

**Chapter 1 : Aristotle's Ethics (Stanford Encyclopedia of Philosophy)**

*The ICA/Index debate on being human in a scientific, ethical and human rights context demonstrated a genuine lack of confidence in talking about such a fundamental issue.*

Hardcover John Leslie is a professor of philosophy at the University of Guelph. But if this were to actually happen, humans today would be among the very earliest of the race -perhaps in the first 0. How likely is it that we are that special? In the year the population of earth might be 12 billion people. Of all the humans who had ever lived, one in ten would be alive in that year. Instead of expecting to be in a remarkably early stage of human civilization, say in the first 0. To me this argument seems flimsy, sophistic, and somehow just wrong, but Leslie does an impressive and thorough job of refuting the many objections to it. My eyes glazed over during some of these detailed and convoluted defences, but then I only took one philosophy course in university. What I liked this book for was the exploration of the many delicious ways in which humanity could be wiped out. Some of these faces of doom might seem quite far-fetched and unlikely, but all have some formidable scientists and philosophers backing them. Here is an abbreviated list: I believe a few well-placed bombs could de-stabilize the United States almost overnight. Such weapons are less costly than nuclear weapons, easier to conceal, and could be more dangerous because their field of destruction is harder to limit. Their effects are often hard to predict. Many deadly diseases are developing immunity to our best drugs. New viruses are thought to filter down from outer space. Global warming could thaw out some virulent disease from the past, such as the flu, which preferred younger, healthy victims. As they expired, they vented pints of the highly infectious liquid from their mouths and noses. If Shoemaker-Levy had hit earth instead of Jupiter, we would all be having drinks with the dinosaurs right now in the Restaurant At the End of the Universe. Earth would be bathed in deadly rays, cleansing it of all life. As investigated by Chaos Theory: Seen already to a certain extent in rich nations. Okay, so Y2K was a bust. We are becoming more and more reliant on them. The vacuum we live in is not stable, it is meta-stable. This is because it is not a true vacuum. It is filled with a force field a scalar field and so is a pseudo-vacuum. While stable at low energies, a high energy experiment such as planned in conjunction with the new super particle-colliders due to come on line in the near future might provide enough of a jolt to destabilize it like a ball bearing resting in a hollow on a wooden incline that starts rolling because of a nudge. If and when E. Suppose a fundamentalist U. S president or general wanted to hasten Judgement Day a wee bit by pressing a certain red button see Dr Strangelove. Alternatively, someone in a position of power might, when looking at the prevalence of evil in the world, agree with Schopenhauer that "it would have been better if our planet had remained like the moon, a lifeless mass. We should be asking ourselves as individuals, as nations, and as a species, what we can do to lower their risk of occurring. Our survival is far from assured.

**Chapter 2 : Ethics in human research**

*The ICA/Index debate on being human in a scientific, ethical and human rights context demonstrated a genuine lack of confidence in talking about such a fundamental issue. The speakers did not dare to put forward defining statements on what being human is in our world of scientific and technological.*

What Does it Mean to be Human? One of the most fundamental questions that is increasingly facing bioethicists and society alike is the question, "What does it mean to be human? I hold that every human being is a human person, and every human person is a human being. I also hold that the existence of a human being, say my own existence, began when my bodily existence began, that is when I was conceived. Related An Evaluation of the Arguments on "Personhood" There are some who do not maintain that human beings are human persons as I do. These differences in view indicate that here we are faced with a problem about the recognition of what we take human beings to be as we experience them, and so as we experience ourselves. Obviously, the facts, say, about our embryonic beginnings--as much as the beginnings of other animals--are well known to biologists and to most of us; the facts are the same, they are written in good biology books. Yet these facts, these realities, are seen to be different, interpreted to be different; so different that some would say: What is it that underlies this difference in interpretation? What makes our vision differ? But for human beings, this awareness is not only a matter of physical vision, not only a matter of intelligence but also a matter of will and of imagination. For some it appears impossible to imagine themselves as embryos. We must challenge our poor imagination with our intelligence and allow it to see beyond only what we want to see. The human being by his or her free will can pay attention, or listen, or want to be aware, or not at all. I am confident enough to say that "lack of awareness is the root of all evil;" this lack, of course, may be deliberate or not. By this attention truth is born; it dawns on us, i. So let me draw your attention to three fundamental aspects of the human being to which we have to pay attention in order to see them in relation to the kind of beings we are: Every one of us has a history; the most basic aspect of our history is our bodiliness--the fact that we are embodied beings, living physical organisms. Our organism begins at conception, and is then genetically constituted, and in that very fact endowed with human powers and potential for growth. The historical continuity of embodiment, say, about myself, can be traced back to conception when I was constituted organically as a zygote, and then embryo, fetus, infant, child, and now an adult who is still here. I have been the same being all the way through. So in bodily terms I can rightly and truly say, "look, I am here, as a female being, and I began as such a bodily being at conception. At conception, I was endowed with a physical organism that had the actual inner power to become what I am now. That power was there from the beginning. The development of a living organism, of a living being, is indeed a process, but the being itself with the process of coming-to-be-an-adult has been there all the time. The being has been total, one, yet developing all the time. Living beings, and so human beings, are not like machines or houses, that come to be by installments. You may have half a clock, or half a house constructed, but you cannot have half of a dog, or half of a human being. Either we are fully present or we are not present at all. Let me now draw your attention a little more to the idea of the human being as a unity, and organic whole. Every living being is generated as a whole, grows as a whole, moves as a whole, relates to others as a whole, dies as a whole. The early embryo as a living whole is a stable organism. As I have said elsewhere: The kind of life that a zygote or an embryo has, because of the power it actually possesses is personal power, is personal life, the life of a personal being. By this inner power the zygote turns into the adult person. And clearly, the presence of personal powers must be attributed to a personal subject, they belong to someone, they are of someone, they are of a personal being. It is my belief that it is impossible to separate the two without doing an injustice to the logic of life. And once that tyranny is unleashed, as we know, it can be almost impossible to undo the harm that comes from it. Issues of Bioethics and Law. Pleroma Press, Dublin, , pp.

**Chapter 3 : Posthuman - Wikipedia**

*By Jiwon Choi, VI Form. Vonnegut's Cat's Cradle: Thoughts on Science, Ethics, and Being Human. I am drawn to science. I always loved history and literature, too, but science made sense to me, scratched my itch in a way other subjects never did.*

Aristotle had a lot of free time and delved into the study of many subjects besides philosophy. One of his favorite fields was biology, and his preference for the life sciences led him to think in different ways than his teacher Plato, whose favorite field was mathematics. The main difference between Plato and Aristotle is this: Plato thought ethics was an exact theoretical science; Aristotle thought precision was extremely difficult in a science such as ethics. Please note that "science" is being used in its ancient sense of knowledge in general. Here is the common picture of the world before the Ptolemaic system was introduced. It is usually called the Three-Story Universe and is found in many ancient texts, including the Bible. Click here for more details about this view. God is a perfect knower. A perfect knower would know only perfect things. Everything below the orbit of the moon is imperfect. Therefore, God does not know anything below the level of the moon. How can a perfect being have any relations with an imperfect world? How does an unchanging, eternal being relate to changing, finite beings? Aristotle believed and everyone and everything had a purpose. Everything has an "entelechy. The human entelechy is rational activity in pursuit of the good. Such a view emphasizes the individual as an integral and subordinate part of the whole. Politics, for Aristotle, is the master science of the good. The end of the state is more important than the end of each individual. Humans are naturally social and political animals. Aristotle states that the collective goals of the state are more "god-like. In this passage Aristotle makes his position against this "procedural" democracy very clear: Otherwise, a political association sinks into a mere alliance, which only differs in space from other forms of alliance where the members live at a distance from one another. Otherwise, too, law becomes a mere covenant--or. For him the citizen does not belong to himself, "but rather that all belong to the city" Politics bks. Common religious rites, citizen messes, required military service, regulated ages for marriage and rules for child bearing, and mandatory exposure of deformed infants. Ancient views of the relation of the citizen to the state continued even after the founding of the American republic. The Anti-Federalist Agrippa i. Constitution that was ratified argued for the preservation of small, independent states where men free propertied males were totally in charge, just as in ancient Greece could keep "their blood pure" and preserve "their religion and morals. Many people in the southern states used such arguments to support the Confederate cause and some today use the same arguments to fight the Federal Government. Does this mean, then, that moral rules are "conventions," made up or created by humans? Aristotle avoids ethical relativism because of his confidence in human reason and experience to decide on general courses of action. Plato approached ethical questions with a formal, abstract approach, analyzing each just as he would analyze a math problem. Aristotle, though, believed that because of all the human variables found in ethics but not found in the formal sciences , mathematical precision was impossible. A better translation of eudaimonia would be "contentment": It is not the gratification of pleasure, but "consciousness of virtue. Think of the American Declaration of Independence. What do you think it really means by the "pursuit of happiness"? In the early books of the Nicomachean Ethics, one could say that in addition to the two explicit criteria for eudaimonia--finality and self-sufficiency--there are also two implicit requirements: The humanistic criterion is necessary to avoid the implication that the highest good is god-given, a suggestion that Aristotle appears to reject at b Our next task is to determine the highest good and to figure out how to attain it. Could we say that the highest good is honor, pleasure, reason, or virtue? For example, one sense of honor is that it is bestowed upon someone by other people. Reflecting on this story may give you a different idea of the value of honor. Aristotle believed, further, that only happiness is "final"; in other words, it is not a means to anything else. For example, maybe you want good grades in college because they are a means to a good job. A good job is a means to earn money to live on. So you see that each thing you want is a means to something else. It is, in a word, final. Another interesting point made by Bernard Gert is that one can regret pleasures that one used to have for me having killed wild game , but one cannot regret

happiness. Happiness then must be always remembered with pleasure. Just as with true love happiness is never having to say that you were sorry. One will be content with what one has done and achieved. This is what Aristotle means by the virtue of pride or high-mindedness [megalopsychia]. One will have realized that one has chosen the right ends for the right reasons. An impartial observer would have to see this life as successful, too? Notice that a happiness as a successful life necessitates the setting and achieving of some life goals as important external goods. One then, over an entire life, could not say that "this was the happiest moment of my life. We can deliberately aim at pleasure and get it if conditions are right, but the Zen Buddhists say that we cannot aim at happiness. This means that the causal relation between desires and their satisfactions is very different between the causes of happiness. One it might be more appropriate to say that the virtues are the necessary conditions not physical causes of happiness. Virtues do not cause happiness in the same way that the stimulation of sense organs causes pleasure. Recall that Aristotle believed everything had a proper function or virtue arete. For example, the virtue of a good knife is to be sharp. The virtue of a racehorse is to run fast. So, what then is the virtue of a human being? A race horse develops its running capacity; a person develops his or her rational soul. If a person does this, then she functions well in society and attains happiness. All first trimester fetuses have a nutritive soul, as do all animals and plants. The main characteristic of the nutritive soul is to take in nutrition and grow. A being with only a nutritive soul cannot move, cannot perceive things, and cannot experience pain or pleasure. This occurs when the fetus starts to move--about the beginning of the second trimester. For some odd and unsubstantiated reason, Aristotle thought that male fetuses moved at 40 days and poor little females did not until days. The later period is in fact when fetuses begin to move in the womb. Since animals can also move, they also have sensitive souls. Animals and human beings are have sense organs, another essential component of the sensitive soul. Sensitive souls can perceive the world about them, and they can experience pain and pleasure. Only human beings and God gods have rational souls; only they can be considered persons, which, following Aristotle, Euro-American religion, law, and morality have defined as rational beings. The rational soul develops naturally out of the fusion of the sensitive and nutritive souls. Christian philosophers changed this: The Christian philosopher Thomas Aquinas thought that the rational soul was infused by God late in pregnancy. Study these slides from the fetal brain below. The brain on the left essentially cannot think because there are very few connections between the brain cells and the neocortex has not yet developed into its six layers. The human function or virtue is to follow a rational principle, and the final human good is activity of the entire soul in accordance with reason. There are three things in the soul which control human actions: The first two reside in the sensitive soul and the latter in the rational soul. No moral action can originate in sensation; if it did, then animals would exhibit a moral sense. Moral action, then, must be a combination of intellect and character i. The "irrational" nutritive and the sensitive soul and rational. We have no control, obviously, over the "nutritive" or involuntary functions of the body for example, growing older; going gray. Of course sometimes our emotions get out of control: For more on the soul read this link. Goods of the soul: Goods of the body: A "quick burst" of happiness is not enough. Happiness has to last a whole life in order to say you had "true" happiness. Besides the "internal good" of virtue, one also needs the goods of the body: You also need the "external" goods:

**Chapter 4 : ON SCIENCE, MORALITY AND BEING HUMAN | Pandaemonium**

*While the film invites the audience to consider some fairly weighty questions around science, ethics, belonging and the nature of being human, there are also flashes of humour and some unexpected moments which set the film apart from similar genre movies.*

To maintain a healthy weight, get more exercise and worry less about cutting calories. The beverage giant has teamed up with influential scientists who are advancing this message in medical journals, at conferences and through social media. To help the scientists get the word out, Coke has provided financial and logistical support to a new nonprofit organization called the Global Energy Balance Network, which promotes the argument that weight-conscious Americans are overly fixated on how much they eat and drink while not paying enough attention to exercise. Featured Links Research integrity: In the wake of evidence that many research findings are not reproducible, the scientific community has launched initiatives to increase data sharing, transparency and open critique. As with any new development, there are unintended consequences. Many measures that can improve science – shared data, post-publication peer review and public engagement on social media – can be turned against scientists. Featured Links Mental capacity to consent to research? Understanding study information, which is an important aspect of demonstrating capacity to give informed consent, can be a particular challenge. This study surveyed clinical researchers to discover: Everything happens in the blink of an eye, and if you have your eyes closed for more than a second, you miss so many important advancements, specifically in the STEM fields. Many practices are going on today, such as stem cell research, among others, that have divided experts. There is a fine line that STEM professionals are finding themselves progressing along in regards to morality. More Than Just Numbers! By Khob Raj Bhandari December 12, With the advancement of science and technologies, the world has seen tremendous amount of research studies being undertaken in different avenues of science. There is an increasing depth of knowledge including a broad range of topics from small microorganisms, human systems to the extraterrestrial mission, for an instance, promising a future journey of mankind to the Mars. It is obvious that necessity drives the innovations, and unsurprisingly there is an increased interest and investments in these fields. With the quest of helping the mankind and making lives easier, even the government and private parties are funding the studies, and scientists are assiduously working to discover new things, test old hypothesis, improve the existing practices or to modify the currently available devices. With this rush, it is obvious that every one competes for the research publications, not just for the academic contribution but to ensure they receive the regular funding or get a good position in a company, or a tenure tract faculty position in a reputed university. By Srujana Lam December 12, In the internet age, a few companies have come to the forefront as industry leaders that have changed the way we live and communicate. Social media sites, like Facebook and Twitter, have accelerated the speed and ease with which we can connect with friends, family, and veritable strangers. Technology behemoth Google has integrated itself into every nook of our lives with services that range from email to photos to fitness tracking to online advertisements. But as important as these services have become to the everyday routines of millions of people, their immense potential as tools of social change was only realized with movements like the Arab Spring and Black Lives Matter, where activists used technology to mobilize protestors and spread real-time information that was not being reported on by the media. For many, these events only confirmed what they had believed all along: By Sakhitha Chowdary Kanyadhara December 12, The education and training of IT professionals usually focuses on technical knowledge and skills. You learn how to perform tasks, yet with little thought of how those abilities can be misused. That power can be abused, either deliberately or inadvertently. But there are no standardized training requirements for hanging out your shingle as an IT security consultant. Many of the ethical issues that face IT professionals involve privacy. Featured Course Spring After introducing the students to the basic principles of writing, the course emphasizes practice on topics drawn from the science history record. The topics are diverse covering all STEM fields.

**Chapter 5 : When Do Human Beings Begin?**

*Medical science and ethics along with the notion of sophistication have now triggered this already growing extinction event which is consuming our planet in this very present time and has definitely weakened the human species.*

Surgical experiments[ edit ] Throughout the s, J. Marion Sims , who is often referred to as "the father of gynecology ", performed surgical experiments on enslaved African women, without anaesthesia. Seeing a research opportunity, he cut open her head, and inserted needle electrodes into her exposed brain matter. When the needle entered the brain substance, she complained of acute pain in the neck. In order to develop more decided reactions, the strength of the current was increased Very soon, the left hand was extended as if in the act of taking hold of some object in front of her; the arm presently was agitated with clonic spasm; her eyes became fixed, with pupils widely dilated; lips were blue, and she frothed at the mouth; her breathing became stertorous; she lost consciousness and was violently convulsed on the left side. The convulsion lasted five minutes, and was succeeded by a coma. She returned to consciousness in twenty minutes from the beginning of the attack, and complained of some weakness and vertigo. Leo Stanley, chief surgeon at the San Quentin Prison , performed a wide variety of experiments on hundreds of prisoners at San Quentin. Many of the experiments involved testicular implants, where Stanley would take the testicles out of executed prisoners and surgically implant them into living prisoners. In other experiments, he attempted to implant the testicles of rams , goats , and boars into living prisoners. Stanley also performed various eugenics experiments, and forced sterilizations on San Quentin prisoners. A review of the medical literature of the late 19th and early 20th centuries found more than 40 reports of experimental infections with gonorrheal culture, including some where gonorrheal organisms were applied to the eyes of sick children. Army doctors in the Philippines infected five prisoners with bubonic plague and induced beriberi in 29 prisoners; four of the test subjects died as a result. He did this without the consent of the patients, and without informing them of what he was doing. All of the subjects became sick and 13 died. In the study, they refer to the children as "material used". Knowles released a study describing how he had deliberately infected two children in an orphanage with *Molluscum contagiosum* "a virus that causes wartlike growths" after an outbreak in the orphanage, in order to study the disease. Hideyo Noguchi of the Rockefeller Institute for Medical Research injected hospital patients some of whom were children with syphilis. He was later sued by the parents of some of the child subjects, who allegedly contracted syphilis as a result of his experiments. In the experiment, impoverished black males who had syphilis were offered "treatment" by the researchers, who did not tell the test subjects that they had syphilis and did not give them treatment for the disease, but rather just studied them to chart the progress of the disease. By , penicillin became available as treatment, but those running the study prevented study participants from receiving treatment elsewhere, lying to them about their true condition, so that they could observe the effects of syphilis on the human body. By the end of the study in , only 74 of the test subjects were alive. The study was not shut down until , when its existence was leaked to the press, forcing the researchers to stop in the face of a public outcry. It may save you much trouble if you publish your paper The Journal is under constant scrutiny by the anti-vivisectionists who would not hesitate to play up the fact that you used for your tests human beings of a state institution. That the tests were wholly justified goes without saying. Black inoculated a twelve-month-old baby with herpes who was "offered as a volunteer". He submitted his research to The Journal of Experimental Medicine which rejected the findings due to the ethically questionable research methods used in the study. The editor of the Journal of Experimental Medicine, Francis Peyton Rous, called the experiment "an abuse of power, an infringement of the rights of an individual, and not excusable because the illness which followed had implications for science. At the Nuremberg trials , Nazi doctors cited the precedent of the malaria experiments as part of their defense. In related studies from to , Dr. Alf Alving, a professor at the University of Chicago Medical School, purposely infected psychiatric patients at the Illinois State Hospital with malaria , so that he could test experimental treatments on them. Approximately people were infected as part of the study including orphan children. The team was led by John Charles Cutler , who later participated in the Tuskegee syphilis experiments. Cutler chose to do the study in

Guatemala because he would not have been permitted to do it in the United States. In when the research was revealed, the US officially apologized to Guatemala for the studies. Navy sprayed large quantities of the bacteria *Serratia marcescens* "considered harmless at this time" over the city of San Francisco during a project called Operation Sea-Spray. Numerous citizens contracted pneumonia-like illnesses, and at least one person died as a result. Joseph Stokes of the University of Pennsylvania deliberately infected female prisoners with viral hepatitis. Southam, a Sloan-Kettering Institute researcher, injected live cancer cells, known as HeLa cells, into prisoners at the Ohio State Penitentiary and cancer patients. Also at Sloan-Kettering, healthy women were injected with live cancer cells without being told. The doctors stated that they knew at the time that it might cause cancer. The San Francisco Chronicle, December 17, 1950, p. 1. It was alleged that the experiment tripled the whooping cough infections in Florida to over one-thousand cases and caused whooping cough deaths in the state to increase from one to 12 over the previous year. This claim has been cited in a number of later sources, although these added no further supporting evidence. Operation Big Itch, in 1950, was designed to test munitions loaded with uninfected fleas *Xenopsylla cheopis*. In May 1950, uninfected mosquitoes *Aedes aegypti* were dropped over parts of the U.S. The mosquito tests were known as Operation Big Buzz. Southam, who in 1950 had done the same to prisoners at the Ohio State Prison, in order to "discover the secret of how healthy bodies fight the invasion of malignant cells". The administration of the hospital attempted to cover the study up, but the New York medical licensing board ultimately placed Southam on probation for one year. Army performed tests which involved spraying several U.S. The personnel were not notified of the tests, and were not given any protective clothing. Chemicals tested on the U.S. Human radiation experiments Researchers in the United States have performed thousands of human radiation experiments to determine the effects of atomic radiation and radioactive contamination on the human body, generally on people who were poor, sick, or powerless. The experiments included a wide array of studies, involving things like feeding radioactive food to mentally disabled children or conscientious objectors, inserting radium rods into the noses of schoolchildren, deliberately releasing radioactive chemicals over U.S. Much information about these programs was classified and kept secret. Three Decades of Radiation Experiments on U.S. It published results in Welsome later wrote a book called The Plutonium Files. Radioactive iodine experiments[ edit ] In a operation called the "Green Run," the U.S. In one study, researchers gave pregnant women from 0.1 to 3 microcuries. In another study, they gave 25 newborn babies who were under 36 hours old and weighed from 5 to 10 pounds. In the experiment, researchers from Harper Hospital in Detroit orally administered iodine to 65 premature and full-term infants who weighed from 2 to 10 pounds. The children subsequently underwent painful experimentation without adult consent. Many were given spinal taps "for which they received no direct benefit. According to the CBS story, over 1,000 patients died at the clinic. Fidler at the Oak Ridge National Laboratory in Tennessee [66] Between 1945 and 1950, researchers at the University of Rochester injected uranium and uranium in dosages ranging from 6 to 100 milligrams. William Sweet injected eleven terminally ill, comatose and semi-comatose patients with uranium in an experiment to determine, among other things, its viability as a chemotherapy treatment against brain tumors, which all but one of the patients had one being a mis-diagnosis. Sweet, who died in 1950, maintained that consent had been obtained from the patients and next of kin. San Francisco Medical Center in 1950 Joseph Gilbert Hamilton, a Manhattan Project doctor in charge of the human experiments in California [71] had Stevens injected with Pu-239 and Pu-240 without informed consent. Stevens never had cancer; a surgery to remove cancerous cells was highly successful in removing the benign tumor, and he lived for another 20 years with the injected plutonium. Neither Albert Stevens nor any of his relatives were told that he never had cancer; they were led to believe that the experimental "treatment" had worked. His cremated remains were surreptitiously acquired by Argonne National Laboratory Center for Human Radiobiology in 1950 without the consent of surviving relatives. Some of the ashes were transferred to the National Human Radiobiology Tissue Repository at Washington State University, [72] which keeps the remains of people who died having radioisotopes in their body. Three patients at Billings Hospital at the University of Chicago were injected with plutonium. The mixtures contained radioactive iron and the researchers were determining how fast the radioisotope crossed into the placenta. At least three children are known to have died from the experiments, from cancers and leukemia. Fernald State School in Massachusetts, in an experiment sponsored by the U.S. Atomic Energy Commission and the Quaker Oats corporation, 73 mentally disabled

children were fed oatmeal containing radioactive calcium and other radioisotopes, in order to track "how nutrients were digested". The children were not told that they were being fed radioactive chemicals; they were told by hospital staff and researchers that they were joining a "science club". In the experiments, the subjects were exposed to additional burning, experimental antibiotic treatment, and injections of radioactive isotopes. Fernald State School, in , researchers gave mentally disabled children radioactive calcium orally and intravenously. They also injected radioactive chemicals into malnourished babies and then collected cerebrospinal fluid for analysis from their brains and spines. Many were chosen from the Age Center of New England and had volunteered for "research projects on aging". Such tests had dispersed radioactive contamination worldwide, and examination of human bodies could reveal how readily it was taken up and hence how much damage it caused. Of particular interest was strontium in the bones. Infants were the primary focus, as they would have had a full opportunity to absorb the new contaminants. The bones were cremated and the ashes analyzed for radioisotopes. This project was kept secret primarily because it would be a public relations disaster; as a result parents and family were not told what was being done with the body parts of their relatives. Patients were told that they were receiving a "treatment" that might cure their cancer, but the Pentagon was trying to determine the effects of high levels of radiation on the human body. One of the doctors involved in the experiments, Robert Stone, was worried about litigation by the patients. He referred to them only by their initials on the medical reports. He did this so that, in his words, "there will be no means by which the patients can ever connect themselves up with the report", in order to prevent "either adverse publicity or litigation". Eugene Saenger, funded by the Defense Atomic Support Agency, performed whole body radiation experiments on more than 90 poor, black, advanced stage cancer patients with inoperable tumors at the University of Cincinnati Medical Center during the Cincinnati Radiation Experiments. He forged consent forms, and did not inform the patients of the risks of irradiation. Critics have questioned the medical rationale for this study, and contend that the main purpose of the research was to study the acute effects of radiation exposure. Carl Heller, irradiated the testicles of Oregon and Washington prisoners.

**Chapter 6 : Being Human: Science and Philosophy of Cloning**

*HUMAN GENOME EDITING: SCIENCE, ETHICS, AND GOVERNANCE Consider and apply the global processes in governance of human gene editing () â€¢ Promoting Well-Being.*

This article has been cited by other articles in PMC. Human research is research conducted with or about people, or their data or tissues, with the sole intention to do good. Human research involves significant risks and it is possible for things to go wrong. Despite the best of intentions and care in planning and practice, sometimes things go awry. Now and then mishaps may arise because of technical errors or an ethical insensitivity, neglect or disregard. On rare occasions, the practice of research has even involved deliberate and appalling violation of human beings. Earlier, in the s, there were no regulations regarding the ethical use of human subjects in research. Here is a brief account of why rules and regulations were established and the need for all established research institutes to have an IRB became a necessity. Among the charges were that German physicians conducted medical experiments on thousands of concentration camp prisoners without their consent. Most of the subjects of these experiments died or were permanently crippled as a result. Although it did not carry the force of law, the Nuremberg Code was the first international document, which advocated voluntary participation and informed consent. Issues addressed in the declaration of Helsinki include: Six hundred low-income, African-American males, of whom were infected with syphilis, were monitored for 40 years. Free medical examinations were conducted; however, the subjects were not told about their disease. Even though a proven cure penicillin became available in the s, the study continued until , with participants being denied treatment. In some cases, when the subjects were diagnosed as having syphilis by other physicians, researchers intervened to prevent treatment. The study sparked off a wide-scale public outrage when it became publicly known, and the US government had to close it in . Due to the publicity from the Tuskegee Syphilis Study, a National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research was formed in the US, which was in charge of identifying the basic ethical principles that should underline the conduct of biomedical and behavioral research involving human subjects and to develop guidelines that should be followed, to assure that such research is conducted in accordance with those principles. The Report is a statement of the basic ethical principles and guidelines that should assist in resolving the ethical problems that surround the conduct of research with human subjects. The three basic ethical principles and their corresponding applications according to the report are: The Belmont Report established three basic ethical principles â€” respect for persons, beneficence, and justice â€” which are the cornerstones for the regulations involving human subjects. The main elements of the Common Rule include: In our country the guidelines, which are often cited and followed, are those issued by the Indian Council of Medical Research, New Delhi. Since then it has been revised and the latest version has been published in Basic concepts for capacity building. Human research ethics handbook - commentary on National statement on ethical conduct in research involving humans. University of Nevada; History of research ethics. Ethical guidelines for biomedical research on human participants. Indian Council of Medical Research; Statement of general principles on ethical considerations involving human participants; pp.

**Chapter 7 : Being Human: How Should We Define Life and Personhood?**

*If human beings have a spirit as well as a body, then a human being has value beyond the condition and developmental stage of his body. The identity of a human being involves more than just the state of the physical body or the measure of mental capacity.*

International Journal of Sociology and Social Policy , Introduction The question as to when the physical material dimension of a human being begins is strictly a scientific question, and fundamentally should be answered by human embryologistsâ€”not by philosophers, bioethicists, theologians, politicians, x-ray technicians, movie stars, or obstetricians and gynecologists. The question as to when a human person begins is a philosophical question. Current discussions on abortion, human embryo research including cloning, stem cell research, and the formation of mixed-species chimeras , and the use of abortifacients involve specific claims as to when the life of every human being begins. If the "science" used to ground these various discussions is incorrect, then any conclusions will be rendered groundless and invalid. The purpose of this article is to focus primarily on a sampling of the "scientific" myths, and on the objective scientific facts that ought to ground these discussions. At least it will clarify what the actual international consensus of human embryologists is with regard to this relatively simple scientific question. In the final section, I will also address some "scientific" myths that have caused much confusion within the philosophical discussions on "personhood. When does a human being begin? Getting a handle on just a few basic human embryological terms accurately can considerably clarify the drastic difference between the "scientific" myths that are currently circulating, and the actual objective scientific facts. This would include such basic terms as: Further, more complicated, details can be obtained by investigating any well-established human embryology textbook in the library, such as some of those referenced below. Please note that the scientific facts presented here are not simply a matter of my own opinion. They are direct quotes and references from some of the most highly respected human embryology textbooks, and represent a consensus of human embryologists internationally. Basic human embryological facts To begin with, scientifically something very radical occurs between the processes of gametogenesis and fertilizationâ€”the change from a simple part of one human being i. That is, upon fertilization, parts of human beings have actually been transformed into something very different from what they were before; they have been changed into a single, whole human being. During the process of fertilization, the sperm and the oocyte cease to exist as such, and a new human being is produced. To understand this, it should be remembered that each kind of living organism has a specific number and quality of chromosomes that are characteristic for each member of a species. The number can vary only slightly if the organism is to survive. For example, the characteristic number of chromosomes for a member of the human species is 46 plus or minus, e. Every somatic or, body cell in a human being has this characteristic number of chromosomes. Even the early germ cells contain 46 chromosomes; it is only their mature forms - the sex gametes, or sperms and oocytes - which will later contain only 23 chromosomes each.. This is necessary so that after their fusion at fertilization the characteristic number of chromosomes in a single individual member of the human species 46 can be maintainedâ€”otherwise we would end up with a monster of some sort. To accurately see why a sperm or an oocyte are considered as only possessing human life, and not as living human beings themselves, one needs to look at the basic scientific facts involved in the processes of gametogenesis and of fertilization. It may help to keep in mind that the products of gametogenesis and fertilization are very different. The products of gametogenesis are mature sex gametes with only 23 instead of 46 chromosomes. The product of fertilization is a living human being with 46 chromosomes. Gametogenesis refers to the maturation of germ cells, resulting in gametes. Fertilization refers to the initiation of a new human being. The timing of gametogenesis is different in males and in females. The later stages of spermatogenesis in males occur at puberty, and continue throughout adult life. The process involves the production of spermatogonia from the primitive germ cells, which in turn become primary spermatocytes, and finally spermatidsâ€”or mature spermatozoa sperms. These mature sperms will have only half of the number of their original chromosomesâ€”i. By birth, only about , - 2 million remain. By puberty, only about , remain. The

process includes several stages of maturation—the production of oogonia from primitive germ cells, which in turn become primary oocytes, which become definitive oocytes only at puberty. In fact, it does not reduce its number of chromosomes until and unless it is fertilized by the sperm, during which process the definitive oocyte becomes a secondary oocyte with only 23 chromosomes. Many people confuse meiosis with a different process known as mitosis, but there is an important difference. Mitosis refers to the normal division of a somatic or of a germ cell in order to increase the number of those cells during growth and development. The resulting cells contain the same number of chromosomes as the previous cells—in human beings, Meiosis refers to the halving of the number of chromosomes that are normally present in a germ cell - the precursor of a sperm or a definitive oocyte - in order for fertilization to take place. The resulting gamete cells have only half of the number of chromosomes as the previous cells—in human beings, He also sits on the international board of Nomina Embryologica which determines the correct terminology to be used in human embryology textbooks internationally: These cells are produced in the gonads, i. During the differentiation of gametes, diploid cells those with a double set of chromosomes, as found in somatic cells [46 chromosomes] are termed primary, and haploid cells those with a single set of chromosomes [23 chromosomes] are called secondary. The reduction of chromosomal number Spermatogenesis, the production of spermatozoa, continues from immediately after puberty until old age. It takes place in the testis, which is also an endocrine gland, the interstitial cells of which secrete testosterone. Previous to puberty, spermatogonia in the seminiferous tubules of the testis remain relatively inactive. After puberty, under stimulation from the interstitial cells, spermatogonia proliferate. When these undergo their first maturation division meiosis 1, they become secondary spermatocytes. The second maturation division meiosis 2 results in spermatids, which become converted into spermatozoa. Oogonia derived from primordial germ cells multiply by mitosis and become primary oocytes. The number of oogonia increases to nearly seven million by the middle of prenatal life, after which it diminishes to about two million at birth. From these, several thousand oocytes are derived, several hundred of which mature and are liberated ovulated during a reproductive period of some thirty years. Prophase of meiosis 1 begins during fetal life but ceases at the diplotene state, which persists during childhood. After puberty, meiosis 1 is resumed and a secondary oocyte The secondary oocyte is a female gamete in which the first meiotic division is completed and the second has begun. From oogonium to secondary oocyte takes from about 12 to 50 years to be completed. Meiosis 2 is terminated after rupture of the follicle ovulation but only if a spermatozoon penetrates. Hence a human ovum does not [really] exist. Thus, for fertilization to be accomplished, a mature sperm and a mature human oocyte are needed. Before fertilization, each has only 23 chromosomes. They each possess "human life," since they are parts of a living human being; but they are not each whole living human beings themselves. They each have only 23 chromosomes, not 46 chromosomes—the number of chromosomes necessary and characteristic for a single individual member of the human species. Furthermore, a sperm can produce only "sperm" proteins and enzymes; an oocyte can produce only "oocyte" proteins and enzymes; neither alone is or can produce a human being with 46 chromosomes. Thus these terms themselves would qualify as "scientific" myths. The commonly used term, "fertilized egg," is especially very misleading, since there is really no longer an egg or oocyte once fertilization has begun. What is being called a "fertilized egg" is not an egg of any sort; it is a human being. The zygote is characteristic of the last phase of fertilization and is identified by the first cleavage spindle. It is a unicellular embryo. The fusion of the sperm with 23 chromosomes and the oocyte with 23 chromosomes at fertilization results in a live human being, a single-cell human zygote, with 46 chromosomes—the number of chromosomes characteristic of an individual member of the human species. This cell results from the union of an oocyte and a sperm. A zygote is the beginning of a new human being i. The expression fertilized ovum refers to a secondary oocyte that is impregnated by a sperm; when fertilization is complete, the oocyte becomes a zygote. In fact, this genetic growth and development has been proven not to be directed by the mother. In sum, a mature human sperm and a mature human oocyte are products of gametogenesis—each has only 23 chromosomes. They each have only half of the required number of chromosomes for a human being. They cannot singly develop further into human beings. They produce only "gamete" proteins and enzymes. They do not direct their own growth and development. And they are not individuals, i. They are only

parts—each one a part of a human being. On the other hand, a human being is the immediate product of fertilization. It simply divides and grows bigger and bigger, developing through several stages as an embryo over an 8-week period. Several of these developmental stages of the growing embryo are given special names, e. Given these basic facts of human embryology, it is easier to recognize the many scientifically inaccurate claims that have been advanced in the discussions about abortion, human embryo research, cloning, stem cell research, the formation of chimeras, and the use of abortifacients—and why these discussions obfuscate the objective scientific facts. The following is just a sampling of these current "scientific" myths. But human sperms and human ova are human life, too. So proliferers would also have to agree that the destruction of human sperms and human ova are no different from abortions—and that is ridiculous! As pointed out above in the background section, there is a radical difference, scientifically, between parts of a human being that only possess "human life" and a human embryo or human fetus that is an actual "human being. Destroying a human sperm or a human oocyte would not constitute abortion, since neither are human beings. The issue is not when does human life begin, but rather when does the life of every human being begin. A human kidney or liver, a human skin cell, a sperm or an oocyte all possess human life, but they are not human beings—they are only parts of a human being. As demonstrated above, the human embryonic organism formed at fertilization is a whole human being, and therefore it is not just a "blob" or a "bunch of cells. As demonstrated above, scientifically there is absolutely no question whatsoever that the immediate product of fertilization is a newly existing human being. A human zygote is a human being. It is not a "potential" or a "possible" human being. The immediate product of fertilization is genetically already a girl or a boy—determined by the kind of sperm that fertilizes the oocyte.

**Chapter 8 : Unethical human experimentation in the United States - Wikipedia**

*With the advancement of science and technologies, the world has seen tremendous amount of research studies being undertaken in different avenues of science. There is an increasing depth of knowledge including a broad range of topics from small microorganisms, human systems to the extraterrestrial mission, for an instance, promising a future.*

Preliminaries If ethics is widely regarded as the most accessible branch of philosophy, it is so because many of its presuppositions are self-evident or trivial truths: At least for secularists, the attainment of these overall aims is thought to be a condition or prerequisite for a good life. What we regard as a life worth living depends on the notion we have of our own nature and of the conditions of its fulfillment. This, in turn, is determined, at least in part, by the values and standards of the society we live in. The attainment of these ends can also depend at least in part on external factors, such as health, material prosperity, social status, and even on good looks or sheer luck. Although these presuppositions may appear to be self-evident, most of the time, human beings are aware of them only implicitly, because many individuals simply lead their lives in accordance with pre-established standards and values that are, under normal circumstances, not objects of reflection. The historical Socrates was, of course, not the first to question the Greek way of life. Nevertheless, Plato continued to present his investigations as dialogues between Socrates and some partner or partners. And Plato preserved the dialogical form even in those of his late works where Socrates is replaced by a stand-in and where the didactic nature of the presentations is hard to reconcile with the pretense of live discussion. But these didactic discourses continue to combine questions of ethical, political, social, or psychological importance with metaphysical, methodological and epistemological considerations, and it can be just as hard to assess the extent to which Plato agrees with the pronouncements of his speakers, as it is when the speaker is Socrates. Furthermore, the fact that a certain problem or its solution is not mentioned in a dialogue does not mean that Plato was unaware of it. There is, therefore, no certainty concerning the question: It stands to reason, however, that he started with the short dialogues that question traditional virtues – courage, justice, moderation, piety. It also stands to reason that Plato gradually widened the scope of his investigations, by reflecting not only on the social and political conditions of morality, but also on the logical, epistemological, and metaphysical presuppositions of a successful moral theory. These theoretical reflections often take on a life of their own. The *Parmenides*, the *Theaetetus*, and the *Sophist* deal primarily or exclusively with epistemological and metaphysical problems of a quite general nature. Nevertheless, as witnessed by the *Philebus*, the *Statesman*, the *Timaeus*, and the *Laws*, Plato never lost interest in the question of what conditions are necessary for a good human life. Socrates explores the individual virtues through a discussion with persons who are either representatives of, or claim to be experts on, that virtue. Xenophon *Memorabilia* I, 10; In the *Laches*, he discusses courage with two renowned generals of the Peloponnesian war, Laches and Nicias. Similarly, in the *Charmides* Socrates addresses – somewhat ironically – the nature of moderation with the two of the Thirty Tyrants, namely the then very young Charmides, an alleged model of modesty, and his guardian and intellectual mentor, Critias. And in the *Gorgias* Socrates discusses the nature of rhetoric and its relation to virtue with the most prominent teacher of rhetoric among the sophists. Finally, in the *Meno* the question how virtue is acquired is raised by Meno, a disciple of Gorgias, and an ambitious seeker of power, wealth, and fame. Nor is such confidence unreasonable. These flaws vary greatly in kind and gravity: Socrates shows that enumerations of examples are not sufficient to capture the nature of the thing in question. Definitions that consist in the replacement of a given concept with a synonym are open to the same objections as the original definition. Definitions may be hopelessly vague or miss the mark entirely, which is to say that they may be either too wide, and include unwanted characteristics or subsets, or too narrow, and exclude essential characteristics. Moreover, definitions may be incomplete because the object in question does not constitute a unitary phenomenon. Given that the focus in the early dialogues is almost entirely on the exposure of flaws and inconsistencies, one cannot help wondering whether Plato himself knew the answers to his queries, and had some cards up his sleeve that he chose not to play for the time being. This would presuppose that Plato had not only a clear notion of the nature of the different virtues, but also a positive conception of the good life

as such. Since Plato was neither a moral nihilist nor a sceptic, he cannot have regarded moral perplexity *aporia* as the ultimate end, nor regarded continued mutual examination, Socratico more, as a way of life for everyone. Perplexity, as is argued in the *Meno*, is just a wholesome intermediary stage on the way to knowledge. But if Plato assumes that the convictions that survive Socratic questioning will eventually coalesce into an account of the good life, then he keeps this expectation to himself. There is no guarantee that only false convictions are discarded in a Socratic investigation, while true ones are retained. For, promising suggestions are often as mercilessly discarded as their less promising brethren. It is therefore a matter of conjecture whether Plato himself held any positive views while he composed one aporetic dialogue after the other. He may have regarded his investigations as experimental stages, or have seen each dialogue as an element in a network of approaches that he hoped to eventually integrate. The evidence that Plato already wanted his readers to draw this very conclusion in his early dialogues is somewhat contradictory, however. Plato famously pleads for the unity of the virtues in the *Protagoras*, and seems intent to reduce them all to knowledge. This intellectualizing tendency, however, does not tell us what kind of master-science would fulfill all of the requirements for defining virtues, and what its content should be. Though Plato often compared the virtues with technical skills, such as those of a doctor or a pilot, he may have realized that virtues also involve emotional attitudes, desires, and preferences, but not yet have seen a clear way to coordinate or relate the rational and the affective elements that constitute the virtues. In the *Laches*, for instance, Socrates partners struggle when they try to define courage, invoking two different elements. His comrade Nicias, on the other hand, fails when he tries to identify courage exclusively as a certain type of knowledge. The investigation of moderation in the *Charmides*, likewise, points up that there are two disparate elements commonly associated with that virtue, namely, a certain calmness of temper on the one hand. It is clear that a complex account would be needed to combine these two disparate factors. In his earlier dialogues, Plato may or may not already be envisaging the kind of solution that he is going to present in the *Republic* to the problem of the relationship between the various virtues, with wisdom, the only intellectual virtue, as their basis. Courage, moderation, and justice presuppose a certain steadfastness of character as well as a harmony of purpose among the disparate parts of the soul, but their goodness depends entirely on the intellectual part of the soul, just as the virtue of the citizens in the just state depends on the wisdom of the philosopher kings. Nicias is forced to admit that such knowledge presupposes the knowledge of good and bad. But pointing out what is wrong and missing in particular arguments is a far cry from a philosophical conception of the good and the bad in human life. But the evidence that Plato already had a definitive conception of the good life in mind when he wrote his earlier dialogues remains, at most, indirect. First and foremost, definitions presuppose that there is a definable object; that is to say, that it must have a stable nature. Nothing can be defined whose nature changes all the time. In addition, the object in question must be a unitary phenomenon, even if its unity may be complex. If definitions are to provide the basis of knowledge, they require some kind of essentialism. This presupposition is indeed made explicit in the *Euthyphro*, where Plato employs for the first time the terminology that will be characteristic of his full-fledged theory of the Forms. Despite this pregnant terminology, few scholars nowadays hold that the *Euthyphro* already presupposes transcendent Forms in a realm of their own models that are incompletely represented by their imitations under material conditions. No more than piety or holiness in the abstract sense seems to be presupposed in the discussion of the *Euthyphro*. Given that they are the objects of definition and the models of their ordinary representatives, there is every reason not only to treat them as real, but also to assign to them a state of higher perfection. And once this step has been taken, it is only natural to make certain epistemological adjustments. For, access to paradigmatic entities is not to be expected through ordinary experience, but presupposes some special kind of intellectual insight. It seems, then, that once Plato had accepted invariant and unitary objects of thought as the objects of definition, he was predestined to follow the path that let him adopt a metaphysics and epistemology of transcendent Forms. It would have meant the renunciation of the claim to unassailable knowledge and truth in favor of belief, conjecture, and, *horribile dictu*, of human convention. It led him to search for models of morality beyond the limits of everyday experience. This, in turn, explains the development of his theory of recollection and the postulate of transcendent immaterial objects as the basis of reality and thought that he

refers to in the *Meno*, and that he presents more fully in the *Phaedo*. We do not know when, precisely, Plato adopted this mode of thought, but it stands to reason that his contact with the Pythagorean school on his first voyage to Southern Italy and Sicily around BC played a major role in this development. Mathematics as a model-science has several advantages. It deals with unchangeable entities that have unitary definitions. It also makes a plausible claim that the essence of these entities cannot be comprehended in isolation but only in a network of interconnections that have to be worked out at the same time as each particular entity is defined. For instance, to understand what it is to be a triangle, it is necessary "inter alia" to understand the nature of points, lines, planes and their interrelations. That Plato was aware of this fact is indicated by his somewhat prophetic statement in his introduction of the theory of recollection in the *Meno*, 81d: The slave finally manages, with some pushing and pulling by Socrates, and some illustrations drawn in the sand, to double the area of a given square. In the course of this interrogation, the disciple gradually discovers the relations between the different lines, triangles, and squares. That Plato regards these interconnections as crucial features of knowledge is confirmed later by the distinction that Socrates draws between knowledge and true belief 97b-98b. And that, *Meno* my friend, is recollection, as we previously agreed. After they are tied down, in the first place, they become knowledge, and then they remain in place. Not only that, the same is suggested by the list through which Socrates first introduces the Forms, 65d-e: And the Beautiful, and the Good? How does it work? The hypothesis he starts out with seems simpleminded indeed, because it consists of nothing more than the assumption that everything is what it is by participating in the corresponding Form. But it soon turns out that more is at stake than that simple postulate. First, the hypothesis of each respective Form is to be tested by looking at the compatibility of its consequences. Second, the hypothesis itself is to be secured by higher hypotheses, until some satisfactory starting point is attained. The distinctions that Socrates subsequently introduces in preparation of his last proof of the immortality of the soul seem, however, to provide some information about the procedure in question b. Socrates first introduces the distinction between essential and non-essential attributes. This distinction is then applied to the soul: The viability of this argument, stripped here to its bare bones, need not engage us. The procedure shows, at any rate, that Plato resorts to relations between Forms here. The essential tie between the soul and life is clearly not open to sense-perception; instead, understanding this tie takes a good deal of reflection on what it means to be, and to have a soul. To admirers of a two-world metaphysics, it may come as a disappointment that in Plato, recollection should consist in no more than the uncovering of such relationships. Plato does not employ his newly established metaphysical entities as the basis to work out a definitive conception of the human soul and the appropriate way of life in the *Phaedo*. Rather, he confines himself to warnings against the contamination of the soul by the senses and their pleasures, and quite generally against corruption by worldly values. He gives no advice concerning human conduct beyond the recommendation of a general abstemiousness from worldly temptations. But as long as this negative or other-worldly attitude towards the physical side of human nature prevails, no interest is to be expected on the part of Plato in nature as a whole "let alone in the principles of the cosmic order but cf. But it is not only Platonic asceticism that stands in the way of such a wider perspective. Socrates himself seems to have been quite indifferent to the study of nature. And in a dialogue as late as the *Phaedrus*, Socrates famously explains his preference for the city and his avoidance of nature d: If Plato later takes a much more positive attitude towards nature in general, this is a considerable change of focus. In the *Phaedo*, he quite deliberately confines his account of the nature of heaven and earth to the myth about the afterlife c.

**Chapter 9 : Intro to Aristotle**

*If 'human' means 'my own natural kind,' then referring to a being as human boils down to the assertion that the other is a member of the natural kind that the speaker believes herself to be.*

Preliminaries Aristotle wrote two ethical treatises: In any case, these two works cover more or less the same ground: Both treatises examine the conditions in which praise or blame are appropriate, and the nature of pleasure and friendship; near the end of each work, we find a brief discussion of the proper relationship between human beings and the divine. Though the general point of view expressed in each work is the same, there are many subtle differences in organization and content as well. Clearly, one is a re-working of the other, and although no single piece of evidence shows conclusively what their order is, it is widely assumed that the Nicomachean Ethics is a later and improved version of the Eudemian Ethics. Not all of the Eudemian Ethics was revised: Perhaps the most telling indication of this ordering is that in several instances the Nicomachean Ethics develops a theme about which its Eudemian cousin is silent. The remainder of this article will therefore focus on this work. Page and line numbers shall henceforth refer to this treatise. It ranges over topics discussed more fully in the other two works and its point of view is similar to theirs. Why, being briefer, is it named the Magna Moralia? Because each of the two papyrus rolls into which it is divided is unusually long. Just as a big mouse can be a small animal, two big chapters can make a small book. A few authors in antiquity refer to a work with this name and attribute it to Aristotle, but it is not mentioned by several authorities, such as Cicero and Diogenes Laertius, whom we would expect to have known of it. No one had written ethical treatises before Aristotle. The Human Good and the Function Argument The principal idea with which Aristotle begins is that there are differences of opinion about what is best for human beings, and that to profit from ethical inquiry we must resolve this disagreement. He insists that ethics is not a theoretical discipline: In raising this question—“what is the good? He assumes that such a list can be compiled rather easily; most would agree, for example, that it is good to have friends, to experience pleasure, to be healthy, to be honored, and to have such virtues as courage at least to some degree. The difficult and controversial question arises when we ask whether certain of these goods are more desirable than others. To be eudaimon is therefore to be living in a way that is well-favored by a god. But Aristotle never calls attention to this etymology in his ethical writings, and it seems to have little influence on his thinking. No one tries to live well for the sake of some further goal; rather, being eudaimon is the highest end, and all subordinate goals—“health, wealth, and other such resources—are sought because they promote well-being, not because they are what well-being consists in. But unless we can determine which good or goods happiness consists in, it is of little use to acknowledge that it is the highest end. One important component of this argument is expressed in terms of distinctions he makes in his psychological and biological works. The soul is analyzed into a connected series of capacities: The biological fact Aristotle makes use of is that human beings are the only species that has not only these lower capacities but a rational soul as well. The good of a human being must have something to do with being human; and what sets humanity off from other species, giving us the potential to live a better life, is our capacity to guide ourselves by using reason. If we use reason well, we live well as human beings; or, to be more precise, using reason well over the course of a full life is what happiness consists in. Doing anything well requires virtue or excellence, and therefore living well consists in activities caused by the rational soul in accordance with virtue or excellence. No other writer or thinker had said precisely what he says about what it is to live well. But at the same time his view is not too distant from a common idea. As he himself points out, one traditional conception of happiness identifies it with virtue—“1. He says, not that happiness is virtue, but that it is virtuous activity. Living well consists in doing something, not just being in a certain state or condition. It consists in those lifelong activities that actualize the virtues of the rational part of the soul. At the same time, Aristotle makes it clear that in order to be happy one must possess others goods as well—“such goods as friends, wealth, and power. Someone who is friendless, childless, powerless, weak, and ugly will simply not be able to find many opportunities for virtuous activity over a long period of time, and what little he can accomplish will not be of great merit. To some extent, then, living well requires good fortune; happenstance

can rob even the most excellent human beings of happiness. Nonetheless, Aristotle insists, the highest good, virtuous activity, is not something that comes to us by chance. Although we must be fortunate enough to have parents and fellow citizens who help us become virtuous, we ourselves share much of the responsibility for acquiring and exercising the virtues. Suppose we grant, at least for the sake of argument, that doing anything well, including living well, consists in exercising certain skills; and let us call these skills, whatever they turn out to be, virtues. Even so, that point does not by itself allow us to infer that such qualities as temperance, justice, courage, as they are normally understood, are virtues. They should be counted as virtues only if it can be shown that actualizing precisely these skills is what happiness consists in. What Aristotle owes us, then, is an account of these traditional qualities that explains why they must play a central role in any well-lived life. But perhaps Aristotle disagrees, and refuses to accept this argumentative burden. In one of several important methodological remarks he makes near the beginning of the *Nicomachean Ethics*, he says that in order to profit from the sort of study he is undertaking, one must already have been brought up in good habits (1095a6). The audience he is addressing, in other words, consists of people who are already just, courageous, and generous; or, at any rate, they are well on their way to possessing these virtues. Why such a restricted audience? Why does he not address those who have serious doubts about the value of these traditional qualities, and who therefore have not yet decided to cultivate and embrace them? Addressing the moral skeptic, after all, is the project Plato undertook in the *Republic*: He does not appear to be addressing someone who has genuine doubts about the value of justice or kindred qualities. Perhaps, then, he realizes how little can be accomplished, in the study of ethics, to provide it with a rational foundation. Perhaps he thinks that no reason can be given for being just, generous, and courageous. These are qualities one learns to love when one is a child, and having been properly habituated, one no longer looks for or needs a reason to exercise them. One can show, as a general point, that happiness consists in exercising some skills or other, but that the moral skills of a virtuous person are what one needs is not a proposition that can be established on the basis of argument. This is not the only way of reading the *Ethics*, however. For surely we cannot expect Aristotle to show what it is about the traditional virtues that makes them so worthwhile until he has fully discussed the nature of those virtues. He himself warns us that his initial statement of what happiness is should be treated as a rough outline whose details are to be filled in later (1095a20). His intention in Book I of the *Ethics* is to indicate in a general way why the virtues are important; why particular virtues—courage, justice, and the like—are components of happiness is something we should be able to better understand only at a later point. His point, rather, may be that in ethics, as in any other study, we cannot make progress towards understanding why things are as they are unless we begin with certain assumptions about what is the case. Neither theoretical nor practical inquiry starts from scratch. Someone who has made no observations of astronomical or biological phenomena is not yet equipped with sufficient data to develop an understanding of these sciences. The parallel point in ethics is that to make progress in this sphere we must already have come to enjoy doing what is just, courageous, generous and the like. We must experience these activities not as burdensome constraints, but as noble, worthwhile, and enjoyable in themselves. Then, when we engage in ethical inquiry, we can ask what it is about these activities that makes them worthwhile. We can also compare these goods with other things that are desirable in themselves—pleasure, friendship, honor, and so on—and ask whether any of them is more desirable than the others. We approach ethical theory with a disorganized bundle of likes and dislikes based on habit and experience; such disorder is an inevitable feature of childhood. But what is not inevitable is that our early experience will be rich enough to provide an adequate basis for worthwhile ethical reflection; that is why we need to have been brought up well. Yet such an upbringing can take us only so far. We seek a deeper understanding of the objects of our childhood enthusiasms, and we must systematize our goals so that as adults we have a coherent plan of life. We need to engage in ethical theory, and to reason well in this field, if we are to move beyond the low-grade form of virtue we acquired as children. His project is to make ethics an autonomous field, and to show why a full understanding of what is good does not require expertise in any other field. There is another contrast with Plato that should be emphasized: In Book II of the *Republic*, we are told that the best type of good is one that is desirable both in itself and for the sake of its results (357a). Plato argues that justice should be placed in this category, but since it is generally agreed that it is desirable for its

consequences, he devotes most of his time to establishing his more controversial point—that justice is to be sought for its own sake. By contrast, Aristotle assumes that if A is desirable for the sake of B, then B is better than A<sup>14</sup>; therefore, the highest kind of good must be one that is not desirable for the sake of anything else. To show that A deserves to be our ultimate end, one must show that all other goods are best thought of as instruments that promote A in some way or other. He needs to discuss honor, wealth, pleasure, and friendship in order to show how these goods, properly understood, can be seen as resources that serve the higher goal of virtuous activity. He vindicates the centrality of virtue in a well-lived life by showing that in the normal course of things a virtuous person will not live a life devoid of friends, honor, wealth, pleasure, and the like. Virtuous activity makes a life happy not by guaranteeing happiness in all circumstances, but by serving as the goal for the sake of which lesser goods are to be pursued. That is why he stresses that in this sort of study one must be satisfied with conclusions that hold only for the most part<sup>11</sup>. Poverty, isolation, and dishonor are normally impediments to the exercise of virtue and therefore to happiness, although there may be special circumstances in which they are not. The possibility of exceptions does not undermine the point that, as a rule, to live well is to have sufficient resources for the pursuit of virtue over the course of a lifetime. Virtues and Deficiencies, Contenance and Incontinence Aristotle distinguishes two kinds of virtue<sup>1</sup>. Intellectual virtues are in turn divided into two sorts: He organizes his material by first studying ethical virtue in general, then moving to a discussion of particular ethical virtues temperance, courage, and so on, and finally completing his survey by considering the intellectual virtues practical wisdom, theoretical wisdom, etc. All free males are born with the potential to become ethically virtuous and practically wise, but to achieve these goals they must go through two stages: This does not mean that first we fully acquire the ethical virtues, and then, at a later stage, add on practical wisdom. Ethical virtue is fully developed only when it is combined with practical wisdom<sup>14</sup>. A low-grade form of ethical virtue emerges in us during childhood as we are repeatedly placed in situations that call for appropriate actions and emotions; but as we rely less on others and become capable of doing more of our own thinking, we learn to develop a larger picture of human life, our deliberative skills improve, and our emotional responses are perfected. Like anyone who has developed a skill in performing a complex and difficult activity, the virtuous person takes pleasure in exercising his intellectual skills. Furthermore, when he has decided what to do, he does not have to contend with internal pressures to act otherwise. He does not long to do something that he regards as shameful; and he is not greatly distressed at having to give up a pleasure that he realizes he should forego. Aristotle places those who suffer from such internal disorders into one of three categories: 1 Some agents, having reached a decision about what to do on a particular occasion, experience some counter-pressure brought on by an appetite for pleasure, or anger, or some other emotion; and this countervailing influence is not completely under the control of reason. Such people are not virtuous, although they generally do what a virtuous person does. 2 others are less successful than the average person in resisting these counter-pressures. The explanation of *akrasia* is a topic to which we will return in section 7.