



This session will consider human morality, the role played by religion in determining what we should do, and the science of altruism. Crucial to any understanding of human morality is the idea of compassion.

This is illustrated in the Parable of the Good Samaritan from *Luke* 10: 25-37. In it Jesus considers the meaning of the Jewish version of the golden rule “Thou shalt love thy neighbour as thyself” *Leviticus* 19:18

²⁵ And, behold, a certain lawyer stood up, and tempted him, saying, Master, what shall I do to inherit eternal life?

²⁶ He said unto him, What is written in the law? how readest thou?

²⁷ And he answering said, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy strength, and with all thy mind; and thy neighbour as thyself.

²⁸ And he said unto him, Thou hast answered right: this do, and thou shalt live.

²⁹ But he, willing to justify himself, said unto Jesus, And who is my neighbour?

³⁰ And Jesus answering said, A certain man went down from Jerusalem to Jericho, and fell among thieves, which stripped him of his raiment, and wounded him, and departed, leaving him half dead.

³¹ And by chance there came down a certain priest that way: and when he saw him, he passed by on the other side.

³² And likewise a Levite, when he was at the place, came and looked on him, and passed by on the other side.

³³ But a certain Samaritan, as he journeyed, came where he was: and when he saw him, he had compassion on him,

³⁴ And went to him, and bound up his wounds, pouring in oil and wine, and set him on his own beast, and brought him to an inn, and took care of him.

³⁵ And on the morrow when he departed, he took out two pence, and gave them to the host, and said unto him, Take care of him; and whatsoever thou spendest more, when I come again, I will repay thee.

³⁶ Which now of these three, thinkest thou, was neighbour unto him that fell among the thieves?

³⁷ And he said, He that shewed mercy on him. Then said Jesus unto him, Go, and do thou likewise.

The Samaritan is not the neighbor we must love, but rather the person who understands the commandment: our neighbor is anyone in need of help, regardless of their religion or their relation to us. And love requires acting.

The Church fathers came up with a strange allegorical interpretation:

The good Samaritan is Christ, the traveler who fell among thieves the sinning man, the inn the church and the Samaritan's promise to return later a prophecy of the Second Coming.

In Delacroix' painting the emptied treasure box is at the lower right and one can dimly see on the middle right the priest and the Levite who have passed by without offering help.



Any rational idea of human morality requires that we have the ability to choose what we do. This concept of free will, however, is controversial. Some scientists have suggested that we do not really decide at all but that all our actions are completely determined by what has already occurred. They suggest that we have no free will.

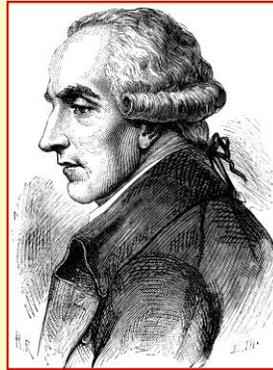
The painting is by the Québécois artist Paul-Émile Borduas. He was the author of a 1948 manifesto against the Quebec establishment called *Le Refus global* or *Total Refusal*. My talk will follow his cue. I refuse to accept the current view that everything we do is completely determined by the past. Free will is not an illusion. The painting is entitled *Unforeseen Openings*. This contains the idea that what we choose to do might not be foreseen.

A preview of this part of the talk: I shall briefly review the idea of physical determinism and its limitations, discuss how complete determinism is incompatible with free will, consider some current ideas of how free will might be an illusion, and suggest how this is not the case. Since I am talking about a controversial subject, you should be aware of my conflicts of interest. Am I atheist or believer, optimist or pessimist, determinist or libertarian? I submit that "I am innocent." Nevertheless, my presentation will be highly biased – it would not be interesting otherwise.

The Demon of Determinism

We ought then to regard the present state of the universe as the effect of its anterior state and as the cause of the one which is to follow. Given for one instant an **intelligence** which could comprehend **all the forces by which nature is animated** and the **respective situation** of the beings who compose it – an intelligence sufficiently vast to submit these data to analysis – it would embrace in the same formula the movements of the greatest bodies of the universe and those of the lightest atom; for it, nothing would be uncertain and the future, as the past, would be present to its eyes.

A Philosophical Essay on Probabilities, 1812,
translated by Truscott & Emory, 1902



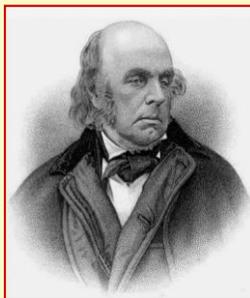
**Pierre-Simon
Laplace**

Modern determinism was most clearly stated by Pierre-Simon Laplace. We have seen this quotation before – when we considered Newton and his laws. Laplace proposed that an intelligence – whether God or Demon, whether real or hypothetical – could completely predict the future from the present if the intelligence knew all the “forces by which nature is animated” and could measure the exact “situation” of everything in the present universe. Determinism is usually interpreted in terms of what will happen. However, it also casts its net backward: if we know everything about the present then we can tell exactly what happened in the past.

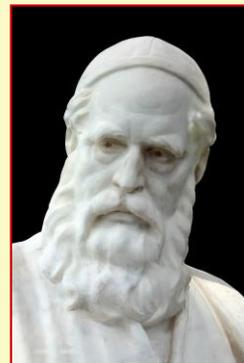
What is not always recognized is that Laplace wrote this definition of determinism in the introduction to his book on probability. Now, probability is what we use when we cannot predict exactly what will happen. A hypothetical vast intelligence might, but we cannot. We estimate the odds rather than predict the outcomes.

Fatalism

With earth's first clay they did the last man knead,
And there of the last harvest sowed the seed.
And the first morning of creation wrote
What the last dawn of reckoning shall read.

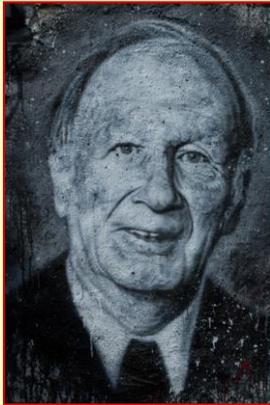


Rubaiyat of Omar Khayyam (1048-1131)
translated by Edward Fitzgerald (1859)
5th Version LXVIII



If the concept of determinism is taken seriously, then the present is determined by the immediate past, that past is itself determined by what preceded it, and so on. Ultimately, everything must have been decided when the world began. All our present actions were determined 13.8 billion years ago at the moment of the Big Bang.

This idea is given poetic form in the Persian *Rubaiyat of Omar Khayyam*, translated by Edward Fitzgerald to become an essential part of the philosophy of Victorian England. We have two different ways to deal with this – we have no hope, or we must fulfil our destiny.



Edward Lorenz
by Thierry Ehrmann
Domaine de Chaos

Limits of Determinism

Determinism: If the present state and the laws governing how that state changes are known then the future is completely predictable.

Quantum Mechanics: The future is not precisely predictable from the present state but may be estimated in terms of probabilities.

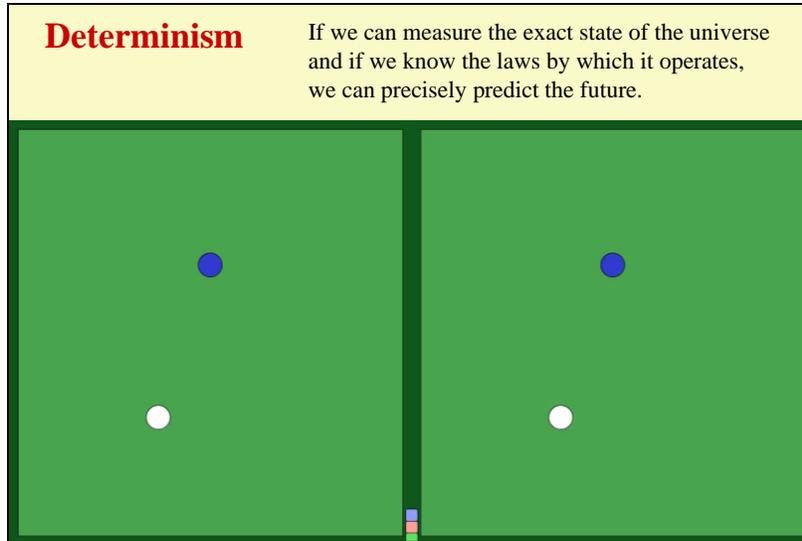
Adequate Determinism: At macroscopic levels, quantum uncertainty plays no significant role in the prediction of the future.

Chaos: When the present determines the future, but the approximate present does not approximately determine the future.

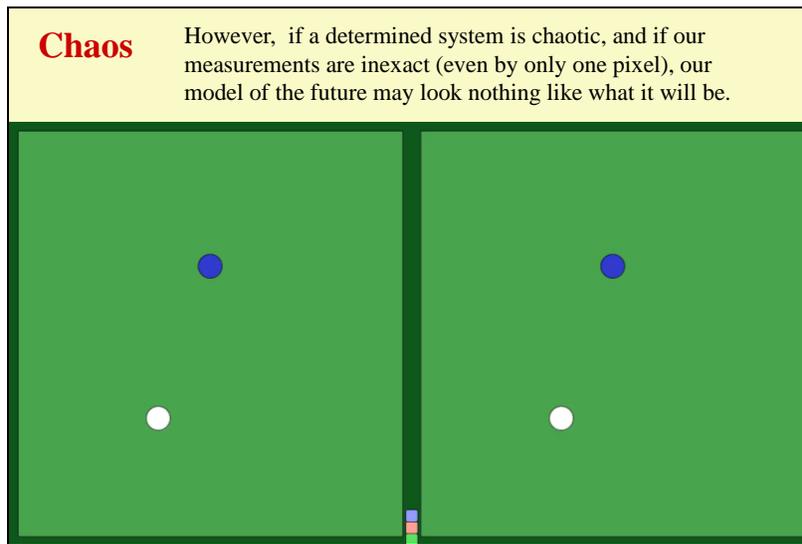
Determinism is a powerful working hypothesis but it may not be universally applicable. In the early 20th century, we became aware that atomic and sub-atomic processes are not deterministic. They follow rules, but these are expressed in terms of probabilities rather than certainties. Several recent formulations have attempted to explain free will in terms of this quantum uncertainty. Yet, chance is not the same as choice. If we make our decisions on the basis of random quantum events, we are just subject to the tyranny of the atom rather than the will of God.

Most biologists consider that at the levels of chemistry and physiology, quantum uncertainty averages out and we are “for all intents and purposes” fully determined. [Physicists are sometimes less confident, recognizing that they know little about most of the universe – dark matter and dark energy.]

My suggestion is that the universe veers away from strict determinism at levels of extreme simplicity – quantum uncertainty – and also at levels of extreme complexity – conscious choice. Sometimes, as Edward Lorenz, has shown, fully determined systems are liable to chaos. Chaos occurs when the present completely determines the future, but the approximate present does not approximately determine the future.



This slide provides an example of a typical deterministic system – billiard balls on a billiard table. If the rules by which the system operates and the positions and velocities of the balls are exactly known, the future of the system can be precisely predicted. On the left is the actual system. It is not perfect – the table is frictionless and the balls are inelastic – there is only so much an old man can program – but it does follow deterministic laws. On the right is the modeled system. If we initiate movement in the white ball, our prediction fits exactly with what happens.



Some systems, however, are chaotic as well as being determined. In a chaotic system our predictions can be wildly off the mark if our measurement of the initial state of the system is not exact. Chaos is usually considered in terms of complex systems such as the weather. However, chaos also occurs in very simple systems, even in billiards.

This example shows the same deterministic system on the left as in the previous slide. On the right is the prediction. This time the measurement of the initial position of the white ball was out by one pixel. The measurement of the velocity vector was exact.

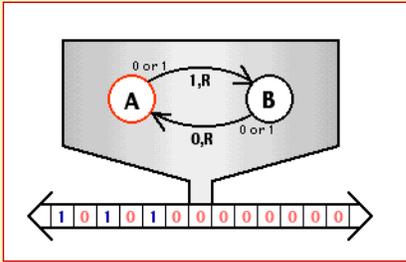
At the very beginning the prediction will be approximately correct. After the first few seconds, however, the model will show no relationship whatsoever to the actual.

Chaos is an inherent part of physical determinism. It is therefore often impossible to measure the state of the world with sufficient accuracy to give meaningful predictions of what will actually occur.

Prediction and Computability

Predicting everything that will occur before it occurs would require a computer that is larger and/or faster than the universe.

“Laplace was wrong to claim that even in a classical, non-chaotic universe the future can be unerringly predicted, given sufficient knowledge of the present.” (Wolpert 2008: *Physical limits of inference*)



The diagram shows a Turing machine with two states, A and B, represented as circles. State A has a self-loop labeled '0 or 1'. A transition from A to B is labeled '1,R'. A transition from B to A is labeled '0,R'. State B has a self-loop labeled '0 or 1'. Below the states is a tape with a sequence of symbols: 1, 0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0. Arrows indicate the tape moving to the left and right.

Prediction and Free Will:

Key factors in any test for free will would be the use of recursive reasoning (rather than flipping a coin) in coming to a decision, and the **inability of the subject to predict what she or he will finally decide.**

Even without chaos, complete predictability is impossible. The universe contains neither time nor space enough to map its own future. Laplace was wrong. The proof is related to Turing’s Halting Problem.

A Turing machine reads an infinite tape one symbol at a time. According to its internal state at the time of reading, the machine then changes the symbol written on the tape, moves the tape, and changes its state. The Turing machine is a model of a computer. We cannot predict when the machine will stop. This is similar to our inability to know if a problem is soluble before it is solved.

David Wolpert’s work means that “No matter what laws of physics govern a universe, there are inevitably facts about the universe that its inhabitants cannot learn by experiment or predict with a computation.” (Collins, 2009). The most we can hope for is a “theory of almost everything” (Binder, 2008).

However, even though we cannot prove determinism, we cannot disprove it. It continues to be a reasonable working hypothesis for most situations

Lack of predictability is a characteristic of free will:

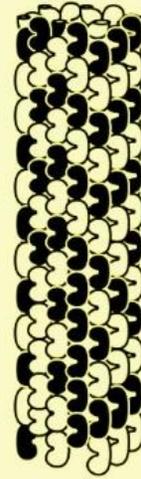
If you are in the process of deciding how to act and if you cannot predict how you will decide, you are in a state of free will.

Freedom and Chance

Indeterminism of quantum mechanics may just be a matter of our not yet knowing the actual deterministic rules that underlie sub-atomic processes – “**superdeterminism**.”

Quantum uncertainty may provide a way for our behavior not to be fully determined by antecedent causes. We would need to imagine some way for unpredictable quantum events to change brain activity. The “Orchestrated Objective Reduction of Quantum States” in **neuronal microtubules** is one such hypothesis (Penrose and Hameroff, 2011).

Chance occurrences are by definition ones for which I can claim no responsibility. And if certain of my behaviors are truly the result of chance, they should be surprising *even to me* (Harris, 2012).



One way out of the problem that quantum uncertainty poses for determinism is to claim that yet-unknown deterministic laws underlie quantum events. Once we discover these laws we will be able to re-cast quantum mechanics so that all events are exactly rather than stochastically determined. The problem with such a “superdeterminism” is that we would have to observe the events at subquantal levels, and that would require using subquantal measuring devices, and that would run into Heisenberg’s Uncertainty Principle. I think indeterminism is here to stay. However, I do not think that quantum uncertainty can explain free will, as proposed, for example, by Penrose and Hameroff. They suggested that quantum events in the neuronal microtubules could underlie our choices of one action over another. Making free will depend on quantum uncertainty is unsatisfying in that it reduces free will to chance rather than choice. Random is not the same as free. Even Sam Harris agrees.

Logical Problems of Free Will

Free will means that we are sometimes in the position with respect to a contemplated future act: that **we are able either to perform the act or to do otherwise**. The claim that we can choose between these two futures is incompatible with the idea that the past and the laws of nature together determine, at every moment, a unique future.

If our actions do not necessarily follow from our mental/cerebral states, i.e. our intentions, then we cannot decide to do one thing or another. Unless the world is deterministic, we cannot **exercise free will**.



Peter van Inwagen

by Francis Hills

Peter van Inwagen is one of the finest modern philosophers to consider free will. This slide summarizes two of his conclusions.

Freedom of the will is not possible if the world is completely determined. Free will occurs when we choose to act in one way when we could have acted otherwise. If we can indeed do otherwise – if two different futures can equally follow from the same present – then the future is not determined.

However, free will cannot exist without determinism. If we make a decision, we can only carry it out if our behavior is determined by that decision – if action potentials travel down the nerves to the muscles, if the muscles move the limbs, and if the limbs perform the intended physical acts.

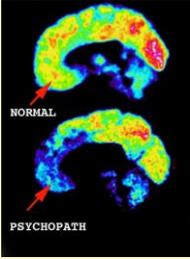
So we cannot have free will if the universe is completely determined, and free will is meaningless if the universe is not determined. The only way out in a completely determined universe is for free will to be an illusion.

However, van Inwagen concludes that free will is true and the world is not completely determined.

Absence of Free Will

If our actions are completely determined:

- (i) There is no reason to spend any time deliberating how to act
- (ii) We have no moral responsibility for our actions
- (iii) Concepts of justice, reward, punishment and rehabilitation become irrational.



The less someone believes in free will, the more likely he or she will **cheat** if the opportunity presents, and the more likely she or he will indulge in **anti-social acts** if they will not be discovered (Vohs & Schooler, 2008; Baumeister et al., 2009).

Even if we are not free, should we act as if we were?

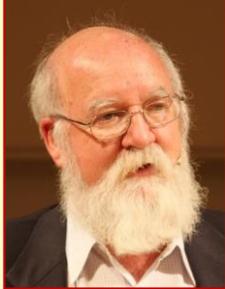
Van Inwagen believes in free will because he cannot imagine human life without personal responsibility. If there is no free will, everything we do is determined before we have anything to do with it. We need not think; we are never responsible for our actions; any idea of justice is meaningless. All evil will be exculpated by fMRI evidence that the brain was just unable to be good.

The world where people do not believe in free will is not pleasant. Simply suggesting to subjects that there is no free will encourages dishonesty and mischief.

So, even if we are not free, should we act as if we were? This is a strange way to live our lives.

Free Will and Determinism

| | Free Will Impossible | Free Will Possible |
|-------------------|----------------------|--------------------|
| Determinism True | Determinism | Compatibilism |
| Determinism False | Nihilism | Libertarianism |

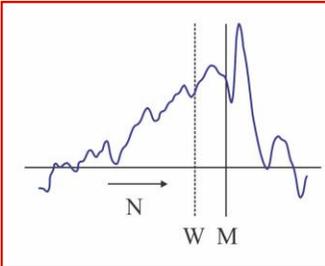


Most of us are compatibilists: 75% of normal folk (Nahmias et al, 2005), 80% of biologists (Graffin & Provine, 2007), and 60% of philosophers (Bourget & Chalmers, 2014)

Our autonomy does not depend on anything like the miraculous suspension of causation but rather on the integrity of the processes of education and mutual sharing of knowledge. (Dennett, 2003).

We can take various positions in relation to the problem of free will and determinism. Van Inwagen’s position is one of philosophical “libertarianism.” This is not the same as political libertarianism, which disputes the laws of society rather than the laws of science. Most of us believe that we have free will, but we are also convinced that the universe is determined. We are “compatibilists” – determinism is true but so is free will. We do not know how the two co-occur, but somehow they must. Dan Dennett is the most prominent of our present compatibilists. But he is unclear about exactly how free will can exist in a world of causes.

Neurodeterminism: Libet Experiments



N Neuronal changes preceding movement (*Bereitschaftspotential*)

W Perceived time of movement initiation

M Movement

Libet’s EEG experiments (1982-85) have been replicated by Fried et al (2011) with frontal neurons, and by Soon et al (2008, 2013) with fMRI patterns

Problems of Libertarianism: what does the physiological activity preceding the action represent? and how is this related to the decision to act?

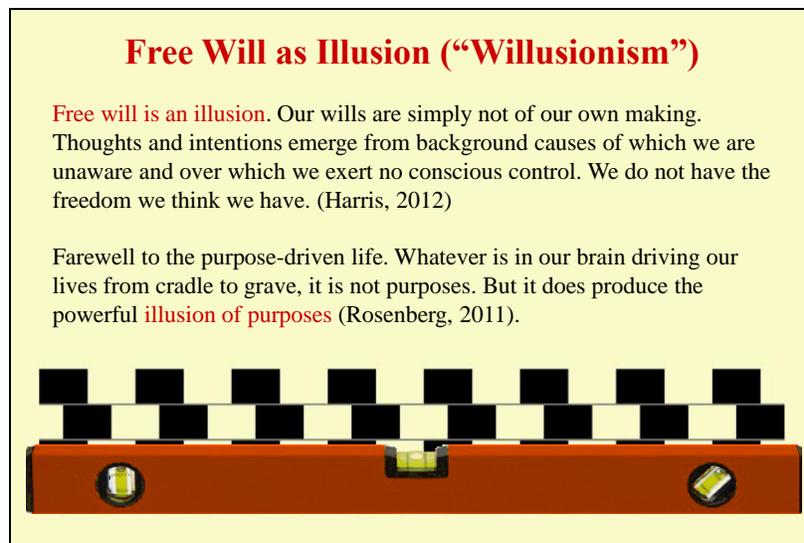
Neuroscience entered the philosophical arena in the early 1980s when Benjamin Libet evaluated the relations between volition and the readiness potential (or *Bereitschaftspotential*) recorded from the scalp. The readiness potential began up to a second before the movement but the subject consciously perceived the time of movement initiation at about 200 ms before the movement.

Similar experiments have recorded unit activity in the human frontal cortex beginning about 2 seconds before the act (Fried et al.) and fMRI activation patterns (Haynes et al., Soon et al.) some 4-10 seconds prior to the act

These experiments have led to a theory of volition that has been called “neuro-determinism.” Perhaps a better term might be “Libetarianism.” Our actions are determined by cerebral processes of which we are unaware. We only become conscious of what we are doing just before we do it. We do not control our actions, we just watch them taking place.

The 200 ms between the awareness of response-initiation and its occurrence could make it possible to inhibit or “veto” a response in process. Thus we might be consoled with the idea that even if we don’t have free will, we might have “free won’t.” Yet recent experiments have shown that even this might be unconsciously driven (Filevich et al., 2013).

One problem with the neural measurements is that we do not know what they represent. Many different cerebral processes contribute to the readiness potential – estimating time, preparing to respond, monitoring performance, etc. Some of these can be unconscious and can correlate significantly with later acts. Yet such processes do not necessarily cause the act – the mind can always change at the last minute (or millisecond).



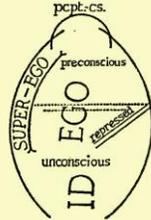
Because of these findings many scientists and philosophers have suggested that our idea of free will is illusory. Eddy Nahmias has suggested that we call this position “willusionism.”

I submit that this idea is wrong – free will is not an illusion. Now, this is an illusion!

The argument that a particular experience is illusionary presupposes that other experiences are veridical. Indeed we only know that something is illusory if we can prove by some other experience that reality has been distorted.

Despite the illusion of the tilting tiles in Richard Gregory’s café-wall, we can prove with a spirit level that they are actually all horizontal.

The Rationalization of the Interpreter



... the large majority of mental processes in a normal person arise from sources unsuspected by him. ... No one will admit that he ever deliberately performed an irrational act, and any act that might appear so is immediately justified by distorting the mental processes concerned and providing a false explanation that has a plausible ring of rationality (Jones, 1908).

It is the left hemisphere that engages in the human tendency to find order in chaos, that tries to fit everything into a story and put it into a context ... even when it is sometimes detrimental to performance (Gazzaniga, 2011).



Those who have proposed that free will is an illusion point to clear evidence that we often do not know why we behave in a particular way. Psychoanalysis has long shown that we invent plausible but false reasons for how we act. This quotation is from Ernest Jones, one of Freud’s early disciples. The psychoanalytic idea of rationalization has been supported by numerous recent psychological studies showing the effects of subliminal stimulation and the extent of our unconscious prejudices.

Michael Gazzaniga’s studies of split-brain patients showed how the left hemisphere can invent plausible but totally inaccurate explanations for our actions. He suggests that the left-hemisphere language-system interprets our experience so that it makes sense. It tries to find order in chaos and to fit our experience into a meaningful story. Sometimes, however, the story is false. So perhaps we are always wrong? I think not. Just like the argument from illusion, the argument from rationalization only works if we are sometimes right. We have to know the real explanation in order to show that our rationalization is false.

Nature of Free Will

Only some of what we do is under conscious or controlled processing. Most of what we do occurs automatically. We are therefore often mistaken about why we acted in a particular way.

Nevertheless, we sometimes come to a decision about how to act by deliberately weighing the future consequences of several possible actions.



Such future-directed thought can have a top-down effect on the present. In particular, acts of free will can form a “self” that will then continue to act in a characteristic way, sometimes automatically and sometimes deliberately.

“Every undetermined self-forming choice is the initiation of a novel pathway into the future, whose justification lies in that future and is not fully explained by the past.” (Kane, 2011)

Only a small part of what we do is under conscious or controlled processing. Most of what we do occurs automatically. We are therefore often mistaken about why we acted in a particular way. We are not aware of causes outside of ourselves or hidden from conscious scrutiny, and we may invent reasons that are unrelated to what actually occurred, so that we can make sense of ourselves and our actions.

Nevertheless, we sometimes come to a decision about how to act by deliberately weighing the future consequences of several possible actions and choosing the most appropriate.

The future does not determine the present. That is not the way time flows. But the imagined future can determine the present.

Once a feedback loop is created, time and causality become complicated. In causal circles, causes need not precede their effects. Once we conceive of consequences, the future becomes part of the present and we can base our actions on how the future will (or should) be.

Such future-directed thought can have a top-down effect on the present. In particular, acts of free will can form a “self” – a set of predispositions to act in a characteristic way, sometimes automatically and sometimes deliberately.



The concluding slide for this initial section shows Borduas' *Black Star*. It was painted almost ten years after the *Total Refusal* manifesto and three years before Quebec's Quiet Revolution.

Quebec society then became no longer determined by its past and began to look to the future. I have considered physical determinism and pointed out its limitations in quantum uncertainty, chaos and incomputability. I have shown that complete determinism is in logical conflict with free will. I have reviewed some of the evidence that suggests that our unconscious brain determines what we might falsely believe to be our free choices. And I have refused to accept that evidence, arguing that we are still free when we base our actions on an evaluation of their consequences.

Determinism rules except at its limits. At the level of the atom there is quantum uncertainty. At the level of the brain there is conscious choice.

In our brains, most of what happens follows the laws of determinism, with the past causing the present and the present causing the future. Most of what we do is unconscious. Yet some acts are deliberately chosen after consideration of what will happen. These are as much determined by the imagined future as by the actual past. As such they are both determined and free.

Morality

Deontological (from Greek *deon* – duty). One acts according to a set of rules or norms that state which actions are right and which are wrong. These rules (e.g., “Thou shalt not kill”) can be God-given (revealed in holy scriptures) or humanly determined (defined in the laws of a society).

Consequentialist: One acts on the basis not of the act but of its outcome. This is often described as “the end justifies the means.” In certain situations – to save the life of oneself or of others – it is permissible to kill. The value of different outcomes need to be assessed according to some principles.

Virtue: One acts as a good person would act. The main virtues according to Plato (*The Republic*) are wisdom, justice, fortitude, and temperance. Christian philosophers added to these faith, hope, and charity. Exercise of these virtues will determine how one acts in any particular situation.

A person with free will can choose what to do. We wish to do the right thing. How then to decide what is right? We have evolved many moral rules and principles. Which of these are the most important?

Three different approaches are presented – based on the act, its consequences and the actor. In a survey of philosophers 26% preferred deontology, 24% consequentialism, 18% virtue ethics and 32% other approaches.

These approaches overlap considerably. However some things are distinct. Consequentialists will sometimes allow the ends to justify the means. Deontologists will not allow an evil act to be performed in order to attain some better end. In the Roman Catholic Church, this is called the Pauline Principle since Paul says in his letter to the Romans that we must not “do evil that good may come.” (Romans 3: 8)

Aristotle was the philosopher of virtue. His main contribution was the idea of the golden mean. One should strive for the mean between the extremes: courage between cowardice and recklessness, honesty between deceit and tactlessness. Virtue ethics have the advantage that they urge people to be good. Most moral rules tell us what not to do, e. g. “Do not deceive.” However, someone can follow all the rules and yet have nothing to do with one’s fellows. A hermit may be wise but we would not usually consider him good. The hermit is not virtuous.

In each of these three approaches one may be absolute or relative. Laws differ from one society to another (cultural relativism) but there may be universal rules underlying these differences.

There are many lists of the virtues. Another Christian list of seven virtues contains: chastity, temperance, charity, diligence, patience, kindness, and humility.

Natural Law

Juliette Binoche in
Antigone, Sophocles



The unchangeable unwritten code of Heaven;
This is not of today and yesterday,
But lives forever, having origin
Whence no man knows

We may act as we are told or we may follow our own conscience. This is often considered as following our intuitions of a natural law. This is the oldest system of human ethics. In the Torah this is usually described in terms of the laws that God gave Noah after the deluge.

Sophocles' play *Antigone* (441 BCE) considers the issue of the natural law. Antigone's brother Polynices rebelled against his brother Eteocles, the ruler of Thebes. Both brothers died in the battle. Creon became king of Thebes and forbade any funeral rites for the traitor Polynices. Antigone defied this order, claiming that the code of Heaven required her to do so. Creon condemned her to death.

Antigone's speech:

nor did I deem
Your ordinance of so much binding force,
As that a mortal man could overbear
The unchangeable unwritten code of Heaven;
This is not of today and yesterday,
But lives forever, having origin
Whence no man knows: whose sanctions I were loath
In Heaven's sight to provoke, fearing the will
Of any man.

Antigone represents the right to civil disobedience, the priority of individual conscience over social obedience.

Modern versions of the play are clearly on the side of Antigone. However, it is possible that the original viewers of the play might have been more sympathetic to Creon who represents the rule of law. There is a second tragedy in Creon's stubborn refusal to compromise or to heed the wishes of the people of Thebes. Jean Anouilh presented a version of the play during the German occupation of France. Though the play supports rebellion, it also makes a case for the need for government.

Natural law was recognized by Christian philosophers such as Thomas Aquinas. Our awareness of the natural law is the same as our perception of the will of God as manifest in His creation. This allowed the church to condemn acts that were not discussed in scripture.



Hugo Grotius (1583-1645)

Grotius wrote several books on the principles of international law., the most important being *On the Law of War and Peace* (1625). He evoked the idea of natural law independent of any divine revelation. He famously stated that we know what is right "even if we concede ... that there is no God, or that the affairs of men are of no concern to Him" (*etiamsi daremus ... non esse Deum aut non curari ab eo negotia humana.*)

1631 Portrait by Michiel Janszoon van Mierevelt

It is not clear how natural law fits with a concept of God. The Catholic Church considers natural law as a supplement to the rules and regulations provided by the scriptures. But as Grotius pointed out natural law is independent of any religious faith. Even the atheist knows what is right and what is wrong.



Unnatural Acts

Warren Cup,
Roman Silverware,
1st Century CE
British Museum

One difficulty with appealing to natural law to determine what is right and what is wrong is that we do not know why certain acts are considered unnatural in some societies but not in others.

Some claim that there are evolutionary principles at play in our understanding of the natural law. For example, incest is not beneficial since it can lead to the hereditary defects which interfere with the survival of any issue from the incestual relationship. Another reason for the taboo against incest is the need for exogamy – the marriage with another group – which increases the possibility of better-surviving issue (hybrid vigor). Homosexuality may be considered wrong in an evolutionary context because it does not lead to any issue. Others have argued that homosexuality in some way benefits the group. Pedophilia is considered unnatural by most people.

Social Contract

To prevent the natural state of man which leads to the war of all against all (*bellum omnium contra omnes*), we agree to be governed, ceding some part of our liberty to be protected from ourselves.



Frontispiece to *Leviathan* by Thomas Hobbes (1651)
Etching by Abraham Bosse

Hobbes wrote *Leviathan* at the end of the English Civil War. The frontispiece of the book shows the state government that controls the land. It is composed of hundreds of different people who have decided to unite to bring peace and justice to the land. Hobbes preferred the idea of monarchy to a faceless democracy and thus the head of the state wears a crown. In his right hand

he exercises justice through the sword. In his left he unifies the common belief through the crozier.

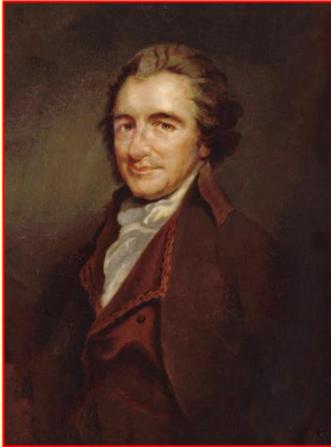
Hobbes presented a different view of “nature” from that espoused by Aquinas. He described the natural state of man who exercises his desires without restraint:

In such condition there is no place for industry, because the fruit thereof is uncertain, and consequently no culture of the earth, no navigation nor the use of commodities that may be imported by sea, no commodious building, no instruments of moving and removing such things as require much force, no knowledge of the face of the earth, no account of time, 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. (Chapter XIII).

The only solution is to create a government to control these desires:

The final cause, end, or design of men (who naturally love liberty, and dominion over others) in the introduction of that restraint upon themselves, in which we see them live in Commonwealths, is the foresight of their own preservation, and of a more contented life thereby; that is to say, of getting themselves out from that miserable condition of war which is necessarily consequent, as hath been shown, to the natural passions of men when there is no visible power to keep them in awe, and tie them by fear of punishment to the performance of their covenants. (Chapter XVII).

This is the idea of the social contract. Social contract ethics promote altruism – but this is based not so much on regard for others as for their reciprocal regard for oneself. It has therefore been termed the altruism of selfishness.

| | |
|---|--|
| <p>Human Rights</p> <p>The universal Declaration of Human Rights was proclaimed by the United Nations in 1948:</p> <p>All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.</p> <p>Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.</p> |  <p>Tom Paine (1737-1809), copy of portrait by George Romney, 1793</p> |
|---|--|

One way to set up a system of morality is not to impose rules on people but to grant them (and all their fellows) rights. Then it is in our self-interest to make sure that everyone enjoys these

rights. Tom Paine published *Common Sense* in 1776 and *Rights of Man* in 1791. These presented arguments against hereditary monarchy and for the rights of all men.

From the United States Declaration of Independence 1776

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness

UN Declaration

<http://www.un.org/en/universal-declaration-human-rights/>

Categorical Imperative

Act only according to that maxim whereby you can at the same time will that it become a universal law.

Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end.

Groundwork of the Metaphysics of Morals (1785)



Immanuel Kant (1724-1804)

Kant proposed a way to determine how to act based on reason and independent of any religious belief: we should act in the same way that we would wish everyone to act. The problem with the categorical imperative is that no precept should be considered universal. If we advocate telling the truth as a general principle, should we tell a known murderer the location of his prey when he or she asks? Kant said yes. Almost everyone else would say no.



Jeremy Bentham's Auto-Icon attends a council meeting at University College London

Utilitarianism

Jeremy Bentham (1747-1832) proposed in his *Introduction to the Principles of Morals and Legislation* (1789) that the right act is the one that causes the greatest good for the greatest number of people. The problem is how to measure the amount of good.

Bentham left his body to University College London with instructions that his skeleton should be made into an “auto-icon” of himself. This is maintained in the college and occasionally attends council meetings. Bentham’s ideas were extended and defended by John Stuart Mill in his book *Utilitarianism* (1863).

The best measurement of “good” is not known. Usually “good” is assessed in terms of happiness and absence of pain. The good can be measured as the total amount of good in the world, or as the average good per person, etc. Some types of measurement can easily break down. For example, as Donald Parfit has pointed out, the per-person average happiness of the world’s people could be significantly increased by callously killing off “all but the most ecstatic.”

One difficulty with Utilitarianism concerns whether some goods are better than others. This is particularly true if one tries to measure good in terms of happiness. Is discovering the theory of gravitation better than sexual satisfaction? Another problem is the preservation of the rights of minorities. Should the happiness of the majority be increased by decreasing the happiness of a minority, e.g. slaves.

In Eastern religions, the assessment of the good or evil done by a person contributes to their *karma*. This influences the nature of subsequent reincarnations.

Golden Rule

Torah: Thou shalt love thy neighbour as thyself (*Leviticus 19:18*)

New Testament: All things whatsoever ye would that men should do to you, do ye even so to them. (*Matthew 7:12*)

Silver Rule

Talmud: What is hateful to you, do not to your neighbour: that is the whole Torah, while the rest is the commentary thereof. (*Hillel*)

Confucianism: Do not inflict on others what you yourself would not wish done to you. (*Analects 15:23*)

Hinduism: Do not do to others what would cause pain if done to you (*Mahabharata 5:1517*)

Platinum Rule

New Testament: Unto him that smiteth thee on the one cheek offer also the other. (*Luke 6:29*)

Many religions have pointed to a supreme moral rule that subsumes all others. Most of the ethical philosophers have agreed with this “golden rule”

However, all rules have limits

Problems with the golden rule: Just because someone thoroughly enjoys listening to loud rock music does not mean that she or he should subject his neighbor to these sounds.

Problems with the silver rule: the silver rule cannot be the sole basis for morality. Though it prevents us from harming our neighbor, it does not tell us to assist those in need of help. We could follow the silver rule by completely ignoring our neighbor

Problems with the platinum rule: We should not submit to rape or robbery simply because this is what the rapist or the robber wants.

Forgiveness

to the accusers:

He that is without sin among you, let him first cast a stone at her.

to the woman:

Neither do I condemn thee: go, and sin no more.



The Woman Taken in Adultery. Codex Egberti, 9th century CE. From left to right are the disciples, Jesus, the penitent adulteress, and the departing accusers.

Related to the platinum rule is the idea of forgiveness.

The story is from *John 8 3-11*

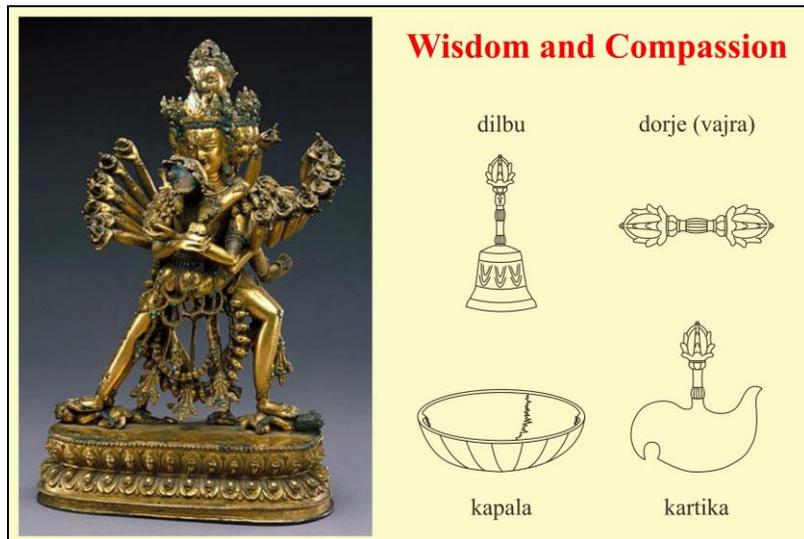
³ And the scribes and Pharisees brought unto him a woman taken in adultery; and when they had set her in the midst,
⁴ They say unto him, Master, this woman was taken in adultery, in the very act.
⁵ Now Moses in the law commanded us, that such should be stoned: but what sayest thou?
⁶ This they said, tempting him, that they might have to accuse him. But Jesus stooped down, and with his finger wrote on the ground, as though he heard them not.
⁷ So when they continued asking him, he lifted up himself, and said unto them, He that is without sin among you, let him first cast a stone at her.
⁸ And again he stooped down, and wrote on the ground.
⁹ And they which heard it, being convicted by their own conscience, went out one by one, beginning at the eldest, even unto the last: and Jesus was left alone, and the woman standing in the midst.
¹⁰ When Jesus had lifted up himself, and saw none but the woman, he said unto her, Woman, where are those thine accusers? hath no man condemned thee?
¹¹ She said, No man, Lord. And Jesus said unto her, Neither do I condemn thee: go, and sin no more.

Jesus wrote something on the ground. What he wrote remains unknown. The illustration above suggests that it was

terra terram accusat, iudicium autem meum est

(Though everyone accuse each other, judgment is mine alone)

Forgiveness is good for the victim since it removes the need for revenge; it is good for the sinner since it removes the burden of guilt. In both cases it allows life to be lived with new resolve.



In religions that promote the attainment of wisdom, compassion must not be forgotten. The believer seeks to attain understanding but cares not for his fellows. The idea of compassion in Buddhism centers on the story that when Gautama attained Nirvana he returned to the world to

aid others in their search for release from samsara – the never-ending cycle of birth and death. Several of his disciples did the same – these are the bodhisattvas, of which Avalokiteshvara/Guan Yin/Kannon is the most famous.

The statue shows a 16th Century CE Tibetan representation of the union of wisdom and compassion. The God Hevajra has many heads and many arms. When embracing his consort he often holds in his left hand the female symbol *dilbu* (bell) and in his right the male *vajra* or *dorje* (diamond or thunderbolt). In the particular statue illustrated in the figure, Hevajra holds in his sixteen hands the spirits of all the animals and all the gods. Around Hevajra’s neck hangs a garland of severed human heads, representing the negative mental attitudes he has overcome. Hevajra’s consort Nairatmya holds behind his neck a ritual skullcup (*kapala*) in which she cuts away worldly attachments using the hooked vajra knife (*kartika*) in her raised right hand. The *kartika* contains the hook of compassion.

The Problem of Altruism

| Social Behavior | Actor | Recipient |
|-----------------|-------|-----------|
| Altruism | – | + |
| Reciprocity | + | + |
| Selfishness | + | – |
| Spite | – | – |

Hamilton’s Rule: Altruistic behavior is selected when the cost to the altruist is less than the benefit of the behavior to the family, multiplied by a factor r denoting the genetic relationship (with sibling-sibling being 0.5, grandparent-grandchild being 0.25, etc.)

“It is worth risking one’s life to save the life of two brothers, but not just one.” (attributed to Haldane)

One of the major difference between human beings and other animals is morality – human beings consider what they should or should not do. They evaluate what “ought” to be done as well as what “is.” The science of evolution has had difficulty explaining altruism – why we do things that might set ourselves at risk for the benefit of others. The only clear evolutionary statement on altruism is Hamilton’s rule

However altruism is generally considered independently of any genetic relationship. Is it possible that what we consider altruism is actually just a version of reciprocity – we aid others with the unspoken agreement that they will aid us when we are in need?

True altruism would negatively affect the altruist’s survival while enhancing the survival of the recipient of the altruism. So how could it be selected during evolution? One suggestion is that the altruism in individuals enhances the survival of the group. However group selection is controversial.



Is altruism worthwhile? Does not humanity do best when everyone is competing against each other?

This is a clip from the 1949 film noir *The Third Man* directed by Carol Reed and starring Joseph Cotton and Orson Welles. Welles plays Harry Lime, an unscrupulous black marketeer who is stealing penicillin from hospitals in postwar Vienna and substituting inactive solutions that result in patients dying. He has also betrayed his lover Anna to the Russians. In order to escape arrest Harry has faked his own death. In this scene Holly Martins (Cotton) meets his old friend Harry in the fairground, and they take a trip on a Ferris wheel. Harry presents his idea of ethics.

Victims? Don't be melodramatic. Look down there. Would you really feel any pity if one of those dots stopped moving for ever? If I said you could have twenty thousand pounds for every dot that stops, would you really, old man, tell me to keep my money – or would you calculate how many dots you could afford to spare?

You know what the fellow said – in Italy, for 30 years under the Borgias, they had warfare, terror, murder and bloodshed, but they produced Michelangelo, Leonardo da Vinci and the Renaissance. In Switzerland, they had brotherly love, they had five hundred years of democracy and peace – and what did that produce? The cuckoo clock.

https://www.youtube.com/watch?v=21h0G_gU9Tw

The Tragedy of the Commons



Wimborne St Giles
Village Green, Dorset

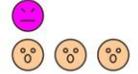
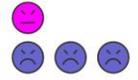
In medieval times villages contained areas of shared land for grazing, mowing hay, and hunting. Over time these lands became over-used as individuals attempted to gain as much profit from them as possible. Another problem was “enclosure” whereby the land was divided up into plots and granted to individual owners. These plots were too small to be maintained and the land was bought up by aristocrats to enlarge their estates.

An anonymous poem from the 17th century:

They hang the man and flog the woman,
That steals the goose from off the common;
But let the greater villain loose
That steals the common from the goose.

In 1968 Garrett Hardin wrote an important paper for *Science* entitled “The Tragedy of the Commons.” This described the conflict between individual goals and the common good. We want the best for ourselves and our families and this can detract from the common good.
<http://science.sciencemag.org/content/162/3859/1243.full>

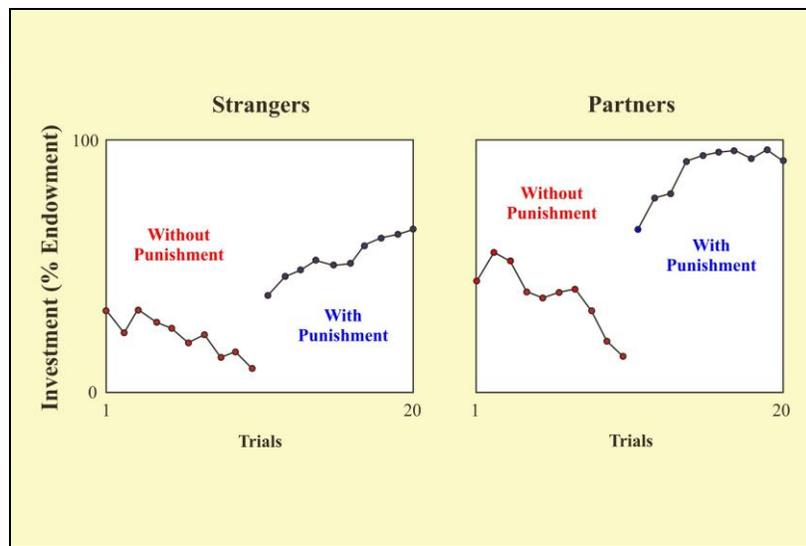
Problems of the Public Good

| Group of 4 Each Endowed with 10 Tokens | Retained | Invested in Public Good | Payoff (Total Investment Doubled and Divided by 4) | Punishment Cost | Effect | Final Return |
|---|----------|----------------------------|--|--------------------|--------|--------------|
|  | 0 | 10 | 20 | | | 20 |
|  | 10 | 0 | 15 | | | 25 |
|  | 0 | 10 | 15 | | | 15 |
|  | 10 | 0 | 15 | | 15 | 10 |
|  | 0 | 10 | 15 | 2 | | 13 |

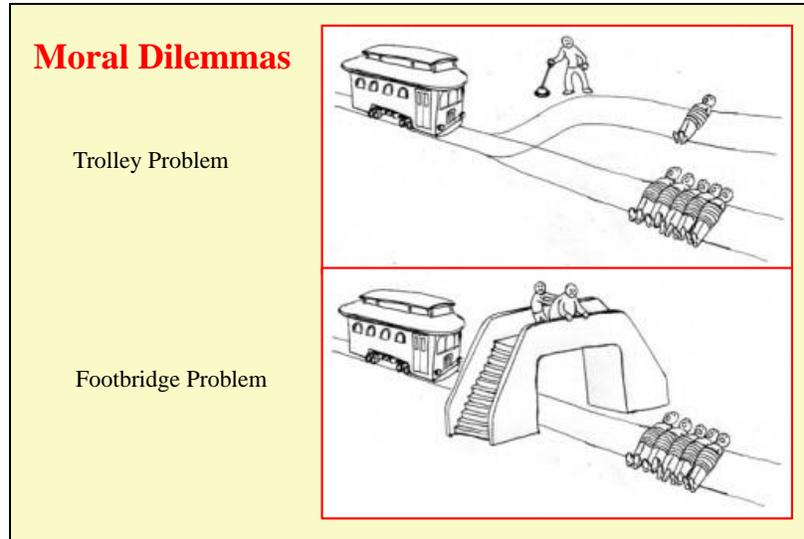
Fehr, E. & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *American Economic Review*, 90, 980-994

Science can look at the principles of morality using games. The Public Goods Game illustrated involves a small group of four individuals. Each is given an endowment and asked to contribute

some portion of this to the public good. The experimenter then increases the total amount invested in the public good returns this equally to each of the members of the group. In the best of all possible worlds (first section) everyone contributes as much as they can and each receives high benefit. However, one selfish individual (a shirker) might realize that he or she would stand to gain more by not investing anything but still receiving an equal division of a smaller public good (second section). The other individuals are then played for “suckers.” In a third condition each individual is then allowed to punish others for not investing sufficiently in the public good, for example by contributing less than the average amount that each individual invests (third section). The punishment is a reduction in the shirker’s share of the return on the public good. The participants are happy to punish shirkers even if this comes at a cost.



Because of the possibility of someone shirking their contribution to the public good, individuals tend to invest only a small portion of their endowment, and even this portion decreases over repeated trials (initial set of trials). If punishment is instituted, the system works: the amount invested in the public good increases (second set of trials), as does the average return. Furthermore the cost of punishment decreases markedly as the number of individuals acting selfishly decreases. The system works better if the participants know each other (right side).



Several hypothetical problems have been used to evaluate how one makes moral decisions. In the trolley problem, most people would change the switch so that one person rather than five are killed by the runaway trolley. In a survey of philosophers those choosing to switch outnumbered those who refused to switch by a factor of 9 to 1.

This is an example where one might apply the “principle of double effect” (first formulated by Aquinas in the 13th Century CE). This states that if one foresees that an act has both good and bad effects it is still justifiable to choose that act provided one’s intention is to bring about the good effect and that the good effect outweighs the bad effect. A modern example of this is giving morphine to someone who is terminally ill. Some ethicists would claim that morphine can be given if the intention is to relieve the pain but not if the intention is to bring about the patient’s death.

However, to return to the trolley problems, most people would not push the fat man off the footbridge to derail the trolley and accomplish the same end-result. There is something intuitively wrong about hands-on killing.

And if the switch problem is recast as the transplant surgeon who wishes to take five different organs from a single healthy person to save the lives of five separate patients (each with a single-organ failure), no one would agree.

Moral Reasoning

Rationalization: In many (perhaps most) cases we come to a decision about a moral question by intuition rather than by reason. We then create reasons for the decision. These reasons can be worthwhile, but we should be aware of our unconscious processes, and guard against tendencies that are unjust.

Knowledge: In order to come to a proper decision we should explore all relevant facts. All possible consequences, both direct and indirect, should be foreseen and evaluated.

Breaking the Rule: Most moral dilemmas involve breaking a moral rule in order to arrive at some greater good. In these cases we should recognize all possible ulterior motives, and we should consider whether our decision would be the acceptable to others if it were made public.

Role Models: An aid to coming to a moral decision is imagining what a recognized moral leader would do.

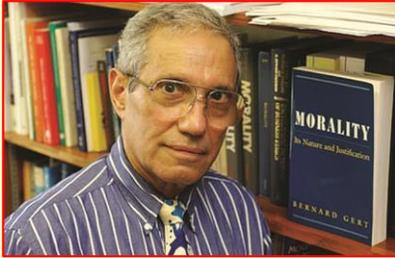
The taboo against incest is followed by most people. If asked why, we state that inbreeding causes a higher incidence of congenital abnormalities, that incest leads to severe emotional problems, that one of the individuals involved is being coerced, etc. However, even when assured that none of these reasons apply in a particular instance, we still insist that incest is wrong. We do not know why. Our reasoning comes after our intuitions. Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*. 108, 814-834.

Religion can both supply us with rules for action and provide moral role models.

Often there are several acceptable answers to a moral dilemma. Some people agree with one answer and others with another.

Recognizing that there are several morally acceptable answers to most controversial moral questions makes it less likely that people will believe that they themselves have the unique correct answer and that everyone else is mistaken (Gert 2011).

When we break a moral rule that is also legally enforced we are liable to punishment. The amount of punishment typically varies with whether some or all of our fellows consider the violation justified.



Common Morality

Bernard Gert
(1934-2011)

| | |
|--|---|
| <ol style="list-style-type: none"> 1. Do not kill 2. Do not cause pain 3. Do not disable 4. Do not deprive of freedom 5. Do not deprive of pleasure | <ol style="list-style-type: none"> 6. Do not deceive 7. Keep your promises 8. Do not cheat 9. Obey the law 10. Do your duty. |
|--|---|

The world has many different societies and each has its own system of morality. Is it possible to set up a common morality that all would agree to and obey?

Bernard Gert thought that this was possible. He proposed 10 rules that everyone should be able to accept.

The first 5 are variants of “Do no harm.” The second five are variants of “Do not violate trust.” According to Gert:

Violation of any of the second five rules increases the risk of someone suffering some harm and the more widespread are violations of the second five rules, the more harm will be suffered.

Because not every violation of the second five rules causes harm, it is with regard to these rules that even well intentioned people sometimes ask, “Why should I be moral?”

The usual excuse for violating the second five rules is that no one is harmed by the action, e.g. insider trading, cheating on an exam. This is based on only a superficial view of the consequences of an act. A Kantian evaluation would show that if everyone did that then systems of trust would break down.

Care Ethics

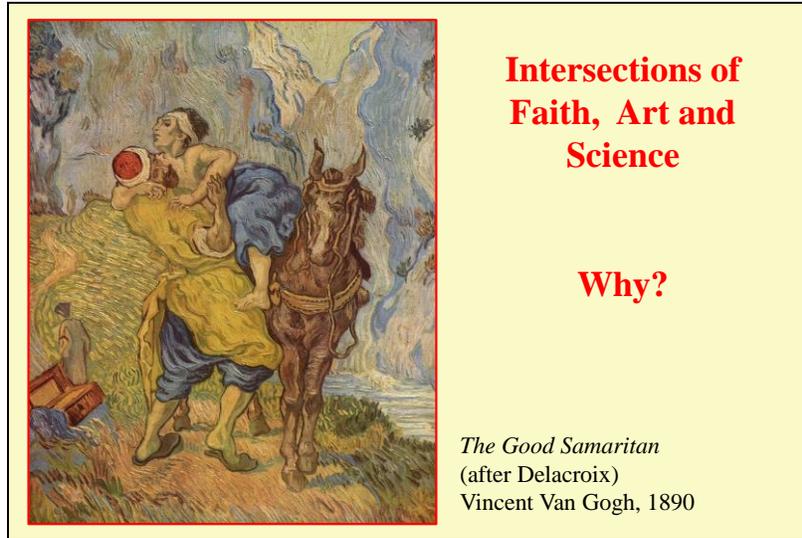
Until recently, the study of ethics has largely been pursued by men. Women have a different approach to ethical problems. Rather than abstract principles of justice and human rights, women are far more concerned with relationships between people, particularly between those who care for those in need. The classic example of such a relationship is that between mother and child. Care ethics are primarily based on feelings rather than on reason.



Carol Gilligan (1936-)

Carol Gilligan wrote *In a Different Voice* in 1982. Another important book is Nel Noddings' *Caring: A Feminine Approach to Ethics and Moral Education* (1984).

One example of women succeeding where men failed is in the peace movement in Northern Ireland.



This is Van Gogh's copy of the Delacroix painting illustrated in the opening slide. This was one of a set of copies (of Delacroix, Millet and others) painted while Von Gogh was in the Asylum at Saint-Rémy-de-Provence. They were made from engravings – hence the left-right reversal.