

The History of Psychology
Part Two: The Rebirth

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The Middle Ages

The Dark Ages

Sometime after the fall of Rome, we come to the Dark Ages. Most of Europe was decentralized, rural, parochial. Life was reduced to the "laws of nature:" The powerful ruled, while the powerless looked only to survive. There was no sense of history or progress. Superstition and fatalism prevailed. Belief in the imminent end of the world was common every century. You can get a fair approximation to European life in dark and early middle ages by looking at some of the developing nations of the world, although you would have to take away all signs of the past thousand years of technological development!



Alcuin (735-804) – Charlemagne's head scholar – is one of the few names that come down to us from this period. Other than his Christianity, a glimmer of his view of reality can be gleaned from this quote: "What is man? The slave of death, a passing wayfarer. How is man placed? Like a lantern in the wind."

Nevertheless, **Charlemagne** (768-814) provided a political unity, and the Pope a religious unity, and a new era slowly began. Eventually, the Church took over Europe, and the Pope replaced the emperor as the most important figure. By 1200, the Church would own a third of the land area of Europe!

The power of the church and its common creed meant enormous pressures to conform, backed up by fear of supernatural sanctions. But on the positive side, the papacy helped establish stability and ultimately prosperity.

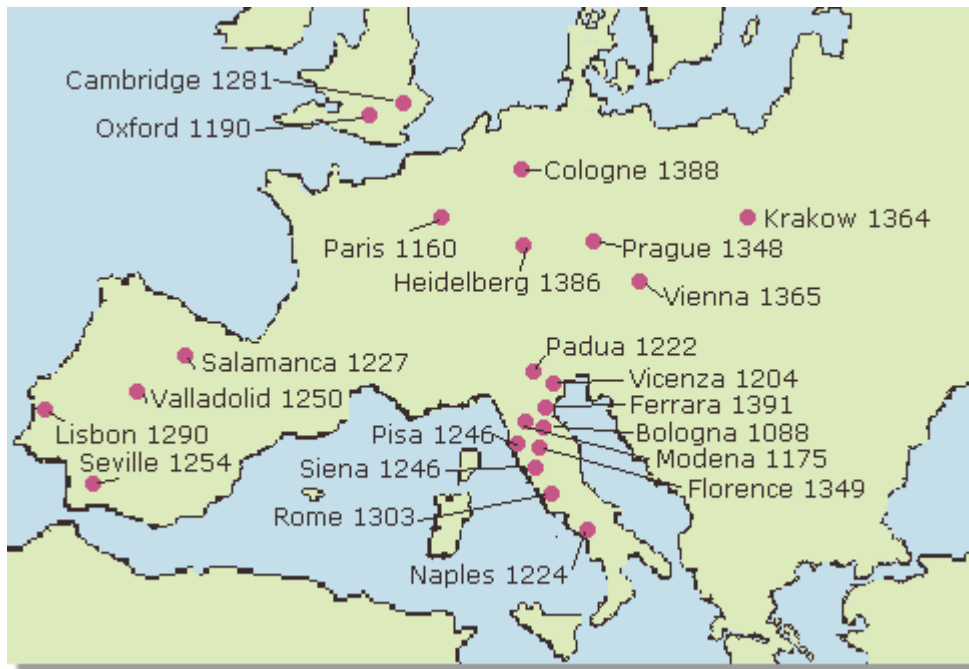
We now turn to what are called the Middle Ages, roughly the period from 1000 to 1400 ad.

The Universities

Universities developed out of monastery and cathedral schools – really what we would call elementary schools, but attended by adolescents and taught by monks and priests. The first was in Bologna, established in 1088 (see map below).

In these schools and universities, students began (with the always-present threat of flogging!) with the **trivium** – grammar (the art of reading and writing, focussing on the psalms, other parts of the Bible, and the Latin classics), rhetoric (what we would call speech), and logic. Trivium, of course, is the origin of the word trivia – the stuff beginners deal with!

Beyond that, they would study the **quadrivium**: arithmetic, geometry, music, and astronomy. All together, these subjects make up the seven **liberal arts**. Liberal referred to the free man, the man of some property, and liberal arts were in contrast to the practical arts of the working poor.



The problem of universals

The major philosophical issue of the time was the nature of universals. This concerns the meaning of a word. What in the real world does a word refer to? This is easy with proper nouns (names): George, for example, refers to this person here, me myself. But what about other, more general words? What does cat refer to? This was by no means a new issue, but the scholars of the middle ages began without the benefit of nice Greek sources!



St. Anselm of Canterbury (1033-1109) was a neoPlatonist, and he is best known for his efforts at coming up with a logical proof of God's existence – the famous ontological proof: Since we can think of a perfect being, he must exist, since perfection implies existence.

In regards to the question of universals, he was a proponent of **realism**. Realism was Plato's perspective: There is a real universal or ideal (somewhere) to which a word refers. This usually fits in well with Christianity. If humanity is real beyond being just the collection of individual human beings, we can talk about a human nature, including, for example, the idea of original sin. If there were no such thing as humanity, if each person were a law unto him or herself, then we could hardly lay the sins of Adam and Eve on anyone but Adam and Eve!

Likewise, if God is a real universal, then there is no logical incongruity about saying he is Father, Son, and Holy Spirit all at once.

Mind you, the argument isn't without problems. For example, the ultimate universal – All – is then logically greater than God, because All must include God and creation! But Christianity says that God and creation are separate and fundamentally different.

Anselm's motto was Augustine's "I believe in order that I may understand" (*credo ut intelligam*): Faith is an absolute requirement, and is the standard for all thinking. Truth is revealed by God, so submit yourself to the church.

Nominalism

Roscellinus of Amorica in Brittany (1050-1121) was the founder of nominalism, another approach to universals. A universal, he said, is just a "flatus vocis" (a vocal sound – i.e. a word). Only individuals actually exist. Words, and the ideas they represent, refer to nothing, really. This is quite compatible with materialism and empiricism, but not, really, to Christianity.

It, too, is not without problems: If words are nothing but air, then reason (and philosophy), which is the manipulation of these words, is nothing but blowing air (as many students in fact believe). That includes, of course, the reasoning it took to come to the nominalist conclusion!

Regarding the church, nominalism means that the church is nothing but the people that compose it, and religion is just what individuals think. And, if God is Father, Son, and Holy Ghost, then we can't be monotheists.

Abelard

Peter Abelard (1079-1142) was a student of both Anselm and Roscellinus. A brilliant thinker and speaker and a canon (priest) of the Cathedral of Notre Dame, he became a popular teacher at the University of Paris.

In 1117, he met a sixteen year old girl named Heloise. An orphan, she was being raised by her uncle Fulbert. She was particularly intelligent, as well as beautiful, and so her uncle asked Abelard if he would tutor her in exchange for room and board. Abelard himself commented that this was like entrusting a lamb to a wolf!

His teaching suffered a bit. He was more likely to compose love poems than lectures! But Heloise became pregnant and had a son they named Astrolabe (!). Her uncle was furious, but Abelard promised to marry Heloise, if Fulbert would keep the marriage a secret. The only way he could become a priest while married would be for her to become a nun, which was unacceptable to either of them. She was willing to be his mistress, but he convinced her to marry him in secret.

Well, Fulbert remained upset by all this, and eventually sent some men to teach Abelard a lesson: They cut off his genitals! The people of Paris (being French, even in the Middle Ages) had complete sympathy with their hero Abelard, but Abelard himself was mortified. Heloise became a nun, and Abelard a monk in order to pay for their sins. They exchanged letters for many years, and her first to him can be seen by [clicking here](#).

Abelard was, however, persuaded to continue teaching and writing. Arguing, among other things, that the trinity referred not to the Father, Son, and Holy Spirit, but to God's power, wisdom, and love, he began to irritate some of the people with power in the church. The Pope issued an order condemning Abelard to perpetual silence and confinement to a monastery (the usual for heresy at this time). On his way to Rome to defend himself, he died at 63. Heloise convinced his Abbot to bury him at her convent, and twelve years later, she died and was buried next to him.

Abelard invented "sic et non" – yes and no, pros and cons – in a book by the same name. Sic et non is a Socratic method that lays the arguments of two opposing points of view side by side for comparison. Abelard is very much the rationalist, and he made his motto "I understand in order to believe" (intelligo ut credam).



He believed that the truth of faith and reason must still agree, as did all his teachers, but reason has precedence. It is faith that has to adapt, i.e. the church must re-evaluate the meaning of its teachings when they fail to measure up to reason.

For Abelard, ethics is a matter of conduct inspired by a good heart, good will, good intentions. If you have a good conscience, you can do no wrong (sin). You can only be mistaken. He had said, for example, that when Romans killed Christians (including Christ himself), they were only acting according to their conscience, and therefore were not guilty of sin!

He is best known, however, for **conceptualism**, his attempt to synthesize nominalism and realism. Although the thing and its name have a reality of their own, universals exist in the mind as ideas, he said, which refer to groups of things and are represented by words. The mind creates abstractions out of real things by detecting similarities, so the meaning of the word cat is the mental abstraction we created by looking at individual cats and noting that they all have four legs, fur, pointy ears, two eyes with funny pupils, meow, etc. etc. This is still an important perspective in modern cognitive psychology.

This answer to the question of universals is, as you might have guessed by now, still not without problems. Notice that we are assuming that we can use words like legs, ears, eyes.... But what do *they* refer to? They can only refer to the mental abstractions we make of individual legs, ears, eyes.... So how do you tell you are looking at a leg? Well, it's a mental abstraction we make out of flesh with a hip joint, a knee, and a foot at the end. So what is a knee? Well, it's.... At what point do we reach a unique thing?

[Personally, I believe that these abstractions or characteristics are based on errors, that is, when individual things are easily mistaken for each other!]

The Moslems

The Near-Eastern and North African remnants of the Roman Empire fell as far as any other parts. Mohammed (570-632) brought Islam – "Surrender" – into the world, and it spread like wildfire, both by sword and by persuasion. So, with Islam and reunification under a series of Arab caliphates, the dark of the dark ages lifted a bit earlier there. In Baghdad, Damascus, Cairo, even Seville in newly-conquered Spain, scholars turned to the ancient Greeks and began again to reason and observe. The security, stability, wealth, and relative tolerance of their society inspired them to produce literature, including philosophy, that by the millennium, nearly equalled that of ancient Greece.

Avicenna of Baghdad (Ibn Sina, 980-1037) was one of these great thinkers. Thoroughly familiar with Aristotle, he was none-the-less a neo-Platonist and a gnostic, as it seems all Moslem philosophers must be in order to remain Moslem. Generally, he felt that reason and faith could not conflict, as the Christian thinkers had concluded as well. But he hints at heresy by suggesting that such items of faith as the physical paradise after death that Mohammed promised his followers, were necessary in order to win over the masses, but are just stories to the mature believer.

Averroes of Cordova (Ibn Rushd, 1126-1198) is the greatest of the Islamic philosophers. He began as a lawyer, and was chief justice of Seville and later of Cordova. He was also a physician, and served as the court physician in Marrakesh. He was the first to recognize that if a person survived smallpox, they would be immune thereafter. He described for the first time the purpose of the retina. He wrote an encyclopedia of medicine used in both Moslem and Christian universities.

Averroes begins, of course, with God. God is what sustains reality. God is the



order of the universe. But, he says, creation is just a myth. The universe has always existed, and will always exist.

The human mind has two aspects. There is a passive intellect, which is composed of the potential for thought and carries the details that make one personality different from another, both physically and psychologically. It is a part of the body and dies with it. And there is an active intellect, which energizes the passive intellect. It is actually the same in each person, is the only part of us that survives death, and is, in fact, God.

But Islam's openness to philosophy was not to last. The Emir of Baghdad ordered Averroes' books burned, and his example was followed by other leaders all the way back to Averroes' homeland of Spain. The world of Islam had achieved what the Christian world failed to achieve: complete domination by religion.

By means of Moslem Spain and Sicily, Avicenna and Averroes and others would come to inspire, in turn, the Christian scholars of the new universities of Europe. These scholars would consume the writings of Greek, Jewish, and Arabic scholars.

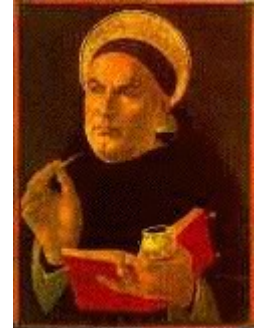
St. Thomas

In the late Middle Ages (the 1200s), Aristotle excited a lot of thought in the monks and scholars of the universities. These neo-Aristotelians were called schoolmen, or **scholastics**. By studying Aristotle and his Arab and Jewish commentators, they learned to think more logically, but their goals were still essentially theological.

The scholastic par excellence was St. Thomas Aquinas (1225 - 1274).

Of German stock, he was the son of the Count of Aquino, a town between Rome and Naples. He went to the University of Naples, where there was great interest in Arab and Jewish philosophers – and, of course, Aristotle. He became a monk of the Dominican order and went to Paris to study.

His mother was so upset by this turn of events that she sent his brothers to kidnap him and bring him home. (Contrary to what we might assume, families were seldom happy when sons or daughters went off to become monks or nuns. They often grieved for them as if they had died!) He escaped and continued his studies in Paris and elsewhere.



He was known to be a very pious and modest man, with no ambitions for church promotions – unlike the ambitious Abelard! He wrote a great deal, but is best known for the **Summa Theologiae**, usually just called the Summa, a work of 21 volumes in which he uses Abelard's Sic et Non method to reconcile Aristotle and Christianity.

Thomas believed that the soul is the form of the body, as Aristotle said, and gives it life and energy. But the soul and the body are totally linked together. This flies in the face of the Platonic and neo-Platonic ideas of the church fathers, and irritated the mystical Franciscan monks most of all.

Thomas added that the soul without the body would have no personality, because individuality comes from matter, not spirit, which represents the universal in us. For this reason, resurrection of the body is crucial to the idea of personal immortality. Averroes' idea that only an impersonal soul survives death was, in other words, quite wrong.

Thomas saw five faculties of the soul:

1. The vegetative faculty, which is involved in food, drink, sex, and growth.

2. The sensitive faculty, i.e. our senses, plus the common sense that binds sensations together.
3. The locomotor faculty, which permits movement.
4. The appetitive faculty, which consists of our desire and will.
5. The intellectual faculty, i.e. thought, reason.

For St. Thomas, reason or intellect is man's greatest treasure, that which raises him above the animals. In keeping with conceptualism, he felt it was the intellect that abstracts the idea (form or universal) from its individual appearance, so that, even though day-to-day experience can tell us about the particulars of reality, only reason or intellect can lead us to universal laws of the physical, or the human, world.

Ultimately, we do need direct, intuitive knowledge of God. Reason depends on sensory experience, and sensory experience is of matter, not spirit. So reason, like all things human, is imperfect, and cannot comprehend the perfection that is God. Faith is our ultimate refuge. Nevertheless, he insisted, faith and reason do not conflict, since God would not have made a world that did not ultimately match up with revealed truth.

In spite of his obvious brilliance, St. Thomas (like all philosophers in all ages) was a man of his time. For example, he was as chauvinistic as any of his predecessors regarding women: He considered women inferior by nature (and God's design), and saw them as a serious threat to the moral progress of men. He also devoted a significant portion of the Summa to angels and demons, which he thought of as every bit as real as anything else. Among other things, he believed that the angels moved the planets, that they had no bodies, that they moved instantaneously, and that each person had his or her very own guardian angel.

His ideas threatened many in the church, most especially the Franciscans. His works emphasized reason too much and faith too little. He put too much stock in pagans like Aristotle and Averroes. And he taught that the soul and the body were unified! After his death (at the age of 49), the Franciscans convinced the Pope to condemn him and his writings. But the Dominicans rallied to his defense, and in 1323 Thomas was canonized.

(In 1879, Pope Leo XIII made **Thomism** the official philosophy of the Catholic church. It is, with Marxism, positivism, and existentialism, one of the four most influential philosophies of the 20th century).

The Beginning of the End of the Middle Ages

The Franciscans, as I said, were the primary critics of St Thomas. **Roger Bacon** (1214-1294), a Franciscan monk and scientist, pointed out that reason does actually need experience in order to have something to reason about – a hint of modern empiricism in the Middle Ages!

But St. Thomas' severest critic was **John Duns Scotus** (1265-1308), a Franciscan monk and professor at Oxford, Paris, and Cologne. He believed that the authority of the church was everything. The will is supreme and intellect is subordinate to it. Although a conceptualist (like Thomas), of the thing, the idea, and the name, he felt that it was the individual thing that was the most real. His student William would take that and run with it.



William of Occam in England (1280-1347) was another Franciscan monk. Like Roger Bacon, he believed that, without sensory contact with things, the universal is inconceivable. In fact, he said universals are only names we give groups of things – a return to the nominalism of Roscellinus.

William is best known for the principle that is named for him: **Occam's razor**. "Don't multiply causes unnecessarily." usually interpreted to mean that the simplest explanation is the best. Over time, this came to mean "if you don't need a supernatural explanation, don't use it!"

The result of William's thinking is skepticism: Without universals, there are no generalizations, categories, classifications, theories, laws of nature, etc. All we can have is an accumulation of facts about individual entities. We will see this again in the philosophy of David Hume.

William of Occam, although he was a devout Christian, is often considered the turning point from the religious worldview of the Middle Ages to the scientific worldview of the Renaissance and the Modern era.

You could say that philosophy rested a while around this time, not for a lack of ideas, but because of over a hundred years of Troubles. There was a great famine in Europe from 1315 to 1317. The economy spiralled downward and the banks collapsed in the first few decades of the 1300s. The Hundred Years War began in 1337 and lasted about 120 years (despite the name). The Black Death, a plague carried by the fleas on rats, came from the Near East and killed over one third of the population between 1347 and 1352. Peasant revolts in England, France, and elsewhere were cruelly suppressed between 1378 and 1382. The Church was split between two popes, one in Rome and one in Avignon, between 1378 and 1417.

But these events, horrible as they were, turned out to be temporary setbacks, and an even greater explosion of intellectual activity was about to begin!

Heloise's First Letter to Abelard*

(a selection)

To her master, nay father, to her husband, nay brother; from his handmaid, nay daughter, his spouse, nay sister: to ABELARD, from HELOISE.

....

And if the name of wife appears more sacred and more valid, sweeter to me is ever the word friend, or, if you be not ashamed, concubine or whore. To wit that the more I humbled myself before you the fuller grace I might obtain from you, and so also damage less the fame of your excellence. And you yourself were not wholly unmindful of that kindness in the letter of which I have spoken, written to your friend for his comfort. Wherein you have not disdained to set forth sundry reasons by which I tried to dissuade you from our marriage, from an ill-starred bed; but were silent as to many, in which I preferred love to wedlock, freedom to a bond. I call God to witness, if Augustus, ruling over the whole world, were to deem me worthy of the honor of marriage, and to confirm the whole world to me, to be ruled by me forever, dearer to me and of greater dignity would it seem to be called your strumpet than his empress.

For it is not by being richer or more powerful that a man becomes better; one is a matter of fortune, the other of virtue. Nor should she deem herself other than venal who weds a rich man rather than a poor, and desires more things in her husband than himself. Assuredly, whomsoever this concupiscence leads into marriage deserves payment rather than affection; for it is evident that she goes after his wealth and not the man, and is willing to prostitute herself, if she can, to a richer. As the argument advanced (in Aeschines) by the wise Aspasia to Xenophon and his wife plainly convinces us. When the wise woman aforesaid had propounded this argument for their reconciliation, she concluded as follows: "For when you have understood this, that there is not a better man nor a happier woman on the face of the earth; then you will ever and above all things seek that which you think the best; you to be a husband of so excellent a wife, and she to be married to so excellent a husband." A blessed sentiment, assuredly, and more than philosophic, expressing wisdom itself rather than philosophy. A holy error and a blessed fallacy among the married, that a perfect love should preserve their bond of matrimony unbroken, not so much by the continence of their bodies as by the purity of their hearts. But what error shows to the rest of women the truth has made manifest to me. Since what they thought of their husbands, that I, that the entire world not so much believed as knew of you. So that the more genuine my love was for you, the further it was removed from error.

For who among kings or philosophers could equal you in fame? What kingdom or city or village did not burn to see you? Who, I ask, did not hasten to gaze upon you when you appeared in public, nor on your departure with straining neck and fixed eye follow you? What wife, what maiden did not yearn for you in your absence, nor burn in your presence? What queen or powerful lady did not envy me my joys and my bed? There were two things, I confess, in you especially, wherewith you could at once captivate the heart of any woman; namely the arts of making songs and of singing them. Which we know that other philosophers have seldom followed. Wherewith as with a game, refreshing the labor of philosophic exercise, you have left many songs composed in amatory measure or rhythm, which for the suavity both of words and of tune being oft repeated, have kept your name without ceasing on the lips of all; since even illiterates the sweetness of your melodies did not allow to forget you. It was on this account chiefly that women sighed for love of you. And as the greater part of your songs descanted of our love, they spread my fame in a short time through many lands, and inflamed the jealousy of many against me. For what excellence of mind or body did not adorn your youth? What woman who envied me then does not my calamity now compel to pity one deprived of such delights? What man or women, albeit an enemy at first, is not now softened by the compassion due to me?

* Source: The Letters of Abelard and Heloise, translated from the Latin by C.K. Scott Moncrieff, (New York: 1925). Made available by Miss MariLi Pooler, Brooklyn NY. Language modernized slightly by myself.

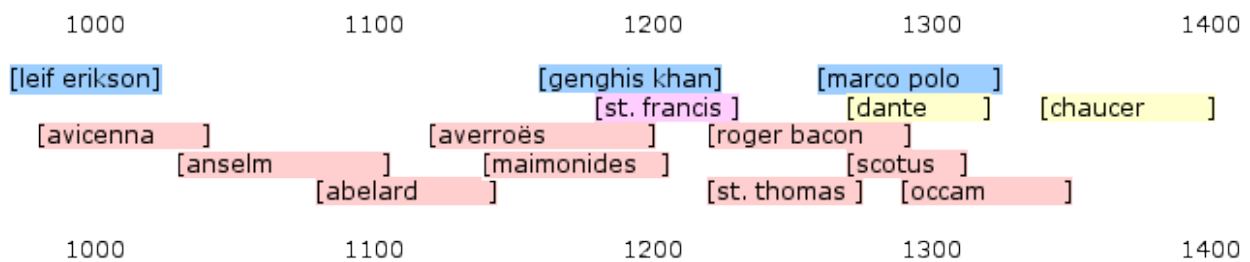
This text is part of the Internet Medieval Source Book. © Paul Halsall December 1997. Available at: <http://www.fordham.edu/halsall/source/heloise1.html>

And, though exceedingly guilty, I am, as you know, exceeding innocent. For it is not the deed but the intention that makes the crime. It is not what is done but the spirit in which it is done that equity considers. And in what state of mind I have ever been towards you, only you, who have knowledge of it, can judge. To your consideration I commit all, I yield in all things to your testimony. Tell me one thing only, if you can, why, after our conversion, which you alone did decree, I am fallen into such neglect and oblivion with you that I am neither refreshed by your speech and presence nor comforted by a letter in your absence. Tell me, one thing only, if you can, or let me tell you what I feel, nay what all suspect. Concupiscence joined you to me rather than affection, the ardor of desire rather than love. When therefore what you desired ceased, all that you had exhibited at the same time failed. This, most beloved, is not mine only but the conjecture of all, not peculiar but common, not private but public. Would that it seemed thus to me only, and your love found others to excuse it, by whom my grief might be a little quieted. Would that I could invent reasons by which in excusing you I might cover in some measure my own vileness.

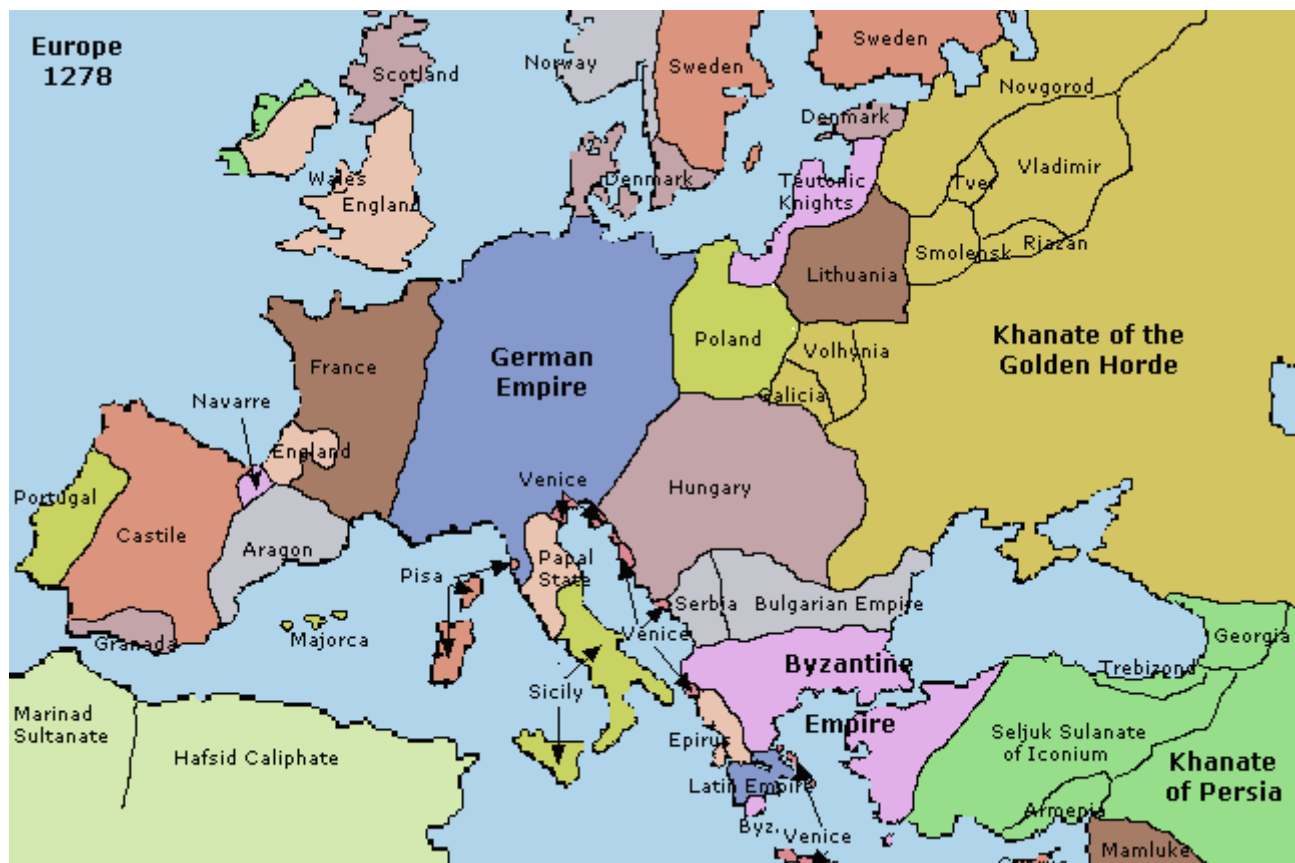
Give your attention, I beseech you, to what I demand; and you will see this to be a small matter and most easy for you. While I am cheated of your presence, at least by written words, whereof you have an abundance, present to me the sweetness of your image. In vain may I expect you to be liberal in things if I must endure you niggardly in words. Until now I believed that I deserved more from you when I had done all things for you, persevering still in obedience to you. Who indeed as a girl was allured to the asperity of monastic conversation not by religious devotion but by your command alone. Wherein if I deserve nought from you, you may judge my labor to have been vain. No reward for this may I expect from God, for the love of Whom it is well known that I did not anything. When you hastened to God, I followed you in the habit, nay preceded you. For as though mindful of the wife of Lot, who looked back from behind him, you delivered me first to the sacred garments and monastic profession before you gave yourself to God. And for that in this one thing you should have had little trust in me I vehemently grieved and was ashamed. For I (God knows) would without hesitation precede or follow you to the Vulcanian fires according to your word. For not with me was my heart, but with you. But now, more than ever, if it be not with you, it is nowhere. For without you it cannot anywhere exist. But so act that it may be well with you, I beseech you. And well with you will it be if it find you propitious, if you give love for love, little for much, words for deeds. Would that your love, beloved, had less trust in me, that it might be more anxious! But the more confident I have made you in the past, the more neglectful now I find you. Remember, I beseech you, what I have done, and pay heed to what you owe me. While with you I enjoyed carnal pleasures, many were uncertain whether I did so from love or from desire. But now the end shows in what spirit I began. I have forbidden myself all pleasures that I might obey your will. I have reserved nothing for myself, save this, to be now entirely yours. Consider therefore how great is your injustice, if to me who deserve more you pay less, nay nothing at all, especially when it is a small thing that is demanded of you, and right easy for you to perform.

And so in His Name to whom you have offered yourself, before God I beseech you that in whatsoever way you can you restore to me your presence, to wit by writing me some word of comfort. To this end alone that, thus refreshed, I may give myself with more alacrity to the service of God. When in time past you sought me out for temporal pleasures, you visited me with endless letters, and by frequent songs did set your Heloise on the lips of all men. With me every public place, each house resounded. How more rightly should you excite me now towards God, whom you excited then to desire. Consider, I beseech you, what you owe me, pay heed to what I demand; and my long letter with a brief ending I conclude. Farewell, my all.

Timeline 1000 to 1400 ad



Map Europe 1278



The Beginnings of Modern Philosophy

Things began to get better: The economy improved; There was a return to building, cathedrals, universities, cities...; a return to "luxuries" – paper, plays, music...; a return to invention – the compass, printing...; a return to exploration – Africa, the New World, the Pacific.... It was the renaissance, which we date (roughly!) from 1400 to 1600 or so. They were vigorous times, interesting times, dangerous times!

The aristocracy had won the day over the fledgling monarchies and even the church's heavy hand, at least for now. So there were just tons of these upper-crust types, often with lots of money, totally in love with the idea of themselves. Religious and other thinkers were freed, to one extent or another, from the powerful central authority of the church to create their own, very reasonable or totally outlandish, religious philosophies. And merchants found that money can buy almost anything, including the traditional respect that the aristocracy received. In fact, aristocratic title and merchant wealth were a perfect combination for a good marriage!

These aristocrats and merchants believed in the "perfectibility" of mankind: We could become better human beings! Most importantly, we could become more powerful, richer – more aristocratic, if you will. Much attention was paid to behaving like a gentleman or a lady, as reflected, for example, in Baldesar Castiglione's guide to proper conduct, *The Book of the Courtier*.

They were practical, interested in real events and real people in the real world. Individualistic and competitive (and very "dog eat dog"), they liked their politics, and they like to play rough.

But, they were also anti-intellectual, even cocky in their ignorance. They tended to think of scholars as dry, impractical types, who might be able to forecast eclipses, but probably couldn't tie their own shoes, much less make money or run estates!

And they were superstitious, spiritualistic, fascinated by astrology, ancient Egypt, the Kabbalah, alchemy, magic – a Renaissance version of our "New Age" movement.

Two events in particular stand out as representative of the renaissance: The first was printing. **Johann Gutenberg** (c 1400-1467) of Mainz invented the printing press and movable type, and printed the *Gutenberg Bible* in 1455.

The second was the discovery of the New World, which meant lots of gold and silver and a stoked-up international economy, as well as an outlet for those discontented with life in Europe ("Lebensraum" – room to live, as the Germans call it). This, of course, is usually credited to **Christopher Columbus** (1451-1506), pictured above.

Humanism

Another aspect of the renaissance was its humanism, meaning an interest in or focus on human beings and their well being, here and now, rather than in God and the afterlife, or the activities of saints and Biblical heroes of eons ago. **Petrarch** (1304-1374), for example, wrote history with an emphasis on personality, and is often considered the first humanist (at least since the ancients!).

There were several philosophers in the early renaissance who particularly express this idea of humanism. **Giovanni Pico della Mirandola** (1463-1494), for example, believed that the philosophers (that is, Plato and Aristotle) and Christianity basically agree. He argued for free will and saw mankind as the connection between the physical world and the spiritual world.

Desiderius Erasmus of Rotterdam (1467-1536) recommended a compromise between faith and humanism, and tried hard to prevent the excesses of the reformation. A strong believer in free will, he wrote against the concept of justified wars, and asked his readers to exercise tolerance, friendliness, and gentleness.

Sir Thomas More (1478-1535), friend of Erasmus and chancellor to the infamous King Henry VIII, wrote a

story called *Utopia*, in which he described a perfect society much along the lines of Erasmus' compromise between faith and humanism. When he refused to recognize his sovereign as the head of the English church, said Henry VIII had him beheaded. The Catholic church made him a saint.

Niccolo Machiavelli (1469-1527) had quite a different outlook on things than these philosophers – still, however, typifying humanism. He wrote about hard ball politics in a book called *The Prince*, 1513. His reputation became so negative, that "Old Nick" became a nickname (!) for the devil himself. But few people realize that he followed up *The Prince* with *The Discourses*, in which he discusses democracy as the political system he would prefer to see! I myself think he deserves credit as the first social psychologist after the Greeks.

And this was particularly the heyday of artists and authors. Among the artists were **Leonardo DaVinci** (1452-1519) and **Michelangelo** (1475-1564) in Italy, and **Albrecht Dürer** (1471-1528) in Germany. Later in the renaissance, we have **El Greco** (1541-1614) in Spain, and later still, **Rembrandt van Rijn** (1606-1669) in Holland. Among the literary types we had **Montaigne** (1533-1592) in France, **Cervantes** (1547-1616) in Spain, and none other than **William Shakespeare** (1564-1616) in England. There were many others.

The Reformation

In the Middle Ages, the ultimate authority was pretty clearly God, and the pope was his mouthpiece. Heresy was not uncommon, of course, but excommunication and monastic imprisonment were the major punishments. Then, in 1215, came the Inquisition, and heresy was punishable by death. Spain in particular was a land of religious fanatics. **Torquemada**, the Grand Inquisitor of Spain from 1483 to 1498, made the Spanish Inquisition a household word.



Martin Luther (1483-1546) posted his 95 Theses (points of disagreement with the way the church was doing things) on the door of the castle church of Wittenburg. His Theses focused on the sale of indulgences and denied the primacy of the pope. He emphasized the idea that we are born in sin, our lack of free will, and our absolute need for the grace of God. Luther furthermore translated the Bible into German, and his dialect became the basis for standard literary German to the present day!. He also wrote some pretty nasty papers condemning peasants and Jews.

John Calvin (Jean Cauvin, 1509-1564) from northern France, became Protestant, and was forced to flee to Switzerland. There, he preached unconditional obedience to God and the odd doctrine of predestination, which says that since God is omniscient, he already knows who is going to heaven and who is not. Gaining political as well as spiritual power, he ruled Geneva as a religious dictatorship, not unlike Iran or Afghanistan recently: no drinking, dancing, or

gambling; no icons, candles, or incense; obligatory church attendance for everyone.... He condemned the Spanish unitarian Michael Servetus, who came to him for protection, to burn at the stake for heresy! (A unitarian is someone who does not believe in the Trinity – the worst heresy of all. Even today, the protestant churches of the US won't accept the Unitarians as Christians! This despite the fact that the trinity is mentioned nowhere in the Bible.)

Henry VIII ruled England from 1509 to 1547. Having a hard time conceiving an heir, he divorced (and executed) one wife after another. When the pope refused to give him an easy divorce from Catherine of

Aragon, he declared himself the head of the English Church and took all monastic property for his treasury! But the doctrines remained fundamentally Catholic. (Although usually considered Protestant, the Anglican Church and its offspring, the Episcopalian Church, maintain good relationships with the Catholic Church to this day.)

On the other hand, **Philip II** of Spain (ruled 1556-1598) wished to restore Catholicism to its former glory. His domestic policy consisted of encouraging the inquisition – resulting in the mass burning of heretics and severe oppression of remaining Moors and Jews in Spain.

Philip was especially ticked off by the war for independence of the Netherlands from Spain, which was led by Protestants. **Elizabeth I** of England (ruled 1558-1603), whom he courted, secretly encouraged piracy against his fleets, which were coincidentally bringing loads of silver from the new world. The hostilities culminated in the destruction of his Great Armada in 1588.

The reformation lead the Catholic church to reform itself, but not before executing a very large number of Protestants for heresy. The Protestants executed Catholics and other Protestants as well. Catholic or Protestant, these were not proud days for religion!

Science

In Mathematics, a number of advances were made: **Francis Pellos** of Nice invented the decimal point in 1492. **Thomas Harriot**, the astronomer who discovered sunspots, created what are now the standard symbols used in algebra. **John Napier** of Scotland invented logarithms, which in turn permitted the **William Oughtred** to develop the slide rule – which could be considered a simple analog computer – in 1622. **Descartes** himself invented analytic geometry.

Biology and medicine also had a few breakthroughs: **Peracelsus** (Theophrastus Bombastus von Hohenheim was his real name! 1493-1541) recognized that life was based on chemical and physical sources, and should be explained thus. In 1553, **Michael Servetus** – the same one that Calvin had burned at the stake in Geneva – discovered pulmonary circulation. **William Harvey** (1578-1657), physician to King James I and King Charles I (and Francis Bacon, below), explained the circulation of the blood for the first time. He also promoted the idea that every animal comes from an egg – in an age when spontaneous generation of flies was the established belief.

Instrumentation drove much of the progress in science. The compound microscope was invented in 1595 by **Zacharias Janssen** of Middleburg in Holland. The telescope was invented by his neighbor, a German named **Hans Lippershey** in 1608. **Galileo** invented a thermometer in 1603, and his student **Evangelista Torricelli** invented the barometer in 1643.

[A note: Glass lenses had been around for some time. "Reading stones" (magnifying glasses) exist that date from 1000 ad in Venice. Roger Bacon suggested the principle of reading spectacles in 1264, and the first spectacles show up in Florence, Italy, around 1280. A nobleman named **Amati** is suggested as a possible inventor. They were considered a near miracle by the elderly of the time. On the other hand, spectacles for the near-sighted only show up in the 1500's (on the nose of Pope Leo, no less!), and bifocals have to wait for Ben Franklin to invent them in the 1780s.]

And then there were the great astronomers! **Nicholas Copernicus** of Poland (1473-1543) introduced the heliocentric solar system. The church, of course, asked why would God not put us – his special creation – in the



center? How can this be reconciled with scripture? And doesn't this conflict with direct experience?

Johannes Kepler 1571-1630 added the laws of planetary motion, i.e. that they have elliptic, not circular, paths. Note that this implies something less than perfection, not what God would do, even if he did put the sun in the center!



If astronomers were having a hard time with the church, heaven forbid you elaborated on Copernicus: **Giordano Bruno** (1548-1600), of Nola near Naples, believed in an infinite universe without center, with innumerable earths traveling around innumerable suns, each with plants and animals and people. And he was a pantheist. Pantheism is the belief that God is found throughout nature, that he is, in fact, identical with the universe. When people say "God is in everything and everyone," they are in fact making a pantheist statement that could have gotten them killed until fairly recently! He had a particularly powerful effect on Spinoza, whom we will discuss in the next chapter.

After a brief stint as a Dominican monk, he wandered around the cities of Europe until a Venetian aristocrat invited him to return. That same aristocrat turned him in to the Inquisition in 1592. He was imprisoned for eight years, but refused to recant. Finally, on February 17, 1600, he was burned at the stake in the Square of the Flowers in Rome, naked and with a nail through his tongue. In 1889, a statue of him was erected in that same square, and his death commemorated by free-thinkers world-wide every year since.

Francis Bacon

Francis Bacon (1561-1626) was born January 22, 1561. His father was "Lord Keeper of the Royal Seal," under Elizabeth I, something similar to the Secretary of the Treasury in the US President's Cabinet today. When his father died early, he was left without an estate, and so went to study law.

At the ripe old age of 23, he was elected to Parliament, where he was a strong advocate of religious toleration, and his fortunes began to improve. In 1607, King James I made him Solicitor General; in 1613, Attorney General; and in 1617, Lord Keeper of the Royal Seal! The following year, the King made him a Baron and the Lord Chancellor – basically the King's right hand man.

His real love, however, was science and philosophy. He wrote *Novum Organum* of 1620 refined the art of logical thinking, and proposed a "new method" for science. Bacon suggested that we use **induction** – working from facts to theory (instead of from theory, or the Bible, to "facts"). He was wary of hypotheses – which he felt were as likely to be superstition or wishful thinking than anything else – but in fact suggested what we would now call the testing of hypothesis in the form of a process of elimination of alternative explanations!



In 1621, soon after the King raised him to Viscount, the Parliament impeached him for taking bribes. He had indeed taken many bribes – but so had everyone else, so the impeachment was really a political slap at the King.

But, being out of political office allowed him to continue full time the science and philosophy he loved part time. He began a project, with the help of the King, called *The Great Renewal*, which was to be a review of all the sciences.

Basically, *The Great Renewal* involved purging ourselves, our intellects, of our biases, which he called **idols**. He named four:

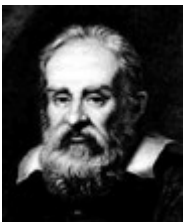
1. **Idols of the Tribe.** The tribe he is referring to is us, the human tribe. So the idols of the tribe are our natural tendencies towards bias, such as reading our own wishes into what we suppose we see, looking for patterns or a purpose to everything, and so on.
2. **Idols of the Cave.** The cave is the little box we each live in as individuals. So the idols of the cave are the distortions and biases we have as individuals, such as those based on our peculiar backgrounds and educations, as well as the intellectual heroes we emulate.
3. **Idols of the Marketplace.** The marketplace is society, and the main threat to clear thinking from society is its use of language. The common uses of words are not necessarily fit for scientific and philosophical use, and "common sense" or the logic we presume we are using when we speak is not that logical. And words can exist that have references that do not exist – a great root of confusion.
4. **Idols of the Theater.** The theater refers to the showplaces of scientific ideas and theories – journals and books, famous names and theories, particular scientific designs or methods that have won recognition – the appearances of truth! Bacon says we should take care not to idolize or dogmatize whatever theories are presently accepted, even if they are promoted by "authorities" in their field or appear to be accepted "universally."

In 1624, he published *The New Atlantis*, a utopian fiction about an island in the South Pacific ruled by scientists. They lived in a university-like setting called Salomon's House (after their founder), and were chosen for their position by tests of their merits – just like the philosopher-kings in Plato's Republic. This may have been the model for England's Royal Society (of scientists).

In *The New Atlantis*, incidentally, he predicted quite a few modern inventions, including cars, planes, radio, and anesthetics.

Bacon died in 1626, at the age of 65, after catching cold while experimenting with preserving chicken by freezing. He is considered the father of British philosophy, and the intellectuals of France dedicated their monumental *Encyclopédie* to him in 1751.

Galileo Galilei



Galileo Galilei (1564-1642) was born in Pisa, Italy February 18, 1564, the same year as William Shakespeare was born, and the same day Michelangelo died. When he was 18, he discovered the principle of the pendulum. At 22, he invented the hydrostatic balance. Perfecting his telescopes, he managed, in 1610, to discover four of the nine moons of Jupiter (the Galilean moons!), the rings of Saturn, and the phases of Venus!

He is most famous, of course, for the law of gravity, stating that two things of the same size and shape, but of different weights, will fall at the same speed through the same medium. That he demonstrated this by dropping things off the leaning tower of Pisa is probably a myth – but who knows?

On the philosophical front, he was the first to make the distinction, which would become so important in English philosophy, between **primary** and **secondary qualities**. Primary qualities were physical properties of matter that could be measured, and therefore be made the subject of scientific analysis. Secondary qualities, on the other hand, were things that required the presence of a conscious, living creature: tastes, odors, colors, sounds... Only if these could be converted into primary qualities could they, he believed, become the subjects of science.

Galileo considered Copernicus' theory as a proven fact, and taught it as such. The church, however, and especially the Jesuits, would only accept it if stated as a hypothesis, in the same way that some fundamentalists today will only tolerate the teaching of evolution if it is presented as just one theory among many.

Galileo pointed out to his critics that the Bible shouldn't be read literally. If you do, you will end up with no end of absurdities and contradictions! It is meant to be taken metaphorically. Uh oh. Here are some quotes from a letter he wrote to the Grand Duchess Christina of Tuscany in 1615 :

...(N)othing physical which sense-experience sets before our eyes, or which necessary demonstrations prove to us, ought to be called in question (much less condemned) upon the testimony of Biblical passages which may have some different meaning beneath their works.

...I do not feel obliged to believe that that same God who has endowed us with sense, reason, and intellect has intended us to forgo their use.

(From p. 607 of Durant's *The Age of Reason Begins*, and originally from *Galileo's Discoveries and Opinions*, edited by Stillman Drake, pp 177 and 183)

In 1616, the Inquisition told Galileo to stop teaching Copernicus' theory, and in fact condemned all publications and books, by any author, that did so. Galileo, probably recalling Bruno's fate only 16 years earlier, quieted down. An essay by a student of his got things upset again, so Galileo spoke to the Pope himself. The Pope wouldn't budge.

He finished his book on Copernicus's theory anyway, but presented it as a hypothesis only, even putting it in the form of a dialog between supporters and detractors. Of course, naming the anti-Copernicus speaker "Simpleton" didn't help. The Jesuits attacked it, even saying that Galileo was a greater danger to the church than Luther and Calvin. (They were probably, in the long run, right.)

At 68, he was, over four interrogations, threatened with torture (though not tortured), and asked to recant. He refused, a little less intensely each time. They pronounced him guilty of heresy. Eventually, he was put under house arrest, but otherwise free to teach and write. He was lucky.

Galileo died January 8, 1642. Science suffered quite a blow in the Catholic countries, with many scientist fearful of stating their views. This moved the center of scientific discovery to the Protestant North, not because Protestantism was more tolerant of science, but because the churches of those countries had less legal authority. In 1835, the church did finally take Galileo's books off the banned books list. The church apologized in 1999.

René Descartes



René Descartes (1596 - 1650) was born March 31, 1596 in La Haye, France, the son of a wealthy lawyer. Sadly, his mother contracted tuberculosis a few days after his birth and died. The baby nearly died as well, and Rene remained a weak child.

After a good Jesuit education, at 17 he began to wander Europe, including a stint in the Bavarian army. In 1628, he moved to Holland, where he stayed for most of his life. Rene never married, but he did have a mistress and a daughter, who died at the age of five.

His major contribution, for which he will forever be known as the father of modern philosophy, is the method of doubt. In his book *Meditations*, he decided to start philosophy from scratch by doubting everything he could – things, God, self, the church, Aristotle... – until he found something he could not doubt and from which he could build a new philosophy.

His conclusion was, of course, that there was one thing he could not doubt: The fact that he was there doing the doubting! *Cogito ergo suum*, I think therefore I am. From there, he went on to conclude that there were a number of things equally certain: God, time and space, the world, mathematics. These things, he said, were innate – in-born – to the mind. You derive them not from experience but from the nature of one's mind itself.

But there's more to Descartes: He was a mathematician as well as a philosopher, and he made a variety of mathematical discoveries, most especially analytic geometry (applying algebra to geometry – remember Cartesian coordinates?), which he supposedly discovered while in what he called a stove – perhaps a sauna. He was also a scientist, and made a number of innovations in mechanics and optics as well. And he was the first to note the idea of the reflex.

The idea that some of our actions are reflexive leads inevitably to the possibility that all actions are reflexive. Descartes theorized that animals (at least) have no need for a soul: They are automatons. Being a good Catholic, he exempted human beings. We do have a soul, although he acknowledged that he did not know how the soul and the body interacted.

In history, people use what is most interesting around them to theorize about other things, especially themselves. Today, everyone talks about psychological issues using computer analogies and information processing models. In Descartes' day, it was the mechanics of clockworks and hydraulic systems that were the cutting edge of technology. So he and others basically suggested that life – including at least much of human life – was mechanical, i.e. functioned by the same natural laws as did physical entities.

Descartes went one step further: He made the **deist** hypothesis. He suggested that (outside of the human soul and free will) all of creation works mechanically, and that God designed and set it all in motion – but certainly would have no need to step in and intervene once things are going. Of course, that says God would have no need of miracles, that Christ was not some great intervention in the course of history, and that prayers don't really do anything. Uh oh.

The Calvinist theologians of Holland attacked him: Besides this untraditional idea of deism and a mechanical universe, as a good Catholic Descartes also believed in free will, which doesn't jive well with Calvinist predestination (the idea that God knows exactly who is going to hell or to heaven). His friends, fortunately, intervened on his behalf.

In 1649, Descartes was invited by Queen Christina of Sweden to tutor her majesty. Unfortunately, she wanted him at five in the morning three days a week, through sleet and rain and snow. Descartes caught pneumonia and died in 1650, at the age of 54.

Education

I should add a little note on education during these heady times. In the 1600's, despite all the great scientists and philosophers, about 80% of the population was illiterate. (Not the modern "functionally illiterate," meaning they are not very good at it, but totally unable to read and write.) Nevertheless, change was coming. For example, in 1619, the Duke of Saxe-Weimar (in Germany) ordered compulsory education for all children between six and twelve years old, with a month of "vacation" at harvest time so they could work on the farm – practically the same system we have today, including the summer vacation!

John Comenius (Jan Komensky, 1592-1670), a bishop of the Moravian Brethren, wrote the first printed textbook (illustrated, no less) which was used for 250 years. In the *Didactica Magna* ("Great Art of Teaching"), he outlined principles of education that could be used by most any schoolboard today.

Note, however, for all the religious reform and scientific progress, over one million people, mostly older women, were executed as witches from the time of the Papal Bull concerning witches, issued in 1484, through the 1700s. There was even a witch hunting manual first published in 1486 called *Malleus Malificarum* (the Witch's Hammer) – how to recognize them, how to torture them into a confession, how to effectively kill them.... Women continue to be mistreated today, of course, although we seem to be coming to our senses as the world moves into the second millenium.

Note as well that slavery, which was a minor issue in the Middle Ages (what with the convenience of serfs), had resurrected its ugly head with Spanish and Portuguese conquest of vast areas of Africa and the Americas. Many people in Spain (where else?) believed that no decent Christian should perform manual labor! Protestant nations and their colonies found the practice of slavery equally profitable. Although slavery still exists in some third-world nations, it has died out in most of the world, mostly because the industrial revolution made it too costly, not because we were offended by the practice.

Selections from a letter to the Grand Duchess Christina of Tuscany, 1615*

Galileo Galilei

To the Most Serene Grand Duchess Mother:

Some years ago, as Your Serene Highness well knows, I discovered in the heavens many things that had not been seen before our own age. The novelty of these things, as well as some consequences which followed from them in contradiction to the physical notions commonly held among academic philosophers, stirred up against me no small number of professors-as if I had placed these things in the sky with my own hands in order to upset nature and overturn the sciences. They seemed to forget that the increase of known truths stimulates the investigation, establishment, and growth of the arts; not their diminution or destruction.

Showing a greater fondness for their own opinions than for truth they sought to deny and disprove the new things which, if they had cared to look for themselves, their own senses would have demonstrated to them. To this end they hurled various charges and published numerous writings filled with vain arguments, and they made the grave mistake of sprinkling these with passages taken from places in the Bible which they had failed to understand properly, and which were ill-suited to their purposes.

These men would perhaps not have fallen into such error had they but paid attention to a most useful doctrine of St. Augustine's, relative to our making positive statements about things which are obscure and hard to understand by means of reason alone. Speaking of a certain physical conclusion about the heavenly bodies, he wrote: "Now keeping always our respect for moderation in grave piety, we ought not to believe anything inadvisedly on a dubious point, lest in favor to our error we conceive a prejudice against something that truth hereafter may reveal to be not contrary in any way to the sacred books of either the Old or the New Testament."

Well, the passage of time has revealed to everyone the truths that I previously set forth; and, together with the truth of the facts, there has come to light the great difference in attitude between those who simply and dispassionately refused to admit the discoveries to be true, and those who combined with their incredulity some reckless passion of their own. Men who were well grounded in astronomical and physical science were persuaded as soon as they received my first message. There were others who denied them or remained in doubt only because of their novel and unexpected character, and because they had not yet had the opportunity to see for themselves. These men have by degrees come to be satisfied. But some, besides allegiance to their original error, possess I know not what fanciful interest in remaining hostile not so much toward the things in question as toward their discoverer. No longer being able to deny them, these men now take refuge in obstinate silence, but being more than ever exasperated by that which has pacified and quieted other men, they divert their thoughts to other fancies and seek new ways to damage me.

.... To this end they make a shield of their hypocritical zeal for religion. They go about invoking the Bible, which they would have minister to their deceitful purposes. Contrary to the sense of the Bible and the intention of the holy Fathers, if I am not mistaken, they would extend such authorities until even in purely physical matters - where faith is not involved - they would have us altogether abandon reason and the evidence of our senses in favor of some biblical passage, though under the surface meaning of its words this passage may contain a different sense.

.... I think that in discussions of physical problems we ought to begin not from the authority of scriptural passages but from sense?experiences and necessary demonstrations; for the holy Bible and the phenomena of nature proceed alike from the divine Word the former as the dictate of the Holy Ghost and the latter as the observant executrix of God's commands. It is necessary for the Bible, in order to be accommodated to the

*Available at <http://www.fordham.edu/halsall/mod/galileo-tuscany.html>

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understanding of every man, to speak many things which appear to differ from the absolute truth so far as the bare meaning of the words is concerned. But Nature, on the other hand, is inexorable and immutable; she never transgresses the laws imposed upon her, or cares a whit whether her abstruse reasons and methods of operation are understandable to men. For that reason it appears that nothing physical which sense?experience sets before our eyes, or which necessary demonstrations prove to us, ought to be called in question (much less condemned) upon the testimony of biblical passages which may have some different meaning beneath their words. For the Bible is not chained in every expression to conditions as strict as those which govern all physical effects; nor is God any less excellently revealed in Nature's actions than in the sacred statements of the Bible....

If in order to banish the opinion in question from the world it were sufficient to stop the mouth of a single man – as perhaps those men persuade themselves who, measuring the minds of others by their own, think it impossible that this doctrine should be able to continue to find adherents-then that would be very easily done. But things stand otherwise. To carry out such a decision it would be necessary not only to prohibit the book of Copernicus and the writings of other authors who follow the same opinion, but to ban the whole science of astronomy. Furthermore, it would be necessary to forbid men to look at the heavens, in order that they might not see Mars and Venus sometimes quite near the earth and sometimes very distant, the variation being so great that Venus is forty times and Mars sixty times as large at one time as at another. And it would be necessary to prevent Venus being seen round at one time and forked at another, with very thin horns; as well as many other sensory observations which can never be reconciled with the Ptolemaic system in any way, but are very strong arguments for the Copernican. And to ban Copernicus now that his doctrine is daily reinforced by many new observations and by the learned applying themselves to the reading of his book, after this opinion has been allowed and tolerated for these many years during which it was less followed and less confirmed, would seem in my judgment to be a contravention of truth, and an attempt to hide and suppress her the more as she revealed herself the more clearly and plainly. Not to abolish and censure his whole book, but only to condemn as erroneous this particular proposition, would (if I am not mistaken) be a still greater detriment to the minds of men, since it would afford them occasion to see a proposition proved that it was heresy to believe. And to prohibit the whole science would be to censure a hundred passages of holy Scripture which teach us that the glory and greatness of Almighty God are marvelously discerned in all his works and divinely read in the open book of heaven....

René Descartes: *Selections from Meditations**

Meditation I.

1. SEVERAL years have now elapsed since I first became aware that I had accepted, even from my youth, many false opinions for true, and that consequently what I afterward based on such principles was highly doubtful; and from that time I was convinced of the necessity of undertaking once in my life to rid myself of all the opinions I had adopted, and of commencing anew the work of building from the foundation, if I desired to establish a firm and abiding superstructure in the sciences. But as this enterprise appeared to me to be one of great magnitude, I waited until I had attained an age so mature as to leave me no hope that at any stage of life more advanced I should be better able to execute my design. On this account, I have delayed so long that I should henceforth consider I was doing wrong were I still to consume in deliberation any of the time that now remains for action. To-day, then, since I have opportunely freed my mind from all cares [and am happily disturbed by no passions], and since I am in the secure possession of leisure in a peaceable retirement, I will at length apply myself earnestly and freely to the general overthrow of all my former opinions.

4. But it may be said, perhaps, that, although the senses occasionally mislead us respecting minute objects, and such as are so far removed from us as to be beyond the reach of close observation, there are yet many other of their informations (presentations), of the truth of which it is manifestly impossible to doubt; as for example, that I am in this place, seated by the fire, clothed in a winter dressing gown, that I hold in my hands this piece of paper, with other intimations of the same nature. But how could I deny that I possess these hands and this body, and withal escape being classed with persons in a state of insanity, whose brains are so disordered and clouded by dark bilious vapors as to cause them pertinaciously to assert that they are monarchs when they are in the greatest poverty; or clothed [in gold] and purple when destitute of any covering; or that their head is made of clay, their body of glass, or that they are gourds? I should certainly be not less insane than they, were I to regulate my procedure according to examples so extravagant.

5. Though this be true, I must nevertheless here consider that I am a man, and that, consequently, I am in the habit of sleeping, and representing to myself in dreams those same things, or even sometimes others less probable, which the insane think are presented to them in their waking moments. How often have I dreamt that I was in these familiar circumstances, that I was dressed, and occupied this place by the fire, when I was lying undressed in bed? At the present moment, however, I certainly look upon this paper with eyes wide awake; the head which I now move is not asleep; I extend this hand consciously and with express purpose, and I perceive it; the occurrences in sleep are not so distinct as all this. But I cannot forget that, at other times I have been deceived in sleep by similar illusions; and, attentively considering those cases, I perceive so clearly that there exist no certain marks by which the state of waking can ever be distinguished from sleep, that I feel greatly astonished; and in amazement I almost persuade myself that I am now dreaming.

12. I will suppose, then, not that Deity, who is sovereignly good and the fountain of truth, but that some malignant demon, who is at once exceedingly potent and deceitful, has employed all his artifice to deceive me; I will suppose that the sky, the air, the earth, colors, figures, sounds, and all external things, are nothing better than the illusions of dreams, by means of which this being has laid snares for my credulity; I will consider myself as without hands, eyes, flesh, blood, or any of the senses, and as falsely believing that I am possessed of these; I will continue resolutely fixed in this belief, and if indeed by this means it be not in my power to arrive at the knowledge of truth, I shall at least do what is in my power, viz, [suspend my judgment], and guard with settled purpose against giving my assent to what is false, and being imposed upon by this deceiver, whatever be his power and artifice. But this undertaking is arduous, and a certain indolence insensibly leads me back to my ordinary course of life; and just as the captive, who, perchance, was enjoying in his dreams an imaginary liberty, when he begins to suspect that it is but a vision, dreads awakening, and

* From <http://philos.wright.edu/Descartes/Meditations.html>

conspires with the agreeable illusions that the deception may be prolonged; so I, of my own accord, fall back into the train of my former beliefs, and fear to arouse myself from my slumber, lest the time of laborious wakefulness that would succeed this quiet rest, in place of bringing any light of day, should prove inadequate to dispel the darkness that will arise from the difficulties that have now been raised.

Meditation II

1. The Meditation of yesterday has filled my mind with so many doubts, that it is no longer in my power to forget them. Nor do I see, meanwhile, any principle on which they can be resolved; and, just as if I had fallen all of a sudden into very deep water, I am so greatly disconcerted as to be unable either to plant my feet firmly on the bottom or sustain myself by swimming on the surface. I will, nevertheless, make an effort, and try anew the same path on which I had entered yesterday, that is, proceed by casting aside all that admits of the slightest doubt, not less than if I had discovered it to be absolutely false; and I will continue always in this track until I shall find something that is certain, or at least, if I can do nothing more, until I shall know with certainty that there is nothing certain. Archimedes, that he might transport the entire globe from the place it occupied to another, demanded only a point that was firm and immovable; so, also, I shall be entitled to entertain the highest expectations, if I am fortunate enough to discover only one thing that is certain and indubitable.

2. I suppose, accordingly, that all the things which I see are false (fictitious); I believe that none of those objects which my fallacious memory represents ever existed; I suppose that I possess no senses; I believe that body, figure, extension, motion, and place are merely fictions of my mind. What is there, then, that can be esteemed true? Perhaps this only, that there is absolutely nothing certain.

3. But how do I know that there is not something different altogether from the objects I have now enumerated, of which it is impossible to entertain the slightest doubt? Is there not a God, or some being, by whatever name I may designate him, who causes these thoughts to arise in my mind? But why suppose such a being, for it may be I myself am capable of producing them? Am I, then, at least not something? But I before denied that I possessed senses or a body; I hesitate, however, for what follows from that? Am I so dependent on the body and the senses that without these I cannot exist? But I had the persuasion that there was absolutely nothing in the world, that there was no sky and no earth, neither minds nor bodies; was I not, therefore, at the same time, persuaded that I did not exist? Far from it; I assuredly existed, since I was persuaded. But there is I know not what being, who is possessed at once of the highest power and the deepest cunning, who is constantly employing all his ingenuity in deceiving me. Doubtless, then, I exist, since I am deceived; and, let him deceive me as he may, he can never bring it about that I am nothing, so long as I shall be conscious that I am something. So that it must, in fine, be maintained, all things being maturely and carefully considered, that this proposition (pronunciatum) I am, I exist, is necessarily true each time it is expressed by me, or conceived in my mind.

4. But I do not yet know with sufficient clearness what I am, though assured that I am; and hence, in the next place, I must take care, lest perchance I inconsiderately substitute some other object in room of what is properly myself, and thus wander from truth, even in that knowledge (cognition) which I hold to be of all others the most certain and evident. For this reason, I will now consider anew what I formerly believed myself to be, before I entered on the present train of thought; and of my previous opinion I will retrench all that can in the least be invalidated by the grounds of doubt I have adduced, in order that there may at length remain nothing but what is certain and indubitable.

6. But [as to myself, what can I now say that I am], since I suppose there exists an extremely powerful, and, if I may so speak, malignant being, whose whole endeavors are directed toward deceiving me? Can I affirm that I possess any one of all those attributes of which I have lately spoken as belonging to the nature of body? After attentively considering them in my own mind, I find none of them that can properly be said to belong to myself. To recount them were idle and tedious. Let us pass, then, to the attributes of the soul. The first mentioned were the powers of nutrition and walking; but, if it be true that I have no body, it is true likewise that I am capable neither of walking nor of being nourished. Perception is another attribute of the soul; but perception too is impossible without the body; besides, I have frequently, during sleep, believed

that I perceived objects which I afterward observed I did not in reality perceive. Thinking is another attribute of the soul; and here I discover what properly belongs to myself. This alone is inseparable from me. I am—I exist: this is certain; but how often? As often as I think; for perhaps it would even happen, if I should wholly cease to think, that I should at the same time altogether cease to be. I now admit nothing that is not necessarily true. I am therefore, precisely speaking, only a thinking thing, that is, a mind (*mens sive animus*), understanding, or reason, terms whose signification was before unknown to me. I am, however, a real thing, and really existent; but what thing? The answer was, a thinking thing.

8. But what, then, am I? A thinking thing, it has been said. But what is a thinking thing? It is a thing that doubts, understands, [conceives], affirms, denies, wills, refuses; that imagines also, and perceives.

9. Assuredly it is not little, if all these properties belong to my nature. But why should they not belong to it? Am I not that very being who now doubts of almost everything; who, for all that, understands and conceives certain things; who affirms one alone as true, and denies the others; who desires to know more of them, and does not wish to be deceived; who imagines many things, sometimes even despite his will; and is likewise percipient of many, as if through the medium of the senses. Is there nothing of all this as true as that I am, even although I should be always dreaming, and although he who gave me being employed all his ingenuity to deceive me? Is there also any one of these attributes that can be properly distinguished from my thought, or that can be said to be separate from myself? For it is of itself so evident that it is I who doubt, I who understand, and I who desire, that it is here unnecessary to add anything by way of rendering it more clear. And I am as certainly the same being who imagines; for although it may be (as I before supposed) that nothing I imagine is true, still the power of imagination does not cease really to exist in me and to form part of my thought. In fine, I am the same being who perceives, that is, who apprehends certain objects as by the organs of sense, since, in truth, I see light, hear a noise, and feel heat. But it will be said that these presentations are false, and that I am dreaming. Let it be so. At all events it is certain that I seem to see light, hear a noise, and feel heat; this cannot be false, and this is what in me is properly called perceiving (*sentire*), which is nothing else than thinking.

Quotes from Comenius*

Education for Everyone

Not the children of the rich or of the powerful only, but of all alike, boys and girls, both noble and ignoble, rich and poor, in all cities and towns, villages and hamlets, should be sent to school.

Education is indeed necessary for all, and this is evident if we consider the different degrees of ability. No one doubts that those who are stupid need instruction, that they may shake off their natural dullness. But in reality those who are clever need it far more, since an active mind, if not occupied with useful things, will busy itself with what is useless, curious, and pernicious.



Learning is Natural

Who is there that does not always desire to see, hear, or handle something new? To whom is it not a pleasure to go to some new place daily, to converse with someone, to narrate something, or have some fresh experience? In a word, the eyes, the ears, the sense of touch, the mind itself, are, in their search for food, ever carried beyond themselves; for to an active nature nothing is so intolerable as sloth.

The proper education of the young does not consist in stuffing their heads with a mass of words, sentences, and ideas dragged together out of various authors, but in opening up their understanding to the outer world, so that a living stream may flow from their own minds, just as leaves, flowers, and fruit spring from the bud on a tree.

Learning by Easy Stages

There is in the world no rock or tower of such a height that it cannot be scaled by any man (provided he lack not feet) if ladders are placed in the proper position or steps are cut in the rock, made in the right place, and furnished with railings against the danger of falling over.

If we examine ourselves, we see that our faculties grow in such a manner that what goes before paves the way for what comes after.

Play

Much can be learned in play that will afterwards be of use when the circumstances demand it.

A tree must also transpire, and needs to be copiously refreshed by wind, rain, and frost; otherwise it easily falls into bad condition, and becomes barren. In the same way the human body needs movement, excitement, and exercise, and in daily life these must be supplied, either artificially or naturally.

* Quotes from John Amos Comenius, *The Great Didactic*, 1649 (translated by M.W. Keatinge 1896). Presented on the Froebel Web at <http://www.geocities.com/Athens/Forum/7905/web7005.html>.

Last quote found in Will and Ariel Durant's *The Age of Reason Begins* (1961), p. 582.

Image: Statue of Comenius at Moravian College, Bethlehem, Pennsylvania, presented at their web site at <http://www.moravian.edu>.

Lifelong Learning

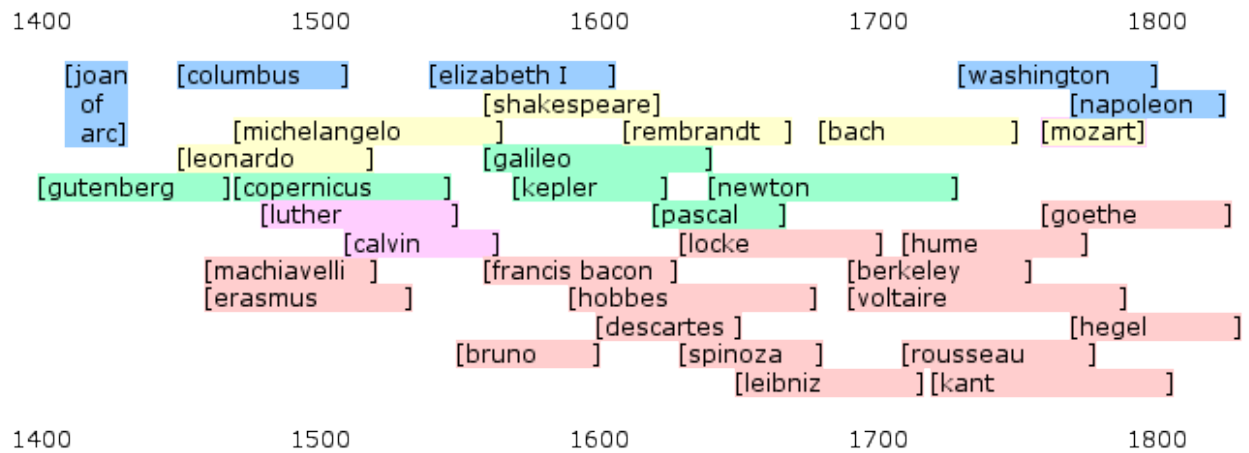
If, in each hour, a man could learn a single fragment of some branch of knowledge, a single rule of some mechanical art, a single pleasing story or proverb (the acquisition of which would require no effort), what a vast stock of learning he might lay by. Seneca is therefore right when he says: "Life is long, if we know how to use it." It is consequently of importance that we understand the art of making the very best use of our lives.

Aristotle compared the mind of man to a blank tablet on which nothing was written, but on which all things could be engraved. There is, however, this difference, that on the tablet the writing is limited by space, while in the case of the mind, you may continually go on writing and engraving without finding any boundary, because, as has already been shown, the mind is without limit.

Humanity

We are all citizens of one world, we are all of one blood. To hate a man because he was born in another country, because he speaks a different language, or because he takes a different view on this subject or that, is a great folly. Desist, I implore you, for we are all equally human.... Let us have but one end in view, the welfare of humanity; and let us put aside all selfishness in considerations of language, nationality, or religion.

Timeline 1400 to 1800 ad



Map Europe 1700



Epistemology

Epistemology is that part of philosophy that asks "what can we know?" "What can we be sure of?" "How do we get beyond mere opinion to real knowledge?"

Traditionally, there are two approaches to epistemology: **rationalism**, which says we gain knowledge through reasoning, and **empiricism**, which says we gain knowledge through sensory experience. Although there are a few extremist philosophers, generally most agree that both these approaches to knowledge are needed, and that to some extent they support and correct each other. More on that in a moment.

Rationalists focus on what they call **necessary truth**. By that they mean that certain things are necessarily true, always, universally. Another term that means the same thing is **a priori truth**. *A priori* is Latin for "beforehand," so *a priori* truth is something you know must be true before you even start looking at the world the senses reveal to us.

The most basic form of necessary truth is the **self-evident truth**. Self-evident means you don't really even have to think about it. It *has* to be true. The truths of mathematics, for example, are often thought of as self-evident. One plus one equals two. You don't need to go all over the world counting things to prove this. In fact, one plus one equals two is something you need to believe before you can count at all!

(One of the criticisms that empiricists would put forth is that "one plus one is two" is trivial. It is **tautological**, meaning it is true, sure, but not because it is self-evident: It is true because we made it that way. One plus one is the definition of two, and so with the rest of mathematics. We created math in such a way that it works consistently for us!)

Other self-evident truths that have been put forth over the years include "you can't be in two places at once," "something either is or it isn't," "everything exists." These are pretty good candidates, don't you think? But often, what is self-evident to one person is not self-evident to another. "God exists" is perhaps the most obvious one – some people disagree with it quite vigorously. Or "the universe had to have a beginning" – some people believe it has always been. A familiar use of the phrase "self-evident" is Thomas Jefferson's use of it in the Declaration of Independence: "We hold these truths to be self-evident: That all men are created equal...." But it is pretty obvious to most that this is not, really, true. Instead, it is a rhetorical device, that is, it sounds good to put it that way!

In order to reason our way to more complex knowledge, we have to add **deduction** (also known as **analytic truth**) to the picture. This is what we usually think of when we think of thinking: With the rules of logic, we can discover what truths follow from other truths. The basic form of this is the **syllogism**, a pattern invented by Aristotle which has continued to be the foundation of logic to the present day.

The traditional example is this one, called **modus ponens**: "Men are mortal. Socrates is a man. Therefore Socrates is mortal." If x, then y (if you are human, then you are mortal). X (you are human). Therefore, y (you are mortal). This result will always be true, if the first two parts are true. So we can create whole systems of knowledge by using more and more of these logical deductions!

Another syllogism that always works is in the form "If x, then y. Not y. Therefore not x." If you are human, then you are mortal. You are not mortal. Therefore, you are not human. If the first two parts are true, then the last one is necessarily true. This one is called **modus tollens**.

On the other hand, there are two examples that don't work, even though they sound an awful lot like the ones I just showed you: If x, then y. Not x. Therefore not y. If you are human, then you are mortal. You are not human. Therefore you are not mortal. That, of course, would come as a big surprise to animals! Or look at this example: "If God would show himself to me personally, that would prove the truth of religion. But he hasn't done so. Therefore, religion is false." It sounds like a reasonable argument, but it is not. (This is called **denial of the antecedent**.)

Another goes like this: If x, then y. Y. Therefore x. If you are human, then you are mortal. You are mortal. Therefore you are human. Or try this one: "If God created the universe, we would see order in nature. We do in fact see order in the universe – the laws of nature! Therefore, God must have created the universe." It sounds good, doesn't it? But it is not at all logical: The order in the universe could have another cause. (This is called **affirmation of the consequent**.)

There are many types of rationalism, and we usually refer to them by their creators. The best known, of course, is Plato's (and Socrates'). Aristotle, although he pretty much invented modern logic, is not entirely a rationalist – he was also interested in the truths of the senses. The most magnificent example of rationalism is Benedict Spinoza's. In a book called *Ethics*, he began with one self-evident truth: God exists. By God, he meant the entire universe, both physical and spiritual, so his truth does seem pretty self-evident: Everything that is, is! But from that truth, he carefully, step by step, reasons his way to a very sophisticated system of metaphysics, ethics, and psychology.

Now let's turn to empiricism. Empiricism focuses, logically enough, on **empirical truth** (also known as **synthetic truth**), which we derive from our sensory experience of the world.

Many people think that empiricism is the same thing as science. That is an unfortunate mistake. The reason that empiricism is so closely tied in our minds to science is really more historical than philosophical: After many centuries of religious rationalism dominating European thinking, people like Galileo and Francis Bacon came out and said, hey, how about paying some attention to the world out there, instead of just trying to derive truth from the scriptures? The stage for this change in attitude was, in fact, already set by St. Thomas Aquinas, who at least felt that scriptural truth and empirical truth need not conflict!

The simplest form of empirical truth is that based on **direct observation** – taking a good hard look. Now this is not the same as **anecdotal evidence**, such as "I know a guy who has a cousin in Topeka who married a woman whose college roommate saw a UFO." It's not really even the same as "I saw a UFO." It means that there is an observation that I made that you can make, too, and that, were it possible, everyone should be able to make. In other words, here's a UFO: Take a look!

(Rationalists would argue, of course, that we could very well ALL be having an hallucination!)

In order to build a more complex body of knowledge from these direct observations, we must make use of **induction**, also known as **indirect empirical knowledge**. We take the observations and carefully stretch them to cover more ground than we could actually cover directly. The basic form of this is called **generalization**. Say you see that a certain metal melts at a certain temperature. In fact, you've seen it many times, and you've shown it to others. At some point, you make the inductive leap and say "the melting point of this metal is so many degrees." Now it's true that you haven't melted every bit of this metal in the universe, but you feel reasonably confident that (under the same conditions) it will melt at so many degrees. That's generalization.

You can see that this is where **statistics** comes in, especially in a more wishy-washy science like psychology. How many observations do you need to make before you can comfortably generalize? How many exceptions to the desired result can you explain away as some sort of methodological error before it gets to be too much? What are the odds that my observation is actually true beyond these few instances of it?

Just like there are different styles of rationalism, there are different types of empiricism. In this case, we have given them some names. Most empirical approaches are forms of epistemological **realism**, which says that what the senses show us is reality, is the truth.

The basic form of realism is **direct realism** (also known as **simple** or "**naive**" realism – the latter obviously used by those who disagree with it!). Direct realism says that what you see is what you get: The senses portray the world accurately. The Scottish philosopher Thomas Reid is the best known direct realist.

The other kind is called **critical** (or **representative**) **realism**, which suggests that we see sensations, the images of the things in the real world, not the things directly. Critical realists, like rationalists, point out how often our eyes (and other senses) deceive us. One famous example is the way a stick jutting out of the water seems to be bent at the point it comes out. Take it out of the water, and you find it is straight. Apparently, something about the optics of air and water leads to this illusion. So what we really see are sensations, which are representations of what is real. Descartes and Locke were both critical realists. So are the majority of psychologists who study sensation, perception, and cognition.

But, to give Reid his due, a direct realist would respond to the critical realist that what we call illusions are actually matters of insufficient information. We don't perceive the world in flash photos: We move around, move our eyes and ears, use all our senses.... To go back to the stick, a complete empirical experience of it would include seeing it from all directions, perhaps even removing it. Then we will see not only the real stick, just as it is, but the laws of air-water optics as well! A modern direct realist is the psychologist J. J. Gibson.

There is a third, rather unusual form of empiricism called **subjective idealism** that is most associated with Bishop George Berkeley. As an idealist in terms of his metaphysics, he argued that what we see is actually already a psychological or mental thing to begin with. In fact, if we don't see it, it isn't really there: "To be is to be perceived" is how he put it. Now, this doesn't mean that the table you are sitting at simply ceases to be when you leave the room: God's mind is always present to maintain the table's existence!

There is this famous question: "If a tree falls in the woods, and there is no one there to hear it, does it make a sound?" The subjective idealist answer is yes, it does, because God is always there.

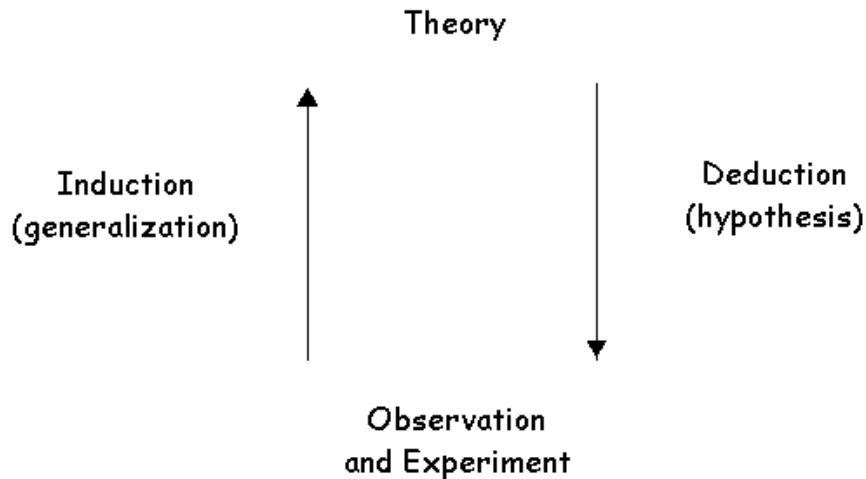
Another way to look at these three empirical approaches is like this: Critical realism postulates two steps to experiencing the world. First there is the thing itself and the light or sounds (etc.) it gives off. Second, there is the mental processing that goes on sometime after that light hits our retinas, or the sound hits our eardrums. Direct realism says that the first step is enough. Subjective idealism says that the second step is all there is.

(An old story tells about three baseball umpires bragging about their abilities. The first one says "I call 'em as I see 'em!" The second one says "Well, I call 'em as they *are*!" And the third one says "Shoot, they ain't *anything* till I call 'em!" The first is a critical realist, the second a direct realist, and the third is a subjective idealist.)

As I said at the beginning of this section, rationalism and empiricism don't really have to remain antagonistic, and in fact they haven't. It could even be said that **science** is a very well balanced blend of the two, where each serves, like the branches of government, as a check and balance to the other.

The traditional, ideal picture of science looks like this: Let's start with a theory about how the world works. From this theory we *deduce*, using our best logic, a **hypothesis**, a guess, regarding what we will find in the world of our senses, moving from the general to the specific. This is rationalism. Then, when we observe what happens in the world of our senses, we take that information and *inductively* support or alter our theory, moving from the specific to the general. This is empiricism. And then we start again around the circle. So science combines empiricism and rationalism into a cycle of progressive knowledge.

Now notice some of the problems science runs into: If my theory is true then my hypothesis will be supported by observation and/or experiment. But notice: If my hypothesis *is* supported that does *not* mean that my theory is true. It just means that my theory is not necessarily wrong! On the other hand, if my hypothesis is *not* supported, that *does* in fact mean that my theory is wrong (assuming everything else is right and proper). So, in science, we never have a theory we can say is unequivocally true. We only have theories that have stood the test of time. They haven't been shown to be false... yet!



This is one of the things that most people don't seem to understand about science. For example, people who prefer creationism over evolution will say that, since evolution is "only a theory," then creationism is just as legitimate. But evolution has been tested again and again and again, and the observations scientists have made since Darwin have held up tremendously well. It's like saying that a thoroughbred race horse is "just a horse," and therefore any old nag is just as good!

On the other hand, creationism fails quickly and easily. Carbon dating shows that the world is far older than creationists suggest. There are fossils of species that no longer exist. There is a notable lack of fossils of human beings during the dinosaur age. There are intermediate fossils that show connections between species. There are examples of species changing right before our eyes. There is a vast body of related knowledge concerning genetics. But with every piece of evidence shown to the creationists, they respond with what the logicians call an **ad hoc argument**.

An ad hoc argument is one that is created after the fact, in an attempt to deal with an unforeseen problem, instead of being a part of the theory from the beginning. So, if there is a rock that is too old, or a fossil that shouldn't be, the creationist might respond with "well, God put that there in order to test our faith," or "the days in Genesis were actually millions of years long" or "mysterious are the ways of the Lord." Obviously, creationism is based on faith, not science.

Science is always a work in progress. No one *believes* in evolution, or the theory of relativity, or the laws of thermodynamics, the same way that someone believes in God, angels, or the Bible. Rather, we *accept* evolution (etc.) as the best explanation available for now, the one that has the best reasoning working for it, the one that fits best with the evidence we have. Science is not a matter of faith.

Science is, of course, embedded in society and influenced by culture and, like any human endeavor, it can be warped by greed and pride and simple incompetence. Scientists may be corrupt, scientific organizations may be dominated by some special interest group or another, experimental results may be falsified, studies may be poorly constructed, scientific results may be used to support bad policy decisions, and on and on. But science is really just this method of gaining knowledge – not knowledge we can necessarily be certain about, but knowledge that we can rely upon and use with some confidence. For all the negatives, it has been the most successful method we have tried.

Modern Philosophy: The Enlightenment



The 1600's were among the most exciting times for philosophy since ancient Athens. Although the power of religion was still immense, we begin to see pockets of tolerance in different places and at different times, where a great mind could really fly. England was fairly tolerant, if only because of its diversity. Holland was the best place to be. A small country fighting off attacks, military and economic, from every side, needed all the support it could get, whatever your religion, denomination, or even heresy.

The central issues were the same as those of the ancient Greeks: What is the world made of? How do we know anything for certain? What is the difference between good and evil? But they are now informed with centuries of science, literature, history, multicultural experiences, and, of course, written philosophy. Perhaps we have to admit that the modern philosophers are only elaborating on the ancient Greeks, but what elaboration! Was Rembrandt only doodling?

I will approach this era philosopher-by-philosopher, showing, I hope, the "battles" between materialism (e.g. Hobbes) and idealism (Berkeley), between empiricism (Locke) and rationalism (Spinoza), and between faith (Leibniz) and atheism (Bayle).

Thomas Hobbes (1588 - 1678)

Thomas Hobbes was born on April 5, 1588. His father, an Anglican clergyman, left the family when Thomas was still young. Fortunately, his older brother did well for himself, and sent Thomas to Oxford. He served for a while as secretary to Francis Bacon. Travelling around Europe, he paid a visit to Galileo. He spent eleven years in Paris, and was tutor there to the exiled Prince of Wales (who would become Charles II).



In 1651, he wrote **The Leviathan**, a book presumably concerning politics, but covering much else besides. The book is named for a sea monster in the book of Job in the Bible. It was meant to be a symbol of God's power, but Hobbes used it to symbolize the state.

Hobbes thought of himself as a scientist, but he was really more of a rationalist: Truth can be had if we only make sure to define our terms well and reason logically! But his conclusions were empiricistic: Nothing is in the mind that isn't first in the senses. This in turn led him to a pure materialism: All qualities are really matter in motion. Things "of the mind," such as memories and imagination, are just sense images decaying, and all in the form of matter in motion in the brain.

Will to Hobbes is just the last desire you have before you take action on it – hence free will is an absurdity. All motivation is selfish, and ultimately tied to survival. The basic negative emotion is fear, the basic positive emotion is desire for power. Good and bad are purely subjective matters. And so he goes beyond Descartes: Not only are animals just machines, so are we. B. F. Skinner was an admirer of Hobbes.

Because good and bad are subjective and we are selfishly motivated, we will do whatever we need to do to satisfy our needs. Society must therefore control the individual if we are to have any peace at all! So society develops systems of rewards and punishments, social approval and social censure. Leviathan – the commonwealth – is that necessary evil.

Presaging Rousseau, he suggested we submit to society in order to avoid a purely primitive life, which he characterized as "nasty, brutish, and short." But, in contrast to Rousseau, he felt that society is an arrangement made between ruler and ruled, not among equals. Ultimately, the king must have absolute

power for civilization to survive. Democracy, he says, is just rule by orator-demagogues who easily manipulate the mob.

Religion, too, is a device for keeping the peace. It is nothing more than a fear of invisible powers that the mob has accepted as legitimate. Superstition is the same thing, just not accepted as legitimate! I should note that Hobbes was not an atheist: He was a deist, meaning that he believed in a creator, an intelligent prime mover who started all this, but one who does not need to intervene once his mechanical laws of nature take effect.

When he returned to England, he found himself confronted with many critics. Fortunately for Hobbes, his old pupil, now King Charles II, took him in and set him up with a nice pension. He died December 4, 1679, at the age of 91.

Benedictus Spinoza (1632-1677)

Baruch Spinoza was born in Amsterdam on November 24, 1632. His parents were Portuguese Jews who had escaped from the persecution they suffered in their homeland. Sadly, his mother died when Baruch was only six.



He received a religious education, but his father instructed him in various secular subjects in the hopes that Baruch would take on a business career. Baruch became fluent in many languages, and had a particular love for math, especially geometry. His father died in 1654, when Baruch was 22.

Discussing his beliefs with his friends, he admitted to doubting many of their religious traditional beliefs, such as life after death. They reported him to the synagogue soon after. After trying to persuade him to keep his opinions to himself, the rabbis excommunicated him in 1656. At that time, excommunication (Jewish or Christian) including the practice of shunning – i.e. no one in the community was to speak or correspond with him in any fashion.

But Baruch – now called Benedictus ("blessed," the Latin for the Hebrew baruch) – had many friends outside the Jewish community, and they would protect him all his life. Nevertheless, he was forced to move to Rijnsburg, a small town, in 1660 after a death threat, and again in 1663 to Voorburg near the Hague, and finally to the Hague itself.

He supported himself throughout as a lens-maker. At this time, that occupation included not only the making of glasses, but of lenses for telescopes and microscopes – the latest thing in technology! He conducted a variety of experiments as well. Unfortunately, the constant exposure to glass dust was to take a toll on Benedictus' lungs.

He published, anonymously, the **Treatise on Theology and Politics** in 1670. This was a devastating critique of Biblical literalism, and was immediately condemned by the religious community of Holland.

His most important work, **Ethics**, was begun all the way back in 1662. He tried to publish it in 1675, but was frightened off by rumors that his life would be in jeopardy if he did so. He died of tuberculosis two years later, February 20, 1677, at the age of 45. His friends published **Ethics** and other unpublished works in his honor in that same year.

The full title of the book was **Ethics, Demonstrated in the Fashion of Geometry**, because he laid out his arguments in the same way that a mathematician might lay out a geometric proof. This is certainly a rigorous way of writing philosophy, but it does make it hard to read. (Dagobert Runes edited *The Ethics of Spinoza* in

1957 so that it would be more readable for modern students.)

According to Spinoza, Substance (that which underlies all reality, also known as Existence or Being) has two attributes (sides or aspects). If we look at reality from one angle, thru the senses, we see it as matter. But if we look at it within ourselves, we see it as thought. He suggested that there were an infinite number of aspects, but those two are the only ones evident to human beings.

So, the body (or brain) and the mind (or soul) are one and the same thing seen from two different perspectives. Where there is material activity, there is thought. Where there is thought, there is material activity. Not all thought is available to what I perceive as myself: Much of it remains unconscious. But it goes on nonetheless.

This "**double-aspectism**" sounds great, but it does bring us to **panpsychism**. Panpsychism is the idea that every material thing has a mental side to it (and vice versa). People have minds, animals have minds, plants have minds, even rocks and houses have minds. The earth itself has a mind. Of course, as we move away from people, those minds are increasingly unconscious and lacking in a sense of self, but still....

It also leads to Spinoza's most famous concept, the one he actually based the rest of his theory upon: God and Nature are one and the same, and identical with all of Existence, mental and physical. God is the mind of the universe; the universe is the body of God. This is often called pantheism – God is everywhere and in everything – but in his day, it was called atheism.

Like Hobbes, Spinoza is a mechanist. He believes only in determinism, not free will. For us as humans, this determinism comes in the form of desires, which derive from our need to survive. All things, he says, have the motive of self-preservation, all things are "selfish."

He says that we strive to increase our power, that is, our capacity to preserve ourselves. Then he identifies this power with virtue! So the good is defined as what is useful to us, and the bad as what is damaging to us. Good advances our well-being, bad decreases our well-being. Good we perceive as pleasure, bad is perceived as pain.

But, we have many desires. Usually, one outweighs the others and we do what we desire most. But often they conflict. This conflict itself decreases our well-being and so is painful. What do we do to make our lives less painful then?

Society helps to some extent. By providing rewards and punishments, praise and blame, it adds new items to our list of desires that may outweigh certain desires and support others. Ultimately, society instills a conscience in most of us. Spinoza saw conscience as learned, not innate.

Ultimately, we must rely on ourselves: First, Spinoza says, we have to gain some control over our desires. When they are out of our control, when they instead control us, he calls them passions. They are out of our control because they operate unconsciously and so are not available to reason. By getting a "clear idea" of them, we turn them into simple emotions, which are amenable to reason. Freud would say, three centuries later, that we must "make the unconscious conscious!"

One way to turn a passion into an emotion, incidentally, is to trace its roots. If you can see where it came from, its operations become clear – conscious – and you can better deal with it.

Another way to deal with passions is to see the necessity of things. Nature is what it is, God wills what he wills, and no one can change that. Surrender to the inevitable, and you will be much more peaceful, at least. A wise person, for example, sees that getting angry at unpleasant people isn't going to change them. In fact, it only hurts you. Being kind to others, on the other hand, is usually rewarded, and it takes much less out of you. Along with Buddha and Jesus, Spinoza said that love can conquer hate.

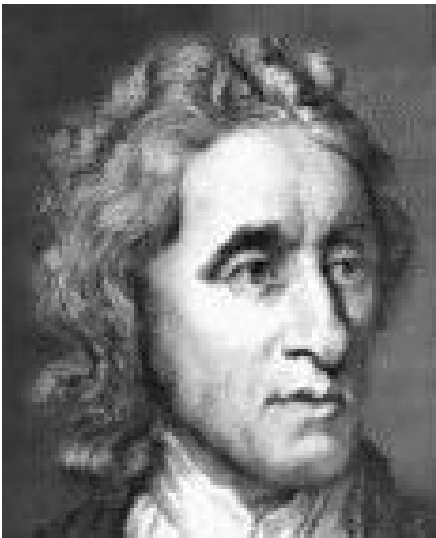
He also said that wise people "desire nothing for themselves which they do not also desire for the rest of mankind" (Ethics, iv, 48). This presages Kant's categorical imperative by a century.

But only an emotion can overcome another emotion. Therefore, reason must itself become an emotion – a powerful one – in order that it may outweigh others. He calls this powerful emotion "the intellectual love of

God," which of course means love of nature as well. It also includes the acceptance of God's will – or natural law. Knowledge of God/Nature is the ultimate virtue, and the ultimate pleasure!

Dismissed by the English as an atheist and by the French as too religious, Spinoza would have great influence on upcoming German philosophers, including Goethe, Hegel, Schopenhauer, and Nietzsche. And it is in Germany where psychology was to flourish.

John Locke (1632-1704)



John Locke is sometimes called "the father of the enlightenment." He was born August 29, 1632, the same year as Spinoza. His father was an attorney and a Puritan, who taught young John the value of representation and religious freedom. John's father died of tuberculosis when John was 29, leaving him with a small inheritance.

John went to Oxford, received his Masters degree, and taught there. He later studied medicine and became the personal physician to the Earl of Shaftesbury (grandfather to the philosopher of the same title).

Beginning in 1675, Locke studied in France. When he returned, he found the political climate under James II less than congenial, and so moved to Holland. It was there that he wrote his great psychological work, **Essay concerning Human Understanding**.

In 1689, he returned to England after William and Mary took the throne from James II. There he published his works – the **Essay**, his two **Treatises on Government**, and two letters concerning the need for religious tolerance. In 1691, he retired to a friend's mansion, and died in 1704 at the age of 72.

His **Treatises** alone would assure him a place in history near the top. In them, he outlined the basics of representative government, including natural rights, consent of the governed, the protection of property, religious tolerance, separation of church and state, and the checks and balances between executive and legislative branches. His ideas would become the foundation of the Declaration of Independence, the American Constitution, especially the Bill of Rights, and the French Declaration of the Rights of Man. Not bad.

Unlike Hobbes, Locke sees people as having a positive nature, one that contains instincts for social good and the ability to reason. Since our nature is positive, we should allow ourselves and others the freedom to develop that nature. For this reason, we must each surrender some degree of freedom in order that others may likewise be free to develop their potentials.

Laws are created, not to keep us from destroying each other, but to allow us to express our positive, rational natures. And so a government is legitimate only if its laws promote that which is our nature – to be free and rational. And it can do this only if it is based on the consent of the governed! If Hobbes reminds you of Skinner, Locke should remind you of Carl Rogers.

His **Essay concerning Human Understanding** attacked another popular idea of his time: Many scholars believed that the idea of God and the ideas of good and evil are planted in our minds at birth, perhaps by God himself. It was said that these ideas were innate. But when Locke looked at the variety of beliefs, non-beliefs, and moralities, he concluded that these things could not possibly be innate.

He admits, of course, that there are reflexes and instincts and the like, but these are just physiological

sequences of movement, not ideas! There are some ideas, learned from experience, that are learned so early and reinforced so consistently, that they have the appearance of being innate. But that's only an appearance!

In the course of arguing that there are no innate ideas, he also sets the stage for two future arguments, taken up by Berkeley and Hume. First, he notices that if we try to find matter, we see nothing but qualities that we attribute to matter – but never matter itself. The idea of matter is not empirical! This would be elaborated by Berkeley.

Second, he notices that if we try to find mind, all we see are the qualities we attribute to mind. Never do we see, empirically, a mind at all! This would be elaborated by Hume.

Locke doesn't make the leaps that Berkeley and Hume will, however. He is too practical for that. He says we are no doubt correct in believing in matter and mind. Life makes little sense without them. And yet, they are not empirically verifiable. He is sometimes called a metaphysical agnostic: He believes that there is mind and matter (and that they do interact, somehow), but no one can prove their existence.

Locke's ideas were adopted enthusiastically by French philosophers as well as English (and American) thinkers. They would translate him into a revolutionary, and his philosophy of human nature into Sensationism and Mechanism.

George Berkeley (1685-1753)

George Berkeley was born March 12, 1685 at Dysert Castle in Ireland. He went to Trinity College in Dublin, where, among other things, he studied John Locke.



In 1709, he wrote **An Essay Towards a New Theory of Vision**. He asked, if a man, born blind, recovered his sight, what would he see? Berkeley reasoned he would see a meaningless array of qualities, which he would interpret as in his mind, and certainly not extended further than his eyes. Only repeated connection between the sights he sees and those same objects touched would lead him to learn shapes, distances, and so on. Later operations actually restoring people's sight supported his theory.

Space (extension), therefore, is a mental construct, a matter of coordinating the relationships between what we see and what we experience through touch. We will see this idea of space as a mental thing again in Kant's theory.

In 1710, he wrote **The Principles of Human Knowledge**. If, as Locke said, all knowledge comes through the senses, then we can know nothing that does not come through the senses. Extension in space, the shapes of things, their resistance to touch, their colors, tastes, smells,... all these do in fact come through the senses. But when does matter come through the senses? When do you see matter, or feel it, or taste it? All you ever experience through the senses are qualities, never a substance!

Matter is therefore a theory without evidence. Since the atheism of Berkeley's day relied a great deal on materialism, he felt he had laid a knock-out punch!

Of course, it's not just atheists who believe in matter – nearly everyone does. It's "common sense." Dr. Johnson thought he gave the perfect rebuttal to Berkeley's idea when he kicked a rock as hard as he could: The pain that rock caused him could hardly be denied! But Berkeley would (and did) note that all anyone could know about the rock was its shape, location, color, i.e. information of the senses, including the sense of pain if you are stupid enough to kick it.

Esse est percipi, Berkeley said: To be is to be perceived.

So what happens to things when we are not looking at them, touching them, or kicking them? Do they vanish every time we turn around? Berkeley said of course not! Things – as collections of qualities – always remain, but in God's mind, which encompasses everything.

When a tree falls in the forest, and there's no one to hear it, does it make a sound? Berkeley would say it does, because God hears it. This is perhaps the purest, and most eloquent, version of idealism ever. Only the Mahayana (northern) Buddhists have a similar idea in their "mind-only" philosophy. In their case, they refer not to God but to *Buddha-mind*.

Berkeley went on to spend some time in Rhode Island, waiting for a grant to start up a college in Bermuda, which never arrived. Berkeley in California was named for him. He became (Anglican) Bishop of Cloyne in 1734, and died at Oxford in 1753 at the age of 68.

Gottfried Wilhelm Leibniz (1646-1716)

Leibniz was born June 21, 1646. His father was a professor of philosophy at the University of Leipzig. Little Gottfried was a boy genius (of course) and received his doctorate at the age of 20. He spent some time gallivanting around Europe, tasting just about every philosophy the continent had to offer.



In 1672, he went to France as a diplomat. There he would begin to invent calculus, as well as a calculator that could multiply and divide. In 1676, he visited Spinoza in Holland (where he read the manuscript for *Ethics*), and then went on to Hanover to serve the prince there. In 1700, he founded the Berlin Academy.

His major life's project was to reconcile Catholicism and Protestantism. He failed, obviously. It will take a lot more than genius to reconcile those two!

His major work, as far as psychology is concerned, is **New Essays on Human Understanding**, a refutation of Locke written in 1703, but not published until 1765.

His basic point was that the mind is not a passive "*tabula rasa*" (clean slate or piece of paper) upon which experience writes, as Locke and Aristotle suggested. The mind is a complex thing that works on and transforms experience. "Nothing is in the mind that has not been in the senses," he said, paraphrasing Locke, "except the mind itself." This would inspire Kant, and many psychologists in more recent times.

Leibniz also suggested that while we are alive, the mind is never entirely at rest, even in deep sleep. In fact, it is often functioning even when we are not conscious of it doing so. It was this conception of the unconscious that would most influence Schopenhauer and, later, Freud.

Leibniz had a very unusual metaphysics. He started with the same sort of skeptical approach as Descartes. But he ended with an idealistic metaphysics called **monadology** that outdoes even Berkeley's metaphysics. **Monads** are *souls*. Each soul contains within it the "perception" of the entire universe. It's not that there is an entire universe outside our souls which we all perceive as an object – souls are all there is!

We often experience ourselves as interacting with others – "monad a monad," you might say. But Leibniz makes it clear that we are only *apparently* interacting, each within our own internal universe. Monads, he tells us, are "window-less."

We *consciously* perceive only a small piece of this internal universe – our "point-of-view," we could say. I am not aware, however, of what the insides of my stomach look like, or what thoughts you are having at this

moment, or what's happening on some planet circling Alpha Centauri. All that and more is "in" me, but is only perceived *unconsciously*.

Although each soul has its own "point-of-view," all souls contain the same total perception of the universe. This is what he called **harmony**. But some souls have a clearer, more complete, more *conscious*, view of the universe within than others do. Only one soul is totally conscious, or, if you like, contains all "points-of-view." That soul is God.

Leibniz became increasingly isolated and impoverished over time, being without a political sponsor. He died alone in 1716, and his funeral was attended only by his secretary.

Pierre Bayle (1647-1706)

Pierre Bayle was born November 18, 1647, the son of a Huguenot (Protestant) minister in southern France. He was sent to a Jesuit college in order to get the best education, and was converted to Catholicism there. When he returned, he converted back to Protestantism! This made him a relapsed heretic, a very dangerous thing to be at the time.

So his father sent him to Geneva to study, where he discovered Descartes. He taught for a while in France, but then found it necessary to escape to Rotterdam, in Holland, where he eventually became a professor. He suffered from headaches and depression and never married.

In 1682, he anonymously published **Diverse Thoughts on the Comet**. Referring to a recent comet that had everyone abuzz, he wrote against the various superstitions of his day and the belief in miracles. In the book, he noted that as far as actions and morality are concerned, he could see no difference between Catholics and Protestants, Christians and Jews and Moslems and pagans and even atheists!



In Amsterdam in 1684 he began a magazine called **News of the Republic of Letters**. He wrote all the articles himself! In the meantime, both his parents and his brother were killed during the persecution of the Huguenots. So he wrote a book on tolerance. But tolerance was not on the Protestant agenda, either, and he lost his professorship. "God preserve us from the Protestant Inquisition!" he wrote.

His major work was **The Dictionary**, which was really more of an encyclopedia of philosophy, religion, literature, etc. Writing 14 hours a day, he wrote 2600 pages. In this massive work, he "deconstructed" (as we would say nowadays) a great number of Biblical stories, religious beliefs, and philosophical theories, including such tidbits as the doctrine of original sin and the trinity. He even suggested that, if God and Satan actually exist, Satan is winning! He would always add, after making these extreme statements, that of course no good Christian would ever believe such a thing!

After years of condemnation by the religious establishment, he died of tuberculosis on December 28, 1706. But **The Dictionary** would become immensely popular among intellectuals throughout Europe, and have a great influence on thinkers for more than a century.

As we enter the 1700's, we find religion fighting a losing battle against the forces of reason and science. While average people still went to church, baptized their babies, and prayed for forgiveness, the educated elite turned to deism, pantheism, and even atheism. This included the intellectuals of Catholic France as well as future "founding fathers" in colonial America: Ben Franklin, Thomas Jefferson, James Madison, and even George Washington were deists, and John Adams was a Unitarian. Scientific discovery and invention would steamroller traditional society for the next 300 years. Psychology would attempt to follow, but would lag behind for some time to come!

August Comte's Positivist Calendar

Since the Enlightenment, Philosophers and Scientists have been trying to make human life a little more rational. Decimal-based monetary systems, for example, began in the US in 1786, on the insistence of Thomas Jefferson. The system was adopted in France in 1793, with decimes and centimes. These terms, meaning tenths and hundredths, became our dimes and cents. The Italians didn't adopt it until 1862, and it didn't get to the British until 1971!

Similarly, the French introduced the metric system in 1795. By the end of the 1900s, almost all countries have adopted it -- the US being the notable exception this time!

Far more resistant to "rationalization" has been time. It does not seem that we will ever change the 60-second minute, 60-minute hour, and 24-hour day, but these are at least consistent and international. The calendar has likewise resisted change, but not for a lack of ideas! You see, the year of 365 days is $4 \times 7 \times 13$ plus 1 (and another 1 on leap years), which means that there are several simple schemes we could be using. For example, we could have four seasons of thirteen weeks of seven days each (plus one, and another on leap years). Or....

August Comte, in 1849, published a 13 month calendar, which he called **The Positivist Calendar**. It consisted of 13 months of 28 days each (exactly four weeks). There was one extra day at the end of the year which had no weekday assigned to it, and one more extra day on leap years. Every year begins on Monday, Moses 1. It begins with 1789 as year one, so the year 2000 would be 212. Each month would look exactly like this:

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Here are the names of the months Comte proposed:

- 1. Moses
- 2. Homer
- 3. Aristotle
- 4. Archimedes
- 5. Caesar
- 6. St. Paul
- 7. Charlemagne
- 8. Dante
- 9. Gutenberg
- 10. Shakespeare
- 11. Descartes
- 12. Frederick II
- 13. Bichat

Individual days were dedicated to significant persons in fields related to the month, e.g...

- Moses 14 – Buddha
- Aristotle 21 – Socrates
- Gutenberg 7 – Columbus
- Shakespeare 28 – Mozart
- Descartes 28 – Hume
- Bichat 7 – Galileo

It never caught on.

There were calendar suggestions both before and after Comte's. Perhaps the most famous is the **French Revolutionary Calendar**. Invented by a committee led by Fabre d'Églantine, it was adopted by the Convention in October, 1793. The calendar was divided into twelve months of thirty days each, leaving five days (six in leap years) over at the end of the last month. These five or six days were to be known as the Sans-culottides, and were to be a series of national holidays. Each month had three ten-day weeks called *décades* named arithmetically--primidi, duodi, tridi, quartidi, quintidi, sextidi, septidi, octidi, nonidi, *décadi*. The last day, *décadi*, was designated a day of rest. Dating was begun with Vendémiaire 1, year 1, corresponding to the fall equinox, September 22, 1792. Each month looked like this:

primidi	duodi	tridi	quartidi	quintidi	sextidi	septidi	octidi	nonidi	décadi
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

The names of the months:

Vendémiaire	(vintage)	sep 22 – oct 21
Brumaire	(misty)	oct 22 – nov 20
Frimaire	(frosty)	nov 21 – dec 20
Nivôse	(snowy)	dec 21 – jan 19
Pluviôse	(rainy)	jan 20 – feb 18
Ventôse	(windy)	feb 19 – mar 20
Germinal	(seeds)	mar 21 – apr 19
Floréal	(blossoms)	apr 20 – may 19
Prairial	(meadows)	may 20 – jun 18
Messidor	(harvest)	jun 19 – jul 18
Thermidor	(hot)	jul 19 – aug 17
Fructidor	(fruitful)	aug 18 – sep 16

The Sans-culottides ran from sep 17 to sep 20, with sep 21 as leap day. Sans-culottides literally means the time of no breeches. The "No-Breeches" were the working class revolutionaries, who wore long pants instead of breeches (culottes) that tied or buttoned just below the knee, which is what upper class men wore. These days were named...

- Jour de la vertu (Virtue Day)
- Jour du génie (Genius Day)
- Jour du travail (Labor Day)
- Jour de l'opinion (Reason Day)
- Jour des récompenses (Rewards Day)
- Jour de la révolution (Revolution Day) (the leap day)

It was used in France for twelve years, until Napoleon changed it back.

Much more recently, the **World Calendar** was introduced by Elisabeth Achelis in 1930. She founded the World Calendar Association October 21 of the same year. It was gaining great international support until World War II interrupted civilized discussion. Reintroduced to the United Nations after the war, world-wide adoption was thwarted by the United States in 1955. American politicians could not afford to alienate the religious right, who were upset by the idea that, once a year, there would be an extra day, making it eight days between one Sunday and the next -- not in keeping with Biblical tradition! The organization moved to Ottawa and became the International World Calendar Association. Sadly, the UN setback led to demoralization of World Calendar supporters. Now, with the advent of the internet, there is again a small movement for adoption of the World Calendar voicing its support.

The World Calendar consists of 12 months, divided into four quarters. Each quarter begins on a Sunday, with a 31-day month. This is followed by two 30-day months. At the end of the year, an extra day is appended to bring the total number of days to 365. This is called World Day and does not have a weekday designation. It is conceived of as an international holiday much like New Year's Eve. Every fourth year, an extra day is added to the sixth month. It too has no weekday designation, and is thought of as an international holiday. By this method, we would have the same calendar for every year.

January/April/July/October							February/May/August/November							March/June/September/December						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 *

*Plus World Day at the end of December every year, and Leap Day at the end of June every fourth year.

The World Calendar would present us with the fewest changes to how we perceive the weeks, months, and year, plus leaves us with four identical seasons or quarters -- a help in business finances! Unfortunately, there is still enormous resistance to simple, sensible ideas like these!

For more information, see Rick McCarty's wonderful Home Page for Calendar Reform at personal.ecu.edu/mccartyr/calendar-reform.html

Spinoza's Emotions*

- i. **Desire** is the essence of man insofar as it is conceived as determined to any action by any one of its modifications. [I.e., when there is change, we become motivated, and that is called desire.]
- ii. **Joy** is man's passage from a less to a greater perfection. [We feel joy when we improve our abilities to deal with what life hands us.]
- iii. **Sorrow** is man's passage from a greater to a less perfection. [We feel sorrow when we find we are not able to deal with life.]
- iv. **Love** is joy with the accompanying idea of an external cause. [When something, or someone, gives us joy, we feel love towards that thing or person.]
- v. **Hatred** is sorrow with the accompanying idea of an external cause. [When something, or someone, gives us sorrow, we feel hatred towards that thing or person.]
- vi. **Hope** is a joy not constant, arising from the idea of something future or past about the issue of which we sometimes doubt. [When we detect the possibility of joy in an otherwise uncertain situation, we feel hope.]
- vii. **Fear** is a sorrow not constant, arising from the idea of something future or past about the issue of which we sometimes doubt. [When we detect the possibility of sorrow in an uncertain situation, we feel fear.]
- viii. **Confidence** is a joy arising from the idea of a past or future object from which cause for doubting is removed. [Confidence happens when hope conquers fear.]
- ix. **Despair** is sorrow arising from the idea of a past or future object from which cause for doubting is removed. [Despair happens when fear overwhelms hope.]
- x. **Gladness** is joy with the accompanying idea of something past which, unhoped for, has happened. [Gladness is the recognition that things have gone well.]
- xi. **Remorse** is sorrow with the accompanying idea of something past which, unhoped for, has happened. [Remorse is the recognition that things have gone wrong. It might include regret and even guilt, if we had some responsibility in the matter.]
- xii. **Favor** is love toward those who have benefited others. [It is the appreciation we feel towards good people.]
- xiii. **Indignation** is hatred toward those who have injured others. [It is the hatred we feel towards bad people.]
- xiv. **Overestimation** consists of thinking too highly of another person in consequence of our love for him. [This might include infatuation.]
- xv. **Contempt** consists in thinking too little of another person in consequence of our hatred for him. [To have contempt for someone is the same as despising them.]

* From Spinoza's **Ethics** (Elwes, Trans.) [All comments in brackets are my own.]

xvi. **Envy** is hatred in so far as it affects a man so that he is sad at the good fortune of another person and is glad when any evil happens to him. [Envy may include jealousy and lead to spitefulness.]

xvii. **Compassion** is love in so far as it affects a man so that he is glad at the prosperity of another person and is sad when any evil happens to him. [This, which many would call love, is no doubt the most worthy emotion.]

xviii. **Self-satisfaction** is the joy which is produced by contemplating ourselves and our own power of action. [Today, we might refer to this as self-esteem or self-worth.]

xix. **Humility** is the sorrow which is produced by contemplating our impotence or helplessness. [Although humility sounds negative, it involves a realistic understanding of our limitations.]

xx. **Pride** is thinking too much of ourselves, through self-love. [We often use the word to mean something positive, but traditionally pride is undeserved or excessive self-esteem.]

xxi. **Despondency** is thinking too little of ourselves through sorrow. [This corresponds to that unrealistic sense of guilt that plagues so many people.]

xxii. **Self-exaltation** is joy with the accompanying idea of some action which we imagine people praise. [Self-esteem based on others' opinions of particular behaviors.]

xxiii. **Shame** is sorrow with the accompanying idea of some action which we imagine people blame. [Like humility, but based on others' opinions of particular behaviors. We call it guilt if it is entirely internalized.]

xxiv. **Benevolence** is the desire to do good to those whom we pity. [Benevolence is the emotion behind our good deeds. Pity here does not carry the negative tone it often does today.]

xxv. **Anger** is the desire by which we are impelled, through hatred, to injure those whom we hate. [Anger is the emotion behind aggression. It includes the desire for revenge.]

Metaphysics

Metaphysics is that part of philosophy that examines the composition of the universe, and asks "what is the world – including us – made of?" "What is the ultimate substance?"

You might assume that this is more interesting to a physicist than a psychologist. Physics, in fact, gets its name from the Greek word *physis*, which means "ultimate substance." But for psychology, one of the enduring problems is the relationship between the mind and the body. Is the mind, for example, just the activity of the brain, as many suppose? Or is it more than that? This is one of the issues that psychology has inherited from religion as well as philosophy: We can just as well ask about the separate existence of the soul, and its relationship to mind and body. *Psyche*, after all, is the Greek word for soul!

For a variety of reasons, philosophers generally would like it if there were exactly one ultimate substance in the universe – an idea called **monism**. Call it a love of simplicity. But the problem is, of course, which one? There are two major competitors for the title:

Materialism says that the universe is made entirely of matter. Matter, for philosophers, includes energy and anything in the physical sense. Some early Greek philosophers, for example, thought that the whole world (including us) was made of water. Others thought it was fire. Others still thought the universe was composed of invisible particles which were neither created nor destroyed called atoms. Today, physicists (and chemists, and biologists, and most psychologists) have agreed on more complex explanations which, nonetheless, boil down to physical reality.



(Please note that "materialism" does *not* refer here to the love of material things!)

Idealism is the other competitor for the title. Idealism says that the universe is made of the spiritual or the mental, which they refer to as idea or the ideal. Early Greeks also had a variety of ideas regarding what particular brand of ideal constituted the universe. Some would say the entire world was nothing more than God's dream (like some Hindu philosophers would argue). Others saw it as a sort of life force. Others still saw it as the perfection behind the flawed world we perceive. Modern idealist philosophers talk in terms of a world of persons, or a world of qualities.



(Again a note: "Idealism" does *not* here refer to living by high ideals!)

Although it may seem to you that materialism is the obviously better answer, that is more a matter of culture than philosophy. The majority of philosophers have been idealists, because idealism is a bit more reasonable than materialism! Consider: Have you ever seen "matter?" If you look at a chair, for example, you see its shape, its colors. If you touch it, you feel resistance, warmth or coolness. You can tap it and hear sounds, smell it or lick it (if you really want to), and so on. You experience many mental events, but never, all by its lonesome, matter! But ideas – all you have to do is have a thought, and you experience it as self-evident!

(We'll come back to some more kinds of monism in a bit.)

The usual alternative to monism is called – logically enough – **dualism**. It is simply a matter of saying that there are, in fact, two different substances in this universe: material and ideal. For psychology, this would be the idea that the mind (or spirit) and the body are both equally real, and that neither can be reduced to the other.



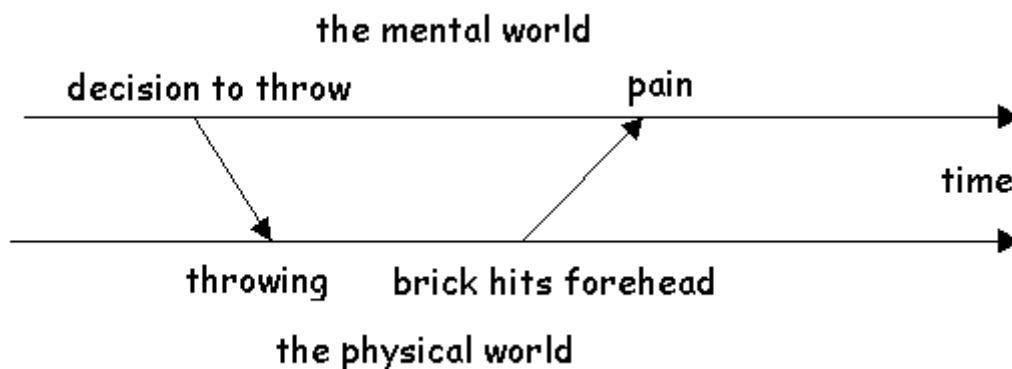
Now, this sounds like the obvious solution to the dilemma. But there is a serious philosophical problem: If there are two different substances in the universe, how could they possibly interact? How does the soul, which is presumed to be without mass or extension, cause the body to act? And how do the things that happen to the body somehow change from physical activities into a mental thing?

Think about it for a minute. It is easy to say that, when we see a red apple, the light waves cause chemical reactions in the retina, which cause sensory neurons to fire, which causes neurotransmitters to sail across synapses, which send the neural signals deeper and deeper into the brain, the activity of which is the thing we call "seeing the red apple." But no matter how much detail you provide, at no point do you convert all this physical activity into the experience of an apple!

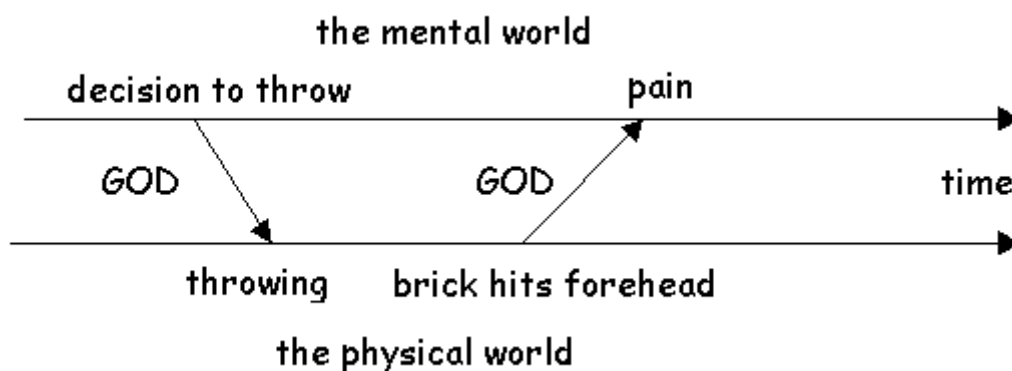
Likewise, if I have a thought that says "I'm going to throw the apple at you," there's no question that there will be neural activity, translated into muscular activity, translated into the flight of the apple. But when, where, and how did that thought become a neural activity? Some refer to this problem as **the mind-body problem**. Others call it the ghost in the machine.

Descartes, in addition to be the father of modern philosophy, also took time out to promote the idea of the reflex. In his day, hydraulic devices were all the rage – fountains with moving characters. Descartes simply suggested that living creatures are similar mechanisms (no different than we do today when we suggest that the brain is just a wet computer.)

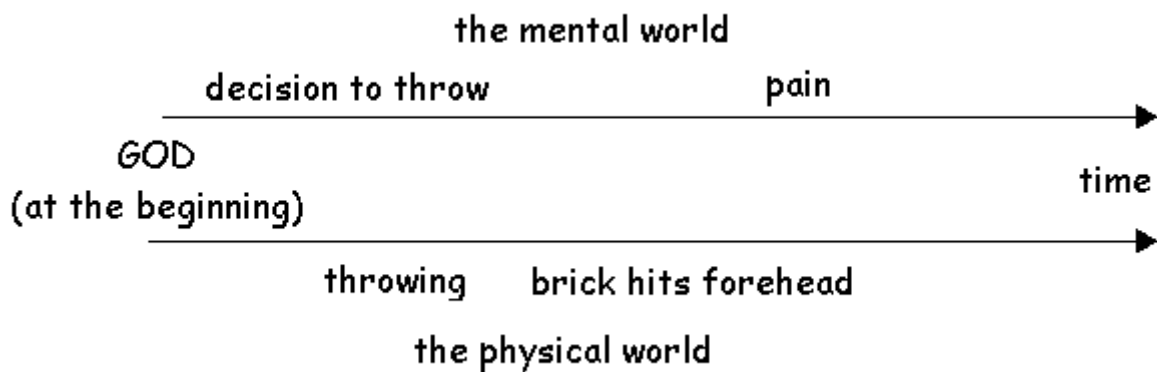
But Descartes was also a devout Catholic who believed we had an immortal soul. How that soul influenced the body or the body the soul remained a mystery. Descartes thought that perhaps the pineal gland (a few inches behind your eyes) was a conduit that let in the "animal spirits" from our souls, which traveled through the nerves and made our muscles move. A bad guess.



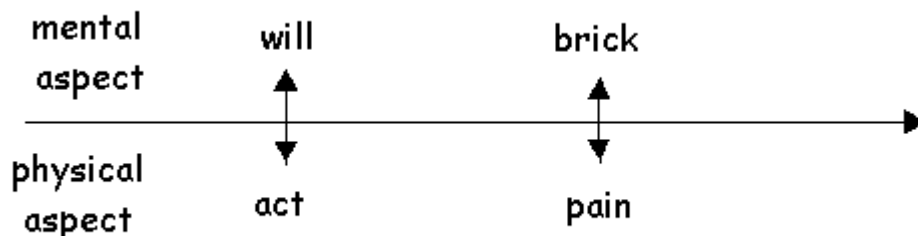
Descartes' type of dualism is called **interactionism**: There are two substances, they interact, I don't know how. That, of course, is less than satisfactory. So other philosophers put in their two cents. A French priest named Nicholas Malebranche suggested that God intervenes, and makes us experience things when stuff happens to our bodies, and makes our bodies move when we will it. Since these interactions occur in all of us every day, a million times a day, God must be very busy. But God is, well, God... so it is clearly a possibility. This type of dualism is called **occasionalism**.



Another explanation was given by the German genius Leibniz. He suggested that, rather than have God intercede a gazillion times a day, He could have simply set the entire universe going in two coordinated paths, one material, one spiritual. Like I can set two clocks – one an antique pendulum clock and one an electric digital – to keep the same time, even though they are completely different mechanisms and have no contact with each other, so God could have done the same with the body and the mind. This is called **parallelism**. Again, not a bad explanation.



But philosophers (and psychologists) desire more certain knowledge than faith. So the search for an answer went on. Perhaps the most impressive of the enlightenment answers came from the lens-grinder Benedict Spinoza. His theory is called **double-aspectism**. It is a monism that looks like a dualism: The mind and the body, he said, are two sides of one "coin," which is the true ultimate substance of the universe.



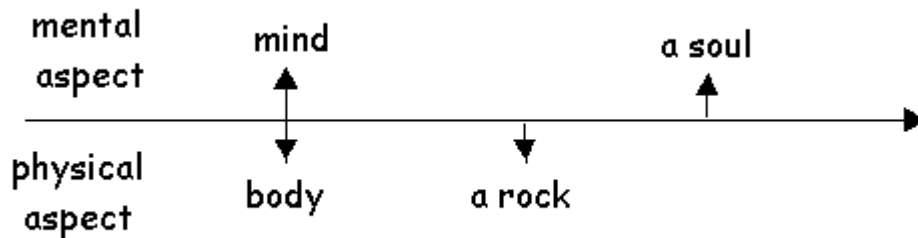
So, if a brick hits you on the forehead, the physical things happening inside your head have another side to them, which is the pain you experience. And the thought you have to raise your hand to touch the bruise has another side to it, which is the physical act of doing so. Problem solved!

But perhaps not quite. If you say that the entire universe has two sides to it, you have to include not only mind and brain. Spinoza believed that God is what we call the mental side of the universe, and nature is what we call the physical side. God is the mind of nature, and nature is God's body! This is called **pantheism**. In Spinoza's day, it was called atheism, and was grounds in most countries for a bonfire, with you as the guest of honor.

Even if you kind of like the idea of pantheism, keep in mind that it also implies **panpsychism** – everything has to have its mental side. So animals and plants have souls and rocks have thoughts (albeit slow and simple ones!). On the other hand, there can be no soul in heaven that is not attached to some body. These ideas are a little harder to take.

Much later, William James, "the father of American psychology," and our best philosopher in his spare time,

came up with **neutral monism**. He suggested that Spinoza was nearly right, but not quite. The physical is the one ultimate substance as seen from one perspective, and the mental or spiritual is that substance seen from another perspective. The ultimate substance is something else, something neutral. This means that it is quite alright to say that some things can only be seen as physical, others only as mental, and some as both.



The problem that remains is the question we started out with: What then is the ultimate substance? One recent suggestion is **information**. This doesn't stray too far from materialism and is popular with the artificial intelligence movement and cognitivists in psychology. Another suggestion is more idealist, and offers **quality** as the ultimate substance, quality sometimes having physical characteristics, sometimes mental ones.

William James also came up with another idea called **pluralism**. Strictly speaking, of course, dualism is a pluralism. But he suggested that there were many more than two "ultimate substances." There is matter, of course, and mind. But there is also math and logic – are they physical or are they mental, or are they something else? And there's space and time – what are they? Even the material can be divided into matter, energy, gravity, and so on. And the mental includes thoughts, perceptions, imagery, feelings, will, choice, etc. Some of these things may interact (matter and energy, for example, via $e = mc^2$). Others may not interact with anything else. The problem? Now instead of having two ultimate substances we need to reconcile, we have hundreds.

Perhaps the most popular metaphysics among researchers in psychology is called **epiphenomenalism**. This approach suggests that, while materialism is clearly the way to go in the sciences, it is also undeniable that there is something real about our inner, psychological life. So, say the epiphenomenalists, let's allow that there is something called mind which we have yet to pin down, but let's also say that the mind is nothing more than a byproduct of brain! Sort of like heat is a byproduct of an engine's operation: If we could design a perfect engine, all energy would translate into motion instead of heat! So, if we completely understood the brain, we would no longer need the concept mind. This is just a form of materialism, although a more humble form.

So the problem remains. "How does all this relate to ordinary psychology?" you might ask. Well, think about anything having to do with psychology – love, anger, perception, mental illness, psychopharmacology.... What is depression? Is it a perceptual or emotional problem? Or is it a matter of serotonin availability? Should we use drugs to alter people with problems such as these, or is it a matter of helping them to change their perspectives on life? If it's a combination of the two, how do we know how much of the problem is one or the other? Is it the same for everyone? The mind-body problem does indeed remain, right at the very heart of psychology.

Hume and Kant

The 1700s saw many great thinkers who have left a lasting impact on modern philosophy and science – and psychology. But there were two who would, between them, define the nature of science, *especially* psychology. They are, of course, David Hume and Immanuel Kant.

David Hume

David Hume was born April 26, 1711 in Edinburgh, Scotland. His father died the following year and left the estate to his eldest son, John. John ensured that David would receive a good Presbyterian upbringing and sent him – at the age of 12 – to the University of Edinburgh. David left three years later, to become a philosopher!



His family suggested he try law, and he tried, but found that it – as he put it – made him sick. So he went off to travel a few years in England and France. It was at a Jesuit College in France that he wrote **A Treatise of Human Nature** (in two parts), which he published anonymously in London in 1739.

Hume was the ultimate **skeptic**, convincingly reducing matter, mind, religion, and science to a matter of sense impressions and memories. First, he agreed with Bishop Berkeley that matter, or the existence of a world beyond our perceptions, is an unsupportable concept. Further, cause and effect were likewise unsupportable. We see sequences of events, but can never see the necessity that determinism requires. Further still, his investigations led him to dismiss the existence of a unifying mind within us. What we call mind is just a collection of mental perceptions. And finally, without mind, there can be no free will.



I will let him speak for himself. Pay close attention to some really good arguments!

All ideas are copies of impressions...it is impossible for us to think of anything which we have not antecedently felt by our senses....

When we entertain any suspicion in a philosophical term, we need but inquire from what impression is that supposed idea derived. If it be not possible to assign any, this will serve to confirm our suspicion that it is employed without meaning....

Some philosophers found much of their reasonings on the distinction of substance and quality. I would fain ask them whether the idea of substance be derived from impressions of sensations or impressions of reflection. Does it arise from an impression? Point it out to us, that we may know its nature and qualities. But if you cannot point out any such impression, you may be certain you are mistaken when you imagine you have any such idea.

The idea of substance is nothing but a collection of ideas of qualities, united by the imagination and given a particular name by which we are able to recall that collection. The particular qualities which form a substance are commonly referred to an unknown something in which they are supposed to "inhere." This is a fiction.

And so...no matter!

There are some philosophers (e.g. Berkeley) who imagine we are every moment intimately conscious of what we call our self; that we feel its existence and its continuance in existence, and are certain of its identity and simplicity.

For my part, when I enter most intimately into what I call my self, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure, color or sound, etc. I never catch my self, distinct from some such perception.

I may venture to affirm of the rest of mankind that they are nothing but a bundle or collections of different perceptions which succeed each other with an inconceivable rapidity and are in a perpetual flux and movement. Our eyes cannot turn in their sockets without varying their perceptions. Our thoughts are still more variable. And all our other senses and powers contribute to this change.

The mind (or self) is a kind of theatre where perceptions make their appearances, pass, repass, glide away, and mingle in an infinite variety. But there is no simplicity, no one simple thing present or pervading this multiplicity; no identity pervading this process of change; whatever natural inclination we may have to imagine that there is. The comparison of the theatre must not mislead us: it persists, while the actors come and go. Whereas, only the successive perceptions constitute the mind.

As memory alone acquaints us with the continuance and extent of a succession of perceptions, it is to be considered, on that account chiefly, as the source of personal identity. Had we no memory, we should never have any notion of that succession of perceptions which constitutes our self or person. But having once acquired this notion from the operation of memory, we can extend the same beyond our memory and come to include times which we have entirely forgot. And so arises the fiction of person and personal identity.

And no mind!

There is no idea in metaphysics more obscure or uncertain than necessary connection between cause and effect. We shall try to fix the precise meaning of this terms by producing the impression from which it is copied. When we look at external objects, and consider the operation of causes, we are never able, in a single instance, to discover a necessary connection; any quality which binds the effect to the cause, and renders one a necessary consequence of the other. We find only that the effect does, in fact, follow the cause. The impact of one billiard ball upon another is followed by the motion of the second. There is here contiguity in space and time, but nothing o suggest necessary connection.

Why do we imagine a necessary connection? From observing many constant conjunctions? But what is there in a number of instances which is absent from a single instance? Only this: After a repetition of similar instances the mind is carried by habit, upon the appearance of the cause, to expect the effect. This connection, which we feel in the mind, this customary and habitual transition of the imagination from a cause to its effect, is the impression from which we form the idea of necessary connection. There is nothing further in the case.

Out with cause and effect!

The most irregular and unexpected resolutions of men may be accounted for by those who know every particular circumstance of their character and situation. A genial person, contrary to expectation, may give a peevish answer, but he has a toothache or has not dined. Even when, as sometimes happens, an action cannot be accounted for, do we not put it down to our ignorance of relevant details?

Thus it appears that the conjunction between motive and action is as regular and uniform as between cause and effect in any part of nature. In both cases, constant conjunction and inference from one to the other.

Free will is only our ignorance of cause and effect, and cause and effect is an illusion, so free will is an illusion. Simple.

In all reasonings from experience, then, there is a step taken by the mind (that the future resembles the past) which is not supported by any argument. Nevertheless, we take this step. There must therefore be some other principle (than rational or demonstrative argument). This principle is custom....

What, then, is the conclusion of the whole matter? A simple one, though, it must be confessed, pretty remote from the common theories of philosophy. All belief concerning matters of fact or real existence, is derived merely from some object present to the memory or the senses, and a customary conjunction between that and some other object. Having found, in many instances, that two kinds of objects have been conjoined (say, flame and heat), the mind is carried by custom to expect the same in the future. This is the whole operation of the mind in all our conclusions concerning matters of fact and existence.

So long, science!

If we take in hand any volume, of divinity or metaphysics, for instance, let us ask: Does it contain any reasoning concerning quantity or number? No. Does it contain any experimental (probable) reasoning concerning matter of fact? No. Commit it then to the flames: for it can contain nothing but sophistry and illusion.

I am at first affrighted and confounded with that forlorn solitude in which I am placed by my philosophy, and fancy myself some strange uncouth monster, utterly abandoned and disconsolate. Fain would I run into the crowd for shelter and warmth. I call upon others to join me. But no one will hearken to me. Everyone keeps at a distance, and dreads that storm which beats upon me from every side. I have exposed myself to the enmity of all metaphysicians, logicians, mathematicians, and theologians. Can I wonder at the insults I must suffer? I have declared my disapprobation of their systems. Can I be surprised if they should express a hatred of my ideas and my person? when I look about me, I foresee on every hand, dispute, contradiction, anger, calumny, detraction. When I turn my eye inward, I find only doubt and ignorance. Every step I take is with hesitation; every new reflection makes me dread an error and absurdity in my reasoning.

In 1739, he returned to Edinburgh, where he added a third part to **A Treatise**, on morality. He suggested that morality comes from sympathy, which is an instinct for association with others. He goes on to say that it is emotions that move us, not reason, and he presages Jeremy Bentham's utilitarianism by defining virtue as "every quality of the mind which is useful or agreeable to the person himself or others." Even beauty is based on pleasure and pain, and love is based on our desire to reproduce – shades of Freud!. What little attention this part received was negative.

At this point in his life, he went through several minor political positions. And he gained a great deal of weight – something unusual among philosophers! Then, in 1748, he published **An Enquiry Concerning the Human Understanding**, followed in 1751 by **An Enquiry Concerning the Principles of Morals**. These were essentially a rewrite of **A Treatise**. In it, he included a new essay, "Of Miracles," wherein he portrays some of Christianity's most basic beliefs as nothing but superstition!

He continued on that subject with **Dialogues Concerning Natural Religion**, in which he compared Christianity, Deism, and Atheism. Among other things, he suggests that the world we know – including ourselves – is the result of eons of nature's experiments. His friends asked him not to publish it. They published it for him posthumously (no pun intended).

In 1752, he wrote **Political Discourses**. Although he liked egalitarianism (roughly, communism) and democracy, he felt that both were too idealistic. This book influenced Adam Smith, the father of modern capitalism.

In 1754, he published the first volume of the **History of England**, a book admired by such notables as Voltaire and Gibbon (the author of *The Decline and Fall of the Roman Empire*).

In 1763 he went to Paris, where he soon became the talk of the town and was especially popular at the salons of the great aristocratic women of France, who apparently took a liking to his grand body as well as his great mind. Several years later, he brought the nearly insane Rousseau to England, which turned out to be a disagreeable adventure for both of them.

He died August 25, 1776, of ulcerative colitis. His friends found the great atheist polite, pleasant, even cheerful, to the end.

Immanuel Kant

Immanuel Kant was born on April 22, 1724, in Königsberg, Prussia (Now Kaliningrad, Russia). He was of Scottish descent and had a Pietist upbringing and education. (Pietism is a form of Protestantism similar to Methodism, i.e. very conservative.) He went to the University of Königsberg, where he received his PhD. He taught as a privatdozent, which is a private teacher or tutor, paid by his students. This meant a poor life, boardinghouses, and bachelorhood.

He began with an interest in science – physics, astronomy, geology, biology. In fact, he introduced the nebular hypothesis, suggesting that originally, swirling gases condensed into the sun and the planets – basically, what we understand to be the reality today. He also reintroduces Lucretius's idea of evolution of plant and animal life.

In 1781, he published the **Critique of Pure Reason**. Critique means a critical or careful analysis, and pure reason means reason which leads to knowledge that doesn't require experiential proof, what is also called *a priori* (before-hand) knowledge.

He said he had been "awakened from his dogmatic slumbers" by reading Hume. This is frequently misunderstood to mean that he was outraged. Actually, he said that he had been dogmatically accepting of the traditional ideas about reason. Hume enlightened him! However, it is also true that Hume challenged him, in a sense, to rescue such concepts as cause and effect, which Kant felt were essential to the existence of science. He took as his life's task to saving of the universe from Hume's pervasive skepticism.

First, he makes a distinction between *a posteriori* and *a priori* knowledge:

It is a question worth investigating, whether there exists any knowledge independent of experience and all sense impressions. Such knowledge is called *a priori* and is distinguished from *a posteriori* knowledge which has its sources in experience. That there is genuine *a priori* knowledge, that we can advance independent of all experience, is shown by the brilliant example of mathematics....



Although all our knowledge begins with experience, it does not follow that it arises entirely from experience. For it is quite possible that our empirical knowledge is a compound of that which we receive through impressions and that which our own faculty of knowing (incited by impressions) supplies from itself—a supplement to impressions which we do not distinguish from that raw material (i.e. impressions) until long practice has roused our attention and rendered us capable of separating one from the other.

What then are these *a priori* faculties of our minds? The first stage of mind's operation on experience is the **transcendental aesthetic**, which states that all sense experience is synthesized "through" the concepts of time and space.

Space does not represent any property of things in themselves, nor does it represent them in their relation to one another.... Space is nothing but the form of all appearances of outer sense. It is the subjective condition of sensibility under which alone outer perception is possible for us.

Since the capacity to be affected by objects must precede all perception of these objects, it can readily be understood how the form of all appearances (i.e., space) can be given prior to all perceptions, and so exist in the mind *a priori*; and how, as a pure intuition, in which all objects must be determined, it can contain, prior to all experience, principles which determine the relations of these objects. It is, therefore, solely from the human standpoint that we can speak of space, of extended things. If we depart from the subjective, the representation of space stands for nothing whatsoever.

Time is a purely subjective condition of our human perception, and, in itself, apart from the subject, is nothing.... What we are maintaining is the empirical reality of time, its objective validity of all objects which allow of ever being given to our senses. Since our perception is always sensible (i.e., by the senses), no object can ever be given to us in experience which does not conform to the condition of time. On the other hand, we deny to time any claim to absolute reality; that is to say, we deny that it belongs to things absolutely, as their condition or property independently of any reference to the form of our perception. Properties that belong to things in themselves can never be given to us through the senses. This, then, is what constitutes the ideality of time.

So time and space are necessary to perception, even though they themselves cannot be perceived apart from the events "in" them. The next step is the **transcendental analytic**, which says that the mind applies certain **categories** of thought to ideas. Without these categories, Kant says, we would not be able to think at all, and Hume couldn't have come up with his arguments. Hume, for example, felt that cause and effect were not objectively real; Kant says right! – they are *a priori*, in the mind:

1. Quantity: unity, plurality, totality.
2. Quality: reality, negation, limitation.
3. Relation: substance and accidents, cause and effect, reciprocity between active and passive.
4. Modality: possible-impossible, existence-nonexistence, necessity-contingency.

Finally comes the **transcendental dialectic**. Kant believed that the mind seeks complete knowledge. But it is limited to dealing with **phenomena**, appearances, only. It can't reach to **noumena**, the thing-in-itself. Phenomena are all you have, but they are not real; noumena are real, but you can't have them. So, to discover that real world, we try to construct it. Unfortunately, we err by trying to use the categories (logic), "designed" for phenomena, on the ultimate reality! So we end up with contradictions that are irreconcilable. Regarding cause and effect and free will:

If, however, we may legitimately take an object in two senses, namely, as phenomena and as thing-in-itself; and if the principle of causality applies to things only as phenomena and not as noumena,

then we can, without any contradiction, think one and the same thing when phenomenal as necessarily conforming to the principle of causality and so far not free, and yet, in itself not subject to that principle and therefore free.

Suppose morality necessarily presupposed freedom of the will while speculative reason had proved that such freedom cannot even be thought. In such case freedom, and with it morality, would have to make room for the mechanical interpretation of nature. But our critique has revealed our inevitable ignorance of things-in-themselves, has limited our knowledge to mere phenomena. So, as morality requires only that freedom should not entail a contradiction, there is no reason why freedom should be denied to will, considered as a thing-in-itself, merely because it must be denied to it as a phenomenon.



Ultimately, Kant found that the existence of God, the soul, and ultimate reality is not something you can prove, because proof is based on phenomena and the categories. Instead, they are heuristic, that is, we believe in these things because they are useful to us! In saving science and religion from Hume, he proved that they had to be taken on faith! Scholars and churchmen on all sides of the issues criticized the Critique, which ironically guaranteed its success. Kant had no censorship problems to worry about at the time, because Frederick the Great – a brilliant man himself – ruled Prussia at that time. Unfortunately for Kant and many others, he died in 1786.

(A note on Frederick the Great: The King of Prussia, including much of Germany as well, he was, besides a consummate leader and politician, an accomplished philosopher and a passionate amateur musician. He corresponded with Voltaire and Rousseau, and Bach wrote "A Musical Offering" for him, based on a melody the King had challenged him with. He wrote a number of books, including **A History of My Times** and **The Anti-Machiavelli**)

In 1788, Kant wrote the **Critique of Practical Reason**. Practical reason refers to the making of moral decisions. In this book, he argues that everyone has a conscience, a moral law within their souls, not unlike the categories of the **Critique of Pure Reason**. This moral law he calls the **Categorical Imperative**, which is phrased two ways. The first is a variation on the Golden Rule: Whatever you do, consider what kind of world this would be if everybody did the same. The other is a little deeper: Treat people (including oneself) only as ends, never as means to an end. Never use them, we would say today.

In order to have morality, Kant believed we needed free will. If you can't make choices, how could you be responsible? If you aren't responsible for anything you do, like an animal or a robot, then what you do is

neither bad nor good! Also, he felt we needed the idea of immortality: Since justice rarely happens within a lifetime, we need life after death to take care of that. And, in order for eternal life to exist, or free will, or good and bad at all, we need to believe in God.

Notice that he doesn't say that, first God exists, therefore.... He is actually saying that, although we can never prove the existence of God (or immortality, or free will, or good and bad), we must act *as if* he (and they) existed. Religious thinkers of the time did not care for this way of thinking at all!

Kant wrote a good deal more. In 1790, he wrote the **Critique of Judgement**, regarding judgements of beauty. He notes that our sense of beauty is based on feeling, not reason. We seem to "see" the harmony, the power, the miraculous in some things. It is as if God so arranged things!

In 1793, when he was 69 years old, **Religion Within the Limits of Reason Alone** came out. Here he argues (unlike Hobbes and unlike Rousseau) that we are born with the potential for both good and bad. He does acknowledge, though, that a great deal of evil comes out of civilization, rather than our primitive nature. In fact, a lot of what we now consider bad was probably originally necessary for survival in primitive conditions!

He also said that, although there is an inborn moral sense, it must be developed by moral instruction. For this reason, he believes that religion is necessary – although he also points out that religion shouldn't be dogmatic, and that beliefs such as original sin, the divinity of Christ, and the efficacy of prayer are mere superstitions.

In 1795, he wrote **On Perpetual Peace**, outlining the basis for international law. In 1798, he came out with *The Conflict of Faculties*, arguing for the importance of academic freedom. He died February 12, 1804, after long illness, and was buried ceremoniously in Königsberg Castle. Over his grave is written

*The starry heavens above me;
The moral law within me.*

The great modern historian of psychology, Dan Robinson, once said that today nearly every psychologist is either a Humean or a Kantian. Humeans see their science as the statistical analysis of a collection of experiences. All we can ever know is probabilities based on what happened in the past. Kantians see their science as more firmly based, in a sense, in the structure of the mind. And yet they, too, can permit themselves little certainty. Humeans can be found among most experimentalists, including the behaviorists. Kantians are more likely to be found among cognitivists and psychoanalysts. There are, as we shall see, alternatives. But they remain very much in the minority.

Declaration of the Rights of Man*

Approved by the National Assembly of France, August 26, 1789

The representatives of the French people, organized as a National Assembly, believing that the ignorance, neglect, or contempt of the rights of man are the sole cause of public calamities and of the corruption of governments, have determined to set forth in a solemn declaration the natural, unalienable, and sacred rights of man, in order that this declaration, being constantly before all the members of the Social body, shall remind them continually of their rights and duties; in order that the acts of the legislative power, as well as those of the executive power, may be compared at any moment with the objects and purposes of all political institutions and may thus be more respected, and, lastly, in order that the grievances of the citizens, based hereafter upon simple and incontestable principles, shall tend to the maintenance of the constitution and redound to the happiness of all. Therefore the National Assembly recognizes and proclaims, in the presence and under the auspices of the Supreme Being, the following rights of man and of the citizen:

Articles:

1. Men are born and remain free and equal in rights. Social distinctions may be founded only upon the general good.
2. The aim of all political association is the preservation of the natural and imprescriptible rights of man. These rights are liberty, property, security, and resistance to oppression.
3. The principle of all sovereignty resides essentially in the nation. No body nor individual may exercise any authority which does not proceed directly from the nation.
4. Liberty consists in the freedom to do everything which injures no one else; hence the exercise of the natural rights of each man has no limits except those which assure to the other members of the society the enjoyment of the same rights. These limits can only be determined by law.
5. Law can only prohibit such actions as are hurtful to society. Nothing may be prevented which is not forbidden by law, and no one may be forced to do anything not provided for by law.
6. Law is the expression of the general will. Every citizen has a right to participate personally, or through his representative, in its foundation. It must be the same for all, whether it protects or punishes. All citizens, being equal in the eyes of the law, are equally eligible to all dignities and to all public positions and occupations, according to their abilities, and without distinction except that of their virtues and talents.
7. No person shall be accused, arrested, or imprisoned except in the cases and according to the forms prescribed by law. Any one soliciting, transmitting, executing, or causing to be executed, any arbitrary order, shall be punished. But any citizen summoned or arrested in virtue of the law shall submit without delay, as resistance constitutes an offense.
8. The law shall provide for such punishments only as are strictly and obviously necessary, and no one shall suffer punishment except it be legally inflicted in virtue of a law passed and promulgated before the commission of the offense.
9. As all persons are held innocent until they shall have been declared guilty, if arrest shall be deemed

* ASCII Text Prepared by Gerald Murphy (The Cleveland Free-Net - aa300)

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Available at <http://www.yale.edu/lawweb/avalon/rightsof.htm>

indispensable, all harshness not essential to the securing of the prisoner's person shall be severely repressed by law.

10. No one shall be disquieted on account of his opinions, including his religious views, provided their manifestation does not disturb the public order established by law.

11. The free communication of ideas and opinions is one of the most precious of the rights of man. Every citizen may, accordingly, speak, write, and print with freedom, but shall be responsible for such abuses of this freedom as shall be defined by law.

12. The security of the rights of man and of the citizen requires public military forces. These forces are, therefore, established for the good of all and not for the personal advantage of those to whom they shall be intrusted.

13. A common contribution is essential for the maintenance of the public forces and for the cost of administration. This should be equitably distributed among all the citizens in proportion to their means.

14. All the citizens have a right to decide, either personally or by their representatives, as to the necessity of the public contribution; to grant this freely; to know to what uses it is put; and to fix the proportion, the mode of assessment and of collection and the duration of the taxes.

15. Society has the right to require of every public agent an account of his administration.

16. A society in which the observance of the law is not assured, nor the separation of powers defined, has no constitution at all.

17. Since property is an inviolable and sacred right, no one shall be deprived thereof except where public necessity, legally determined, shall clearly demand it, and then only on condition that the owner shall have been previously and equitably indemnified.

Selection from *A Vindication of the Rights of Woman**

by Mary Wollstonecraft (1759-1797)

I love man as my fellow; but his scepter, real, or usurped, extends not to me, unless the reason of an individual demands my homage; and even then the submission is to reason, and not to man. In fact, the conduct of an accountable being must be regulated by the operations of its own reason; or on what foundation rests the throne of God?

It appears to me necessary to dwell on these obvious truths, because females have been insulated, as it were; and, while they have been stripped of the virtues that should clothe humanity, they have been decked with artificial graces that enable them to exercise a short-lived tyranny. Love, in their bosoms, taking place of every nobler passion, their sole ambition is to be fair, to raise emotion instead of inspiring respect; and this ignoble desire, like the servility in absolute monarchies, destroys all strength of character. Liberty is the mother of virtue, and if women be, by their very constitution, slaves, and not allowed to breathe the sharp invigorating air of freedom, they must ever languish like exotics, and be reckoned beautiful flaws in nature.

As to the argument respecting the subjection in which the sex has ever been held, it retorts on man. The many have always been enthralled by the few; and monsters, who scarcely have shewn any discernment of human excellence, have tyrannized over thousands of their fellow-creatures. Why have men of superiour endowments submitted to such degradation? For, it is not universally acknowledged that kings, viewed collectively, have ever been inferior, in abilities and virtue, to the same number of men taken from the common mass of mankind – yet, have they not, and are they not still treated with a degree of reverence that is an insult to reason? China is not the only country where a living man has been made a God. Men have submitted to superior strength to enjoy with impunity the pleasure of the moment – women have only done the same, and therefore till it is proved that the courtier, who servilely resigns the birthright of a man, is not a moral agent, it cannot be demonstrated that woman is essentially inferior to man because she has always been subjugated.

Brutal force has hereto governed the world, and that the science of politics is in its infancy, is evident from philosophers scrupling to give the knowledge most useful to man that determinate distinction.

I shall not pursue this argument any further than to establish an obvious inference, that as sound politics diffuse liberty, mankind, including woman, will become more wise and virtuous.



Mary Wollstonecraft was a leading feminist, revolutionary, and Unitarian in 18th century England. In addition to *A Vindication of the Rights of Women* (1792), Mary Wollstonecraft wrote *Thoughts on the Education of Girls* (1786) and *A Vindication of the Rights of Man* (1790). The latter inspired Thomas Payne to write *The Rights of Man*. She had two daughters, Fanny and Mary. She died after giving birth to Mary, who would go on to become Mary Wollstonecraft Shelley, the author of *Frankenstein*.

* Selection taken from full text available at http://www.baylor.edu/BIC/WCIII/Essays/rights_of_woman.html

Ethics

Ethics is the philosophical study of good and bad, right and wrong. It is commonly used interchangeably with the word **morality**. It differs from other aspects of philosophy in being more concerned with what *should* be than with what actually is. This makes it a good deal more slippery as well!

Theological Theories

There are three broad categories of ethical philosophies. The first is the theological theories. As the name tells you, these are moral philosophies that begin with the idea that what is right and wrong derive from God or some other higher power.

The simplest theological theory is the **divine command theory**. This theory says that God has revealed his will in the form of commands that are made available to us through oral tradition, holy scripture, or church law. All we need to do to be good is to follow those commands. Most of the church fathers held such a belief, as do most religious people today. Its major advantage is its simplicity and solidity.

A more complex theological theory is called **natural law**. This goes back to St. Thomas Aquinas, and is a part of traditional Catholic philosophy. St. Thomas felt that God would not give us one set of rules through scripture and the church only to have them contradicted by our experiences and reason. Nature, as God's creation, is in complete agreement with his moral commands. People who believe in natural law would point out that there are people from other cultures, not exposed to our traditions of morality, who nonetheless reason their way to the very same conclusions as to what is right and wrong!

The difficulty with natural law has become obvious: Science does occasionally produce theories that are blatantly contradictory with scripture, and the church does occasionally produce events (religious wars and burning heretics spring to mind) that are blatantly contradictory with our "common sense" sort of morality.

The difficulty with both divine command theory and natural law is that, as society becomes more pluralistic, we come into more and more contact with a greater and greater variety of religious traditions, each with their own scriptures and traditions, and not all of them agreeing all the time. The majority of religious people are good-hearted souls, who are reluctant to believe that God would condemn entire nations for not having been lucky enough to hear the right message! This feeling is especially poignant when people gain experiences with very decent people with different religions or even no religion at all. As long as we remain generous and humble, there is no real problem.

But some people find themselves retreating to what some consider a defensive position called **absolutism**. Absolutism is divine command theory, but without the generous and humble spirit. In other words, it's my way or else. We have had many examples of absolutism in history, and we have many examples still today.

Moral Relativism

Diametrically opposed to the theological theories are various forms of moral relativism. Moral relativism says that there are no universal moral principles. Morality is a matter of customs or opinions or habits or emotions. There is a range of opinions here: Relativism is sometimes considered a kind of **moral skepticism**, which would say that we never truly know what is good or bad. Others see it as a **moral nihilism**, which says that there simply is no such thing as good and bad, that those words are just misleading labels for other, simpler, things.

One brand of relativism is called **conventionalism**. This says that what we call morality is really a matter of

our cultural or social norms. What our traditions say is right and wrong (for whatever reason) is right and wrong. Often, along with that, comes the idea that cultures and societies should not interfere with each other ("when in Rome..."), but that is not necessary.

Another brand is called **prescriptivism** (or imperativism), which looks at morality more in terms of power within a society. What we call right and wrong are essentially prescriptions as to what we want others to do, which we then enforce with the powers at our command. So call theft "bad" so that we have a justification to put people who take our stuff in jail!

Of course it is inevitable that we come across other societies who believe that what they want is their "right" regardless of what we want. Or we come across situations where there are two subcultures or societal groups whose moral beliefs come into conflict. One of the difficulties of conventionalism is defining what constitutes a society or culture and what, if any, are the rules of interaction between or among them.

One "solution" is to reduce the culture or society to a culture or society of one – that is, the individual. This is called **subjectivism**. Here, each person has his or her own morality. It may be a matter of individual beliefs, or a matter of habit, but each person makes their own choices. That does take care of the problem of what is a culture, but it only makes the problem of rules of interaction worse!

Another brand of relativism goes even further: **emotivism** says that what we call good and bad are just labels for certain emotional responses we have to certain acts. If the idea of eating puppies makes you sick, you call it bad. If it makes you salivate, you call it good. If having sex with teenagers makes your day, you call it good. If it gets you all upset, you call it bad.

Among my students, I find that freshmen often bring with them their home town religious beliefs. They tend to like the divine command theory, with a few absolutists thrown in for spice. But by the time they are juniors, most of them have become relativists. The home town crowd often blames this change on professors, but it is more a matter of exposure to the pluralistic mini-society of college.

The freshmen see that there are many people who disagree about one detail or another of their childhood moral codes, yet appear to be decent people, or at least have not been struck down by thunderbolts. So, being decent folk, they begin to emphasize tolerance for the variety of moralities they see, and relativism seems to be the best format for this tolerance. For example, if you were raised to believe that homosexuality is wrong, yet you find many people who believe that it is okay (and some who think it's the only thing to be), you may develop a live-and-let-live attitude that says "to each his own."

But not everything is as innocuous as sexual preferences. There are people whose moral codes say we must sacrifice chickens to the Gods, or we must convert the non-believers, or we must burn witches at the stake, or we must destroy the infidel.... What do we do then with our kind tolerance? Let them be because "to each his own?" What if we had done that when Adolph Hitler had his time at bat? Or what if Jeffrey Daumer's neighbors decided that, well, if he wants to kill and eat his lovers, what business is it of ours?

A sophisticated relativist would respond, however, by pointing out that this tolerance business really has no place in a relativistic moral theory – that tolerance is itself a moral value that one may or may not adhere to! So, if it is Hitler's moral code to exterminate innocent people and invade neighboring countries, it's our moral code to make him stop it! No logical problems here.

As you can see, though, relativism does take a risk. Relativism can become moral nihilism in the same way that divine command can become absolutism. Nevertheless, relativism is the moral theory followed by the majority of people in the hard sciences, including the more experimental, physiological side of psychology.

Moral realism

The third main category of moral theory is moral realism. Moral realism says that good and bad, right and wrong, exist in some fashion in this world, and independently of things like social customs, beliefs, or opinions. On the other hand, moral realism does not propose something as simple as a list of commandments delivered directly from God! Moral realism is the middle ground between the theological theories and moral relativism, and is the most common approach of philosophers.

But, as is usually the case with the middle ground, that is not an easy position to take. The big question that moral realists have to answer is "how do we know good and bad? how do we recognize right and wrong?" Because of the difficulty of this question, there are quite a few forms of moral realism.

Rationalist morality theories

The first group of theories I'd like to look at are the rationalist moral theories. As the name indicates, these theories view morality as coming out of our capacity to think. Just like rationalist epistemology, the most basic form of rational moral truth is the one that is self-evident. This is the theory of **intuitionism**, which is best exemplified by the modern British philosopher G. E. Moore.

Just like rationalistic epistemology, we can deduce from intuitions with formal logic. In other words, we can think our way to various moral principles. Kant promotes such an approach in what is known as **formalism**.

A particularly popular form of rationalist morality is called **contractarianism**. It is associated with several influential philosophers such as John Locke and Jean-Jacques Rousseau. Rousseau is responsible for the title and the basic idea: He suggested that, once upon a time, humanity was in a state of savage anarchy. Each person felt free to do whatever they needed to do to get what they wanted. However, the fact that everyone else was doing the same meant that no-one was really free at all. Whatever time they weren't spending on getting what they needed would be spent protecting themselves from each other!

So, says Rousseau, our ancestors got together, sat down, and thought this through – at least metaphorically. More literally, certain ways of dealing with anarchy evolved over thousands of years. But the principle is the same: We each agree to give up some of our freedom to take whatever we want, in order that we all can get what we need. The Social Contract, it's called.

This idea was very influential in its time, especially on the American and French Revolutions. Our founding fathers quite literally outlined the processes of our government and the rights and obligations of the citizenry in a social contract known as the Constitution. We call our system democracy, of course, but the Constitution limits our democratic freedom – the freedom of the majority – in order to protect the minority. And since you never know when it'll be your turn to be the minority, it has worked out quite well!

Naturalistic moral theories

The next group of theories, as you might suspect, are founded on ideas of a more empirical nature. Here, morality is something you experience in some fashion. These theories are called naturalistic. The simplest suggests that we perceive good and bad quite directly, with a "sixth sense," a **moral sense**. This is the brain child of the Earl of Shaftesbury. We often say to each other "that doesn't look right," and "can't you see that that's wrong?"

Egoism says that right and wrong can be perceived in terms of certain special feelings we call happiness. The term egoism is unfortunate here, because we tend to think in terms of selfishness and hedonism, which would be more appropriately placed under the subjectivist or emotivist form of relativism. The epicureans are examples of egoism: Things like friendship, honor, and even altruism give us certain positive emotions by which we recognize that they are good. Other things make us feel guilty or ashamed.

Analogous to contractarianism in the rational view, there is **utilitarianism** in the natural view. Invented by Jeremy Bentham and developed by the Mills, utilitarianism is best known for the phrase "the greatest happiness of the greatest number." Like egoism, happiness is seen as the way in which we perceive good and bad. This time, however, it is not our own happiness alone, but the happiness of those around us as well.

Intuitively, it is hard to disagree with the notion. But is in fact a difficult one. How do you know if others are happy? We're often not even certain if we ourselves are happy! What makes others happy may not be the same as what makes us happy. How are we to add up the various kinds of happiness? Is every person equal in the equation, or are some people's happiness more important than others? What about the poor minority in this case: Is it okay for them to be unhappy, as long as the majority is happy? Bentham thought that we could develop a "hedonistic calculus" to figure these things out – others are far from certain about that.

Again, our founding fathers were influenced by utilitarianism as well as the social contract, and the Declaration of Independence is loaded with utilitarian concepts (and contractarian ones!) Thomas Jefferson in particular was very interested in these issues.

There are many additional details to utilitarianism, and to many of these moral theories. But you will have to go to your local philosophy professor for those.

One of the things you may have spotted as you read the preceding paragraphs is that these rationalist and naturalist theories are not terribly exclusive: In fact, we could combine them all without stretching them too far out of shape. Just like the US has the Declaration of Independence and the Constitution, and just like science is a blend of rationalism and empiricism, we can use all six of the theories under moral realism at once!

Virtue ethics

There is one more branch of moral realism to talk about. This one is called virtue ethics. Instead of looking at good and bad as something impersonal that we need to recognize via reason or a moral sense, virtue theory sees good and bad as a quality of the person him or herself. It is a virtuous person that creates good acts, not good acts that add up to a virtuous person! This is also often called **perfectionism**.

It is found in a variety of interesting places: Aristotle proposed a virtue ethics in his famous *Nicomachean Ethics*; Buddha outlined a virtue ethics in his sutras; Plato has a virtue ethics, as do the stoics; and Frederic Nietzsche promotes a virtue ethics in *Thus Spake Zarathustra*, the book introduced "Superman" to the world! The idea is simple: Follow certain practices and you will become a virtuous man or woman. Then do what you will, and the results will be good.

I like virtue ethics a lot, but I have to admit there's a danger in it. Who decides what constitutes a virtuous person? The Nazis read Nietzsche and decided that they were the master race and could do no wrong. Nevermind that Nietzsche would never recognize his Superman in boot-stomping blackshirts – Nietzsche was dead by then! Even the gentle Buddhists have had to face the problem: If a certified enlightened master decides it might be a good idea to sleep with his students or take all their money, does that make these things moral? To respond by saying we were mistaken about his enlightenment is too easy a way out of the dilemma!

Another version of virtue ethics, called **situational ethics**, was developed recently by a Christian theologian named Joseph Fletcher. Uncomfortable with the "follow these rules or burn in hell" theology of some Christians, he said that Jesus had a quite different idea of morality (one quite like Buddha, actually). If you cultivate a loving attitude, you will naturally begin to do more good and less bad. In fact, whatever is done with love is by definition a good act. You could point out that some people do pretty awful things in the name of love, but we could consider these *mistaken* examples of love. But you could also argue that this is an example of the "No True Scotsman" fallacy: If something good comes out of love, fine; If something bad comes out of love, then, well, that wasn't *real* love!

Another aspect of his theory is that morality is always situational. He means that morality is always a matter

of a real person in a real situation, and we can't really judge them from outside that situation. Hypothetical moral situations, he says, are never real. There are always more details to be taken into account! This sounded way too much like moral relativism to conservative Christians, and so today many people misunderstand poor Fletcher and assume he was some kind of nasty nihilist!

Overlapping Moralities

There are three overlapping "moralities:"

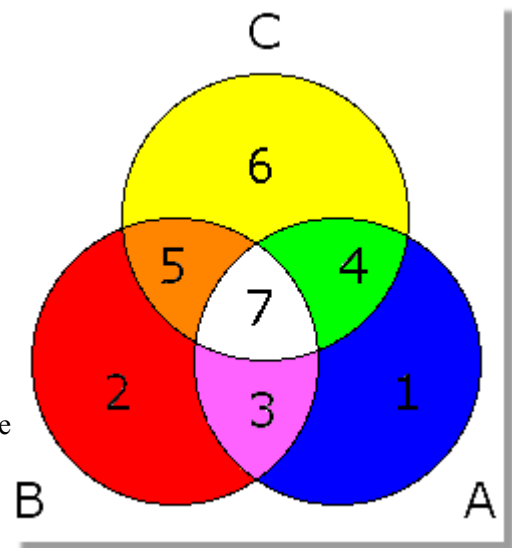
- A. Individual "morality" – individual opinion
- B. Society's "morality" – social convention
- C. Morality (the real deal)

For example: A plantation owner in 1850's Alabama.

A represents the plantation owner.

B represents the laws and social standards of 1850's Alabama.

C represents true morality.



1. Individual opinion only: The plantation owner believes that he can do anything he wants with his own property, including his slaves – something most of his neighbors find a bit extreme.

2. Social convention only: Slaves must be registered with the state and, although most find this reasonable, it is something the plantation owner never bothers with.

3. Individual opinion and social convention: Slavery was accepted and permitted in Alabama, which the plantation owner certainly agrees with.

4. Individual opinion and true morality: The plantation owner believes he has a moral duty to care for his elderly father, even though most of his neighbors would be just as happy to see the old coot croak.

5. Social convention and true morality: The state – and most people of that time and place – says that all human beings, slaves included, should be well treated. The plantation owner doesn't always agree.

6. True morality, separate from both individual opinion and social convention: Slavery is wrong and should be eliminated – even though that is something neither the plantation owner nor his neighbors nor his state legislators find acceptable!

7. All three: There are laws against murder, following general moral principles, and the plantation owner agrees.

How certain overlaps can be interpreted:

1. A good fit between person (A) and society (B): the conformist, the solid citizen.

2. A poor fit between person and society: the misfit, the outlaw, the insane.

3. A good person.

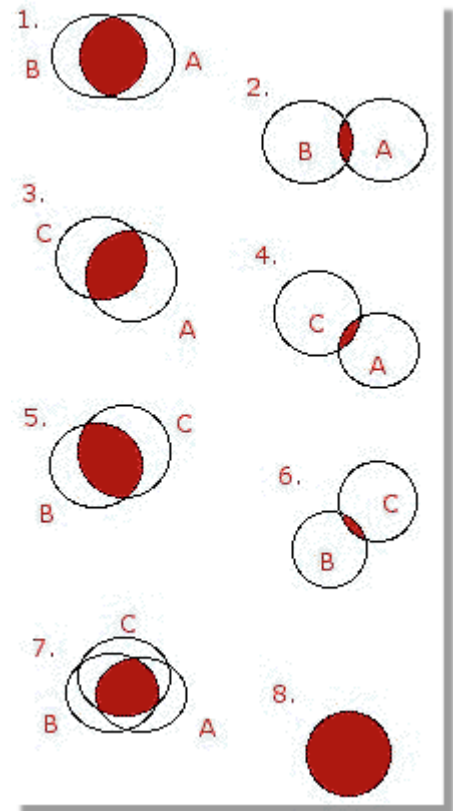
4. A bad person.

5. A good society.

6. A bad society.

7. Moving towards the ideal.

8. Moral perfection: The individual and society are in complete agreement, and the principles involved reflect true, "ultimate" morality. Not expected anytime soon!



The History of Psychology

Part One: The Ancients

Part Three: The 1800's

Part Four: The 1900's

[<http://www.ship.edu/%7Ecgboree/historyofpsych.html>]