

ARE WE A WARLIKE SPECIES?

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Man is naturally peaceable and timorous,
at the slightest danger his first movement
is to flee; he becomes warlike only by dint
of habit and experience.

J.-J. Rousseau, *The State of War*

During the time men lived without a common
power to keep them all in awe, they are in that
condition which is called war; and such a war
as is of every man against every man.

T. Hobbes, *Leviathan*

1. Nature vs. artifice *

The debate on whether humans are by nature peaceful or warlike harkens back to antiquity, where it was most commonly subsumed under the discussion of human morality--whether it was the product of **nature** (*physis*), or of **artifice** (*nomos*; law, custom, convention). This distinction was considered central across all three traditional sub-branches of Classical philosophy--**physics** (incl. cosmology and biology), **epistemology** (logic, language, mind) and **ethics** (morality, law, politics). Thus, for example, the minor Greek philosopher Diogenes of Sinope (Diogenes the Cynic) is reported to have placed the distinction between nature and convention at the very heart of the Classical discussion of human conduct:

(1) "...fortune he would contrast with courage, **nature** with **convention**, passion with reason..."
(Diogenes Laertius, vol. II, p. 39-40)

In this paper I will first survey the historical provenance of the discussion, tracing it through Biblical, Classical, Medieval and Enlightenment sources. I will then attempt to show how the post-Darwinian evolutionary literature has attempted to re-cast the very same discussion in more contemporary scientific terms.

2. Judaic antiquity

The Judaic Biblical tradition seemed to take it for granted, without much debate, that humans were by nature evil, and thus required the strong paternalistic hand of a judgemental, vindictive God to keep them on the moral straight and narrow. This is implicit first in the story of

the **Original Sin** and subsequent **Fall**:**[FN 1]**

(2) "...and God ordered Adam saying: "From all the trees in the garden you shall eat, but from the tree of knowing good and evil you shall not eat, for on the day you ate from it you will die"..." (Gen. 2:16-17)

(3) "...And the snake told the woman: "You will not die; for God knows that on the day you ate from it your eyes will open and you will become like God, knowing good and evil"..." (Gen. 3:4-5)

(4) "...And to Adam he said: "Because you listened to your wife and ate from the tree that I ordered you not to eat from, the earth will be cursed for you, in sadness you will eat from it all the days of your life, it will grow thistles and thorns and you will eat the grasses of the field; by the sweat of your brow you shall eat your bread till you go back to the earth from which you were taken, for you are dust and shall go back to dust"..." (Gen. 3:17-19)

(5) "...And Jehovah God said: "Lo, the man has become like one of us, knowing good and evil, and now lest he sent his hand and took from the tree of life and ate and lived forever"; and Jehovah God sent him from the Garden of Eden to work the earth from which he was taken..." (Gen. 3:22-23)

(6) "...And Jehovah said to Cain: "Where is Abel your brother?" So he said: "I don't know; am I my brother's keeper?" So He said: "What have you done? The voice of your brother's blood is screaming at me from the earth! And now you are cursed by the earth that opened its mouth to take your brother's blood from your hand"..." (Gen. 4:9-11)

(7) "...And Jehovah saw that man's thinking was bad all over the earth, and the impulse of his heart's thought was bad every day, and Jehovah regretted making man on earth, and His heart was saddened; and Jehovah said: "Let me wipe out the man I have made from the face of the earth"..." (Gen. 6:5-7)

The Biblical Jehovah's solution for how to deal with His wayward sin-prone creation was to counter their natural sinfulness with God's legislative fiat (*nomos*)--the **Ten Commandments**, prefaced with the assertion of His ultimate, capricious divine power:

(8) "...I am Jehovah your God who brought you out of the land of Egypt, from the slave quarters; you shall have no other god but me; you shall make neither statues nor pictures..." (Exodus 20:2-4)

The Divine injunctions of the Ten Commandments applied, typically, to the way one treated the members of one's **in-group**. Outsiders--the Other--remained fair game, with God's explicit dispensation, licensing the children of Israel to practice brutal, exterminatory **racism**:

(9) "...and God shall give them to you, and you shall beat them and destroy them, and you shall not make peace with them or pity them; you shall not give your daughters to their sons nor your sons to their daughters..." (Deut. 7:2-3)

(10) "...and they wiped out everybody in the city, from man to woman, from young to old and oxen and donkeys all put to the sword... and Joshua swore to Jehovah: Cursed be he who ever rises to rebuild Jericho..." (Josh. 6:21-26)

The dubious efficacy of this legislative arrangement is shown by the children of Israel's repeated straying, in turn calling for repeated punitive intervention by the jealous Divine:

(11) "...And the children of Israel did what was evil in the eyes of Jehovah, so he placed them at the hand of Midyan for seven years..." (Judges 6.1)

The Old Testament's mid-section, the books of *Joshua*, *Judges*, *Samuel* and *Kings*, are replete with similar accounts.

3. Christian antiquity

One would expect the **Prince of Peace** to have mellowed down the harsh, sin-oriented tribal ethics of the Old Testament, as some early Gospel passages seem to suggest:

(12) "...Therefore, whatever you want men to do to you, do also to them, for this is the Law and the Prophets..." (Matt. 7:12)

(13) "...And why do you look at the speck of your brother's eye, but not consider the plank in your own eye?..." (Matt. 7:3)

(14) "...Judge not, that you be not judged..." (Matt. 7:1)

(15) "...You have heard that it was said, 'You shall love your neighbor and hate your enemy'. But I say to you, love your enemies, do good to those who hate you, bless those who curse you, do good to those who hate you, and pray for those who spitefully use you and persecute you..." (Matt. 5:43-44)

By the Gospel of John, however, we are back to the exclusionary **reward-and-punishment** ethos; that is, the conventionalist (*nomos*) view--of the Old Testament:

(16) "...That whoever believes in Him shall not perish but have eternal life... but he who does not believe in Him is condemned already, because he has not believed in the name of the only begotten Son of God..." (John 3:16-17)

(17) "...unless you eat the flesh of the Son of Man and drink His blood, you have no life in you... Whoever eats My flesh and drink My blood has eternal life..." (John 6:53-54)

(18) "...for if you do not believe that I am He, you will die in your sins..." (John 8:11)

(19) "...if anyone does not abide in Me, he is cast out as a branch and is withered; and they gather them and throw them into the fire, and they are burned..." (John 15:6)

The Church's subsequent sin-based theology, whether Catholic or Protestant, remained faithful to its Biblical origins, although later Church Fathers were clearly bothered by the inherent contradiction--an omnipotent God allowing natural evil. Thus, for example, **St. Augustine** goes into considerable contortions, first asserting **man's inherent natural goodness**:

(20) "...Evil is contrary to nature, in fact it can only do harm to nature; and it would not be a fault to withdraw from God were it not that it is more natural to adhere to him..." (*City of God*, XI.17, p. 448)

Augustine extols the **inherent goodness of God**:

(21) "...It is surely little cause for wonder that those who imagine that there is some evil, which is derived and produced from a supposed 'adverse first cause' of its own,[FN 2] refuse to accept that the reason for the creation of the universe was God's good purpose to create good..." (*ibid.*, XI.23, p. 454)

But the **inherent corruptibility of men** soon rears its ugly head:

(22) "...there are so many things which do not suit the inadequacy and frailty of our mortal flesh, which has already come under deserved punishment..." (*ibid.*, XI.22, p. 453)

Somehow, evil was enabled by pride and ego, with God presumably reluctant to intervene:

(23) "...It was in secret that the first human beings began to be evil; and the result was that they slipped into open disobedience. For they would not have arrived at the evil act if an evil will had not preceded it. Now, could anything but pride have been the start of evil will? For pride is the start of every kind of sin... This happens when a man is too pleased with himself..." (*ibid.*, XIV.13, p. 771)

Added sophistry is called for in order to create an ontology of how **natural good** somehow yielded **unnatural evil**:

(24) "...Thus the evil act, the transgression of eating the forbidden fruit, was committed only when those who did it were already evil; that bad fruit could only have come from a bad tree. Further, the badness of the tree came about **contrary to nature**, because without the fault in the will, which is against nature, it certainly could not have happened..." (*ibid.*, XIV.13, p. 572)

The convoluted chain of argument eventually lead to the parable--whether metaphoric or literal--of the **Two Cities**, one Godly, the other earthly, a construct that must surely harken back to St. Augustine's early entanglement with **Manichean** dualism, which he later rejected (see (21) above):

(25) "...We see then that two cities were created by two kinds of love: the earthly city was created by self-love reaching the point of contempt to God, the Heavenly City by the love of God carried as far as contempt of self..." (*ibid.*, XIV.28, p. 593)

The other giant of Catholic Theology, **St. Thomas Aquinas**, is much more forceful about the role of the original sin as the source of all human corruptibility:

(26) "...According to the Catholic Faith we are bound to hold that the first sin of the first man is transmitted to his descendants, by way of origin. For this reason children are taken to be baptized soon after their birth, to show that they have to be washed from some uncleanness..."(*Summa Theologica*, Pt. I, *Treatise of Law*, q. 81 "Of the cause of sin on the part of man")

Aquinas goes to some length trying to clarify the exact chain of transmission of our sinful disposition, from Adam down the generation, concluding that sinfulness is part of human nature due to the Original Sin:

(27) "...Therefore we must explain the matter otherwise by saying that all men born of Adam may be considered as one man, inasmuch as they have one common nature, which they receive from their first parents..." (*ibid.*)

It was St. Augustine, however, who was the original theological authority for the notion of **Just War**, a term which he is said to have coined:[FN 3]

(28) "...But, they say, the wise man will wage just wars. Surely, he remembers that he is a human being, he would rather lament the fact that he is faced with the necessity of waging just wars; for if they were not just, he would not have to engage in them, and consequently there would be no wars for a wise man. For it is the injustice of the opposing side that lays on the wise man the duty of waging wars..." (*City of God*, XIX.7, pp. 861-862)

As his scriptural authority, Augustine cites **St. Paul's the Epistle to the Romans**, where the faithful are urged to submit to secular rulers' war-waging authority:

(29) "...For rulers are not a terror to good works, but to evil... For he [the ruler] is God's minister to you for good. But if you do evil, be afraid; for he does not bear the sword in vain; for he is God's minister, and avenger to execute wrath on him who practices evil. Therefore you must be subject, not only because of [the ruler's] wrath but also for conscience' sake..." (*Romans*, 13:3-5)

There is also a suggestive passage in the book of *Revelations*, hinting, perhaps with some stretch, at an apocalyptic final war between the forces of good and the forces of evil, perhaps an echo of an **Augustinian-Manichean** perspective:

(30) "...Now when the thousand years have expired, Satan will be released from his prison, and will go out to deceive the nations which are in the four corners of the earth, Gog and Magog, to gather them together to battle, whose number is as sand of the sea. They went up on the breadth of the earth and surrounded the camp of the saints and the beloved city And fire came down from God out of heaven and devoured them. The devil, who deceived them, was cast into the lake of fire and brimstone where the beast and the false prophet are. And they will be tormented day and night forever and ever..." (Rev. 20:7-10)

Lastly, one may as well note that among the **Qumran scrolls**, from the 1st Century BC, there was an apocalyptic text titled "The War of the Sons of light against the Sons of Darkness":

(31) "...The first war at the hands of the Sons of Light to seal the fate of the Sons of Darkness, against the forces of Bliya'al, the bands of Edom and Moab and the sons of Amon [...] and Philistia and the Kittim hordes of Ashur, and with them those who debased the covenant of the sons of Levy and Judah and Benjamin and the desert exiles; who all will fight against them [...] against all their bands when the exiled [Sons of] the Light return from the desert of the Gentiles to camp in the desert of Jerusalem. And after the war they shall rise from there [to fall upon...] and the Kittim of Egypt. And in the end He shall come out in great fury to fight the kings of the north, [Who] in [their?] fury will [aim to] destroy and exterminate the horn ['essence'] of Israel. And this [shall be] a time of salvation for God's people and an end to the rule of all those doomed by Him, and an everlasting end to all the lot of Bliya'al..." (Yadin 1962, p. 112)[FN 4]

4. Greek antiquity

Most Classical Greek philosophers deposited their work into three main disciplinary bins-- **Physics** (natural science), **Epistemology** (logic, language, mind), and **ethics** (human conduct), applying the distinction between *physis* and *nomos* to all three disciplines. Their position on the naturalness of human morality can be often predicted from their stance on the naturalness of physics/cosmology, though much more reliably, from their stance on the naturalness of language.

(a) **Epicure** (404-323 BC)

The classical advocate of a unified science of nature, Epicure preached a **non-creationist** account of physics and cosmology, quite exceptional for his time. A confirm physicalist, Epicure predated Aristotle in espousing an **empiricist** epistemology concerning the relationship between the mind and external reality (see (37) below). According to this objectivist perspective, our **mental constructs** are derived from **sensory data**. Both Epicure's naturalism and empiricism can be seen in:

(32) "...To begin with, **nothing comes into being out of what is non-existent**. For in that case anything would have arisen out of anything, standing as it would in no need of its proper source... The whole of being consists of bodies and space. For the existence of bodies is everywhere attested by sense itself, **and it is upon sensation that reason must rely when it attempts to infer the known from the unknown**. And if that which disappeared had been destroyed and become non-existent, everything would have perished, that into which the things were dissolved being non-existent..." (Diogenes Laertius vol. II. X: *Epicurus*, p. 569)

And likewise, where Epicure throws in for good measure his version of an **atomic theory**:

(33) "...Beyond bodies and space there is nothing which by mental apprehension or on its analogy we can conceive to exist...Of bodies[,] some are composite, the others the elements of which these composite bodies are made. These elements are invisible and unchangeable, and necessarily so, if things are not all to be destroyed and pass into non-existence..." (*ibid*, p. 571)

And more explicitly, again rejecting a creationist account of nature:

(34) "...the atoms move with equal speed...some of them rebound to a considerable distance [and when collide, rebound]...each atom is separated from the rest by void, which is incapable of offering any resistance to the rebound; while it is the solidity of the atom which makes it rebound after a collision... **Of all this there is no beginning, since both atoms and void exist from everlasting**... Moreover, there is an infinite number of worlds, some like this world, other unlike it." (*ibid.*, p. 575)

The insistence on naturalness is then extended to language, where Epicure argues for a natural relation between the **meaning** of words and their **sounds**, integrating the linguistic argument into his empiricist epistemology, the latter anticipating Aristotle:

(35) "...Hence even the names of things were not originally due to convention [*ex arkhes = nomos*], but to the nature [*physeis*] of the men of each tribe [, who,] under the impulse of specific feelings or specific sensory perceptions[,] uttered specific cries. The air thus emitted was moulded by their individual feelings or sensory perceptions, and differently according to the specific regions which the tribes inhabited..." (*ibid.*, p. 605)

Lastly, Epicure extends his naturalist perspective to encompass a **pleasure-based human morality**:

(36) "...Wherefore we call pleasure the alpha and omega of a blessed life. Pleasure is our first and kindred good. It is the starting point of every choice and of every aversion, and to it we come back, inasmuch as we make feeling the rule by which to judge every good thing. And since pleasure is our first and native good..." (*ibid.*, p. 655)

b. **Aristotle** (384-322 BC)

Contrasting with Epicure on many--if not all--questions of naturalness, Aristotle's cosmology harkens back to the traditional Greek **creationist** account, implicating a pantheon of divine creators. This non-naturalist perspective is then extended to the relation between words and their sounds, integrating the latter with his **empiricist--objectivist--epistemology**:

(37) "...Now spoken sounds [=words] are symbols of affections of the soul [=thoughts], and written marks are symbols of spoken sounds. And just as written marks are not the same for all men [=are language specific], neither are spoken sounds. But what these are in the first place signs of--affections of the soul--are the same for all men [=are universal]; and what these affections are likenesses of--actual things--are also the same for all men..." (Aristotle, *De Interpretatione*; in J. Barnes, ed. 1984, p. 25)

In his treatment of human **morality**, Aristotle lays out the basic question as follows:

(38) "...For this reason also the question is asked, whether happiness is to be acquired by learning or habituation or some sort of training, or comes in virtue of some divine providence or again by chance..." (Aristotle, *Nicomachean Ethics*, in J. Barnes, ed. 1984, p. 1737)

(39) "...Now some think that we are made good by nature, others by habituation, others by teaching. Nature's part evidently does not depend on us, but as a result of some divine cause is present in those who are truly fortunate; but argument and teaching, we may suspect, are not powerful with all men..." (*ibid.*, p. 1864)

Aristotle moves on to assert, in multiple places, that what is natural and universal in human behavior is man's **striving for pleasure and happiness** (a la Epicure); but that only in people with "superior refinement" or "active disposition" does this natural inclination transform into more admirable **ethical values**, such as honor, which is "the end of political life":

(40) "...most men, and men of the most vulgar type, seem (not without some reason) to identify the good, or happiness, with pleasure; which is the reason why they love the life of enjoyment... But people of superior refinement and active disposition identify happiness with honour; for this is, roughly speaking, the end of political life..." (*ibid.*, p. 1731)

(41) "...Now we call that which is in itself worthy of pursuit more complete than that which is worthy of pursuit for the sake of something else... Now such a thing happiness, above all else, is held to be; for this we choose always for itself and never for the sake of something else. But honour, pleasure, reason, and every excellence we choose indeed for themselves (for if nothing results from them we can still each of them), but we choose them also for the sake of happiness..." (*ibid.* p. 1734)

Aristotle's idea moral--as well as other types of--**excellence** is closely tied to his notion of **the middle**--neither excess nor deficiency:

(42) "...human good turns out to be activity of the soul in conformity with excellence, and if there are more than one excellence, in conformity with the best and most complete..." (*ibid.*, p. 1735)

What is more, morality is anchored in people's **natural sociality**:

(43) "...now by self-sufficient we do not mean that which is sufficient for a man by himself, for one who lives a solitary life, but also for parents, children, wife, and in general his friends and fellow citizens, since man is sociable by nature..." (*ibid.*, p. 1734)

That is, morality is a matter of **how we treat others**:

(44) "...Now the worst man is he who exercises his wickedness towards himself and towards his friends, and the best man is not he who exercises his excellence toward himself but he who exercises it towards another..." (*ibid.*, p. 1783)

Still, **moral excellence** is **not a product of nature**, as is favoring pleasure or avoiding pain, but rather must be acquired through habit, thus *nomos*:

(45) "...Excellence, then, being of two kinds, intellectual and moral, intellectual excellence in the main owes both its birth and its growth to teaching...while moral excellence comes about as a result of habit. From this it is also plain that none of the moral excellences arise in us by nature; for nothing that exists by nature can form a habit contrary to nature..." (*ibid.*, p. 1742)

(46) "...For moral excellence is concerned with pleasures and pains; it is on account of pleasure that we do bad things, and on account of pain that we abstain from noble ones. Hence we ought to be brought up in a particular way from our very youth, as Plato says, so as both to delight in and to be pained by things that we ought; for this is the right education..." (*ibid.*, p. 1744)

(47) "...it is by reason of pleasures and pains that men become bad, by pursuing and avoiding these..." (*ibid.*, p. 1745)

(48) "...In most things the error seems to be due to pleasure; for it appears as good when it is not. We therefore choose the pleasant as a good, and avoid pain as an evil..." (*ibid.*, p. 1758)

True moral excellence thus demands the pursuit of values that are laid down by law (*nomos*):

(49) "...Since the lawless man was seen to be unjust and the law-abiding man just, evidently all lawful acts are in a sense just acts; for the acts laid down by the legislative art are lawful, and each of these, we say, is just. Now the laws in their enactments on all subjects aim at the common advantage either of all or of the best or of those who hold power, or something of the sort; so that in one sense we call those acts just that tend to produce and preserve happiness and its components for the political society..." (*ibid.*, p. 1782)

One still finds Aristotle hedging on occasion, viewing **the law** as the product of *both* nature and convention:

(50) "...Of political justice part is natural, part legal..." (*ibid.*, p. 1790)

But he soon switches back to considering moral law as the product of artifice, i.e. convention, contrasting it with natural pleasure:

(51) "...(e) There is no art of pleasure; but every good is the product of some art; (f) children and the brutes pursue pleasure. The reasons for the view that not all pleasures are good are that (a) there are pleasures that are actually base and objects of reproach, and (b) there are harmful pleasures..." (*ibid.*, p. 1821)

(52) "...The fact, too, that a friend is different from a flatterer seems to make it plain that pleasure is not a good...for the one is thought to consort with us with a view to the good, the other with a view to our pleasure..." (*ibid.*, p. 1855)

However, in the *Politics*, Aristotle seems to suggest that **sociality**, and higher **political organization**, is natural:

(53) "...When several villages are united in a single complete community...the state comes into existence, originating in the bare needs of life...And therefore, if the earlier forms of society are natural, so is the state...Hence it is evident that the state is a creation of nature, and that man is by nature a political animal..." (Aristotle, *Politics*, in J. Barnes, ed. 1984, p. 1987)

(54) "...Nature, as we often say, makes nothing in vain, and man is the only animal who has the gift of speech... And it is a characteristic of man that he alone has any sense of good and evil, of just and unjust, and the like, and the association of living beings who have this sense makes a family and a state..." (*ibid.*, p. 1988)

(55) "...When we say, then, that pleasure is the ultimate aim, we do not mean the pleasures of the prodigal or the pleasures of sensuality, as we are understood to do by some through ignorance, prejudice or willful misrepresentation. By pleasure we mean the absence of pain in the body and trouble in the soul..." (*ibid.*, p. 657)

c. **Plato** (427-347 BC)

In his epistemology, Plato was the most conspicuous and durable exponent of philosophical **rationalism**, holding that our knowledge of the external world is determined by **innate ideas** already in our mind, where idealized mental 'forms' (*eida*) corresponds to every messy, variable external object. Here is how **Socrates** explains the logic of this doctrine in the *Meno* dialogue:

(56) "...Thus the soul, since it is immortal and has been born many times, and has seen all things both here and in the other world, has learned everything that is. So we need not be surprised if it can recall the knowledge by virtue of everything else which, as we can see, it once possessed..." (*The Collected Dialogues of Plato*, E. Hamilton & H. Cairns (eds 1961); *Meno*, p. 364)

To some extent, this idealization is also reflected in Plato's discussion of the naturalness of the sound-meaning correspondences in **human language**--provided one can decide whose voice speaks for the real Plato. Thus, in *Cratylus*, Hermogenes first cites Cratylus as tending toward an Epicurean--naturalist--view of language:

(57) "...I should explain to you, Socrates, that our friend Cratylus has been arguing about names. He says that they are natural and not conventional--not a portion of the human voice which men agree to use--but that there is a truth or correctness in them, which is the same for Helens as for Barbarians..." (*ibid.*, *Cratylus*, p. 383)

Hermogenes then volunteers that he himself holds the Aristotelian arbitrariness position:

(58) "...I have often talked over this matter, both with Cratylus and others, and cannot convince myself that there is any principle of correctness in names[,] other than convention and agreement..." (*ibid.*, *Cratylus*, p. 383)

Socrates then opts for Cratylus' Epicurean-naturalist position:

(59) "...And Cratylus is right in saying that things have names by nature, and that not every man is an artificer of names, but he only looks to the name which each thing by nature has, and is able to express the true forms [*eida*] of things in letters and syllables..." [*ibid.*, *Cratylus*, p. 429)

He then proceed to support his argument with a veritable tour-de-force of some of the most hilarious fake etymologies of complex Greek words.[FN 5]

The seeming ambiguity about Plato's own thinking persists in the discussion of naturalness vs. arbitrariness of **human morality**. Thus, in the *Republic*, Socrates seems to argue for the naturalness of 'just' (*dikos*), suggesting that whoever applies 'just' only in cases of harming a friend but not in harming an enemy is wrong, violating the universality and naturalness of the ethics of justice:

(60) "...If, then, anyone affirms that it is just to render each his due, and he means by this that injury and harm is what is due to his enemies from the just man and benefits to his friends, he was no truly wise man who said it. For what he meant was not true. For it has been made clear to us that in no case is it just to harm anyone..." (*ibid.*, *Republic I*, p. 585)

In the *Laws*, on the other hand, Clinias argues for the **non-naturalness of morality** and the **naturalness of war**:

(61) "...Humanity is in a condition of public war of every man against every man, and private war of each man with himself..." (*ibid.*, *Laws I*, p. 1228)

Next, further on in the *Laws*, Athenian seems to argue for **natural morality**:

(62) "...There is nothing, then, of all a man owns so natively alive as the soul to shun evil but follow on the trail of the chief good..." (*ibid.*, *Laws V*, p. 1315)

But the same Athenian then switches position, arguing that **only selfishness is truly natural**:

(63) "...But of all the faults of the soul the gravest is one which is inborn in most men, one which all excuse themselves and none therefore attempts to avoid--that is conveyed in the maxim that 'everyone is naturally his own friend', and that it is only right and proper that he should be so, whereas, in truth, this same violent attachment to self is the constant source of all manner of misdeed in every one of us..." (*ibid.*, *Laws V*, p. 1318)

Lastly, one may as well note that Plato, speaking via Socrates, has espoused the **Golden Rule** ca. 300 years before Christ:

(64) "...May I do onto others as I would that they should do onto me..." (*ibid.*, *Laws*, p. 1225)

5. The Enlightenment

5.1. The chain of transmission

The complex chain of transmission via which the Classical discussion of physics, epistemology and ethics threaded its way through Rome and its Hellenistic periphery is of some interest. The **Homeric heroic tradition** was extended in Rome through the works of Virgil, Ovid and Horace. **Platonic thinking** found a safe haven in Ptolemaic Alexandria (Itkonen 2010), where it eventually blended into the thinking of early Church fathers, such as St. Augustine. The Stoic school of philosophy flourished in the works of Seneca and Cicero. **Aristotle's work** was preserved by the Arab scholars of North Africa and Spain, eventually to be -rediscovered and translated into Latin by St. Thomas Aquinas (AD 1225-1274), making the empiricism of The Philosopher a near-official Church dogma. And in his discussions of ethics, Aquinas likewise follows Aristotle closely.[FN 6]

Most significant perhaps was the transmission of Epicure's naturalistic empiricist philosophy through **Titus Lucretius** (99-55 BC), in his monumental poetic work *De Rerum Naturae* (*The Nature of Things*). The Church's position throughout this complex process was ambiguous. The systematic burning of 'pagan' scrolls after the **Council of Nicea** (AD 325) resulted in mass destruction of the Classical Greek and Latin canon. At the same time, intellectually-curious monks copied banned manuscripts and preserved them in the nooks and crannies of monastic libraries.

The re-emergence of the Classical literature out of monastic libraries in late Medieval Europe stimulated the Renaissance literary works of Petrarca, Boccaccio and Dante. Most influential, perhaps, was the re-discovery of Lucretius' *De Rerum Naturae* in an Austrian monastic library in 1528, a discovery that stimulated the flowering of both physical science and humanism in the Renaissance and, subsequently, the Enlightenment (Greenblatt 2011). Most germane to our discussion here is the re-emergence of Epicurean naturalism via the re-discovered Lucretius. This re-emergence bears much responsibility for the resurgent interest in **Human Nature** and natural **human morality**, and in the human propensity for **war**. In the following sections, I will survey how the old argument between natural and arbitrary morality was transmitted down to us via the Enlightenment.

5.2. **Thomas Hobbes** (1588-1679)

The echoes of Epicure's naturalistic grand design ring loud and clear in Hobbes' endearing introduction to *Leviathan* (1651), even as God is affirmed as the author of created nature, including both natural humans and their constructed artifice:

(65) "...Nature (the art whereby God has made and governed the world) is by the art of man, as in many other things, so in this also imitated, that it can make an artificial animal. For seeing life is but a motion of limbs, the beginning whereof is in some principal part within, why may we not say that all automata (engines that move themselves by springs and wheels as doth a watch) have an artificial life? For what is the heart but a spring?; and the nerves but so many strings; and the joints, but so many wheels, giving motion to the whole body, such as was intended by the [Grand] Artificer? Art goes yet further, imitating that most rational and excellent work of Nature, man. For by art is created that great LEVIATHAN called COMMONWEALTH, or STATE (in Latin CIVITAS), which is but an artificial man, though of greater stature and strength than the natural, for whose protection and defence it was intended..." (*Leviathan*, p. 9)

Hobbes then sways toward Aristotle's view of **artifice human morality** (*nomos*) vs. the **natural state of war** (*physis*):

(66) "...So that in the nature of man, we find three principal causes of quarrel. First, competition; secondly, diffidence; thirdly, glory...Hereby it is manifest that during the time men lived without a common power to keep them all in awe, they are in that condition which is called war; and such a war as is of every man against every man..." (*Leviathan*, p. 65)

(67) "...Whatsoever therefore is consequent to a time of war, where every man is enemy to every man, the same [is] consequent to the time wherein men lived without other security than what their own strength and their own invention shall furnish them withal. In such condition there is no place for industry... no arts; no letters; no society; and which is worst of all, continual fear, and danger of violent death; and the life of man, solitary, poor, nasty, brutish and short..." (*ibid.*, p. 65)

(68) "...For the laws of nature [= of society], as justice, equity, modesty, mercy, and, in sum, doing to others as we would be done to, of themselves, without the terror of some power to cause them to be observed, are contrary to our natural passions, that carry us to partiality, pride, revenge and the like. And covenants, without the sword, are but words and have no strength to secure a man at all... If there is no power erected, or not great enough for our security, every man will and may lawfully rely on his own strength and art for caution against all other men..." (ibid., p. 85)

(69) "...That the condition of mere nature, that is to say, of absolute liberty, such as is theirs that neither are sovereigns nor subjects, is anarchy and the condition of war..." (ibid., p. 173)

5.3. J.-J. Rousseau (1712-1778)

In the most primitive natural state of humanity, still somewhat above the state of 'brutes', Rousseau purported to detect the veritable **Noble Savage** with his presumed **natural morality**:

(70) "...nothing is so gentle as man in his primitive state, when placed by nature at an equal distance from the stupidity of brutes and the fatal enlightenment of civil man..." (Rousseau 1754, p. 64)

Rousseau's description of our descent from that ideal primitive stage is an eerie echo of the biblical Fall:

(71) "...Hence although men had become less forbearing, and although natural pity had already undergone some alteration, this period of the development of human faculties, maintaining a middle position between the indolence of our primitive state and the petulant activity of our egocentrism, must have been the happiest and most durable epoch. The more one reflects on it, the more one finds that this state was the least subject to upheavals and the best for man, and that he must have left it only by virtue of some fatal chance happening that, for the common good, ought never to have happened. The example of savages, almost all of whom have been found in this state, seems to confirm that the human race had been made to remain in it always; that this state is the veritable youth of the world; and that all the subsequent progress has been in appearance so many steps toward the perfection of the individual, and in fact toward the decay of the species..." (ibid., p. 65)

Like many of his Enlightenment contemporaries, Rousseau indulged liberally in **speculative evolutionist descriptions** of the rise of human society, first the 'noble savage' and his nuclear family, then primitive tribe, then onward to more complex city-states and the *Society of Strangers*:

(72) "...The most ancient of all societies and the only natural one is that of the family. Even so children remain bound to the father only as long as they need him for their preservation. As soon as that need ceases, the natural bond dissolves... This common freedom is a consequence of man's nature. His first law is to attend to his own preservation, his first cares are those he owes himself..."

The family is, then, if you will, the first model of political societies; the chief is the image of the father, the people are the image of the children, and all, being born equal and free, alienate their freedom only for the sake of their utility..." (Rousseau, 1762, *The Social Contract*, p. 42)

While arguing strenuously against Hobbes, Rousseau cannot help but concede the inherent conflict between **selfishness** and **social cooperation**:

(73) "...This sum of forces can only arise from the cooperation of many; but since each man's force and freedom are his primary instrument of self-preservation, how can he commit them without harming himself, and without neglecting the care he owes himself?..." (*ibid.*, p. 49)

(74) "...To find a form of association that will defend and protect the person and goods of each associate with the full common force, and by means of which each, uniting with all, nevertheless obey only himself and remains as free as before--this is the fundamental problem to which the social contract provides the solution..." (*ibid.*, pp.49-50)

His description of the evolutionary transition from the State of Nature to the ever-expanding civic state involves the ceding of natural instinctive tendencies in exchange for social benefits accruing from the **Leviathan**--Hobbes' artificial, controlling, potentially-oppressive state; hence the **Social Contract**:

(75) "...This transition from the state of nature to the civil state produces a most remarkable change in man by substituting justice for instinct in his conduct, and endowing his actions with the morality they previously lacked... Although in this state he deprives himself of several advantages he has from nature he gains such great advantages in return, his faculties are exercised and developed, his ideas enlarged, his sentiments ennobled, his entire soul is elevated..." (*ibid.*, p. 53)

With this admission, Rousseau also seems to waver about the natural goodness of his Noble Savage:

(76) "...In the state of nature, where everything is common, I owe nothing to those to whom I have promised nothing. I recognize as another's only what is of no use to myself..." (*ibid.*, p. 66)

However, he soon wavers right back, extolling the inherent goodness of natural man:

(77) "...Let us conceive of mankind as a moral person having both a sentiment of common existence which endows it with individuality and constitutes it as one, and a universal motivation which makes every part act for the sake of an end related to the whole..." (Rousseau, 1762, *The Geneva MS.*, p. 155)

And then back again to the inherent conflict between selfish individual interest and universal social motivation:

(78) "...It is false that in the [natural] state of independence, reason, perceiving our self-interest, inclines us to contribute to the common good; far from there being an alliance between particular interest and the general good, they exclude each other in the natural order of things, and social laws are the yoke that everyone is willing to impose on others, but not to assume himself..." (ibid., p. 156)

But his preoccupation with the political ideals of the Enlightenment soon blurs the discussion again:

(79) "...the healthy ideas of natural right and of the common brotherhood of all men spread rather late and made such slow progress in the world that it was only Christianity which generalized them sufficiently..." (ibid., p. 158)

(80) "...the only genuine fundamental law that flows immediately from the social pact, is that each man in all things prefers the greatest good for all..." (ibid., p. 160)

Still, Rousseau cannot bury his visceral disagreement with Hobbes, while still articulating a seemingly-Hobbesean position:

(81) "...If I do not say with Hobbes, everything is mine, why should I not at least recognize as mine in the state of nature everything that is useful to me and that I can seize?..." (ibid., p. 161)

(82) "...I close the book, leave the class-room, and look around me; I see unfortunate people groaning under an iron yoke, mankind crushed by a handful of oppressors, starving masses overwhelmed by pain and hunger, whose blood and tears the rich drink in peace, and everywhere the strong [is] armed against the weak with the frightful power of the law..." (Rousseau, 1762, *The State of War.*, p. 162)

(83) "...Let us briefly contrast these ideas with the horrible system of Hobbes; and we will find that, contrary to his absurd doctrine, the state of war, far from being natural to man, is born of peace, or at least of the precautions men have taken to secure lasting peace... Who could have imagined without shuddering the mad system of natural war of each against all? What a strange animal it must be that would believe that its good depends on the destruction of its entire species!..." (ibid., p. 163-164)

In an explicit reference to **war**, Rousseau relegates it to the post-natural product of the 'habit' and 'experience' that remove us from the **natural state of peace**:

(84) "...Man is naturally peaceable and timorous, at the slightest danger his first movement is to flee; he becomes warlike only by dint of habit and experience. Honor, interest, prejudices, vengeance, all the passions that might make him brave perils and death, are far from him in the state of nature..." (ibid., p. 166)

An important distinction harken back to the Greeks, in trying to distinguish between **natural instincts** (*physis*) and the **artifice of reasoning** (*nomos*):

(85) "...If natural law were inscribed only in human reason, it would have little capacity to guide most of our actions; but it is also engraved on the human heart in indelible characters, and it is from the heart that it speaks to him more forcefully than do all the precepts of the philosophers; it is from the heart that it cries out to him that he is not allowed to sacrifice the life of his fellow except to preserve his own..." (*ibid.*, p. 166)

This important topic turns out to persist into the modern psychological discussion of the evolutionarily-prior, automatically-processed **instincts**, **habits** and affective **predispositions** vs. conscious, deliberate, reasoned, attended processing (see further below).

In a veritable Jeremiad, Rousseau again laments the loss of the original state of Nature, thus the Fall:

(86) "...Thus the whole face of the earth is changed; everywhere nature has disappeared; everywhere human art has taken its place; independence and natural liberty have given way to laws and; there is no free being any more..." (*ibid.*, pp. 167-168)

And a final swipe at Hobbes again contrasts peaceful natural man with the warlike artifice of the Leviathan state:

(87) "...There is no war between men; there is war only between states..." (*ibid.*, p. 168)

5.4. Adam Smith (1723-1790)

In Adam Smith's work we find the most explicit reflection of the split in Classical thinking about the nature of human morality. On the one hand, his first book, *The Theory of Moral Sentiment* (1759), is a magnificent re-statement and elaboration of **Epicurean natural ethics**, arguing for the natural goodness of humans. Much less emphatic is Smith's implicit tilt toward the Aristotelian approach to **natural human selfishness** in *The Wealth of Nations* (1776). We will survey the two in order.

a. The Theory of Moral Sentiment (1759)

In a most prescient way, Smith anticipated the current discussion in evolutionary psychology about the role of empathy and **Theory of Mind**--indeed theory of **other minds**--in establishing human sociality and cooperation. He links inter-personal ethics to our natural ability to place ourselves inside the skin of our fellow humans. This natural propensity is founded on a simple **calculus of likeness**--because you are like me, your mental processes are also like mine:

(88) "...Every faculty in one man is the measure by which he judges of the like faculty in another. I judge of your sight by my sight, of your ear by my ear, of your reason by my reason, of your resentment by my resentment, of your love by my love. I neither have, nor can have, any other way of judging about them..." (Smith, 1759, *The Theory of Moral Sentiment*, p. 11)

From this, an easy step takes us to **empathy**:

(89) "...In all such cases...[of seeing a person suffering an injury]...the spectator must, first of all, endeavour, as much as he can, to put himself in the situation of the other, and to bring home to himself every little circumstance of distress which could possibly occur to the sufferer. He must adopt the whole case of his companion with all its minute incidents; and strive to render [,] as perfect as possible , that imaginary change situation upon which his sympathy is founded..." [*ibid.*, p. 13]

Smith then recapitulates what we have known throughout our 7-million-odd tenure as a social species--that we vest our sympathy more readily in **in-group members** than in **outsiders**:

(90) "...We expect less sympathy from a common acquaintance than from a friend...We expect still less sympathy from an assembly of strangers..." (*ibid.*, p. 15)

(91) "...Men, though naturally sympathetic, feel little to another with whom they have no particular connection..." (*ibid.*, p. 73)

On occasion, it is not easy to decide whether Smith is discussing our natural empathic instincts (*physis*) or the **rational norms** imposed by religion or politics (*nomos*):

(92) "...And hence it is, that to feel much for others and little for ourselves, that to restrain our selfish, and to indulge our benevolent affections, constitutes the perfection of human nature... As to love our neighbour as we love ourselves is the great law of Christianity, so it is the great precept of nature to love ourselves only as we love our neighbour..." (*ibid.*, p. 16)

Still, he again and again reaffirms the naturalness of our love for others:

(93) "...Of all our passions, however, which are so extravagantly disproportionate to the value of their object, love is the only one that appears, even to the weakest minds, to have any thing in it that is either graceful or agreeable..." (*ibid.*, p. 25)

(94) "...Mankind, at the same time, have a very strong sense of the injuries that are done to another..." (*ibid.*, p. 26)

(95) "...There is no proper motive for hurting our neighbour, there can be no incitement to do evil to another...except just indignation for evil which that other has done to us..." (*ibid.*, p. 69)

(96) "...It is thus that man, who can subsist only in society, was fitted by Nature to that situation for which it was made. All the members of human society stand in need of each others assistance...All the different members are bound together by the agreeable bands of love and affection..." (*ibid.*, p. 72)

Not only benevolence to others, but also the **fear of punishment** if goodness is violated, is claimed to be 'implanted in the human *breast*' by Nature:

(97) "...In order to enforce the observation of justice, therefore, Nature has implanted in the human breast that consciousness of ill-desert, those terrors of merited punishment which attend upon its violation, as a safeguard of the association of mankind, to protect the weak, to curb the violent, and to chastise the guilty..." (*ibid.*, p. 73)

(98) "...Nature when she formed man for society, endowed him with an original desire to please, and an original aversion to offend his brethren..." (*ibid.*, p. 99)

Other mechanism that promote sociality, such as **craving for approval** and **shunning disapproval**, are also considered part of our natural endowment:

(99) "...The all-wise Author of Nature has, in this manner, taught man to respect the sentiments and judgements of his brethren; to be more or less pleased when they approve of his conduct, and to be more or less hurt when they disapprove of it..." (*ibid.*, p. 109)

(100) "...It is thus that the general rules of morality are formed. They are ultimately founded upon experience of what, in particular instances, our moral faculties, our natural sense of merit and propriety, approve, or disapprove of..." (*ibid.*, p. 134)

Lastly, with all his effusive belief in our innate benevolence, Smith cannot help but acknowledge the potential **conflict** between our natural moral faculty and other natural 'appetites':

(101) "...Our moral faculties are by no means, as some have pretended, upon a level in this respect with the other faculties and appetites of our nature, endowed with no more right to restrain these last, than these last are to restrain them. No other faculty or principle of action judges of any other..." (*ibid.*, p. 139)

b. **The Wealth of Nations** (1776)

Adam Smith's better known second book, *The Wealth of Nations*, seems to have been given an undeserving bad rap as inspired by Hobbes bleak view of human nature, perhaps also by Malthus' study of population explosions and the ensuing cut-throat competition. In fact, the book is primarily a sober, painstaking, technical--indeed technocratic--study of the workings of markets, pricing, and industrial production, all along contrasting the **industrial state** with pre-industrial rural agriculture. It is a veritable paean to the efficiency of the **division of labor** and the regulatory power of free-trading markets. Only peripherally, and scantily, does Smith allude to the **natural selfish motives** that undergird human behavior in such free markets:

(102) "...It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities but of their advantages. Nobody but a beggar chuses to depend chiefly upon the benevolence of his fellow-citizens..." (Smith, 1776, p. 26-27)

Along the way, Smith also admits the inherent potential for **class conflict**, and the coercive power of the state in protecting the interests of the rich against the poor, an early hint of Marx:

(103) "...Civil government, so far as it is instituted for the security of property, is in reality instituted for the defence of the rich against the poor, or of those who have some property against those who have none at all..." (*ibid.*, p. 715)

6. Charles Darwin (1809-1882)

Like Adam Smith, Darwin distributed the two Classical perspective on human nature and morality in two separate books. We will consider them in order.

a. The Origin of Species (1859)

The gist of Darwin's view of natural selection, the mechanism that drives the production of variant biological types and their gradual evolution, is the **competition for survival** between individuals or groups that occupy the **same adaptive niche**. Although the framework is Malthusian, the book makes no explicit reference to Malthus' work on population explosions. Thus:

(104) "...all organic species are exposed to severe competition..." (Darwin 1859, p. 489)

(105) "...There is no exception to the rule that every organic being naturally increases at so high a rate, that if not destroyed, the earth would soon be covered by progeny of a single pair..." (*ibid.*, p. 491)

(106) "...The action of climate seems at first sight to be quite independent of the struggle for existence; but in so far as climate chiefly acts in reducing food, it brings on the most severe struggle between individuals, whether of the same or of distinct species, which subsist on the same kind of food..." (*ibid.*, p. 493)

(107) "...The struggle for existence inevitably follows from the high geometrical ratio of increase which is common to all organic beings... More individuals are born than can possible survive... As the individuals of the same species come into the closest competition with each other, the struggle will be most severe between them; it will be almost as severe between varieties of the same species, and next in severity between the species of the same genus..." (*ibid.*, p. 746)

(108) "...With animals having separate sexes there will in most cases be a struggle between the males for possession of the females. The most vigorous individuals, or those which most successfully struggle with their condition of life, will generally leave more progeny..." (*ibid.*, p. 747)

While not dealing explicitly with human morality, the implicit evolutionary perspective that emerges out of *The Origin of Species* is clearly Hobbesean and Malthusian--selfish, competitive, **individual motivation** as the primary driver of natural selection.

b. The Descent of Man (1871)

In sharp contrast, *The Descent of Man* is suffused with the **Epicurean natural morality** and **inherent sociality**, not only of humans but of all social species:

(109) "...With respect to the impulse which leads certain animals to associate together, and to aid each other in many ways, we may infer that in most cases they are impelled by the same sense of satisfaction or pleasure which they experience in performing other instinctive actions..." (Darwin 1871, p. 822)

(110) "...The feeling of pleasure from society is probably an extension of the parental or filial affections; and this extension may be in chief part attributed to natural selection... For with those animals which were benefitted by living in close association, the individuals which took the greatest pleasure in society would best escape various dangers..." (*ibid.*, p. 823)

Indeed, Darwin cites approvingly Adam Smith's idea of **natural empathy** as the driving force of human sociality:

(111) "...Adam Smith formerly argued...that the basis for sympathy lies in our strong retentiveness of states of pain and pleasure. Hence, "the sight of another person enduring hunger, cold, fatigue, revives in us some recollection of these states, which are painful even in idea". We are thus impelled to relieve the sufferings of another, in order that our own painful feelings may be at the same time relieved. In like manner we are led to participate in the pleasures of others..." (*ibid.*, p. 823)

(112) "...*Man is a social animal.*--Most persons admit that man is a social being... It is no argument against savage man being a social animal that the tribes inhabiting adjacent districts are almost always at war with each other; for the social instinct never extends to all individuals of the same species..." (*ibid.*, p. 825)

(113) "...Now with those animals which live permanently in a body, the social instincts are ever present and persistent. Such animals are always ready to utter the danger-signal, to defend the community, and to give aid to their fellows in accordance with their habits; they feel at all times, without the stimulus of passion and desire, some degree of love and sympathy for them; they are

unhappy if long separated from them, and always happy to be in their company. So it is with ourselves. A man who possesses no trace of such feelings would be an unnatural monster..." (*ibid.*, p. 828)

Though of course, having written *The Origin of Species* first, Darwin cannot altogether ignore the potential **conflict** between selfish/individual and social/communal motivation:

(114) "...The instinct of self-preservation is not felt except in the presence of danger...The wish for another man's property is perhaps as persistent a desire as any that can be named; but even in this case the satisfaction of actual possession is generally a weaker feeling than the desire: many a thief, if not an habitual one, after success has wondered why he stole some article..." (*ibid.*, p. 828)

7. The post-Darwinian evolutionary synthesis

7.1. Overview

On the threshold of the scientific study of biological evolution, we were left with a more nuanced view of human nature as it relates to morality--and thus to the potential naturalness of war. The two most profound thinkers, Adam Smith and Charles Darwin, refused to treat the topic--and thus the answer to our original question--in a reductionist yes-or-no manner. They thus opened the door to a more complex view of human morality and sociality, whereby humans are endowed naturally with *both* selfish and social motivations, which may then come into conflict. To understand the resolution of such moral conflicts, one must study the subtle contextual factors that may tip human behavior one way or the other.

In the modern empirical study of human behavior, four brand new scientific fields--**primatology, evolutionary psychology, evolutionary anthropology** and **cognitive neuroscience**--emerged in the latter part of the 20th Century, in one way or another elaborating on Smith's and Darwin's insights on natural empathy and sociality. Echoes of the Classical discussion are still discernible in the post-Darwinian evolutionary discussion, but we can now flesh out the traditional dichotomy of nature (*physis*) vs. artifice (*nomos*) with more explicit and meaningful empirical notions, setting up a number of **suggestive equivalencies** (though by no means full identities).

(115) Modern equivalencies:

(a) classical term	(b) mode of transmission	(c) mode of mental processing	(d) scope
nature	genetic encoding	instinct, habit, subconscious	human-universal
artifice	learning, growth, (culture, language)	conscious, rational	culture-specific

(a) **The classical terms:** The contrast between nature (*physis*) and artifice (*nomos*) has been rendered in some modern discussions as *nature vs. nurture*. 'Nurture', however, implies the role of external input, and thus tilts the contrast towards the Classical epistemological clash between Platonic rationalism ('innate mental forms determine the reality we see') vs. Aristotelian empiricism ('external input determined our mental categories'), which is not our focus here.

(b) **Mode of transmission:** The two terms of the Classical contrast are correlated here with their respective modes of transmission. The Classical 'nature' is present at birth, is the product of evolution, and is encoded in and transmitted by **genes**. The classical 'artifice' is acquired during post-natal growth, maturation and learning, with **culture** and **communication** being, potentially, the instruments of inter-personal transmission from mature adults to the immature young.

A certain tendency toward **genetic reductionism** is discernible in evolutionary biology of the early 20th Century. After the discovery of genes and their chemical basis, DNA, it became fashionable to reduce all transmission of natural traits (Darwin's 'inheritance') to a matter of genes. A more fine-grained modern perspective, so-called 'Evo-Devo', holds that genetic coding and transmission does not determine adult traits directly, but rather indirectly through genetically-controlled **development, growth** and **maturation**. Development is thus the mediating process through which adult traits are determined, as well as an integral part of the evolutionary mechanism, where it interacts with random genetic mutation to yield **epigenetic change** (West-Eberhard 2003).

(c) **Mode of mental processing:** Much, though by no means not all, of the genetically-endowed capacities of complex organisms (say, mammals) are rooted in **lower-brain** and **mid-brain** structures that are often fully mature at birth (Tucker and Luu 2012; Tucker, in preparation, chs. 5-9). This is true, for example, of heart-and-lung function, breathing, digestion, as well as of visceral emotional responses such as pleasure, pain and fear. Perceptual capacities such as vision and hearing, on the other hand, have both older sub-cortical and newer cortical components, with the latter maturing within the first 2-3 months after birth, a process that is heavily dependent on external sensory input.

Older sub-cortical capacities tend to be processed rapidly, automatically and sub-consciously. In contrast, many mental capacities that are acquired post-natally through maturation and learning are first processed laboriously and slowly, with **conscious attention**. Only after much repetition and practice do they become **automated** or habituated (Posner and Snyder 1974; Schneider and Shiffrin 1977; Schneider 1985; Schneider and Chein 2003; Petersen and Posner 2012). The Classical discussion of natural vs. constructed morality took **moral sentiment** to be a habituated, automated, emotional response; while the artifice of moral laws and customs were assumed to be the product of rationality. Thus, while the correspondence between **naturalness** and **unconscious processing** is not absolute, it is suggestive.

(d) **Scope:** What is natural and genetically encoded-and-transmitted is presumably human universal; while at least some of what is acquired by learning and practice can vary across individuals or groups, giving rise to cross-cultural diversity.

7.2. Selfishness, altruism and natural selection

The more recent argument about the evolution of human morality eventually focused on the nature of Darwinian **natural selection**. An influential line of investigation, suggested initially by Hamilton (1964) and further elaborated by Trivers (1971), West-Eberhard (1975), Burt and Trivers (2006) and others, held that sociality and altruism can be predicted from--thus reduced to--selfish-driven **individual selection**. That is, natural selection operates strictly at the level of competing individuals. Sociality, cooperation, empathy and altruism could then be derived by mechanisms that favor one's genetic kin, thus **kin altruism**, whereby an individual's genes still survive if he favors and cooperates with his close kin. This mechanism was further extended to **reciprocal altruism**, whereby one reciprocates with one's social intimates--even when they are not close kin.

A more complex line of argument suggests that natural selection can operate at two levels, **individual selection** and **group selection**, and that the two are deployed selectively in different adaptive contexts. This idea was first pursued by D.S. Wilson (1975, 1977, 1980, 1997) and later adopted by E. O. Wilson (2012); see extensive overview in Okasha (2006). Translated into the vocabulary of the Classical and Smith-Darwin discussion, both selfishness and empathy/sociality are natural, evolved and genetically encoded.

7.3. Empathy, altruism and cooperation in primates and children

Probably the most convincing line of research about the naturalness--thus evolutionary and genetic basis--of human morality comes from the comparative study of primates and human neonates. In a long line of research in primatology and evolutionary anthropology, our closest great-ape relatives--chimpanzees, bonobos and other primates--have been shown to be naturally *both* aggressive and warlike, and empathic and cooperative (de Waal 1982, 1989, 2013; Cheney and Seyfarth 2007). Further studies by de Waal (2013) suggest that chimpanzees also have an innate natural sense of **fairness** and **equity** in the allocation of rewards.

A second line of investigation concerns the other-directed behavior of young children, long before they have been socialized to explicit, verbally-transmitted adult moral norms. Such studies have shown that children are spontaneously--naturally--disposed towards cooperation, empathy, and fairness; and that they have a rudimentary Adam Smith-like empathic **theory of mind** of their human interlocutors--both adults and other children (Tomasello 2009). What is more, young children also seem to insist on enforcing **social norms**, thus on **equity** and **justice** (Schmidt and Tomasello 2012). And lastly, there is some literature purporting to identify the neurological correlates of empathy in the human brain (Tucker *et al.* 2005).

Tomasello and his colleagues interpret their results as suggesting a two-step evolution of human cooperation, as well as a sharper break with the pre-human primate pattern:

(116) "...Modern theories of the evolution of human cooperation focus mainly on altruism. In contrast, we propose that human species-unique forms of cooperation--as well as their species-unique forms of cognition, communication and social life--all derive from mutualistic collaboration

(with social selection against cheaters). In the first step, humans became obligate cooperative foragers such that individuals were interdependent with one another and so had a direct interest in the well-being of their partners. In this context, they evolved new skills for collaboration not possessed by other great apes (joint intentionality), and they helped their potential partners (and avoided cheaters). In the second step, these new collaborative skills and motivations were scaled up to group life in general, as modern humans faced competition from other groups..." (Tomasello *et al.* 2013).

In a subsequent paper, Tomasello and Vaish (2013) explicitly equate morality with cooperation, suggesting a similar two-step development in both evolution and ontogeny, this one reminiscent **Aristotle's two-way division** between natural vs. socially-constructed morality. The latter is said to be an expansion of the former, from cooperation with only close intimates ("second-personal morality") to cooperation within a larger, less-intimate group based on "enforced group social norms".

What this seems to suggest is the same *leitmotif* than ran through the entire Classical discussion--that cooperation and morality, and their converse, aggression and war, are apportioned differently within the relevant social in-group--as against outsiders. Which leads us directly to the next question.

7.5. The Society of Intimates: Cooperation, morality and the in-out boundary

The cultural ecology of social primates is remarkably similar to that of hunting-and-gathering hominids and human prior to the advent of agriculture and the rise of large social units of non-intimates (cities, city-states, nation-states, empires). This social adaptation may be called **The Society of Intimates** (Young and Givón 2005).[FN 7] Its most salient characteristics may be summarized as (Power 1991; Young and Givón 2005; Kelly 2007; Marlow 2010):

- **Small social group size:** The size of foraging hominid social units ranged between 50 and 150 (Dunbar 1992). Baboon societies tend toward the upper limit of the hominid range, with the group comprised of several female-headed matrilineal families (Cheney and Seyfarth 2007). Bonobos and chimpanzees have a more flexible split-and-merge social organization, ranging from 25 individuals in the extended matrilineal family (including associated males) all the way to 120 members of multi-family 'tribes' (de Waal and Lanting 1997).

- **Kin-based organization of social cooperation:** Primate social organization is kin-based, and within it cooperation is organized most prominently along kin-based lines, particularly in female-headed matrilineal families (in primates). The social organization of human hunters-gatherers extend away from this social model, building upon the old kin-based social structure but not changing it in any fundamental way (Power 1991).

- **Restricted territorial range:** The widest range recorded for chimpanzees in the wild is ca. 20 miles foraging radius. Human hunters-gatherers may change their base camp several times a year, but the territorial range of each encampment is similar.

● **Genetic homogeneity:** The social unit is kin-based, though provisions for exogamy are made, through either male or female migration. And the strict kin-based social unit is gradually expanded in later hunting-gathering humans.

● **Cultural homogeneity:** Social differentiation within the group follows primarily *gender* and *age* lines, augmented by personal charisma and foraging and social skills. Cultural and foraging skills are distributed relatively evenly across the group, with relatively low occupational specialization. In foraging human societies, the occupational split is primarily between men hunters and women gatherers.

● **Consensual leadership:** Leadership of family units is determined by seniority, social skills and consensus. Linear pecking-orders are strictly observed, but are not wholly fixed. The larger-group leadership (alpha male) is non-hereditary and in constant flux (De Waal 1982; Power 1991; Cheney and Seyfarth 2007). While human hunter-gatherer groups may have a designated 'big-man' or chief, the designation is still consensual and non-hereditary.

● **Flat, non-hierarchic social organization:** While leadership of the female-headed primate families is rigid and determined by seniority, the larger-group leadership is neither hereditary nor permanent, but depends on character, dominance and physical and social skills. Human hunters-gatherers have a similar flat and fluid social organization (Power 1991; Marlowe 2010).

● **Informational stability and homogeneity:** The territorial stability, genetic homogeneity, cultural homogeneity and great cultural stability of pre-human primate societies, taken together, point to the most important parameter of pre-human and early-hominid communicative ecology--informational stability and homogeneity. When all members of the social group know each other intimately, when the terrain is stable and intimately familiar to all members, and when the culture is time-stable and diversity is minimal, then the bulk of relevant **generic knowledge**--the conceptual-semantic map of the physical, social and mental universe--is shared equally by all group members and requires no elaboration. In the intimate social unit, specific day-to-day **episodic information** is also largely shared, by virtue of the ever-shared immediate situation.

● **In-group vs. out-group division:** Human societies proliferated and split repeatedly since the very start, and both empathic cooperation and war-like competition are as ancient as social hominids, albeit in two distinct contexts:

(a) **Within the group:** One cooperates with members of one's own **in-group**, although such cooperation is still co-mingled with inter-personal competition.

(b) **Outside the group:** One's group fights for territory and resources with **other groups**.

To discriminate between in-group and out-group members, human societies use well-established external determinants, primarily **external appearance** and **language**. As elsewhere in human cognition, indeed in science, we infer the invisible from the visible. In all fundamental ways, this calculus of cooperation vs. competition hasn't changed much over the 7-million years of hominid evolution, nor over the 10,000 years of growth and proliferation of larger-scale **Societies of Strangers**--and war (Gat 1999, 2006; Otterbein 2004; Potts and Hayden 2006; Smirnov *et al.* 2007). Nor have the external determinants of in-group vs. out-group membership changed in any fundamental ways. We are still more inclined to cooperate with people who look like us, think like us, live like us and speak our language.

In this connection, it is of interest to recall what Thucydides, the most astute observer of the inner workings of Athenian democracy at its very apex, said about the role of a single leader, Pericles, indirectly thus reflecting upon the prospects of democratic governance in a large-scale Society of Strangers:[FN 8]

(117) "...And so Athens, though in name a democracy, gradually became in fact a government ruled by its foremost citizen..." (Thucydides, *The Peloponnesian War*, Book II, LCV, p. 377)

7.6. The gender dimension

One may as well note that the innate--natural, evolved--human propensities for cooperation vs. aggression are not apportioned in a gender-neutral way. Rather, males are consistently more overtly competitive, aggressive and warlike. While females are consistently more cooperative and empathic. This **social-behavioral di-morphism** has been noted for both pre-human primates (De Waal 1982, 1989; Cheney and Seyfarth 2007; Wrangham and Peterson 1996) and humans (Hrdy 1999, 2009; Potts and Hayden 2008; Marlowe 2010). In this connection, Potts and Hayden (2008) write:

(118) "...The evolutionary perspective we take here highlights the fact that aggression is predominantly an activity of young males... women have never shared men's propensity to band together spontaneously and sally forth to viciously attack their neighbors... one way to reduce the risk of violence is to empower women and maximize their role in society..." (2008, pp. 13-14)

7.7. Current relevance

One conclusion that one may wish to draw from this survey is largely methodological--that complex systems are not amenable to reductionist either-or interpretation. Rather, they most often display an interaction between **competing but complementary principles**. Thus, the seemingly-eternal seesaw in American political history between the individual freedom, autonomy and selfishness that undergird **capitalism**, on the one hand, and the more cooperative, sharing, empathic **communalism** of the organized state, on the other, is a case in point. Interaction between competing but complementary principles is the hallmark of complex biological systems. In such systems, diverse principles are not in head-on--either-or, zero-sum--competition, but rather interact in a **hybrid multi-variant system**.

The growing polarization of our politics, from this perspective, is founded upon a misunderstanding of what complex, hybrid, multi-variant systems are all about. Such polarization is aptly noted in, e.g., Leonard (2017):

(119) "...For me, it took a 2015 pre-caucus stop in Pella by J. C. Watts, a Baptist minister raised in the small town of Eufaula, Okla., who was a Republican congressman from 1995 to 2003, to begin to understand my neighbors--and most likely other rural Americans as well. "The difference between Republicans and Democrats is that Republicans believe people are fundamentally bad, while Democrats see people as fundamentally good," said Mr. Watts, who was in the area to campaign for Senator Rand Paul. "We are born bad," he said and added that children did not need to be taught to behave badly--they are born knowing how to do that. "We teach them how to be good", he said. "We become good by being reborn--born again..."

In the same vein, Samuelson (2017) reflects on our partisan polarization:

(120) "...Our government has turned into a quasi-parliamentary system. Controversial programs are supported and opposed mainly, or exclusively, by one party or the other. This is a bad development. It strengthens fringes in both parties, who hold veto power. This discourages compromise and encourages stalemate. The legislation it produces is often acceptable to partisans but less so to the wider middle class, undermining public faith in government..."

8. Closure: Evolved human nature

The original framing of the question in stark binary, reductionist terms, I would like to suggest, prejudged the complex, interactive, multi-factored nature of both human society and the human brain. Like other social species, humans evolved through protracted interaction of two modes of natural selection--**individual selection**, which promotes selfishness and competition within the group; and **group selection**, which favors empathy and cooperation within the group while consigning aggression and competition primarily to cross-group behavior. As members of a social species, we are thus, by nature, *both* peaceful and warlike--depending on the adaptive context.

The only mechanism by which we may change this dual pattern realistically is by recognizing **cross-group commonality**, sameness or **human-universal identity**. Many liberally-minded educated people share Aristotle abiding faith in the power of human rationality--thus of culture--to mitigate the unpleasant biologically-ingrained features of human nature. In this vein, Potts and Hayden (2008) note:

(121) "...Culture evolves more rapidly than biology does, however, which lends hope to the challenge before us: to understand and rein in our Stone Age behaviors..." (2008, p. 15)

Surveying the current world, both outside our national boundaries and on the inside, does not inspire great confidence in the prospects for **brotherhood of all humans**, leastwise not for the foreseeable future. We are, by all accounts, far removed yet from the Classical ideal of rational perfection.[FN 9] And this far-from-ideal state may be natural, universal and unavoidable. So that perhaps, in our endearing rational belief in--and irrational craving for--the perfectability of human nature, we might wish to remember Leonard Cohen's wise caution:

Ring the bells that still can ring
Forget your perfect offering
There is a crack in everything
That's how the light gets in.

L. Cohen, *Anthem*

Footnotes

*

I am indebted to Sarah Hrdy, John Orbell, Don Tucker, Agustinus Gianto, S.J., Martin Tweedale and Shaila van Sickle for many generous comments on early versions of the MS. Needless to say, the opinions expressed here and the way I chose to interpret the evidence remain strictly my own.

1

While the original sin is usually pegged as the eating of the forbidden fruit, the murder of Abel by Cain comes in a close second.

2

St. Augustine refers here to the dualist Eastern doctrine of Manicheism, descendent from Persian Zoroastrian religion. According to the latter, two powers controlled the universe from the start, the good power of Hormuz and the evil power of Ahariman. Manichean heresies erupted periodically throughout medieval Christianity as late as the 11th Century and beyond.

3

Augustine's notion of *Just War* was rejected by St. Thomas Aquinas, in his *Summa Theologica*.

4

The Hebrew text I used was courtesy of Fr. Agustinus Gianto, S.J. of the Pontifical Biblical Institute, Rome. Both the cited pagination and a suggestive English reading are taken from those materials. The eventual translation I opted for is my own, given the less-than-perfect condition of the original scroll.

5

Socrates' etymological slights of hand in the *Cratylus* dialogue inspired several generations of Neo-Platonic Hellenic grammarians in Alexandria to develop a more realistic account of the morphologically-complex Greek verbal paradigms (Itkonen 2010).

6

See Bourke (ed. 1960), pp. 194-211.

7

The term *Society of Intimates*, contrasting with the *Society of Strangers*, was first used in Givón (1979, ch. 5). An updated version can also be found in Givón (2005, ch. 9)

8

Classical Athenian democracy lasted, roughly, from Solon's legal reforms of 505 BC to the end of the Peloponnesian war in 403 BC. This period of nominal democracy was interspersed repeatedly by periods of oligarchy, tyranny and rank demagoguery, with ca. 95% of the population--slaves, women, foreign-born and the poor--excluded from the franchise.

9

Idealistic, quasi-normative accounts such as J.Q. Wilson's (1993) or Gazzaniga's (2005) notwithstanding.

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