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Chapter 1 : The Contribution of Medicine to Our Idea of the Mind

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Syrian texts[edit] During the 10th century, Ibn Wahshiyya compiled writings by the Nabataeans , including also medical information. The Syrian scholar Sergius of Reshaina translated various works by Hippocrates and Galen, of whom parts 6â€”8 of a pharmacological book, and fragments of two other books have been preserved. Syrian physicians also played an important role at the Academy of Gondishapur ; their names were preserved because they worked at the court of the Abbasid caliphs. Arabian physicians trained in Gondishapur may have established contacts with early Islamic medicine. Under Harun al-Rashid , at latest, the first translations were performed of Indian works about medicine and pharmacology. In one chapter on Indian medicine , Ibn al-Nadim mentions the names of three of the translators: Their concepts and ideas about medical ethics are still discussed today, especially in the Islamic parts of our world. Their ideas about the conduct of physicians, and the doctorâ€”patient relationship are discussed as potential role models for physicians of today. Al-Tabari, a pioneer in the field of child development , emphasized strong ties between psychology and medicine, and the need for psychotherapy and counseling in the therapeutic treatment of patients. His encyclopedia also discussed the influence of Sushruta and Chanakya on medicine, [37] including psychotherapy. His works, many of which no longer survive, are cited by later physicians. Taking what was known at the time by the classical Greek writers, Al-Tamimi expanded on their knowledge of the properties of plants and minerals, becoming avant garde in his field. This book was translated by Constantine and was used as a textbook of surgery in schools across Europe. Folio from the "Liber continens" by Al-Razi Right image: Rhazes was one of the most versatile scientists of the Islamic Golden Age. A Persian-born physician, alchemist and philosopher, he is most famous for his medical works, but he also wrote botanical and zoological works, as well as books on physics and mathematics. Many of his books were translated into Latin, and he remained one of the undisputed authorities in European medicine well into the 17th century. In medical theory, al-Razi relied mainly on Galen , but his particular attention to the individual case, stressing that each patient must be treated individually, and his emphasis on hygiene and diet reflect the ideas and concepts of the empirical hippocratic school. The Comprehensive book of medicine, Continens Liber, The Virtuous Life was one of al-Razis largest works, a collection of medical notes that he made throughout his life in the form of extracts from his reading and observations from his own medical experience. Al-Razi cites Greek, Syrian, Indian and earlier Arabic works, and also includes medical cases from his own experience. Each volume deals with specific parts or diseases of the body. He describes the signs of illness and does not omit anything which would be necessary for anyone who wants to learn the art of healing. However, he does not talk about physical topics, about the science of the elements, temperaments and humours, nor does he describe the structure of organs or the [methods of] surgery. His book is without structure and logical consequence, and does not demonstrate the scientific method. The first six sections are dedicated to medical theory, and deal with anatomy, physiology and pathology, materia medica, health issues, dietetics, and cosmetics. The remaining four parts describe surgery, toxicology, and fever. In his book entitled "Kitab al-Mansuri", al-Razi summarizes everything which concerns the art of medicine, and does never neglect any issue which he mentions. However, everything is much abbreviated, according to the goal he has set himself. Under various titles "Liber medicinalis ad Almansorem"; "Almansorius"; "Liber ad Almansorem"; "Liber nonus" it was printed in Venice in , [51] , [52] and This book covers the treatments and cures of diseases and ailments, through dieting. It is thought to have been written for the noble class who were known for their gluttonous behavior and who frequently became ill with stomach diseases. Kitab al-Jadari wa-l-hasba De variolis et morbillis [edit] Until the discovery of Tabit ibn Qurras earlier work, al-Razis treatise on smallpox and measles was considered the earliest monograph on these infectious diseases. His careful description of the initial symptoms and clinical

course of the two diseases, as well as the treatments he suggests based on the observation of the symptoms, is considered a masterpiece of Islamic medicine. One of the oldest existing copies of The Canon of Medicine by Avicenna, c. The Canon of Medicine, printed in Venice Ibn Sina , more commonly known in west as Avicenna was a Persian polymath and physician of the tenth and eleventh centuries. He was known for his scientific works, but especially his writing on medicine. His other works cover subjects including angelology , heart medicines, and treatment of kidney diseases. The first volume is a compendium of medical principles, the second is a reference for individual drugs, the third contains organ-specific diseases, the fourth discusses systemic illnesses as well as a section of preventative health measures, and the fifth contains descriptions of compound medicines. National Library of Medicine. When food enters the stomach, especially when it is plentiful, the stomach dilates and its layers get stretched I then cut open the stomach and let the water out. Abd al-Latif al-Baghdadi , while on a visit to Egypt , encountered many skeletal remains of those who had died from starvation near Cairo. He examined the skeletons and established that the mandible consists of one piece, not two as Galen had taught. I have repeated the observation a great number of times, in over two hundred heads [â€¦] I have been assisted by various different people, who have repeated the same examination, both in my absence and under my eyes. He never published his anatomical observations in a separate book, as had been his intention. Medieval Islamic physicians used natural substances as a source of medicinal drugsâ€”including Papaver somniferum Linnaeus, poppy , and Cannabis sativa Linnaeus, hemp. Poppy was prescribed by Yuhanna b. Masawayh to relieve pain from attacks of gallbladder stones , for fevers , indigestion , eye, head and tooth aches, pleurisy , and to induce sleep. Surgical procedures were known to physicians during the medieval period because of earlier texts that included descriptions of the procedures. Surgery was uncommonly practiced by physicians and other medical affiliates due to a very low success rate, even though earlier records provided favorable outcomes to certain operations. Techniques[edit] Bloodletting and cauterization were techniques widely used in ancient Islamic society by physicians, as a therapy to treat patients. These two techniques were commonly practiced because of the wide variety of illnesses they treated. Cauterization, a procedure used to burn the skin or flesh of a wound, was performed to prevent infection and stop profuse bleeding. To perform this procedure, physicians heated a metal rod and used it to burn the flesh or skin of a wound. This would cause the blood from the wound to clot and eventually heal the wound. The heat and suction from the glass caused the blood to rise to the surface of the skin to be drained. Both cupping and phlebotomy were considered helpful when a patient was sickly. A common complication of trachoma patients is the vascularization of the tissue that invades the cornea of the eye, which was thought to be the cause of the disease, by ancient Islamic physicians. The technique used to correct this complication was done surgically and known today as peritomy. This procedure was done by "employing an instrument for keeping the eye open during surgery, a number of very small hooks for lifting, and a very thin scalpel for excision. This was done by lifting the growth with small hooks and then cut with a small lancet. Both of these surgical techniques were extremely painful for the patient and intricate for the physician or his assistants to perform. The method for treating cataracts in medieval Islam known in English as couching was known through translations of earlier publishings on the technique. After the procedure was complete, the eye was then washed with salt water and then bandaged with cotton wool soaked in oil of roses and egg whites. After the operation, there was concern that the cataract, once it had been pushed to one side, would reascend, which is why patients were instructed to lie on his or her back for several days following the surgery. Before the development of anesthesia and antisepsis, surgery was limited to fractures, dislocations, traumatic injuries resulting in amputation, and urinary disorders or other common infections. Some of these drugs, especially opium, were known to cause drowsiness, and some modern scholars have argued that these drugs were used to cause a person to lose consciousness before an operation, as a modern-day anesthetic would. However, there is no clear reference to such a use before the 16th century. His ideas on medical ethics were divided into three concepts:

Chapter 2 : The Connection Between Mind And Body - The Bravewell Collaborative

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Black bile melancholy, sad Note how these words have come down to us. Imbalances among these psychological states, he believed, were one more cause for diseases. Of course, this is the first known personality typology! The rebirth of medicine It is some time before we again see real progress in medicine and physiology. In , Mondino de Luzzi came out with the first European textbook on anatomy, appropriately called Anatomia. In , Gabriele Fallopio published Observationes Anatomicae, wherein he describes, among many other things, the cranial nerves and, of course, the fallopian tubes Real progress had to wait for the invention of the microscope by Zacharias Jansen of Middleburg, Holland, in or by his father, Hans. Soon afterwards, in , a colleague of Zacharias Jansen in Middleburg, a German by the name of Hans Lippersberg, invented the telescope. Centers of medical education developed in the universities at Padua, Italy and Leyden, Holland. Here, students studied anatomy, did post-mortems, and even dabbled in what we would now call pathology. They performed careful case-studies, with detailed measurements. Neurophysiology developed in parallel to all the other medical and physiological developments. His book was illustrated by Christopher Wren, the famous English artist and architect. Willis coined the term neurology in A very significant contributor to the development of our understanding of the brain was none other than our old friend Rene Descartes. The will an aspect of our souls enters the brain as animal spirits via the pineal gland, interacts with the organization of nerves that represent established habits, courses through the nerves viewed as tiny tubes to the muscles, causing them to contract and so produce a behavior! Likewise, actions upon the sensory neurons cause increases in pressure on the animal spirits, which course through the nerves to the brain, influencing the structure of the brain by repetition, as well as passing on to the soul as perceptions. Sometimes, the actions of the senses led to rather immediate responses by the muscles. Descartes did include far more complex behavior as reflexes than we would today. Passions roughly, emotions also come from outside the body, essentially as sensations. They lead to a variety of physiological changes as well as reflex actions: We see a bear, we run! In animals, these passions are just sensations and reflexes. Descartes ideas, minus the soul, would be promoted by Julien Offay de la Mettrie in a landmark book called Man a Machine Robert Whytt would later lay down the neurological basics of the reflex, and introduce the terms stimulus and response. About , Lady Mary Montegu introduced a strange medical practice she had seen while visiting in Turkey: Instead of letting a full-blown case of smallpox damage their lovely skin, young women had pus from someone with a mild case of smallpox injected just under the skin. Today, people have themselves injected with the poison botox to erase wrinkles! Edward Jenner later began inoculating people against the smallpox by vaccinating them with cowpox material. The antibodies produced made one immune to smallpox as well as further cases of cowpox. They noted that sensory fibers enter the posterior roots of the spinal cord, and motor fibers leave the anterior roots. Franz Joseph Gall of Vienna and, later, Paris, studied the shapes of skulls and concluded that the various bumps and depressions in each persons head related to certain psychological and personality characteristics. This would become very popular as phrenology, even though serious scientists such as Bell and Flourens thought it absurd. For a phrenological map of the head, click here. There is little, if any, truth to this map! Marie-Jean-Pierre Flourens concluded that the cerebrum was in fact responsible for thought and will, and that it operates holistically -- not as Gall would have it! He noted that the other parts -- cerebellum, medulla, etc. However, things just never seem to be simple. Another surgeon, Carl Wernicke, published a book on aphasia in In , two researchers, Eduard Fritsch and Gustav Hitzig, used direct electrical stimulation of the brain in a dog to discover, among other things, the motor and sensory cortices. Four years later, Robert Bartholow did the same with a human brain. Each nerve, when stimulated, leads to only one sensory experience, even if it is

stimulated in another manner than usual. A simple example is the light flashes you see when you press against your eyeballs! This I think unfortunately led to increased belief in indirect realism -- i. Hermann von Helmhotz Hermann von Helmholtz is arguably the most famous German scientist of the 19th century. His father, a teacher as well as an officer in the Prussian army, began schooling young Hermann at home because of health problems. He did attend Gymnasium from the ages of nine to He wanted to study physics, but entered medical school in Berlin in His parents could not afford to send him without the scholarship given to medical students who promised to serve in the army after graduating. In , he became an army surgeon at Potsdam, and continued studying math and physics on his own. In , he read a paper at the Physical Society of Berlin on the conservation of energy. This alone would have won him an honored place in history! During this period of his life, he measured the speed of the neural impulse. Prior, it was thought to be either infinite or the speed of light. He found it to be a paltry 90 feet per second. This put neurological activity well within the limits of ordinary physical and chemical sciences! Along the way, in , he invented the ophthalmascope -- the device doctors use to look into your eye. In , he moved to Bonn to be professor of anatomy and physiology. Here he began his research into sight and hearing. In , he published the first of three volumes called the Handbook of Physiological Optics. He moved once again in , this time to Heidelberg as professor of physiology. During this period, his wife died, and he later married a young socialite. His philosophical work focused on epistemology, and he continued his research on sight and hearing. His explanation of color vision -- that it is based on three cones sensitive to red, green, and violet -- is still remembered as the Young-Helmholtz theory. He became quite famous. In , he was offered the chair in physics his first love at the University of Berlin. In addition to a huge salary, he was offered living quarters and a new Institute of Physics. He published a number of papers on geometry, especially the non-Euclidean kind that would be so important to people like Einstein in the twentieth century. His main focus was physics, of course, and one of his prize students was Heinrich Hertz, who was the first person to actually generate radio waves in A bad fall on ship put his health in serious jeopardy. He died of a cerebral hemorrhage in September of

Chapter 3 : Locke, John | Internet Encyclopedia of Philosophy

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Share via Print Science journalist Jo Marchant brings her critical eye to this fascinating new terrain, sharing the latest discoveries of the people who are being helped by cures aimed at both body and mind. Now, though, a growing body of scientific research suggests that our mind can play an important role in healing our body â€" or in staying healthy in the first place. In the book Cure , the veteran science journalist Jo Marchant brings her critical eye to this fascinating new terrain, sharing the latest discoveries and telling the stories of the people â€"Iraq war veterans among them â€" who are being helped by cures aimed at both body and mind. Marchant answered questions from Mind Matters editor Gareth Cook. You have taken on a topic where, historically, there has been a tremendous amount of quackery. What convinced you that there was a compelling scientific story to tell? The misunderstandings and false claims were one of the elements that drew me to the topic of mind-body medicine in the first place. The mind influences physiology in many ways â€" from stress to sexual arousal â€" so it has always seemed reasonable to me that it might impact health. Yet the question has become so polarized: I was interested in those clashing philosophies: I wanted to look at why it is so difficult to have a reasoned debate about this issue. What drives so many people to believe in the pseudoscientific claims of alternative therapists, and why are skeptics so resistant to any suggestion that the mind might influence health? That took me around the world, interviewing scientists who are investigating this question often struggling for funding or risking their reputations to do so and their results persuaded me that as well as being an interesting sociological or philosophical story, this was a compelling scientific one. Examples include trials demonstrating that hypnotherapy is a highly effective treatment for patients with irritable bowel syndrome IBS , and studies showing that perceived stress correlates with telomere length in cells. There are now several lines of research suggesting that our mental perception of the world constantly informs and guides our immune system in a way that makes us better able to respond to future threats. What is known about what the placebo effect actually is, and what do you see as the biggest open questions? It is sometimes used to cover anyone who feels better after receiving placebo or fake treatment, which of course includes all those people who would have improved anyway. But researchers are finding that taking a placebo can also have specific, measurable effects on the brain and body. Placebo painkillers can trigger the release of natural pain-relieving chemicals called endorphins. Fake oxygen, given to someone at altitude, has been shown to cut levels of neurotransmitters called prostaglandins which dilate blood vessels, among other things, and are responsible for many of the symptoms of altitude sickness. None of these biological effects are caused by placebos themselves, which are by definition inert. They are triggered by our psychological response to those fake treatments. This influences physiological functions such as hormone levels and immune responses, and works regardless of our conscious beliefs. Future questions include teasing out the psychological factors that shape placebo responses, and investigating why honest placebos where someone knows they are taking a placebo seem to work â€" this research has barely begun. And then of course there is the question of how we can maximize these responses, and integrate them into routine clinical care in an honest way. Have you experienced any of these mind-over-body effects yourself? Perhaps my headache would have faded anyway. I also experienced the value of social support when giving birth to my two children. I had dramatically different outcomes when supported by midwives I knew and trusted, compared to a series of strangers. Mostly though, I experienced the effects I describe in the book through talking to people treated using some of these approaches, often participants in clinical trials. They included a kidney transplant patient drinking a lavender-flavored milk to calm his hostile immune system; people who have suffered decades of recurrent depression now kept well by mindfulness training; and pilgrims seeking healing at the religious sanctuary of

Lourdes in France. Meeting these people took this beyond an intellectual project for me. You write about burn victims who are being treated, in part, with virtual reality. Can you explain this, and what lessons you think it holds? This is another therapy I got to try â€" researchers in Seattle have developed a virtual reality landscape called Snow World. You fly around inside an ice canyon and fire snowballs at characters inside the game, such as penguins and snowmen. When I tried Snow World, the researchers used a heated box to simulate a burn to my foot â€" it was quite painful outside the game, but once immersed, I had so much fun I barely noticed it. This technique was developed to help burn victims â€" they have to undergo agonizing sessions of wound treatment and physiotherapy. Even when taking the maximum safe dose of painkillers these patients are often still left in horrible pain. This is just one of many lines of research telling us that the brain plays a big role in determining the level of pain we feel. Of course any physical damage is important, but it is neither sufficient nor necessary for us to feel pain. Our focus is almost exclusively on trying to banish it with drugs, which is incredibly costly and causes huge problems with side effects and addiction. Research like Snow World shows the potential of psychological approaches for treating pain: And have you read a recent peer-reviewed paper that you would like to write about? Please send suggestions to Mind Matters editor Gareth Cook. Gareth, a Pulitzer prize-winning journalist, is the series editor of Best American Infographics and can be reached at garethideas AT gmail.

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Chapter 4 : Benjamin Rush - Wikipedia

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This article has been cited by other articles in PMC. Abstract Philosophical theory about the nature of human beings has far reaching consequences on our understanding of various issues faced by them. Once taken as self-evident, it becomes the foundation on which knowledge gets built. The cause of concern is that this theoretical framework rarely gets questioned despite its inherent limitations and self-defeating consequences, leading to crisis in the concerned field. The field, which is facing crisis today, is that of medicine, and the paradigmatic stance that is responsible for the crisis is Cartesian dualismâ€"a view that mind and body are essentially separate entities. This paper discusses Cartesian dualism in the context of the practice of medicine. Focusing more closely on how disease, health and treatment are defined through this position, the paper builds up its critique by throwing light on its accomplishments, limitations and self-defeating consequences. The paper also seeks to understand why this dualism is still alive despite its disavowal from philosophers, health practitioners and lay people. Mind-Body Dualism, Cartesian Dualism, Cartesian Dualism and Medicine Introduction Mind and body dualism represents the metaphysical stance that mind and body are two distinct substances, each with a different essential nature. Originated in the ancient period, a well-known version of dualism is credited to Rene Descartes of the 17th century. According to him, human beings consisted of two quite unlike substances which could not exist in unity. Mind was unextended, an immaterial but thinking substance and body was an extended, material but unthinking substance. The body was subject to mechanical laws; however, the mind was not Descartes, Mind and Body Dualism: Reformatory and Confining Force in Medicine Mind and body dualism was the critical conceptual leap Moon, that was desperately sought at that time in history. Before its advent, the prevalent orthodox Christian views of the mind-body relationship had greatly thwarted the development of medical science. According to these views, human beings were spiritual beings; body and soul were one. It was also believed that for the soul to ascend to heaven, the human body had to be preserved intact Walker, As a result, there was a religious prohibition on the study of human anatomy through dissection. Descartes, through mind-body dualism, demythologised body and handed over its study to medicine. Thus, the way was paved for progress in medical science through the study of physiology and anatomy. Methodological Implications Dualism also laid the groundwork for positivism which means a logical thought based upon empirical, i. By making objective realm the only legitimate domain of enquiry, Descartes advocated a complete and exact natural science through the analytic method. This method involved the breaking up of a problem into pieces and rearranging them in a logical order. This is an issue because disciplines under social sciences do not lend themselves to scientific method without running the risk of incomplete and at times distorted understanding of their subject matter-human beings. The field of medicine, by adhering rigidly to scientific method, mislaid its subject matter and gave up its moral responsibility toward the real health concerns of human beings. A Basis of Biomedical Model The dualistic stance of human nature and analytical method determined the biomedical model in medicine. Accordingly, human beings were viewed as biological organisms materialism , to be understood by examining their constituent parts reductionism using the principles of anatomy, physiology, biochemistry and physics. Disease was seen as a deviation from the biological norms, caused by some identifiable physical or chemical event and intervention involved introduction of a corrective physical or chemical agent. Consequently, health came to be defined as an absence of disease and got associated with activities of doctors to the extent that to most people, medicine became synonymous with health Hart, Moreover, living systems have come to be seen as systems of which mind and body are a unit which are integral parts of larger systems, in permanent interaction with their environment and capable of constructing their own subjective realities. In the context of this new understanding of the nature of human beings and health, the question is-how can medicine, with its narrow focus on biological factors and

control of disease, help human beings achieve health which is multidimensional in nature with prevention, cure, promotion of well-being and longevity, which are proposed to be important goals of treatment? Singh, Emergence of diseases that have psychological, social and environmental components as part of their aetiology also challenges the hegemony of biomedicine. The consequence of this paradigmatic error is discordance between what contemporary medical professionals have got to offer and what lay people expect from them. A focus on the human body makes the field of medicine address diseases with complete disregard for illness-personal, interpersonal and cultural reactions to disease. Part of dissatisfaction is also due to disempowerment of patients and dehumanisation of medical care-cold, impersonal, technical style of clinical practice shaped by notion that the body is a machine devoid of self Kriel, As a reaction to the inadequacies of mind and body dualism, several nondualistic philosophical frameworks have been proposed. Still, mind and body dualism persists in the field of medicine. The reasons are multiple: The medical knowledge of the last years is built on the biomedical model. Lot of money, energy, dedication have been invested in this field, which has paid back hugely in terms of technological success. This success has made medicine a very powerful and all encompassing health care field and has reinforced the philosophy that formed the basis of biomedical paradigm Kriel, The pharmaceutical companies with their focus on commercial interests have great stakes in the existing medical system. They fund research in a big way but opt for status quo by selectively publishing their findings Singh and Singh, b which does not allow new knowledge to surface. Established importance of drugs in the treatment of diseases, drug taking as a norm for any health concern and cultural tendency to expect quick remedies do not allow paradigmatic change to take place in favour of alternative and complementary medicine based on holistic view of human beings. Physicians are neither aware of the philosophical framework within which they operate, nor do they realise the power such model exerts on their thinking and behaviour. So strong is the influence of these philosophical frameworks that they act as blinders and human beings who are known as cognitive misers Taylor, tend to treat them as facts and whatever does not fit into the paradigm as trivial or even nonsense. Therefore, even when unity of mind and body presents a more realistic picture of the human functioning, physicians rather stick to the familiar dualistic thinking to match that of their mentors and colleagues. Like medical practitioners, patients also perpetuate the mind and body dualism. Being a product of modern dualistic culture, they tend to feel sceptical about nonbiological explanations for their illnesses, as they appear unreal, illegitimate and unscientific in nature Duncun,

Chapter 5 : Mind-body Dualism: A critique from a Health Perspective

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The History Learning Site, 17 Mar The Ancient Romans, like the Ancient Greeks and Ancient Egyptians , made a huge input into medicine and health, though their input was mainly concerned with public health schemes. The Romans learned a great deal from the Ancient Greeks. They used the ideas of the Greeks but they did not simply copy them. Greek ideas they found impractical they ignored and it seems that the Romans were more keen on things that would lead to the direct improvement of the quality of life of the people in their huge empire. The Romans excelled in those things which the Greeks took little interest in such as the building of roads, aqueducts and sewers. But we Romans have established as the limit of this art, its usefulness in measuring and reckoning. The Romans have always shown more wisdom than the Greeks in all their inventions, or else improved what they took over from them, such things at least as they thought worthy of serious attention. In the early years of the Roman Empire , there were no people in what would be a separate medical profession. It was believed that each head of the household knew enough about herbal cures and medicine to treat illnesses in his household. The Roman writer Pliny wrote: Wounds it heals if dipped in wine or vinegarâ€¦. It is recommended to bathe the eyes with a decoction of the liver and to apply the marrow to those that are painful or swollen. Some of these were prisoners of war and could be bought by wealthy Romans to work in a household. Many of these doctors became valuable additions to a household. It is known that a number of these men bought their freedom and set up their own practices in Rome itself. After BC, more Greek doctors came to Rome but their success at the expense of Romans did generate some mistrust. Pliny did not trust Greek doctors: There is no doubt that all these physicians in their hunt for popularity by means of some new idea, did not hesitate to buy it with our lives. Medicine changes everyday, and we are swept along on the puffs of clever brains of the Greeksâ€¦.. Pliny wrote that when Thessalus walked around in public, he attracted greater crowds than any of the famous actors and chariot riders based in Rome. The Romans and Public Health The Romans were great believers in a healthy mind equalling a healthy body. There was a belief that if you kept fit, you would be more able to combat an illness. Rather than spend money on a doctor, many Romans spent money on keeping fit. He should always make sure that he gets enough exercise especially before a meal. Hence their desire to improve the public health system in the Roman Empire so that everyone in their empire benefited. Those who worked for the Romans needed good health as did their soldiers. In this sense, the Romans were the first civilisation to introduce a programme of public health for everyone regardless of wealth. Roman cities, villas and forts were built in what were considered healthy places. The Romans knew not only where to build but also where not to build: Care should be taken where there are swamps in the neighbourhood, because certain tiny creatures which cannot be seen by the eyes breed there. These float through the air and enter the body by the mouth and nose and cause serious disease. At this time, they give birth to animals with mischief-making stings which fly at us in thick swarms. The Romans became practised at draining marshes to rid areas of malaria-carrying mosquitoes. Julius Caesar drained the Codetan Swamp and planted a forest in its place. The Romans paid special attention to the health of their soldiers as without these soldiers, the Roman Empire could collapse. Great emphasis was placed on soldiers having access to clean water and being able to keep fit. Commanders ordered their junior officers not to set up a camp too near a swamp and the drinking of swamp water was especially discouraged. Soldiers were moved around as it was believed that if they stayed too long in one place, they would start to suffer from the illnesses that might have existed in that area. Clean water and the Romans Clean water was very important to the Romans. Cities, towns and forts were built near springs. However, as Roman cities and towns grew, they needed to bring in water from further afield. As the population grew, so did the need for clean water. Trying to shift large volumes of water underground in pipes was not possible as lead pipes would be too weak and bronze pipes would be too

expensive. The Romans could not make cast iron pipes as the techniques for doing this were not known to them. If water could not be brought via pipes, the Romans decided to bring it overland in what were conduits. When the water got to the city, it was fed off into smaller bronze or ceramic pipes. To get the water to flow at an even and slow pace, conduits were built on a slight slope. Valleys were crossed by using aqueducts. One of the most famous of these is the Pont du Gard aqueduct at Nimes in southern France. Where possible, the Romans did take water through tunnels but the hills needed to be relatively small for this to be successful. Rome, as the capital of the empire, had to have an impressive water supply. The aqueducts that fed Rome carried an estimated million litres of water a day. Frontinus was clearly proud of his work but scathing of other well-known engineering works: Almost every house has cisterns and water pipes and fountains. Their famous baths played an important part in this. The baths were used by both rich and poor. Most Roman settlements contained a public bath of some sort. This extremely low price was to ensure that no-one did not bathe because it was too expensive. From the writings of Seneca, we know that the Romans spent large sums of money building their baths. Seneca wrote about baths with walls covered in huge mirrors and marble with water coming out of silver taps! Even people who were sick were encouraged to bathe as it was felt that this would help them to regain their good health. Roman houses and streets also had toilets. Other civilisations had also used toilets but they had been the preserve of the rich and were essentially a sign of your wealth. By AD, it is said that Rome as a city had public toilets which were flushed clean by running water. All forts had toilets in them. To complement these toilets, the Romans also needed a sufficiently effective drainage system. The importance of hygiene also extended as far as military hospitals which had drainage and sewage systems attached to them. Quite clearly, the Romans believed that an injured soldier would get back to health quicker recovering in a hygienic environment.

Chapter 6 : Aristotle's Psychology - History of Psychology

somatic=the relationship between our physical matter and our energy, the interaction of our body structures with our thoughts and actions. behavioral=learning conditioned describe the malleus maleficarum and how it impacted early views of mental illness.

Share1 Shares We take a lot for granted in terms of medical care today. Whilst we still get ill sometimes, there is a range of medicines and treatments available. Our doctors have a huge body of knowledge and experience to call upon, and we can usually rely on having modern and clean facilities. This list is in honor of all of the people who have improved the knowledge and practice of medicine. He is thought by many to be the Father of Western Medicine. He was an incredibly forward thinking man who developed ideas that were ahead of his time. He was outspoken in his belief that illness was not caused by the displeasure of the gods, but had actual physical causes. He acknowledged that lifestyle, diet and environmental factors all affected physical health. It sounds obvious to us now, but that is because we have over 2, years of his influence to thank. At the time this was an incredible belief, that questioned both the authority of the gods, and other physicians of the time. At this point in history people did not understand the internal workings of the human body in the same way that we do now. It was a great taboo to dissect the dead, so the nervous and circulatory systems had not been studied. All treatments were prescribed on this assumption, and Hippocrates himself believed this. Hippocrates treated patients and taught his knowledge to others. He had a dedicated following of people around him, who helped treat others according to his principles and thus increased his renown. He is credited with writing the Hippocratic Corpus. This is a collection of over 70 documents which describe the symptoms, and progression of diseases. This has been passed down over the millennia since his death, and has informed medical practice right up to the present day. He believed in the importance of observing the patient to see the progression and development of symptoms, and to review how effective the treatment was in combating these. He was also a founder in the practice of taking medical and family histories from patients. These are routine practices for any medic today, but they originated with Hippocrates. Hippocrates is probably best known as the creator of the Hippocratic Oath. This is a statement of moral and professional ethical standards that physicians were expected to abide by. This is still sworn on graduating medical school in some areas in an updated form. The facts that are known about her are often shrouded in exaggeration and legend. She was born to an upper class British family, and was highly educated. She felt that she was called by God to become a nurse; a move which her family felt was beneath her. She went to the Crimean front in Eastern Europe to tend to soldiers in , where hospitals had an appallingly high death rate. At the time diseases such as cholera and typhoid fever were rife, with soldiers being seven times more likely to die after admission to hospital than they were on the battlefield. The importance of sanitation was not fully understood at the time, and patients were housed in dirty conditions, surrounded by the human waste of those with infectious diseases. It is widely thought that she improved the hygiene conditions in the hospital during the war, causing the death rate to drop. This is not accurate, or a claim that she ever made. In fact the British government sent the sanitation commission to the area. They cleaned the sewage out of the military hospitals, after which the mortality rates dropped. Nightingale was a talented mathematician, with a passion for statistical analysis. She was the first female member of the Royal Statistical Society. Following her return from the Crimea she did analysis into the rate of death and what had affected it, and found statistical evidence that it was the improvement of sanitation and cleanliness that had made the biggest changes in improving the survival rates. She used the irrefutable statistical data to lobby politicians and influential committee members, persuading them to make major changes to the hospital systems, both at home and for the military. Prior to this, nurses had a poor reputation of being rough and crude women with little training, loose morals and regular drunkenness. It was not considered a suitable profession for well brought up ladies. Nightingale schools had strict regulations about behavior and sobriety, and had a curriculum for student nurses to follow. They also emphasized the

importance of clinical training on wards. Nightingale herself continued to write textbooks of nurse education. International Nurses Day is still celebrated on her birthday every year, 12th of May. The changes that she influenced in healthcare caused a major transformation in patient care and nurse training. These have had a major impact on the way that medical care is given today, and it is this level of influence that has set her apart from other nurse innovators of the time. In he was made the consultant plastic surgeon to the RAF. When the Second World War started he found himself treating pilots who had been shot down during military action. They were often horrendously burnt due to the aviation fuel igniting. Reconstructive plastic surgery was still in its infancy, and McIndoe was one of only four plastic surgeons in the UK at the time. The conventional methods of using acid to remove damaged skin and then waiting two months before trying to perform surgery meant that the pilots had to spend long periods in agony. It also resulted in a great deal of scar tissue. McIndoe decided to operate immediately, cutting away damaged tissue so that skin grafts could be placed straight away. This greatly increased the chances of healing, resulting in less scarring and much more mobility. He also developed new skin graft techniques which resulted in lower infection rates and more successful grafts. The men who were in his care became known as The Guinea Pig Club as the methods McIndoe tried were so ground-breaking. It is not just the pioneering physical care that McIndoe gave which marks him as an exceptional man. He also recognized the incredible value of psychological rehabilitation for the servicemen who were in his care. It was usual for burn victims who had disfiguring injuries to shun the public eye. He felt that it was important for them to remain part of their community, and to have pride in what they had done for their countries. Many of the men were in hospital for a number of years, having multiple reconstructive surgeries, and so their local community became East Grinstead, where the burns unit was. He encouraged them to wear their service uniforms instead of hospital gowns, to maintain their professional pride, and he encouraged the community to engage with and support them. It became an honor to have them over to their homes, and they attended film openings and events. At the time society, including the medical establishment was incredibly sexist. Although there are still a higher proportion of women that suffer from anxiety related symptoms than men, the treatments for them at the time could be extreme. Bear in mind that not all of these women will have been treated willingly, particularly those in the asylums of the time. This left many women in a position where they were treated for willfulness and anxiety by medically sanctioned rape. Other treatments include applying dung to the genitals, leeches, arsenic treatment, and surgical destruction of the clitoris. Freud felt that these treatments were not effective, and failed to address the root of the problem. He was one of the first to consider that these illnesses may have a psychological, rather than physical cause. He developed a treatment which was unheard of at the time, which basically involved listening to the patient. He initially tried hypnosis, and later used his method of psychoanalysis. He felt that if they could be confronted the troubling symptoms would stop. Freud also developed theories about sexuality, and stated that the development of a healthy functioning person was due to successful transition through stages of sexual development. He gave us the idea of the Oedipus complex. This is where a male child sees his mother as his main focus and falls in love with her. He feels threatened by the presence and dominance of the father and worries that he may be castrated. He described a similar phase in females, where the focus is on the father, and he describes penis envy, stating that women feel incomplete due to the lack of this appendage. He also described the oral, anal and phallic stages of childhood development, where the primary sexual urge is related to each of these three areas in turn. Freud felt that problems in progressing through these stages were the main cause of neurosis and anxiety in adults. It is important to remember that when Freud was developing his theories, sex was not discussed in the way it is now, and Victorian values reigned. Currently psychoanalysis is in decline, and is not widely used as a treatment. It is, however, the precursor for modern psychological treatment. The vast majority of treatment of anxiety based disorders is now with verbal therapy, allowing people to discuss and explore their problems and the reasons for them. Prior to Freud this would have been impossible. He has allowed the area of psychology and the related area of psychiatry to advance dramatically. His theories have become widely known outside of the medical field, and have encouraged the consideration

of psychology to become popular. This has made a huge impact in helping to reduce the stigma of mental illness. Curie is the discoverer of both Radium and Polonium and in she was awarded the Nobel Prize for chemistry for her discoveries. She was the first women to be awarded a Nobel Prize, and was the first person to win multiple Nobel Prizes. She remains the only woman to have won the award twice. At the time much of the French government and scientific establishment were very negative towards her because of her gender, refusing to acknowledge a female scientist among their ranks. This is still the foundation of radiotherapy today, although the methods have changed. At the time she filled small glass tubes with Radon a radioactive gas that could be inserted into the area of the tumor, causing it to shrink. During World War One, Curie and her daughter used their findings to help soldiers injured on the front lines. They fitted x-ray machines to vehicles and drove them directly to field hospitals. They were able to show the location of bullets, shrapnel or broken bones, and were a great assistance in providing appropriate medical care. Unfortunately, at the time the harmful effects of working with radioactive materials were not known, and both Curie and her husband suffered ill health due to their high levels of exposure. They both exhibited sores on their fingers from handling the materials directly, and Curie herself eventually died of leukemia.

Chapter 7 : The Contribution of Medicine to Our Idea of the Mind - CORE

Aristotle's psychology, as would be expected, was intertwined with his philosophy of the mind, reasoning and Nicomachean ethics, but the psychological method started with his brilliant mind and empirical approach.

Benjamin Franklin took a great interest in health-related topics. In his day, many beliefs about health and disease were based on superstition. Franklin applied Enlightenment reasoning to his study of various afflictions and came up with some astonishingly accurate hypotheses. In the 18th century, most people believed that wet clothing and dampness in the air caused the common cold. However, Franklin observed that sailors, who were constantly wearing wet clothing, remained healthy. After considering the matter on and off for several years, he eventually concluded: Franklin learned first-hand from the printing business that working with warm lead type caused his hands to become exceptionally stiff and sore. He discovered that some typesetters who warmed their type sometimes lost the complete use of their hands. Franklin decided to work with cold type from that point on. Years later, he visited a hospital in France that treated patients suffering from what was then called the "dry gripes" or "dry belly ache. He corresponded with others interested in this health issue, exchanging observations and insights about the illness. A friend of Franklin, Dr. Thomas Bond, came up with the idea of establishing a public hospital. Bond was unable to raise the money, so he turned to Franklin, who mounted a public relations and information campaign in support of a hospital. The colonial government finally agreed and the hospital was founded in The Pennsylvania Hospital is considered to be the first public hospital in the United States. While raising money for the hospital, Franklin came up with a new idea for combining public government money with private donations, which created the first matching grant. Franklin experimented with giving electrical shocks to individuals who had paralysis in their limbs due to a stroke or other cause. He wired the patients to Leyden jars and sent electrical shocks to the paralyzed limbs. Franklin observed improvement in many of the patients, but reported that most relapsed after several days. Although he was initially excited about the possibilities, he wrote that he "never knew any advantage from electricity in palsies that was permanent. As an avid swimmer in his youth, Franklin learned the joys of exercise. He especially believed in outdoor exercise with lots of fresh air. In a letter to his son William, Franklin outlined a complete program of vigorous exercise, which Franklin contended would help prevent disease. Franklin rightly believed that the more strenuous the exercise, the higher the degree of body warmth. He commented that when he exercised vigorously with dumbbells that both his heart rate and temperature rose. Today we know that regular cardiovascular exercise can prevent a variety of ailments. Franklin grew up near the ocean in Boston and began swimming at a young age. On his first trip to London in , he often swam in the Thames River and entertained observers with the "ornamental" maneuvers he performed in the water. While in London, Franklin considered taking a job as a full-time swimming instructor. For his early encouragement of the sport of swimming, Franklin was posthumously inducted into the International Swimming Hall of Fame. Franklin improved on conventional catheters, which were hard tubes that were inserted into the bladder through the urethra to drain urine from the body. The original devices were very uncomfortable and often painful to the patient. Franklin devised a catheter with a flexible tube, resulting in less discomfort for the patient.

Chapter 8 : Early Medicine and Physiology

The idea that our minds and emotions play a critical role in our healthâ€”a fundamental premise in integrative medicineâ€”is far from new. Many ancient healing systems emphasize the interconnection between mind and body in healing, including Hippocrates, the father of Western medicine, who taught that good health depends on a balance of mind, body, and environment.

His father, Nicomachus, was the court physician to the king of Macedonia. Aristotle probably received extensive training in biology and medicine from his father. These were his preferred fields, although Aristotle studied and wrote about all the sciences. Aristotle later commented that, although he loved Plato, he loved the truth more. In contrast to his teacher Plato, who considered the physical world of becoming to be an imperfect, ephemeral and illusory reflection of the spiritual world of being, Aristotle affirmed the essential reality of the physical world, and said that the senses must be trusted as the primary sources of valid knowledge. He affirmed the precedence of facts over theory by declaring that if newly discovered facts contradicted a previously held theory, the theory had to be modified or discarded to accommodate them. In Aristotle, we can see the origins of modern science and the scientific method. Although he greatly loved medicine and probably even practiced it on occasion, Aristotle most distinguished himself in the field of biology. An avid natural historian who tirelessly studied and catalogued many species of plants and animals, Aristotle was the father of comparative anatomy and physiology, and of later theories of evolution and embryology. Aristotle believed that the highest virtue that a man could have came from the proper exercise of his reason. He believed that all true happiness and morality came from adhering to the Golden Mean of moderation in all things. Hot, Cold, Wet, and Dry. Later philosopher-physicians would apply these qualities to characterize the Four Elements, Four Humors, and Four Temperaments. The Four Basic Qualities are the foundations for all notions of balance and homeostasis in Greek Medicine. However, his teachings were to be spread far and wide through the conquests of his most illustrious pupil, Alexander the Great. The early Church fathers vastly preferred the spiritual, otherworldly philosophy of Plato and the Neo-Platonists over Aristotle, who was esteemed chiefly as a logician. But, as with Galen, much of his work was blindly accepted as dogma and never questioned until the Renaissance. Like Galen, Aristotle, although impressive, was not infallible. Aristotle in a Nutshell Metaphysics: Change is both natural and necessary. Four different kinds of causes explain the process of change: Material Causes - due to what an object is made of. The most reliable source of knowledge is from the senses and direct experience and observation. Facts take precedence over theories. There are ten basic categories of statements that can be made about any given thing: The virtue of reason: Man is a rational animal. The Four Basic Qualities: Hot, Cold, Wet and Dry. Natural historian; comparative biology, anatomy and physiology. Early theories of evolution and embryology.

Chapter 9 : Medicine in Ancient Rome - History Learning Site

Hippocrates was a physician in Ancient Greece. He is thought by many to be the Father of Western Medicine. He was an incredibly forward thinking man who developed ideas that were ahead of his time.

Metaphysics substance, cause, form, potentiality Nicomachean Ethics soul, happiness, virtue, friendship Eudemain Ethics Politics best states, utopias, constitutions, revolutions Rhetoric elements of forensic and political debate Poetics tragedy, epic poetry 3. From their perspective, logic and reasoning was the chief preparatory instrument of scientific investigation. Aristotle himself, however, uses the term "logic" as equivalent to verbal reasoning. They seem to be arranged according to the order of the questions we would ask in gaining knowledge of an object. For example, we ask, first, what a thing is, then how great it is, next of what kind it is. Substance is always regarded as the most important of these. Substances are further divided into first and second: Notions when isolated do not in themselves express either truth or falsehood: The elements of such a proposition are the noun substantive and the verb. The combination of words gives rise to rational speech and thought, conveys a meaning both in its parts and as a whole. The truth or falsity of propositions is determined by their agreement or disagreement with the facts they represent. Thus propositions are either affirmative or negative, each of which again may be either universal or particular or undesignated. A definition, for Aristotle is a statement of the essential character of a subject, and involves both the genus and the difference. To get at a true definition we must find out those qualities within the genus which taken separately are wider than the subject to be defined, but taken together are precisely equal to it. For example, "prime," "odd," and "number" are each wider than "triplet" that is, a collection of any three items, such as three rocks ; but taken together they are just equal to it. The genus definition must be formed so that no species is left out. Having determined the genus and species, we must next find the points of similarity in the species separately and then consider the common characteristics of different species. Definitions may be imperfect by 1 being obscure, 2 by being too wide, or 3 by not stating the essential and fundamental attributes. Obscurity may arise from the use of equivocal expressions, of metaphorical phrases, or of eccentric words. All men are mortal; Socrates is a man; therefore, Socrates is mortal. The syllogistic form of logical argumentation dominated logic for 2, years until the rise of modern propositional and predicate logic thanks to Frege, Russell, and others. Aristotle begins by sketching the history of philosophy. For Aristotle, philosophy arose historically after basic necessities were secured. It grew out of a feeling of curiosity and wonder, to which religious myth gave only provisional satisfaction. The earliest speculators i. Thales, Anaximenes, Anaximander were philosophers of nature. The Pythagoreans succeeded these with mathematical abstractions. The level of pure thought was reached partly in the Eleatic philosophers such as Parmenides and Anaxagoras, but more completely in the work of Socrates. For Aristotle, the subject of metaphysics deals with the first principles of scientific knowledge and the ultimate conditions of all existence. More specifically, it deals with existence in its most fundamental state i. This can be contrasted with mathematics which deals with existence in terms of lines or angles, and not existence as it is in itself. In its universal character, metaphysics superficially resembles dialectics and sophistry. However, it differs from dialectics which is tentative, and it differs from sophistry which is a pretence of knowledge without the reality. The axioms of science fall under the consideration of the metaphysician insofar as they are properties ofall existence. Aristotle argues that there are a handful of universal truths. Against the followers of Heraclitus and Protagoras, Aristotle defends both the laws of contradiction, and that of excluded middle. He does this by showing that their denial is suicidal. Carried out to its logical consequences, the denial of these laws would lead to the sameness of all facts and all assertions. It would also result in an indifference in conduct. Plato tried to solve the same question by positing a universal and invariable element of knowledge and existence -- the forms -- as the only real permanent besides the changing phenomena of the senses. Forms are not causes of movement and alteration in the physical objects of sensation. However, the forms place knowledge outside of particular things. Further, to

suppose that we know particular things better by adding on their general conceptions of their forms, is about as absurd as to imagine that we can count numbers better by multiplying them. Finally, if forms were needed to explain our knowledge of particular objects, then forms must be used to explain our knowledge of objects of art; however, Platonists do not recognize such forms. However, that substance of a particular thing cannot be separated from the thing itself. Further, aside from the jargon of "participation," Plato does not explain the relation between forms and particular things. In reality, it is merely metaphorical to describe the forms as patterns of things; for, what is a genus to one object is a species to a higher class, the same idea will have to be both a form and a particular thing at the same time. In theMetaphysics, though, it frequently inclines towards realism that is, substance has a real existence in itself. We are also struck by the apparent contradiction in his claims that science deals with universal concepts, and substance is declared to be an individual. In any case, substance is for him a merging of matter into form. The term "matter" is used by Aristotle in four overlapping senses. First, it is the underlying structure of changes, particularly changes of growth and of decay. Secondly, it is the potential which has implicitly the capacity to develop into reality. Thirdly, it is a kind of stuff without specific qualities and so is indeterminate and contingent. Fourthly, it is identical with form when it takes on a form in its actualized and final phase. It was intended to solve the difficulties which earlier thinkers had raised with reference to the beginnings of existence and the relations of the one and many. There are four causes: Take, for example, a bronze statue. Its material cause is the bronze itself. Its efficient cause is the sculptor, insofar has he forces the bronze into shape. The formal cause is the idea of the completed statue. The final cause tends to be the same as the formal cause, and both of these can be subsumed by the efficient cause. Of the four, it is the formal and final which is the most important, and which most truly gives the explanation of an object. The final end purpose, or teleology of a thing is realized in the full perfection of the object itself, not in our conception of it. Final cause is thus internal to the nature of the object itself, and not something we subjectively impose on it. To Aristotle, God is the first of all substances, the necessary first source of movement who is himself unmoved. God is a being with everlasting life, and perfect blessedness, engaged in never-ending contemplation. Philosophy of Nature Aristotle sees the universe as a scale lying between the two extremes: The passage of matter into form must be shown in its various stages in the world of nature. It is important to keep in mind that the passage from form to matter within nature is a movement towards ends or purposes. Everything in nature has its end and function, and nothing is without its purpose. Everywhere we find evidences of design and rational plan. No doctrine of physics can ignore the fundamental notions of motion, space, and time. Motion is the passage of matter into form, and it is of four kinds: Of these the last is the most fundamental and important. Aristotle rejects the definition of space as the void. Empty space is an impossibility. Hence, too, he disagrees with the view of Plato and the Pythagoreans that the elements are composed of geometrical figures. Space is defined as the limit of the surrounding body towards what is surrounded. Time is defined as the measure of motion in regard to what is earlier and later. It thus depends for its existence upon motion. If there where no change in the universe, there would be no time. Since it is the measuring or counting of motion, it also depends for its existence on a counting mind. If there were no mind to count, there could be no time. After these preliminaries, Aristotle passes to the main subject of physics, the scale of being. The first thing to notice about this scale is that it is a scale of values. What is higher on the scale of being is of more worth, because the principle of form is more advanced in it. Species on this scale are eternally fixed in their place, and cannot evolve over time. The higher items on the scale are also more organized. Further, the lower items are inorganic and the higher are organic. The principle which gives internal organization to the higher or organic items on the scale of being is life, or what he calls the soul of the organism. Even the human soul is nothing but the organization of the body. Plants are the lowest forms of life on the scale, and their souls contain a nutritive element by which it preserves itself. Animals are above plants on the scale, and their souls contain an appetitive feature which allows them to have sensations, desires, and thus gives them the ability to move. The scale of being proceeds from animals to humans. The human soul shares the nutritive element with plants, and the appetitive element with animals, but also has a rational

element which is distinctively our own. The details of the appetitive and rational aspects of the soul are described in the following two sections. For a fuller discussion of these topics, see the article Aristotle: Motion and its Place in Nature.