian essential properties of an entity and relative identity over time.

³⁵ Peter Thomas Geach, "Identity," *The Review of Metaphysics* 21, no. 1 (1967): 3–12, <http://www.jstor.org/stable/20124493>; Geach, *Reference and Generality: An Examination of Some Medieval and Modern Theories*, 3rd ed. (Ithaca: Cornell University Press); Harry Deutsch, "Relative Identity," *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Winter 2012, <http://plato.stanford.edu/archives/win2008/entries/identity-relative/>.

³⁶ Hilary Putnam, *Mind, Language, and Reality: Philosophical Papers: Vol. 2* (Cambridge: Cambridge University Press, 1975).

4.2 Ubiquitous Authority and Coinciding Authorities

4.2.1 Ubiquitous Authority

Legal paradox includes the ubiquity of authority. In the case of a geopolitical entity, the complete authority of the government is present in every territorial location of the geopolitical entity. The authority might lack consistent enforcement, but the authority nonetheless exists in every location. On a smaller scale, the governmental authority of a geopolitical division is present in every location of the division and the authority of a property owner is present in every location of the property. Also, the authority of government officials is present in every respective location. For example, the authority of any monarch is present in every location of the respective kingdom.

The ubiquitous authority in every territorial location compares to a set of all Cartesian coordinates in a three-dimensional shape that corresponds to a respective territory that includes underground and atmosphere.

4.2.2 Coinciding Territorial Authorities

Legal paradox includes coinciding territorial authorities that are multiple authorities with ubiquitous presence in the same territory. The coinciding authorities might involve unity or disunity.

Examples of unified coinciding authorities include a geopolitical entity that establishes an indefinite number of departments while each department is an authority in the entire geopolitical entity. Similarly, unified coinciding authorities occur when a geopolitical division establishes an indefinite number of departments while each department is an authority in the entire geopolitical division. Another example involves the authorities of a geopolitical entity and a respective geopolitical division that coincide in the geopolitical division.

Examples of dis-unified coinciding authorities include civil war and military occupation. For instance, during the 49–45 BC Great Roman Civil War, dis-unified coinciding authorities originated in the Roman Republic on January 10, 49 BC, when Julius Caesar and his armies crossed the Rubicon River in conflict with Pompey and the Roman Senate. The dis-unified coinciding authorities terminated when Caesar won the civil war on March 17, 45 BC.

4.3 Identical Entities

Legal paradox includes identical entities. Two distinct categories of identical entities are (C1) an undivided human who is multiple entities and (C2) multiple natural persons who are an identical entity.

4.3.1 An Undivided Human Who Is Multiple Entities

A human who is an official exists as an undivided human who is multiple entities. For example, a public official is both a natural person and an official, which is two types of entities. The human is not part natural person and part official, but the human is the natural person and the official. Additionally, a natural person may simultaneously hold an indefinite number of political offices and likewise exist as an indefinite number of political entities. For instance, Roman emperors typically accumulated multiple offices and some modern day public employees hold multiple political offices.

4.3.2 Multiple Natural Persons Who Are an Identical Entity

Two types of multiple natural persons who are an identical entity are (T1) general partnerships and (T2) co-regencies.

A general partnership is a natural unincorporated business entity that consists of multiple natural persons who are general partners while each general partner is the inseparable proprietor of the partnership. Each general partner by default is the entire authority of the partnership and completely liable for the partnership, except if a legal contract signed by each general partner states otherwise.

Judges and attorneys in many courts never flinch at the premise of multiple natural persons who exist as an identical entity in cases of a lawsuit against a general partnership. If a general partnership owes defaulted debt to a plaintiff, then the court unequivocally asserts that each general partner is identical to the partnership. The plaintiff may conveniently sue any general partner for some or all of the debt. Evidence of the defaulted debt is *prima facie* evidence, which means that the evidence is sufficient to prove the case apart from sufficient contrary evidence. In such cases, the only possible sufficient contrary evidence would involve evidence against the existence of the defaulted debt or evidence that the defendant is not a general partner.

Similar to general partnerships, occasional ancient co-regencies consisted of joint monarchs while each monarch possessed the identical monarchical office with identical

authority. Notable ancient examples of co-regencies included various examples in Egypt, Israel, and Rome

The earliest recorded examples of co-regencies were Egyptian pharaohs in the second millennium BC who appointed their successors as joint rulers in a senior-junior relationship but with identical monarchical authority.³⁷ Some Egyptian queens also rose to the position of joint monarch with identical authority.

Similarly, in the united monarchy of Israel, King David near the end of his life appointed his son Solomon the king of Israel.³⁸ The joint monarchs enjoyed identical monarchical authority until David died.

The Roman Republic contained important examples of identical office while monarchical-like authorities in the republic such as Octavian Augustus avoided the title of monarch or emperor. In the case of the 44–33 BC triumvirate of Octavian, Marcus Lepidus, and Mark Antony, each of the triumvirs enjoyed identical dictatorial authority that was restrained only by a term limit. Similarly, the Roman Senate in AD 13 appointed Octavian and Tiberius to identical office.

4.4 Multi-Units

An entity consisting of multiple entities is called a *multi-unit*. A *collective multi-unit* consists of entities that are unidentical to the multi-unit while an *identical multi-unit* consists of entities that are identical to the multi-unit.

4.4.1 Collective Multi-Units

The most common multi-units are collective multi-units. Any legal person that contains multiple components is a collective multi-unit. For example, a natural person who consists of a human and the human's property is a multi-unit. In a general context, most organizations are collective multi-units such as sports teams, stadium crowds, primate groups, herds of mammals, flocks of birds, schools of fish, insect colonies, colonial organisms, symbioses, and ecosystems. Fully visible examples of collective multi-units include conjoined identical siblings in a variety of species, colonial organisms, and various long-term symbioses. Partly visible examples of collective multi-units include legal persons that contain multiple components.

³⁷ Aidan Dodson, "Co-regency (Egypt)." October 26, 2012, *The Encyclopedia of Ancient History*, <http://onlinelibrary.wiley.com/doi/10.1002/9781444338386.wbeah15087/abstract>.

³⁸ 1 Chronicles 29.

4.4.1.1 Fully Visible Collective Multi-Units

A set of human conjoined siblings is an exceptional example of a fully visible collective multi-unit involving two natural persons and one human body. The conjoined siblings are identical twins who originated from a sole identical fertilized egg and never completely separated during early embryonic development unlike normal identical siblings.³⁹ In theory, human conjoined siblings could involve identical triplets, quadruplets, and so on, but evidently only conjoined twins have survived to birth. Comparatively, conjoined siblings also occur in various vertebrate species while case studies of conjoined turtles and conjoined snakes document the phenomena of multiple heads sharing a single body that is called *polycephaly*, which results in a mix of coordinated and uncoordinated movement.⁴⁰ Most conjoined vertebrates in the wild expire before adulthood but some nonetheless make curious news stories, star in farm show attractions, and inspired the imagination of ancient mythmakers.

An extraordinary example of conjoined humans in the popular media is Abigail and Brittany Hensel, the Hensel twins.⁴¹ Abigail and Brittany have a dicephalic/two-headed body with two normal arms and two normal legs. Each twin has her own duplicated central nervous system, spine, esophagus, set of lungs, heart, gall bladder, and stomach. They incompletely share a peripheral nervous system, a conjoined circulatory system, one rib cage, one liver, one large intestine, one small intestine, one pelvis, one urinary bladder, and one set of reproductive organs. Abigail's head is nearest to the right shoulder while Brittany's head is nearest to the left shoulder. Abigail controls the right limbs while Brittany controls the left limbs. Abigail feels only the left limbs while Brittany feels only the right limbs. Regardless that each controls and feels only the limbs on their own side, they astonish doctors while instinctively coordinating as one person. They manage e-mails with two-handed typing, play two-handed piano, and enjoy sports such as bowling, volleyball, cycling, softball, and swimming. On their sixteenth birthday, they passed their driver's tests. When they drove, they each had a hand on the steering wheel as Brittany controlled the blinkers and the lights while Abigail controlled the

³⁹ "Conjoined Twins," The Children's Hospital of Philadelphia, last modified November 2012, <http://www.chop.edu/service/fetal-diagnosis-and-treatment/fetal-diagnoses/conjoined-twins.html>.

⁴⁰ Candice Swarts, "Rare Two-Headed Tortoise Found in South Africa," May 30, 2003, *National Geographic News*, May 30, 2003, http://news.nationalgeographic.com/news/2003/05/0529_053003_twoheadedtortoise.html; Hillary Mayell, "Life Is Confusing For Two-Headed Snakes," last modified March 22, 2002, *National Geographic News*, http://news.nationalgeographic.com/news/2002/03/0318_0319_twoheadsnake.html.

⁴¹ "Living Life to Its Fullest," *Mail Online*, September 12, 2012, <http://www.dailymail.co.uk/femail/article-2202087/Conjoined-twins-Abigail-Brittany-Hensel-sights-London-latest-episode-reality-show.html>; Helen Weathers, "Abigail and Brittany Hensel: An Extraordinary Bond," *Mail Online*, December 31, 2006, <http://www.dailymail.co.uk/femail/article-425736/Abigail-Brittany-Hensel-extraordinary-bond.html>.

pedals and stick shift. They often understand each other's thoughts and desires without speaking to each other. However, they developed different academic strengths. They simultaneously and separately hand wrote during school examines while earning different grades. They are a physical and metaphysical wonder who push the boundaries of sole natural personhood and a shared tangible body.

4.4.2 Partly Visible Collective Multi-Units

Individual humans inevitably self-organize into partly visible collective multi-units such as families, geopolitical entities, and various types of social organizations. The concept of a collective multi-unit is fundamental for society.

4.4.3 Identical Multi-Units

An identical multi-unit is an entity that consists of multiple identical entities such as subsection 4.3 models of C1, T1, and T2. C1 is an undivided human who is multiple entities; T1 is multiple natural persons who are an identical general partnership; T2 is multiple natural persons who are an identical monarchial office.

Consider an example of a T1 multi-unit. Natural person N simultaneously holds two federal offices. N is the commerce minister called *C* and the defense minister called *D*. N is an undivided natural person; all of N is all of C; all of N is all of D; C is not D while C has no authority in D's department and vice versa. All of N is C but not all that coincides with N is C while all of N is D but not all that coincides with N is D.

Consider an example of a C1 multi-unit. Natural persons P, S, and H develop general partnership T. P is 100% of T, which is 100% of the authority and liability of T; S is 100% of T; H is 100% of T; P is not S or H; S is not H.

Consider an example of a C2 multi-unit. Natural person David becomes the king of Israel and near the end of his life he appoints his son Solomon as joint monarch with identical authority. David is the entire monarch of Israel; Solomon is the entire monarch of Israel; David is not Solomon.

At first sight, the above examples of identical multi-units might appear incompatible with Aristotelian syllogism and mathematical equality. Consider if $A = B$ and $A = C$, then $B = C$ ($A=B=C$). For example, the above C1 model states $N = C$; $N = D$; $C \neq D$, which might appear incompatible with $A=B=C$. However, similar to the examples in subsection 4.1, the $A=B=C$ variables are three different expressions with identical value, which indicates that *A*, *B*, and *C* are equal in value but not identical in every way.

Comparatively, N, C, D are three different types of entities that are an identical human. Also, $A=B=C$ and the C1 model resemble the formula logic of relative identity, which as stated in subsection 4.1 says: " x and y are the same F but x and y are different G s."

Consider $A=B=C$. In the case of formula relative identity, x is A ; y is B ; z is C ; F is a mathematical value; G s are mathematical expressions. Likewise, the variables A , B , and C are the same value and different expressions, which exemplify relative identity.

Consider the above N who simultaneously is C and D. In the case of formula relative identity, x is C; y is D; F is the natural person N; G s are officials. Likewise, x and y are the same F but x and y are different G s.

Consider the above general partnership T and formula relative identity. Natural persons P, S, and H form general partnership T. P is 100% of T; S is 100% of T; H is 100% of T; P is not S or H; S is not H. In the case of formal relative identity, x is P; y is S; z is H; F is T; G s are natural persons P, S, and H.

Consider the above co-regency of natural persons David and Solomon who are an identical monarchial office. In the case of formula relative identity, x is David; y is Solomon; F is the monarchial office; G s are natural persons. David and Solomon are an identical monarchial office and different natural persons.

The above examples indicate that an identical multi-unit exemplifies mathematical equality and formula relative identity.

5. Conclusion

Self-organization of a human population and natural rights unify a respective geopolitical entity. Despite undetectable elements of the organization, the legal personality of geopolitical entities is not a mind-dependent ideal but a mind-independent reality. The properties of legal persons also instigate philosophical debate about organization, Aristotelian essence of an entity, relative identity over time, authority, and relative identity of identical entities. Speculative physicists, neuroscientists, anthropologists, philosophers, jurists, and political scientists may join together to further analyze the nature of legal persons.

