

Chapter 1 : The Artificial Clockmaker

The 18th century was a wealth of knowledge, exploration and rapidly growing technology and expanding record-keeping made possible by advances in the printing press.

He was appointed Chaplain to Lady Grey in Appointed Vicar of Wargrave in Berkshire, Appointed Vicar of Upminster in Essex, , a living worth more than L per annum. Frankly I do not know how to list this, but think patronage is the best category. Chaplain to the Prince of Wales, Canon of Windsor, I list both of these under patronage. Richard Neville, the lord of the manor, whose wife was the daughter of Lady Grey, made him Vicar of Wargrave in Bray apparently presented Derham to Upminster. She was the widow of the previous incumbent, and I find the transaction a mystery. Through the Prince he became Canon of Windsor. He dedicated notes on insects that were published as part of a book by Albin in to the Princess of Wales. Medical Practice, Instruments See above on medical practice. He continued to work on clocks and apparently on telescopes. He published an account of an instrument for finding the meridian in the Philosophical Transactions. Royal Society Informal connections: Atkinson, "William Derham, F. A7 This is an outstanding article. Dictionary of National Biography repr. Oxford University Press, , 5, Biographia Britannica, 2nd ed. London, , 5,

Chapter 2 : The artificial clock-maker. :: History of Engineering & Technology

The Artificial Clock-maker: A Treatise of Watch and Clock-work, Shewing to the Meanest Capacities, the Art of Calculating Numbers to All Sorts of Movements; the Way to Alter Clock-work; to Make Chimes, and Set Them to Musical Notes; and to Calculate and Correct the Motion of Pendulums.

God the Clockmaker - Deism Dr. Lewis at Oxford, taught English, has written some excellent books that are unfortunately are out of print, such as *The Christian Mind*, a very helpful book for thinking about worldview. So these books and more are available in the bookstore, and we would encourage you this summer to take advantage of this opportunity for reading and look at that material. We are going to look at Deism. What is a worldview? Now let me just remind you of a few things that we said last week. We said that a worldview is a set of fundamental assumptions about the most important issues of life. Everything we believe and how we judge reality is related to this worldview. And we also said that everybody has a worldview whether they know it or not. So everyone has a worldview whether they realize it or not. How could I have one? Your epidermis is showing. We all have a worldview whether we realize we have a worldview or not. And so that basic set of presuppositions that we call a worldview is what we hold about the basic makeup of the world. What makes a worldview? Sometimes a worldview is composed of a combination of those things that we know intuitively. There are just certain things that God has built into us that we innately know about this world. There are other things that God teaches us through this world. On the other hand, there can be other components to a worldview as well. It might be formed by the dominant opinions of our culture. It might be formed by the Bible and Christian teaching. It may be right or it may be wrong, or it may be a little bit of a mixture of both. It may be a consistent way to think about the world; it may be an inconsistent way to think about the world—but everyone has a worldview. And we also said that every worldview has questions that it tries to ask and answer. And there are certain basic questions that every worldview tries to answer, questions like this: What is really real? When it gets down to it, what is fundamentally real about this life and in this world? Secondly, what is the nature of this world around us? What can we say about it that is true of its essence? When it all boils down, what are we? How should we account for ourselves? What do we think about ourselves? What happens at death? Why is it possible to know anything at all? These are the kinds of questions that every worldview has to ask and answer, and every worldview has questions that it appears unable to answer satisfactorily. Deism Now tonight, we are going to be looking at a worldview that was very, very popular in the 17th century. What do we need talking about a worldview that was very popular in the 17th century? What are we going to try and do tonight? Well, here are our purposes: Tonight we want to comment on Deism as one of the basic worldviews that underlies the way we, in the Western world, think about ourselves and other people and the natural world and God or ultimate reality. So we want to look at Deism because Deism has contributed to the way we think today. Secondly we want to show, or at least suggest, some reasons why Deism developed. I mean, if Christian theism, which was dominant when Deism came onto the scene—if Christian Theism has all the right answers to all the right questions, why would somebody have come up with Deism? What would have been the attraction? Why would somebody have come up with a new set of answers to the great questions if Christianity had given satisfying, useful, helpful, true answers to that? Why would there have been this development at all? I also want to encourage you to think worldviewishly. That is, conscious not only of your own way of thought but also that of other people. He is not involved in this creation. And so before we begin to look at that wrong worldview, I want to look at four Bible statements that outline for us a glorious presentation and put in stark contrast the Christian view of the Creator-God. Turn with me, first, to the 19th Psalm and just the first half of that Psalm. And in Psalm 19, beginning in verse 1—and, by the way, you just sang this Psalm. In them He has placed a tent for the sun, 5 Which is as a bridegroom coming out of his chamber; It rejoices as a strong man to run his course. He made this world. He ought to be worshiped. Well, Paul, Paul in Romans 1: You owe Him your worship. What does he say? It was that, though God had revealed Himself clearly and it was understood, you chose to suppress that truth and to go your own way. God has revealed Himself that clearly. Now notice what he says in Acts chapter

And notice how Paul here stresses that the God who is the Creator God worshiped by Christians is not an uninvolved, detached deity who wound things up and left it to run. Turn with me there. For by Him all things were created, both in the heavens and on earth, visible and invisible, whether thrones or dominions or rulers or authorities—“all things have been created through Him and for Him. Now in just those four verses you see this dramatically different Christian view of the world, of God, of creation and things, how different it is from the view of Deism. That is, Deism thought that the universe itself and our inherent capacity to understand that universe is the source of true knowledge in this world. Reason suddenly became the source. God is no longer viewed as the source of truth; reason is seen not as an instrument, a tool, but as the source of truth. But reason itself is sufficient to understand everything. So reason goes from being an instrument to help us to hear and understand God speak to us, to being the source of knowledge. The Protestant Reformation happened in the 16th century. Europe had been liberated from the forced darkness of hundreds of years through that Protestant Reformation, and only one hundred years later Deism comes in. Well, there are some interesting answers to that. Let me just suggest two. Remember, that once the Reformation had obtained the freedom for many Protestant churches throughout Europe, the theological debate amongst Christians was not over. In fact, it was more rigorous than ever before because there was now not just one Pope and one church; there were multiple churches and there were vigorous theological debates and even religious wars—“hundreds and thousands of people died. And this was a source of great consternation to many and may well have turned people to look for some other solution. Surely truth will bring peace, was the rationale of many. And so people began to look for something that would give them relief from the religious strife and war that had begun in the 16th century. Secondly, Protestants, because of what they taught about the world, had engendered a new life in the sciences. In the Middle Ages, the only science worth studying was theology. And, therefore, studying that world is inherently a worthy project, and so there were astounding scientific advances that occurred in the 16th and 17th centuries. But what happened was this: As men saw new things about the creation that they had never seen before—they saw patterns and principles and laws that they had never seen in all their study of the world, and those patterns and principles and laws woven into the creation were so impressive to them, some men decided that those things were self-explanatory. No, you had the laws of nature. You had these principles that had been woven into reality and, therefore, what did these men do? They set God on the shelf and they tried to separate the laws which God, the Creator had woven into nature from God Himself. Deism was a fundamentally English phenomenon, attributed to Herbert of Cherbury although there were some non-English Deists - Voltaire in France thought of himself as a French Deist. English love to think about stuff. You know the old joke: The English heard that it was something to argue about. The Irish heard that it was something to fight about. The Welsh heard that it was something to sing about. And the Scots heard that grace was free. And so this new approach of Deism was very attractive to that temperament. Herbert of Cherbury, set down five principles of Deism. Let me just give them to you very quickly: One, there is one God who created the world but who no longer intervenes by either revelation or miracle. Secondly, there is an objective difference between right and wrong.

in English - The 2d ed., enl. To which is added a suppl. containing, 1. The anatomy of a watch and clock. 2. Monsieur Romer's satellite instrument, with observations concerning the calculation of the eclipses of Jupiter's satellites, and to find the longitude by them.

While animals have been shown to be disturbed by artificial light at night, its effects on humans, it is argued, range from discomfort and glare to sleep deprivation and cancer. It is well known that artificial light, especially in and around cities, causes observable problems to wildlife, at levels from the individual all the way to an entire ecosystem. Animals can get disoriented or blinded; they can run into structures such as skyscrapers; and their living, reproductive, and migrating patterns might get disrupted as well. But how can it affect us? The human body – like all living organisms on Earth, in fact – runs on an internal clock that regulates our functions, our sleep, our behavior, etc. This precise biological pattern is aptly named a circadian rhythm, from the latin circa approximately and dia day , as it is programmed within us, within our genes, to follow the 24 hours of a day. However, it can also react to external stimuli. And light, in fact, is the main factor that can advance or delay the circadian rhythm. The Sun is responsible for regulating this mechanism and serves as the basis for the circadian rhythms. More precisely, daylight will inhibit the production of melatonin, the hormone that promotes drowsiness and sleep. When the sun sets, your body starts producing this hormone and you gradually feel sleepier and your body temperature lowers as it accumulates. Then as morning approaches and daylight comes, melatonin levels fall and you wake. The production of melatonin based on darkness is even observed among nocturnal creatures. You can feel the effects it has when you travel and suffer from jet lag. Another noticeable effect occurs in regions farther from the equator, when days become shorter by fall equinox and through wintertime. A non-negligible percentage of people say they feel more depressed, have less energy, and find it difficult to wake up. This Seasonal Affective Disorder, also known as winter blues, is the result of an over-production of melatonin, due to a lack of light. The biological clock has also been reported to function at a different pace when people are in isolation, with no time reference and no light cycles to simulate day and night. Where it becomes an even more important concern is that it has been known for over a hundred years that cell division inside the body follows a circadian rhythm, we have just explained that the circadian rhythm is affected by light, and we also know that damage to cell division is characteristic of cancer. You do the math! Studies have shown that mice, when exposed to unnatural patterns of artificial light, developed certain problems related to their cell division and also to the transcription of many genes. In other words, they were in for some major health problems on the long run, if they remained exposed to that type of light – and so would we. What is not clear, however, is the exact mechanism by which cells and genes are affected. But until we find out and clarify this, it is still a fact that we are naturally conceived to follow the patterns of day and night. Because half of the world population lives in and around cities, most often exposed to the constant orange glow and sometimes even the direct light of various fixtures found outside, we can only imagine how important it is to rethink the way we use light. Luminaire manufacturers should strive to develop more responsible lighting. Not only will this allow for a more pleasant environment, it can also help us feel and live better, while contributing to lower the risks of major health problems. This is a very important issue that the lighting industry as a whole has to proactively keep an eye on, and adjust to, as we learn more.

Chapter 4 : William Derham - Wikipedia

"The Artificial Clockmaker" by William Derham. This Ebook is a facsimile copy of "The Artificial Clockmaker" by William Derham D.D, F.R.S. (-), in its fourth edition of

Biography[edit] Thomas Tompion was born around and was baptized on 25 July in Northill , Bedfordshire , England. He was the eldest son of a blacksmith, also named Thomas Tompion, and probably worked as a blacksmith until when he became an apprentice of a London clockmaker. Very little of his earlier years is known. His early clockmaking style shows a strong connection with Joseph Knibb. This together with the outstanding skills of the workmen he employed gave him an unrivalled reputation throughout the known world. These were fixed in the Octagon room, each was driven by a deadbeat escapement designed by Richard Towneley , with both clocks only needing to be wound once a year. They proved to be very accurate and were instrumental in achieving the correct calculations needed for astronomical observations. Several different kinds were experimented with, including an early type with double balances geared together in order to eliminate errors of motion. William Derham mentions this in his book *The Artificial Clockmaker*. The final form of balance spring arrangement used by Tompion was a plain spiral with a single balance, indeed the same arrangement employed by Christiaan Huygens in watches made for him by Thuret. Huygens imagined that the latter would not be necessary as the spiral spring would render the balance isochronous. It is often stated that Tompion invented the particular type of balance spring regulation in pocket watches widely used until the late 19th century. This has the curb pins mounted on a sector rack, and moved by a pinion on which is mounted a graduated and numbered disc. However, he certainly did not invent this system, as such regulating devices were already in use by the s on French balance spring watches of the Thuret pattern. His three-train grande sonnerie bracket clocks are masterpieces. Those interested in mechanics are particularly attracted to the mechanisms of such clocks and his repeating watches as they are quite complex, indeed it could even be said over-complex, though efficient in operation. He shares this characteristic with the later French-Swiss watchmaker Breguet. Later life[edit] Tompion went into partnership with Edward Banger in until about or , when it was dissolved in circumstances which are not at all clear. Certainly from around it was George Graham who was in partnership with Tompion. Some of his later productions are jointly signed, and mysteriously some clocks have this signature on a separate plate which overlays that of Tompion and Banger engraved on the dial plate proper. Thomas Tompion died on 20 November and was buried in Westminster Abbey , George Graham being buried alongside him in Many of his clocks are still operational today, including two of his one-year clocks in Buckingham Palace. Many of his watches survive and due to their sound construction still continue to work, as predicted by Hatton in The modern Swiss wristwatch brand "Tompion" of the so-called "British Masters" series has no connection either with Thomas Tompion or the original firm of that name. Archived from the original on A Treatise of Watch and Clock-work etc. Retrieved 14 May Further reading[edit] Bernet, Claus George Routledge and Co. Pevsner, Nikolaus , ed. A Book of English Clocks. The King Penguin Books. His Life and Work â€” Ulyett, Kenneth []. British Clocks and Clockmakers. In Quest of Clocks. Rockliff Publishing Corporation Ltd.

Chapter 5 : The Effects of Artificial Light on Human

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Chapter 6 : Thomas Tompion - Wikipedia

*The artificial clock-maker. A treatise of watch and clock-work, shewing to the meanest capacities the art of calculating numbers to all sorts of movements [W. Derham] on calendrierdelascience.com *FREE* shipping on qualifying offers.*

DOWNLOAD PDF THE ARTIFICIAL CLOCKMAKER

The 18th century was a wealth of knowledge, exploration and rapidly growing technology and expanding record-keeping made possible by advances in the printing press.

Chapter 7 : The Galileo Project

To link to the entire object, paste this link in email, IM or document To embed the entire object, paste this HTML in website To link to this page, paste this link in email, IM or document.

Chapter 8 : REVIEW: Elliott-The Clockmaker's Assistant () | NAWCC Message Board

The artificial clock-maker: a treatise of watch and clock-work, wherein the art of calculating numbers for most sorts of movements is explained to the capacity of the unlearned: also the history of clock-work, both ancient and modern, with other useful matters never before published.

Chapter 9 : Bonjour | Smart Alarm Clock with Artificial Intelligence by BONJOUR â€” Kickstarter

The artificial clock-maker: a treatise of watch and clock-work, wherein the art of calculating numbers for most sorts of movements is explained to the capacity of the unlearned: also the history of clock-work, both ancient and modern, with other useful by Derham, W. (William), -,Mynde, James, -,Knapton, James, - and a great selection of similar Used, New and Collectible Books available.