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Assignment Question: 1. How can a Lebanese retain or lose his or her newly acquired Nigerian citizenship  
2. Social Contract Theory explains the evolution of states, what other theories explain the same, and their strengths

#### ANSWER

1) Before I go straight to the first question direct let me first say who are they Lebanese? The Lebanese people are the people inhabiting or originating from Lebanon. The term may also include those who had inhabited Mount Lebanon and the Anti-Lebanon mountains prior to the creation of the modern Lebanese state.

Lebanese citizenship is the status of being a citizen of Lebanon and it can be obtained by birth or naturalisation. ... Therefore, a Lebanese man who holds Lebanese citizenship can automatically confer citizenship to his children and foreign wife (only if entered in the Civil Acts Register in the Republic of Lebanon).

Lebanese nationality law governs the acquisition, transmission and loss of Lebanese citizenship. Lebanese citizenship is the status of being a citizen of Lebanon and it can be obtained by birth or naturalisation. Lebanese nationality is transmitted by paternity (father) (see Jus sanguinis).[1] Therefore, a Lebanese man who holds Lebanese citizenship can automatically confer citizenship to his children and foreign wife (only if entered in the Civil Acts Register in the Republic of Lebanon). Under the current law, descendants of Lebanese emigrants can only receive citizenship from their father and women cannot pass on citizenship to their children or foreign spouse.

On 12 November 2015, the Parliament of Lebanon approved a draft law that would allow "foreigners of Lebanese origin to get citizenship",[3] the Minister of Foreign Affairs and Emigrants Gebran Bassil announced on 5 May 2016 the beginning of the implementation of citizenship law for Lebanese diaspora. [4][5][additional citation(s)]

#### Acquisition of Lebanese citizenship

A child born to a Lebanese father or whose paternity has been declared acquires Lebanese citizenship by descent, irrespective of the nationality of the mother, and irrespective of her marital status.

A child whose Lebanese citizenship depends on paternal links loses citizenship when those are cut.

#### 1) By marriage

A foreign woman who marries a Lebanese man may apply for Lebanese citizenship after having been married for at least one year and their marriage has been entered in the Civil Acts Register in the Republic of Lebanon. No language test is required, but the wife must show integration into the Lebanese way of life, compliance with the Lebanese rule of law and that she poses no danger to Lebanon's internal or external security.

A foreign wife of a Lebanese citizen can apply for naturalization while resident overseas after one year of marriage to a husband who is a Lebanese citizen, and close ties to Lebanon.

The non-Lebanese husband cannot acquire Lebanese citizenship by marriage to a Lebanese woman.[1] It has been argued that to enable the Lebanese wife to pass Lebanese citizenship to a non-Lebanese husband would lead to a flood of Palestinians acquiring citizenship, upsetting the delicate demographics in the country.

#### 2) Birth in Lebanon

Birth in Lebanon does not in itself confer Lebanese citizenship. Therefore, jus soli does not apply

#### Rights of citizens

Citizens of Lebanon have by law the legal right to:

Live freely in Lebanon without any immigration requirements

Gain access to free education covering primary, secondary and university education

Receive all health-care benefits at any public health institution

Participate in the Lebanese political system

Benefit from the privileges of the free trade market agreements between Lebanon and many Arab countries

Get exempted from taxes with no condition of reciprocity

Own and inherit property and values in Lebanon

Enter to and exit from Lebanon through any port

Travel to and from other countries in accordance with visa requirements

Seek consular assistance and protection abroad by Lebanon through Lebanese embassies and consulates abroad.

Responsibilities of citizens

All Lebanese citizens are required by law, when required by the Lebanese government, to bear arms on behalf of Lebanon, to perform noncombatant service in the Lebanese Armed Forces, or to perform work of national importance under civilian direction.

## LOSS OF LEBANESE CITIZENSHIP

### 1) Loss due to adoption

A Lebanese child adopted by foreign parents is considered to have lost Lebanese citizenship.

#### Annulled adoptions

Where a former Lebanese citizen lost citizenship due to adoption by foreign parents and that adoption is later annulled, the Lebanese citizenship is considered to never have been lost.

### 2) Loss due to birth abroad

A Lebanese citizen born abroad to a Lebanese father and holding at least one other nationality loses the Lebanese citizenship at age 25 if: [citation needed]

She/He has never been announced to the Lebanese authorities,

She/He has never written to the Lebanese authorities expressing her/his desire to retain Lebanese citizenship,

She/He (or her/his guardians) have never sought to procure Lebanese identity documents for her/him, i.e. a passport or an identity card,

Equally, the child of a person who thus loses Lebanese nationality equally loses Lebanese nationality,

Exceptionally, a person who has been prevented, against their will, from taking the necessary actions to retain Lebanese citizenship may undertake the required actions within a delay of one year following the cessation of such delays.

### 2) social contract theory

Social contract, in political philosophy, an actual or hypothetical compact, or agreement, between the ruled and their rulers, defining the rights and duties of each. In primeval times, according to the theory, individuals were born into an anarchic state of nature, which was happy or unhappy according to the particular version. They then, by exercising natural reason, formed a society (and a government) by means of a contract among themselves.

Political philosophy, branch of philosophy that is concerned, at the most abstract level, with the concepts and arguments involved in political opinion. The meaning of the term political is itself one of the major problems of political philosophy. Broadly, however, one may characterize as political all those practices and institutions that are concerned with

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Although similar ideas can be traced to the Greek Sophists, social-contract theories had their greatest currency in the 17th and 18th centuries and are associated with such philosophers as the Englishmen Thomas Hobbes and John Locke and the Frenchman Jean-Jacques Rousseau.

What distinguished these theories of political obligation from other doctrines of the period was their attempt to justify and delimit political authority on the grounds of individual self-interest and rational consent.

By comparing the advantages of organized government with the disadvantages of the state of nature, they showed why and under what conditions government is useful and ought therefore to be accepted by all reasonable people as a voluntary obligation. These conclusions were then reduced to the form of a social contract, from which it was supposed that all the essential rights and duties of citizens could be logically deduced.

Theories of the social contract differed according to their purpose: some were designed to justify the power of the sovereign, while others were intended to safeguard the individual from oppression by a sovereign who was all too powerful.

According to Hobbes (*Leviathan*, 1651), the state of nature was one in which there were no enforceable criteria of right and wrong. People took for themselves all that they could, and human life was "solitary, poor, nasty, brutish and short." The state of nature was therefore a state of war, which could be ended only if individuals agreed (in a social contract) to give their liberty into the hands of a sovereign, who was thenceforward absolute, on the sole condition that their lives were safeguarded by sovereign power.

Alternative Title: contractual theory of society

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John Locke (1632-1704) English philosopher, regarded as the father of British empiricism author of *Essay Concerning Human Understanding* (1690). His political philosophy exerted considerable influence on the American revolution and French revolution.

The Social Contract and Philosophy

Why should the state exist, and how much power should it have? The social contract may provide the answer.

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Locke (in the second of the *Two Treatises of Government*, 1690) differed from Hobbes insofar as he described the state of nature as one in which the rights of life and property were generally recognized under natural law, the inconveniences of the situation arising from insecurity in the enforcement of those rights.

He therefore argued that the obligation to obey civil government under the social contract was conditional upon the protection not only of the person but also of private property. Sovereigns who violated these terms could be justifiably overthrown.

*Du Contrat social* (1762; *The Social Contract*), held that in the state of nature humans were unwarlike and somewhat undeveloped in their reasoning powers and sense of morality and responsibility.

When, however, people agreed for mutual protection to surrender individual freedom of action and establish laws and government, they then acquired a sense of moral and civic obligation. In order to retain its essentially moral character, government must thus rest on the consent of the governed, the *volonté générale* (“general will”).

The more perceptive social-contract theorists, including Hobbes, invariably recognized that their concepts of the social contract and the state of nature were unhistorical and that they could be justified only as hypotheses useful for the clarification of timeless political problems.

## Contemporary Approaches to the Social Contract

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The idea of the social contract goes back at least to Epicurus (Thrasher 2013). In its recognizably modern form, however, the idea is revived by Thomas Hobbes; it was developed in different ways by John Locke, Jean-Jacques Rousseau, and Immanuel Kant. After Kant, the idea largely fell into disrepute until it was resurrected by John Rawls. It is now at the heart of the work of a number of moral and political philosophers.

The basic idea seems simple: in some way, the agreement of all individuals subject to collectively enforced social arrangements shows that those arrangements have some normative property (they are legitimate, just, obligating, etc.). Even this basic idea, though, is anything but simple, and even this abstract rendering is objectionable in many ways.

To explicate the idea of the social contract we analyze contractual approaches into five elements: (1) the role of the social contract (2) the parties (3) agreement (4) the object of agreement (5) what the agreement is supposed to show.

### 1. The Role of the Social Contract

#### 1.1 Distinctiveness of the Social Contract Approach

The aim of a social contract theory is to show that members of some society have reason to endorse and comply with the fundamental social rules, laws, institutions, and/or principles of that society. Put simply, it is concerned with public justification, i.e., “of determining whether or not a given regime is legitimate and therefore worthy of loyalty” (D’Agostino 1996, 23). The ultimate goal of state-focused social contract theories is to show that some political system can meet the challenge Alexander Hamilton raised in *Federalist* no. 1 of whether “men are really capable or not of establishing good government from reflection and choice, or whether they are forever destined to depend for their political constitutions on accident and force” (Hamilton 1788). Going further, David Gauthier argues that any system of moral

constraints must be justified to those to whom it is meant to apply. “What theory of morals,” Gauthier asks, “can ever serve any useful purpose, unless it can show that all the duties it recommends are truly endorsed in each individual’s reason?” (1986, 1).

The ultimate goal, then, of social contract theories is to show, in the most general sense, that social (moral, political, legal, etc.) rules can be rationally justified. This does not, however, distinguish the social contract from other approaches in moral and political philosophy, all of which attempt to show that moral and political rules are rationally justifiable in some sense. The true distinctiveness of the social contract approach is that justification does not rely on some exogenous reason or truth. Justification is generated by rational agreement (or lack of rejection in T. M. Scanlon’s version), not by the reasons that generate agreement. That is, the fact that everyone in a society, given their individual reasoning, would agree to a certain rule or principle is the critical justification for that rule, rather than certain correct or sound reasons that sufficiently rational individuals would appreciate and, if appreciated, would lead to agreement.

Although contractarians differ in their account of the reasons of individuals, with some being attracted to more objectivist accounts (Scanlon 2013), most follow Hobbes in modeling individual reasons as subjective, motivationally internal, or at least agent-relative. This may be because of skepticism about moral reasons generally (Gauthier 1986, Binmore 1998), a conviction about the overwhelming importance of self-interest to the social order (Hobbes 1651, Buchanan 2000 [1975], Brennan and Buchanan 1985), a concern to take seriously the disagreement of individual view in modern society, and this includes differences about objectivity (Gaus 2016, 2011a; Muldoon 2017; Moehler 2014, 2015, forthcoming) or because this approach is consistent with the most well-developed theories of rational choice in the social sciences (Binmore 2005, Buchanan 2000 [1975]). In any case, the reasons individuals have for agreeing to some rules or principles are importantly their own reasons, not “good reasons” from the impartial perspective. Of course, those same individuals may care about what they perceive to be the impartial good or some other non-individualistic notion—they need not be egoists—but what they care about, and so their reasons will differ from one another. This point, as Rawls highlights in his later work, is crucial to understanding political justification in a diverse society where members of a society cannot reasonably be expected to have similar conceptions of the good (Rawls 1996). Recent contractarian accounts put even greater weight on heterogeneity (Southwood 2010, Gaus 2016, Muldoon 2017, Moehler forthcoming, Thrasher 2014b, Thrasher and Vallier 2015, Thrasher 2015).

## 1.2 The Social Contract as a Model

Given these features, we can think of social contract theories as having a general schematic form. Social contract theories are a model of justification that have several general parameters that are set differently in different theories. What distinguishes contractarian theories is how they specify these general parameters. The goal of the model is to represent our reasons for endorsing and complying with some set of social rules, principles or institutions. This is done by showing that some model representatives choosers who would agree to these rules in some specified choice situation. Critically, there are two sets of relevant individuals (I and I\*). The first set is the model choosers (I) constructed in the “device of representation” such as the original position. The second set is composed of real individuals (I\*) whose terms of interaction are to be guided by the contract. If the deliberations of the contractors (I) are to be relevant to the actual participants (I\*), the reasoning of the former must, in some way, be shared by the latter. Another variable is the deliberative setting (M) in which the model choosers (I) endorse some principles or rules, principles, or institutions (R). Given all of this, we can identify a general model of social contract theories:

General Model of the Social Contract: I chooses R in M and this gives I\* reason to endorse and comply with R in the real world insofar as the reasons I has for choosing R in M are (or can be) shared by I\*

The social contract, then, is a model of rational justification translating the problem of justification (what reasons individuals have) into a problem of deliberation (what rules they will agree to). As Rawls argues:

Understood this way the question of justification is settled by working out a problem of deliberation: we have to ascertain which principles it would be rational to adopt given the contractual situation. This connects the theory of justice with the theory of rational choice” (Rawls 1999, 16).

At the simplest level, models take something complex and make it simpler. Along these lines, both the economist Ariel Rubinstein (2012) and the philosopher Nancy Cartwright (1991) compare models to fables. Fables are stories that communicate some important lesson in a simple, easy to understand fashion. Fables, like models, communicate important general rules through particular, though fictional, cases.

Models involve abstraction and idealization, but they do more than that: they help us see what our key assumptions are, identify the factors that we see as relevant (Gaus 2016, xv-xvii). Michael Weisberg concurs that models, as techniques of idealization, do more than abstract (2007a, 2013). Consider the periodic table of the elements. It is an abstraction, but not a model according to Weisberg. He calls abstractions like the periodic table abstract direct representations to distinguish them from models (2007b). Modeling seeks to isolate the important features of the target phenomena, allowing the modeler to understand and manipulate important elements of the phenomena in simulations. John Rawls’s representatives to the original position, for instance, are not only abstractions of real persons. They are

idealizations that isolate particular aspects of persons that are relevant to justification as a choice, specifically their thin theory of rationality, and their values (in the form of primary goods). Isolating these features is important for modeling the agreement procedure in Rawls's theory.

The social contract models our reasons for endorsing and complying with some set of social rules or institutions. How the theory does this depends on the assumptions made and the specification of the parameters.

Alternatives to evolution by natural selection, also described as non-Darwinian mechanisms of evolution, [2] have been proposed by scholars investigating biology since classical times to explain signs of evolution and the relatedness of different groups of living things.

The alternatives in question do not deny that evolutionary changes over time are the origin of the diversity of life, nor deny that the organisms alive today share a common ancestor from the distant past (or ancestors, in some proposals); rather, they propose alternative mechanisms of evolutionary change over time, arguing against mutations acted on by natural selection as the most important driver of evolutionary change. (In most cases, they do not deny that mutations or natural selection occur, or that they play a role in evolutionary change, but instead deny that they are fully sufficient primary causes for the evidence of evolutionary change that is observed in the natural world.)

This distinguishes them from certain other kinds of arguments that deny that large scale evolution of any sort has taken place, as in some forms of creationism, which do not propose alternative mechanisms of evolutionary change but instead deny that evolutionary change has taken place at all. Not all forms of creationism deny that evolutionary change takes place; notably, proponents of theistic evolution, such as the biologist Asa Gray, assert that evolutionary change does occur and is responsible for the history of life on Earth, with the proviso that this process has been influenced by a god or gods in some meaningful sense.

Where the fact of evolutionary change was accepted but the mechanism proposed by Charles Darwin, natural selection, was denied, explanations of evolution such as Lamarckism, catastrophism, orthogenesis, vitalism, structuralism and mutationism (called saltationism before 1900) were entertained. Different factors motivated people to propose non-Darwinian mechanisms of evolution. Natural selection, with its emphasis on death and competition, did not appeal to some naturalists because they felt it immoral, leaving little room for teleology or the concept of progress in the development of life. Some who came to accept evolution, but disliked natural selection, raised religious objections. Others felt that evolution was an inherently progressive process that natural selection alone was insufficient to explain. Still others felt that nature, including the development of life, followed orderly patterns that natural selection could not explain.

By the start of the 20th century, evolution was generally accepted by biologists but natural selection was in eclipse.[3] Many alternative theories were proposed, but biologists were quick to discount theories such as orthogenesis, vitalism and Lamarckism which offered no mechanism for evolution. Mutationism did propose a mechanism, but it was not generally accepted. The modern synthesis a generation later claimed to sweep away all the alternatives to Darwinian evolution, though some have been revived as molecular mechanisms for them have been discovered.

The evolution of life on Earth has been an object of intense debate, various theories and elaborate studies. Influenced by religion, early scientists agreed with the theory of divine conception of life. With the development of natural sciences such as geology, anthropology and biology, scientists developed new theories to explain the evolution of life through natural laws rather than divine instrument.

Evolution, But How?

In the 18th century, Swedish botanist Carolus Linnaeus based his categorization of species on the theory of unchanging life created by God. Initially he believed that all organisms appeared on Earth in their present form and never changed. Linnaeus studied the organisms as wholes, and categorized them based on similarities that individuals shared. Unable to consider that organisms might change in time, he couldn't provide an explanation for the plant hybrids that resulted from cross-pollination processes with which he experimented. He concluded that life forms could evolve after all, but he could not say why or how.

Evolutionism

In the late 18th century, naturalist George Louis Leclerc suggested that life on Earth was 75,000 years old and that men had descended from apes. Another step in evolution theory was taken by Erasmus Darwin, Charles Darwin's grandfather, who said the Earth was millions of years old and that species did evolve, even if he could not explain how. Jean-Baptiste de Lamarck, the first evolutionist to publicly defend his ideas, believed that organisms had evolved constantly, from inanimate to animate organisms and on to humans. His theory was that evolution was based on a continuous chain of inherited characteristics passed from parents to offspring that had evolved with each generation until it produced the ultimate, perfect species: humans.

Catastrophism and Uniformitarianism

In the early 19th century, French scientist Georges Cuvier explained evolution through violent catastrophic events or "revolutions" that had contributed to extinction of old species and the development of species to replace them in the newly created environment. He based his theory on the discovery in the same place of fossils of different species. Cuvier's theory was challenged by the English geologist Charles

Lyell, developer of the uniformitarianism theory. He said evolution had been influenced by slow changes since the beginning of time in the shape of the terrestrial surface that could not be perceived by the human eye.

## Natural Selection

The mid-19th century was marked by a new theory, that of Charles Darwin, who based his theory of evolution on the concepts of natural selection and survival of the fittest. According to his study "On the Origin of Species," published in 1859, the process of natural selection enables individuals with the most suitable characteristics in a species not only to survive, but also to transmit those characteristics to their offspring, producing evolutionary changes in the species over time as less suitable traits disappear and more suitable traits endure. Darwin also believed that nature produces a larger-than-necessary number of individuals of a species to allow natural selection to take place. Survival of the fittest represents nature's preservation instinct to ensure that only the strongest and most well-suited individuals survive and propagate in a constantly changing environment.

Theory of Evolution: Definition, Charles Darwin, Evidence & Examples

Updated June 27, 2019

By Dr. Mary Dowd

In 1831, an inexperienced 22-year-old British naturalist named Charles Darwin jumped on the HMS Beagle and sailed the world on a five-year scientific voyage that earned him a place in science and history.

Known today as the "father of evolution," Darwin amassed compelling evidence supporting the theory of evolution by natural selection. Earlier scholars, including his grandfather Erasmus Darwin, were mocked for presenting such unorthodox ideas as transmutation of species.

Darwin is credited with being the first scientist to persuasively argue a unifying theory of how species evolve and continue to change.

## Brief Biography of Charles Darwin

Charles Darwin grew up on an idyllic English estate where he spent his days collecting rare beetles, moths and fossils. His love of nature persisted despite his father's insistence that young Charles pursue a practical career in medicine at the renowned University of Edinburgh. Not to be deterred, Charles found a mentor in marine biologist Robert Grant and immersed himself in natural science.

Grant introduced Darwin to the idea that life sprung from a common ancestor by pointing out similarities between a human hand and a bird wing. Two years later, Darwin transferred to another school where he focused on botany.

His first professional job was working as a naturalist on the HMS Beagle, a survey boat that took him to exciting places like Brazil, Argentina, the Canary Islands, the Galapagos Islands and Sydney, Australia.

Darwin was influenced by the work of geologist Charles Lyell, who believed in the principle of uniformitarianism. Darwin and Lyell considered fossil records and striated layers in rock formations as evidence of slow and continual change. Darwin applied his knowledge of variation in plants, animals, fossils and rocks to the origin of the species by means of natural selection.

## Pre-Darwinian Theories

Religious beliefs and science were closely intertwined in Victorian England. The Bible was the respected authority on how and when life on Earth was created by God. Many scientists acknowledged that species change over time but couldn't comprehend how or why living organisms change once they appear.

French naturalist, Jean Baptiste Lamarck, was a pioneer in evolutionary theory who challenged the notion that species were immutable based on fossil records. He argued that traits could be acquired and passed along to the next generation.

For instance, Lamarck thought that so-called “nervous fluid” was secreted when giraffes reached for leaves, producing a longer neck that would be inherited by the next generation. Lamarck was ostracized for his suggestion that natural processes, rather than a divine design, determined the direction of life.

#### Influencer of Darwinian Theory

The 19th century was a turning point in how people viewed the history of life. Great minds from multiple disciplines influenced one another’s theories. Darwin followed the work of progressive thinkers of his time, such Thomas Malthus. A political economist, Malthus argued that people and animals overproduce and put a drain on resources. He advocated for regulation of family size as a means of population control.

Darwin saw some logic in Malthus’ arguments and applied the concept of overpopulation to the natural world. Darwin reasoned that animals compete for survival from the moment of birth.

When resources are scarce, competition is intense. Random, naturally occurring variations make some siblings more fit than others to successfully compete, mature and multiply.

#### Discovery of Natural Selection

In the 1850s, Alfred Russel Wallace collected thousands of exotic specimens and noticed regional differences in traits. He concluded that the best-suited organisms for a region were naturally more likely to survive and pass along their characteristics. Wallace shared his ideas with Darwin, who had been collecting evidence of natural selection for a much longer time.

Darwin had held off releasing his findings for fear of public ridicule. However, he did not want to see Wallace receive all the credit if the idea of natural selection was favorably received. Soon after, Darwin and Wallace simultaneously presented their work to the Linnaean Society.

A year later, Darwin published his groundbreaking work *On the Origin of Species*.

#### Darwin’s Theory of Evolution: Definition

Darwin defined evolution as a process of “descent with modification.” He believed that some organisms within a species have trait variants that make them fitter and more likely to reproduce.

Over time, inherited modified traits become dominant in the population, and a new species may emerge. Taking the idea further, Darwin speculated that all life evolved from one common ancestor millions of years ago.

Descent from modification also explains extinction. Certain characteristics may be crucial to plant survival, such as thorns. In a heavily grazed area, plants without thorns could be consumed before they go to seed.

Traits acquired during the lifetimes of those eaten plants are not passed along to any offspring, with the exception of gene mutations in sex cells, such as exposure of germ cells to damaging radiation.

#### Theory of Evolution by Natural Selection

Darwin’s theory of evolution by natural selection solved the mystery of how evolution works. Darwin figured out that that certain traits and characteristics are better suited to the environment, which enables organisms with the adapted variant to better survive and multiply.

Slowly, over time, a once uncommon gene variant may eventually become the predominant gene in the population via natural selection.



Survival of the fittest is another premise of Darwinian evolutionary theory. However, this does not mean the biggest, fastest and toughest always win. Fitness is a fluid concept relative to the traits needed for survival at a particular time and place. Biodiversity makes a population stronger because change is ongoing, and the evolutionary process keeps pace.

#### Theory of Evolution: Evidence

Fossil records provide compelling evidence of the evolutionary history of living things. Gradual, incremental changes in land and marine fossils coincide with climate change or migration.

For example, the modern-day horse once looked more like a fox. Paleontologist can show how the ancient horse adapted by slowly acquiring hooves, height and flat teeth as an adaptive modification to living on open grasslands instead of the forest.

DNA extracted from the recovered bones and teeth of Neanderthals indicates that modern humans and Neanderthals descended from the same ancestral group, as supported by DNA sequence analysis. The Neanderthals moved out of Africa and hunted mammoths during the Ice Age.

Later, Homo sapiens and Neanderthals crossed paths again and had children together. Neanderthals died out, but many people today have Neanderthal gene variants in their human genome.

The now extinct Tiktaalik is an example of a missing link that shows when species evolved in very different directions. Tiktaalik was a large fish with characteristics of an amphibian, including a flat head and a neck. Around 375 million years ago, this “fishapod” adapted to living in shallow water and land. Tetrapods, or animals with four feet, descended from these primitive amphibians.

#### Reverse Evolution: Humans With Tails

Vestigial organs, like the human appendix, are remnants of a body part that once served a purpose. For instance, vestigial tails in humans are an unusual evolutionary throwback that occurs when the tail of the embryo fails to dissolve properly. Normally, the tail of the human embryo forms the coccyx (tailbone). On rare occasion, a baby will be born with a tail that may be fleshy or bony, and a few inches long.

According to the American Museum of Natural History, the small hind leg bones under the skin of boa constrictors and pythons reflect the snakes' evolutionary history. Boa constrictors and pythons descended from lizards that happened to be born with stubby legs. Short legs were better for survival than long legs in certain environments.

Genes for short legs became dominant in the population, and eventually legs disappeared except for unseen vestigial bones near the snakes' tails.