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Chapter 1 : World Dream Bank: SHIVERIA

Synopsis. Review. Author. Contents. Order Link: About Primordial Star. This is a fresh, big-picture canvass of the lack of coherence in the current geological, palaeontological, biological, and astro-physical findings and models.

This article has been cited by other articles in PMC. Abstract In concert with the development of new materials in the last decade, the need for toxicological studies of these materials has been increasing. These new materials include a group of rare earths RE. The use of RE nanotechnology is being considered in some green applications, to increase their efficiency by using nano-sized RE compounds, and therefore hazard evaluation and risk assessment are highly recommended. This review was conducted through an extensive contemplation of the literatures in toxicology with in vitro and in vivo studies. Major aspects reviewed were the toxicological evaluations of these elements and metallic compounds at the molecular and cellular level, animal and human epidemiological studies and environmental and occupational health impacts on workers. To establish a safe and healthy working environment for RE industries, the use of biomarkers is increasing to provide sustainable measure, due to demand for information about the health risks from unfavorable exposures. Given the recent toxicological results on the exposure of cells, animals and workers to RE compounds, it is important to review the toxicological studies to improve the current understanding of the RE compounds in the field of occupational health. This will help to establish a sustainable, safe and healthy working environment for RE industries. Rare earths, Toxicology, Environmental health, Occupational health Introduction The rare earth elements RE are a group of metals comprised of yttrium, fourteen lanthanide elements, and sometimes scandium. Their unique physical and chemical properties have rendered them indispensable for a growing number of critical technologies. For example, neodymium is vital to high-performance permanent magnets, and yttrium is a promising raw material for superconductors and laser technology [1]. RE exist in a wide range of mineral types, including halides, carbonates, oxides, phosphates and silicates. Cerium, the dominant RE, is used in catalytic converters in cars, enabling them to run at high temperatures, and plays a crucial role in the chemical reactions in the converter. Lanthanum is used in camera and telescope lenses. Compounds containing lanthanum are used extensively in carbon lighting applications, such as studio lighting and cinema projection. Neodymium is used to make the powerful magnets used in loudspeakers and computer hard drives, to enable them to be smaller and more efficient. Magnets containing neodymium are also used in green technologies, such as the manufacture of wind turbines and hybrid cars. Praseodymium is used to create strong metals for aircraft engines, and it is also a component of a special sort of glass, used to make visors to protect welders and glassmakers. Gadolinium is used in X-ray, magnetic resonance image scanning systems, and also in television screens. Yttrium, terbium and europium are important in making televisions, computer screens and other devices that have visual displays, as they are used in making materials that give off different colors. Europium is also used in making control rods in nuclear reactors [2]. The commercial applications of RE are summarized in Table 1. Nevertheless, there are many environmental issues associated with RE production. Reports indicate that the chemicals used in the refining process have been responsible for the disease and occupational poisoning of local residents, water pollution, and the destruction of farmland. Occupational and public safety and health risks related to the rare earths may be addressed at their mining, transportation, processing, and waste disposal, as well as decommissioning, stages [3]. The possible contaminants cause negative effects on aquatic and terrestrial organisms, as well as on humans. In some cases, they increase the mortality rates of aquatic and terrestrial organisms [4]; and some of the radionuclides and metals contaminants are even classified by international and federal health agencies as human carcinogens. Given the recent toxicological results on the exposure of cells, animals and workers to rare earth compounds, it is important to review the toxicological studies, in order to improve the current understanding of the rare earth compounds. This will also help to establish a sustainable, safe and healthy working environment for the RE industries. Methods This study was conducted through an extensive review

of the literature. Literature review techniques were used to find relevant articles in the toxicology, with in vitro and in vivo studies, industrial hygiene, and epidemiologic literature. Extensive Internet searching was used as the primary tool for this review. Various websites, including Google Scholar http: Searches were conducted using keywords similar to the following: These searches yielded more than references. The references were reviewed further for information regarding occupational or environmental aspects. As a result of this further examination, 84 citations were deemed relevant to this study, and are included as references in this report. The major aspects reviewed were the toxicological evaluations of these elements and metallic compounds at the molecular and cellular level, animal and human epidemiological studies, and environmental and occupational health impacts on workers. Part of the literature review also included gathering information on the chemical and toxicological properties of each compound of interest. Results For the past three decades, most attention in heavy metal toxicology has been paid to cadmium, mercury, lead, chromium, nickel and tin, because these metals have widely polluted the environment. However, with the development in the last decade of new materials, the need for toxicological studies of these materials has been increasing. These new materials include a group of RE. Although some RE have been used for superconductors, plastic magnets, and ceramics, few toxicological data are available, in comparison with other heavy metals. In this review, we present an overview of the health hazards of RE and related compounds, including recent studies. Historical background of occupational health research with RE A case of RE pneumoconiosis is described of a man working in a lithographic laboratory as a photoengraver, exposed to the smoke of cored carbon arc lamps over a period of 46 years, who developed an interstitial pneumoconiosis. The findings strongly suggest that the pneumoconiosis diagnosis has to do with occupational exposure to RE dusts, and calls attention to proposals for maximum permissible concentration limits of occupational exposure to RE [5 , 6]. Little is known of the biological effects of occupational exposure to the lanthanides. A case of a photoengraver professionally exposed to cored arc light carbon fumes doped with Ce was studied, to establish whether the observed pulmonary alterations were related to the exposure to RE present in cored arc light carbon [7]. The first case of RE pneumoconiosis described had worked as a photoengraver for 13 years, and had not been exposed for 17 years. Abnormal levels of RE were demonstrated also in the nails, suggesting absorption of the RE from the lung [8]. Slowly progressive restriction in respiratory function was observed in five reproduction photographers, who had been exposed for more than a decade to the fumes of carbon arc lamps [9]. The case report of a movie projectionist describes his approximately 25 years of occupational exposure to carbon arc lamp fumes [10]. With the increasingly widespread use of RE, there is a likelihood that further occupational groups may have significant but unrecognized exposure. A retrospective study was conducted to evaluate the lung retention of particles containing cerium in subjects with and without previous occupational exposure to mineral dusts [11]. Lanthanides were extracted from the lung tissue of a subject with a history of potential exposure to carbon-arc lamp emissions in printing shops. They showed the presence of elemental Ce, La and Nd, at concentrations higher than the average concentration measured in other workers who had died of cancer at various sites [12]. The authors recommend control of the level of yttrium, terbium and lutetium fluorides in the air of the workplace, through the maximum admissible concentrations MACs for the fluorides of 2. For diagnostic purposes, mineralogical analysis was performed in BAL fluid and lung tissue from a year-old patient previously exposed to asbestos and RE dusts. These results suggest that RE is metabolized, and should be considered as biopersistent in the human respiratory tract, since occupational inquiries revealed that exposure to cerium oxide abrasive powder had ceased at least 15 years earlier [14]. A report describes a male patient with a year history of optical lens grinding, associated with exposure to CeO2. Besides reinforcing the contention that REM are potentially harmful, it is suggested that such agents may be causally related to the development of pulmonary fibrosis [15]. A year-old male subject who worked as a movie projectionist and who was exposed for 12 years to RE from cored arc light carbon electrodes was investigated. The research tended to exclude other occupational or non-occupational lung diseases. The relation between the observed interstitial lung fibrosis and occupational exposure to RE, however, is highly probable [16]. Environmental

and occupational health problems with RE The relationship between cerium content in human breast milk and blood plasma or serum was evaluated. The research of hair content of RE in young children aged years whose mothers live in a RE mining area of Jiangxi Province was conducted. The hair level of RE in young children and their mothers decreased with the increase of the distance from their home to the RE mining area. Young children living in the area with RE mining may be the high-exposure population, and their hair level of RE was significantly higher than that in their mothers [18]. Based on the new information, there is ongoing exposure of a large population to new diesel emissions generated from using fuel additives containing CeO2 nanoparticles, for which the environmental and public health impacts of this new technology are unknown. Therefore, there is an absolutely critical need to investigate integrated exposure and to conduct toxicological studies, in order to accurately assess the environmental, ecological and health implications of nano-RE [19]. These environmental and occupational health problems commonly result from insufficient environmental regulations and controls in the areas where REs are mined and processed. One of the most significant reports related to the radioactivity of some ores, is that refining one ton of RE oxide can potentially produce 1. However, there are indications that China is becoming increasingly aware of the environmental impacts of RE production. It has closed 80 RE production facilities, in an attempt to improve efficiency and environmental performance, which is likely to impact on global supplies [21]. Poor hygiene and the unsafe act of not wearing breathing respirators among workers contributed to radiation risk, following exposures to radioactive emitters. A longer duration of employment and poorer occupational hygiene explained the high chromosomal aberrations frequency among workers [22]. In Malaysia, some plants were built very near to housing areas, some even as close as 20 m, and these residents could potentially be exposed to radiation in the suspended radioactive dust blown from such plants [23]. The impacts on nearby residents from other non-radioactive suspended particles, such as RE minerals and silica, needed further investigation, because such mineral dust has been shown to cause pneumoconiosis [24]. In the course of the extracting, separating and refining processes of RE, a large number of chemical materials are applied, leading to a huge amount of waste gas, waste water and solid waste. In China, after several decades of RE mining and processing, with little regard to health, safety and the environment, regulations have been tightened, and will oblige all RE smelting separation facilities to install health, safety and environmental protection systems [25]. A comprehensive review presents the accumulation and toxicity of RE in the human body, with stress on the potential hazard to environmental and occupational health of the RE fertilizers used in agricultural production. Long-term intake of low dose RE may lead to accumulation in the bone structure, leading to changes in the bone tissue and an increased bone marrow micronucleus MN rate, and further, to generation of genotoxicity in bone marrow cells [26]. Workers in the transportation of raw materials and mineral, such as port or local suppliers, and those who work in the processing plant, as well as in the transportation of minerals within the plant, are exposed to safety and health risk. Drivers of vehicles carrying such minerals are also at radiological risk [27]. Some of the occupational health and safety issues with RE are represented in Table 2. These findings suggest that REM fumes should be considered as cytotoxic to lung tissue, and therefore potentially fibrogenic [28]. In the liver, gadolinium selectively inhibits secretion by Kupffer cells, and decreases cytochrome P activity in hepatocytes, thereby protecting liver cells against the toxic products of xenobiotic biotransformation. It is likely that lanthanides significantly and uniquely affect biochemical pathways, thus altering physiological processes in the tissues of humans and animals [29]. The focus of alloy development for biomedical applications should include most defined alloy compositions, with well-known tissue-specific and systemic effects [30]. It was shown that nanoceria particles prevent increases in the intracellular concentrations of reactive oxygen intermediates ROIs in the primary cell cultures of rat retina, and prevent loss of vision, due to light-induced degeneration of photoreceptor cells. These indicate that the nanoceria particles may be effective in inhibiting the progression of ROI-induced cell death [31]. The cytotoxicity and oxidative stress caused by 20 nm CeO2 nanoparticles in cultured human lung cancer cells was investigated. Cell viability decreased significantly, due to the function of nanoparticle dose and exposure time. It is concluded that free radicals generated by exposure

to CeO2 nanoparticles produce significant oxidative stress in the cells, as reflected by reduced glutathione GSH and alpha-tocopherol levels; the toxic effects of CeO2 nanoparticles are dose dependent and time dependent [32]. The ability of CeO2 nanoparticles to confer radioprotection against gastrointestinal epithelium suggests that they protect against radiation-induced damage, both by acting as free-radical scavengers, and by increasing the production of superoxide dismutase SOD 2 before radiation insult [33]. The ability of nanoceria was investigated to scavenge free radicals, or reactive oxygen species ROS , and inhibit inflammatory mediator production in JA. Cells internalize nanoceria, the treatment is nontoxic, and oxidative stress and pro-inflammatory iNOS protein expression are abated with stimulation. It is suggested that CeO2 nanoparticles are well tolerated in mice, and are incorporated into cellular tissues [35].

Chapter 2 : Our Solar System by Taryn Burden on Prezi

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Tracing global connections 2. Why West, amid horrors of modern war, struggles with red lines How do you decide where to set limits when it comes to barbarity in war? Airstrikes on hospitals â€" let alone chemical weapons use â€" are sharply raising the stakes for that discussion. How to find the political will to impose limits on the systematic targeting of noncombatant men, women, and children. But his support for the war in Iraq, begun in part on that principle, tarnished his legacy. Producer Stephen Morrison has no illusions about a return to an earlier humanitarian assertiveness. But, he says, the world must refuse to let the attacks on humanitarian standards and international law become the new normal. If you look at the people, you have hope. Yet in the wake of the US-led missile strike on Syria, two powerful testimonies â€" a new documentary and a revealing email from a former British prime minister â€" underscore how profoundly the ways of war have changed and the challenge that poses Western democracies. Namely, to find a way, or the political will, to set limits on the systematic targeting of noncombatant men, women and children. It lays bare the extent to which civilians are being attacked, and how the particular horror of chemical weapons attacks is part of a broader assault on civilian populations that has received far less international attention. The film focuses on a campaign of attacks against hospitals and medical facilities, doctors and international relief workers, in violation of a seven-decade-old protection for humanitarian assistance under the Geneva Conventions. It was in reply to a request a month ago to discuss the siege by Syrian President Bashar al-Assad and his Russian backers on Eastern Ghouta, near Damascus â€" the assault that culminated in the recent chemical strike in Douma. Blair was a leading voice in the late s for a new definition of international security that would embrace a duty to respond militarily, if all else failed, to humanitarian crises like the ethnic cleansing then under way in the Balkans. But the House of Commons told Cameron no, all but ensuring that Mr. Obama, too, retreated from acting. So what, then, is to be done about the broader pattern of attacking civilians and the humanitarian workers trying to protect them? The danger is that the deliberate targeting of civilians and those seeking to help them will become accepted as a kind of new normal. A group of doctors of Syrian descent, they initially figured on trying to help in whatever small way they could. Commenting on the attacks on groups like SAMS, and on his own teams in the field, he says: No, these Kansas teens are running for governor. Or he might have had in mind youths like the ones in this next piece, earnest believers â€" though not without critics â€" in change from the inside. Jack Bergeson, a garrulous year-old, is running for Kansas governor on a Bernie Sanders-esque platform after becoming disillusioned with Republican politics in the state â€" and discovering that there was no minimum age requirement to run for its top office. Ruzich are opponents, they have a good deal in common: Both tout bipartisanship and reject what they see as tired political posturing. But Ruzich is unswayed. Wichita and Kansas City, Kan. But they said they would. A former Mitt Romney supporter, Bergeson says he became disillusioned with Republican politics under former Kansas Gov. Sam Brownback, whose drastic tax-cutting experiment sparked a revolt even within the state GOP. His comrade and foil in this quest for the statehouse is Republican candidate Tyler Ruzich , a high schooler from the Kansas City area who works part-time at the local Hy-Vee grocery store. While Bergeson and Ruzich are technically opponents, they have a good deal in common: He is 17, but will be eligible to vote in time for the elections in November. He did however, run the Chicago Transit Authority and got elected to Congress. It was through that online community that Bergeson first met Ruzich, a colleague in the mock US House of Representatives. After Bergeson launched his gubernatorial campaign â€" and after he got on the Jimmy Kimmel show and began to make something of a name for himself â€" he realized he could have an even bigger impact if he had a fellow teen running from across the aisle to help boost youth engagement. Aaron Coleman, a Green Party candidate, had also announced his candidacy at one point, though his current status is unclear. Ruzich says he dislikes pointing fingers, but after some caveats and niceties, confesses he

disagrees with how Secretary of State Kris Kobach, who is in charge of state elections and is also a front-runner in the Republican gubernatorial primary, has used his power to render teenage candidates effectively ineligible in this election. Arnold says â€" not unlike the decision in the presidential primary season to hold one prime-time debate for top contenders and another for lower-tier candidates. Except in this case, the also-rans have been limited to venues like high school gymnasiums. Carmel Catholic High School in Wichita. But some point out that social change has often been led by young people. The Marquis de Lafayette, a Frenchman who played a key role in the American Revolution, was just 19 when Congress commissioned him as a major general, and Alexander Hamilton was 21 when he signed the Declaration of Independence. Two ways to read the story Quick Read By Howard LaFranchi Staff writer High school student Kousalya is a minor celebrity in Thennamadevi, a village nestled between banana trees, rice paddies, and sugar cane fields in southern India. Frustrated by the many do-nothing men who seemed more interested in turning sugar cane into moonshine than in improving village life, the teenage girls have organized around their professed goal of making Thennamadevi the best community in their district. The result is that in less than two years the girls have done everything from creating a book library to successfully lobbying local authorities for a bus stop. All of which has also helped make her into a minor celebrity and role model here. Around the world, development experts are increasingly focusing on girls as the key to fostering progress in developing countries. For more than two decades, aid groups and international nongovernmental organizations have centered their efforts on trying to reduce poverty and improve global health for women. Similarly, improving maternal health and helping a woman space out her pregnancies will enhance prosperity. Numerous African and South Asian countries have seen extreme poverty rates fall and national health standards improve as a result of a focus on women. But more recently development experts have honed their efforts even further, zeroing in on girls as the linchpin of sustained economic and social progress in developing countries. Count India among them. Yet slogans are one thing; changing a culture is another. Not for a handful of idealistic and indomitable teens. Kousalya was like many of the young girls in the village. She was headed down a path with tightly prescribed expectations and boundaries. Others confirm that the can-do spirit of the club has taught them that the future is boundless. When the club was formed, she was one of the first to join and is now the treasurer. Standing alongside the bicycle she cherishes because it gives her an exhilarating sense of independence, Bharati says that working to improve life in the village has taught her that girls really can accomplish a lot, especially when they collaborate. Tired of confronting village men loitering and drinking around the community toilet when they needed to use it, the girls started a campaign to install commodes in individual homes. That effort aims to address two issues at once: They persuaded district health officials to stock modern sanitary napkins in the nearest clinic as a replacement for traditional cloth rags. In a country where child marriage remains a national scourge despite a law prohibiting the marriage of girls under age 18 , club members have publicly pledged not just to renounce the practice for themselves but to come to the rescue of anyone they know being pushed into an early union. Through all the activism, the girls are developing vital leadership skills. Outside, separate classes of girls and boys assemble on the dusty ground under the shade of thin-leaved trees to study for upcoming exams. The Viluppuram district, with its web of rail connections, is a hub of child trafficking and sex trafficking. In many ways, Thennamadevi is a typical village for the area, Dr. Babu says, but in others â€" both good and bad â€" it stands out. The family health survey showed that in the previous year girls were born for every 1, boys â€" girls for every 1, boys in rural areas. Other clubs are being set up, too. On a sunbaked day in the village of Lamba Kalan, girls from 10 to 19 years old hear from one of the older members of her marriage at age 5. Another tells of being married off when she was 9 because her father was ill and the family needed money. Life for our daughters is changing! Standing on the stoop of her home on a village side street, Maragatham Radakrishnan hugs her daughter Kousalya and marvels at her confidence and determination. Having never been to school herself, Ms. Radakrishnan says her biggest dream had always been that her daughter would be able to get some education. What Kepler taught us about our vast galactic neighborhood Sometimes a change in perspective can unlock a universe of possibilities. When NASA launched the Kepler

space telescope into orbit in , it liberated scientists from the limitations of ground-based telescopes. As a result, we can all now see ourselves in an entirely new context. Two ways to read the story Quick Read By Eva Botkin-Kowacki Staff writer EBotkinKowacki For many exoplanet scientists, the time since the first confirmation of a planet beyond our solar system in can be broken down into two periods: The early days of ground-based exoplanet research yielded some exoplanets. Since its launch in , Kepler has identified more than 2, exoplanets and counting. Over the next two years, TESS â€" the Transiting Exoplanet Survey Satellite â€" will scan almost the entire sky, hunting for exoplanets that could hold clues into the evolution of solar systems, Earth-like planets, and life. Collapse What Kepler taught us about our vast galactic neighborhood Thousands of tiny pinpricks of light fill a dark sky on a cloudless night. For thousands of years, people have looked up at that star-filled, mysterious expanse and wondered what â€" or who â€" is out there. Do worlds like our own orbit other stars? Is life a common occurrence in the cosmos? Or, are we alone in the universe? TESS â€" the Transiting Exoplanet Survey Satellite â€" will scan almost the entire sky over the next two years, identifying planets orbiting stars called exoplanets in our own stellar neighborhood that may hold clues into the evolution of solar systems, Earth-like planets, and life. Since it first launched in , Kepler has discovered more than 2, exoplanets and counting â€" nearly three-quarters of all known exoplanets. Before Kepler launched, a little more than exoplanets had been detected using ground-based telescopes, and each was cause for celebration and many scientific publications. But Kepler changed all that. From the ground, scientists discovered mostly giant exoplanets, thought to be like Jupiter. The mission was planned so that the space telescope could look at hundreds of thousands of stars at once and establish a sense of just how common exoplanets can be. To do that, it had to fit as many stars in its view as possible. Kepler was set to observe for at least three years in order to detect planets in an Earth-like orbit or tighter at least three times, to eradicate other explanations. Focusing on an Earth-like orbit would enable Kepler to discover planets that might be able to host life.

Chapter 3 : Obituaries - , - Your Life Moments

Business, Government, and Society Thirteenth Edition A Managerial Perspective Text and Cases. Home ; Business, Government, and Society Thirteenth Edition A Managerial Perspective Text and Cases.

It tells a story about how the guidelines were applied to a mining company that sought to develop a sacred tribal land in India. The section on international corruption is revised to accommodate recent, more vigorous anti-bribery enforcement. It now relates more incidents and stories about bribery. It explains new governance reforms in the wake of the recent financial crisis. Five new stories appear in this edition. His career invites a timeless discussion of whether actions are always right and wrong in themselves, or whether their consequences should be considered. He specialized in getting earmarks for corporations. The story tells how the FAA goes about assessing risks to the public with each launch. More than half a century ago General Electric released the chemicals. The board lost confidence in his integrity. He was forced to resign. The cases illustrate one or more central themes in the chapter. Five new cases appear in this edition. A man and a woman meet on a Web site for adulterers and begin a fated game of insider trading. The case invites discussion of the business model used by the Web site and of the psychology of lying and ethical transgression. Is the money well spent? What kind of measures can prevent its extinction? It tells of two raids, one a physical raid, the other a sudden, mass firing based on an audit. Both tore apart families and towns. For students there are interactive exercises and selfquizzes designed to enhance understanding of text material. The Computerized Test Bank covers chapters and case studies. In preparing exams instructors can view questions as they are selected; scramble questions and answers; add, delete, and edit questions; create multiple test versions; and view and save tests. We extend special thanks to the ranks of colleagues and friends within the Academy of Management who have worked to develop and expand the field over the years. Where appropriate we cite their work. For this edition, the following reviewers have guided us. We are very appreciative of their efforts and have followed their recommendations. Those who gave us new ideas, affirmed our interpretations, or verified our facts include Stephen E. King, Talladega Speedway; George C. Their patience and faith throughout the process were always welcome. We are grateful to copyeditor Nancy Dietz for schooling our style and adding clarity and consistency to the benefit of readers. Finally, we express our appreciation for the very fine work of Rakhshinda Chishty and the composition team at Aptara, Inc. This edition, like all previous editions, is an improbable, momentary, and partial triumph over an unruly, cosmic mass of information. That it occurred is due in significant part to those named here. He received his B. He has coauthored two other books with George A. He is also the author of Industry, Society, and Change: Steiner is one of the leading pioneers in the development of university curriculums, research, and scholarly writings in the field of business, government, and society. In he was the recipient of the first Sumner Marcus Award for distinguished achievement in the field by the Social Issues in Management Division of the Academy of Management. In he received the Distinguished Educator Award, given for the second time by the Academy of Management. After receiving his B. He is the author of many books and articles. In recognition of his writings, Temple University awarded him a Litt. Professor Steiner has held top-level positions in the federal government and in industry, including corporate board directorships. To put this in perspective, it had five times the sales of Microsoft; its profits equaled the total sales of Nike. ExxonMobil employs 84, people, most in the subsidiaries it uses for its operations. Its main business is discovering, producing, and selling oil and natural gas, and it has a long record of profiting more at this business than its rivals. The company cannot be well understood apart from its history. Rockefeller as Standard Oil of New Jersey. Rockefeller was a quiet, meticulous, secretive manager, a relentless competitor, and a painstaking accountant who obsessed over every detail of strategy and every penny of cost and earnings. He believed that the end of imposing order on a youthful, rowdy oil industry justified the use of ruthless means. If the values of a founder such as Rockefeller are effective, they become embedded over time in the organization. Once widely shared, they tend to be exceptionally long-lived and

stable. And no set of principles was ever more triumphant. Standard Oil once had more than 90 percent of the American oil market. In , after years of legal battles, the trust was finally broken into 39 separate companies. Jossey-Bass, , part one. United States, U. It has a centralized, authoritarian culture. Profit is an overriding goal. Every project must meet strict criteria for return on capital. ExxonMobil consistently betters industry rivals in its favorite measure, return on average capital employed. Today managers at ExxonMobil face a Darwinian promotion system that weeds out anyone who is not a top performer. As in the old days, its power is challenged and limited by economic, political, and social forces. Now, however, these forces are more leveling. Markets are more contested. These figures are far lower than in the s when Exxon was the largest of the Seven Sisters, a group of Western oil firms that dominated global production and reserves, including the huge Middle East oil fields. Grand Central Publishing, , p. Venezuela , Petrobras Brazil , and Petronas Malaysia. Output from a mature field drops 5 to 8 percent a year. To maintain profitability the company pursues new reserves wherever they are, taking political risks and abiding unrest and corruption. Iran and Venezuela have expropriated its assets. In Indonesia, government troops guard its facilities against attacks by rebel forces. Governments are more active and relations with them, ranging from high-level diplomacy to mundane regulatory compliance, are more complex than in the past. In the company engaged in a high-stakes game of political intrigue trying to purchase Yukos Oil Company. You must deal with them. He has been in jail ever since. If the founder were alive, he might find this tight supervision unrecognizableâ€”even incredible. It will put nets over ponds and install electronic systems that turn on flashing lights and noisemakers when they detect incoming flights of birds. For years the company agitated environmentalists by rejecting the scientific case for global warming. Alone among major oil companies, it refused to make significant investments in renewable energy. But he made no changes in strategy. A group of John D. Money, Politics, and Power in the 21st Century, p. The company refused to talk with the family members, who held only 0. As a corporate citizen ExxonMobil funds worldwide programs to benefit communities, nature, and the arts. Its largest contributions, about 50 percent of the total, go to education. This is a large sum from the perspective of an individual. Does this giving live up to the elegant example of founder John D. Rockefeller, the great philanthropist of his era? The story of ExxonMobil raises central questions about the role of business in society. When is a corporation socially responsible? How can managers know their responsibilities? What actions are ethical or unethical? How responsive must a corporation be to its critics? This book is a journey into the criteria for answering such questions. As a beginning for this first chapter, however, the story illustrates a range of interactions between one large corporation and many nations and social forces. Such businessâ€”governmentâ€”society interactions are innumerable and complicated. In the chapter that follows we try to order the universe of these interactions by introducing four basic models of the business-government-society relationship. In addition, we define basic terms and explain our approach to the subject matter.

Chapter 4 : The Christian Science Monitor Daily for April 16,

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The Caribbean is a chill gray sea; its Venezuelan shore is an ice shelf. Huge new islands stud the shrunken seas and gulfs, anchoring the ice. In winter, you could sled from Caracas to New Orleans. The Haitian toboggan team can finally practice locally--if anyone inhabits that swollen but near-dead island. The Antilles and Hispaniola support lichens and scant tundra. The grass grows richer on Cuba and the huge new isle of Bahama, and the greatly enlarged Florida and Yucatan peninsulas. Sparse boreal forest covers some of the Gulf Coast. Great caribou herds and mammoths graze these windy flats, heading north in winter to shelter in the Ozarks and southern Appalachians. Besides, this sprawling southern continent, larger than Africa and largely jungle, resembles Latin America more than our North America. The central Mexican highland supports glaciers, especially on the great volcanoes. Below is tundra and steppe cold but unfrozen grasslands , with far fewer trees than we might expect. But as Mexico widens toward Sonora and Texas, it warms and supports some woods. The Rocky Mountains and Cascades form a complex ecological patchwork stretching all the way to Alaska, reminiscent of our East Africa. Rainshadows create savanna and desert between these forested ranges. The Gulf of California has shrunken and broken up, and its shores are cool and rainy, with giant trees--one of the few zones wetter than in our world. From Baja to the Alaskan Panhandle, the coast is temperate to subtropical. West America is a potential cradle of humanoid evolution--assuming suitable primate candidates are present. Inland, the savannas would beckon Forests, even small patches of rainforest, huddle along the tropical coast near Greenland, with cooler, more open woods in Labrador, Newfoundland, and Grand Banks. Inland the savanna plains are studded by large lakes--not merely the shrunken equivalents of our Great Lakes, but others where our Hudson Bay lies. The savanna dries into treeless steppes in the south, though the Ozarks, the Black Hills, and the Gulf Coast support thin conifer forest. The Grand Banks, now a great cape, deflect the warm Labrador Current far out to sea, leaving New England and points south as frigid and treeless as our northern Canada. Glaciers cap the ridges of the Appalachians and crawl down the valleys. The Ohio Valley, in the rainshadow of the Appalachians, is drier, a chill desert. But the northern shores, Newfoundland and Baffin and Ellesmere, are warm and shallow; great coral reefs flourish from Bering to the Grand Banks. Native cultures will be maritime! Greenland, too, is wooded on the coasts, with savanna inland, and ringed in coral reefs. Iceland and Spitsbergen resemble Sri Lanka or Hawaii Climatologically and culturally this is one region--not as wet, warm or dense as our Indonesia, but larger--a fertile bridge between hemispheres. The warm Greenland Sea, though much smaller than our Arctic Ocean more like our Caribbean , does generate enough rain to sustain forests. The equatorial Bering Gulf has coral reefs. But inland the woods thin quickly to savanna, scrub and steppes, and even these soon break up into a vastly expanded Gobi Desert. The Siberian mountains are tundra and ice. Even in sheltered valleys, only scattered conifers grow. The Baltic has dried to a chain of lakes and marshes. The Alps are a cool, rainier ecological island, though its forests are still sparse. The highest peaks are glaciated, even here near the equator. The Strait of Gibraltar is a dry grassy valley. Note I did not say the Mediterranean Sea. Morocco is semi-arid below the glaciated Atlas Mountains. All these shores harbor extensive coral reefs. As we head east, the Mauritanian coast gets slowly wetter until the Guinea Highlands, which are heavily wooded; north and east are coastal patches of true rainforest, especially around the Bight of Benin and on the great volcanoes and isles of the enlarged Cameroon chain. Inland, the woods thin quickly to savanna, then slowly to treeless prairies and semidesert. Lake Chad is somewhat larger, but still shallow and prone to abrupt changes, so ghost forests of drowned trees often line its shores. The three ranges of the interior, the Ahaggar, the Tibesti and the Marra, pull enough moisture from the winds to be green, but to the west, in their rain-shadows, lies a long strip of true desert, even directly on the equator: The Congo forest has shrunk to a coastal strip. Shiverian gorillas will live from Guinea to Capetown, but not inland. To the east, the land rises; the highlands in Angola and Namibia, near the equator, are patchy

open forests where elephants rule. The coast ranges soon rise higher still, unfortunately cutting off sea-winds and rain from the interior; Botswana is a sea of dry grass with trees only along the rivers. The Kalahari and the Orange River valley are fairly green, however, and the plateau has two great lakes: Inland and north, the Drakensberg Mts rise km, catching equatorial storms on their cliffs, making this coast one of the lushest in the world. To the northwest, Mozambique, Malawi and coastal Tanzania are humid by Shiverian standards, sustaining woods and year-round rivers. Inland, the Lake Victoria basin is grassland, and the great lake has shrunk and broken up, though its severed arms are still large. The Rift Valley gets still drier as it cuts deeper into the interior. The valleys and plains are brush, grassland, and desert. These uplands are complex, but less fertile than in our world--squeezed harder between cold at the top and drought at the foot. The warm Madagascar Current allows coral reefs offshore, and even atolls in places, make this strip look more Polynesian than African, though Socotra has cool winters, even occasional snow. Offshore, the large islands and atolls of the Comoro chain lead north to a much-enlarged Madagascar. It too is warm subtropical forest in the lowlands, with conifer forests and a few alpine regions along the mountain spine. The north coast has cooler winters but is equally lush. West and north, the huge Seychelle Islands, nearly the size of Japan, curve in a near-circle. Flat and lush, warm in the south, temperate in the north, the arc ends with two great island-mountains rising from the sea, like twin Hawaiis: Mauritius and spectacular Reunion, with its meter snowy peak looming over coral lagoons. Indeed the sea may have evaporated so much that only a long salt-lake or two remain deep in the Great Rift, far below sea level. In Arabia, the Gulf of Aden and the Yemeni coast are temperate deciduous forests, with pine woods in the mountains, rising to alpine tundra and ice on the meter peaks. Inland is the vast Arabian Prairie, with warm summers and cold winters, wooded only along the many rivers. The plains teem with horses, elephants, camels and buffalo. The grass stretches kilometers east to the snowy Zagros Mountains. Adding to the resemblance is the chain of great lakes inland, moderating the climate of Oman itself. The Nile has siblings: For the Nile and its sisters empty not into a sea, but an abyss, in cataracts, rapids and falls thousands of meters high. This is the Mediterranean Abyss--the strangest place in the world. Low sea levels permanently cut off the basin from the Atlantic, and the sea slowly evaporated, leaving a gigantic chasm more Martian than anything we know on Earth. At the bottom, kilometers below sea level, a chain of warm salt lakes stretches kilometers, each luridly colored by different algae and halobacteria. The Abyss is hot, the hottest place on this chilly world. The Aegean Lakes lie in a series of basins, from miles down; the Adriatic is a modest lake in a long sea-level valley. Corsica, Sardinia, the Balearic Islands, Crete and Sicily are high, forested mountains above deep desert basins. This bizarre hothouse sounds forbidding, but the dense air twice what we breathe at sea level holds humidity, and being hot, rises, creating local clouds and rain, most of which falls back into the basin. The Abyss is bathed in a soft golden light--the dense air blocks ultraviolet, reducing stress on animals and plants. Most important, the high air pressure not only supercharges the lungs, but doubles wing-lift. Flight becomes childishly easy! Such a Mediterranean Basin existed in our world for a few million years before refilling, but it was a hellish salt-poisoned furnace. Temperatures are hot but bearable--especially since local species have had long ages to adapt fully to this alien world. The largest flying creatures seen since the dinosaurs flourish in the Abyss--and not all of them are birds. Dozens of mammals have become gliders or full fliers. Still, birds dominate the region--and gigantism rules. Parrots, cockatoos, macaws and White Mediterranean ravens black feathers were just too hot in these steamy lands , are the most intriguing. Language and tool use follow. Avian civilizations, some multispecific, some perhaps incorporating flying mammals as well, can be found in every basin of the Abyss; with winged travel, innovations would spread quickly compared to human prehistoric diffusion.

Chapter 5 : Full text of "Quiet Resting Places and Other Sermons"

In addition, by analogy with the situation in the dusty Earth's atmosphere (see, e.g., [37]), one may neglect variations in the grain charges in a soliton. The solution to Eqs. The solution to Eqs.

About Primordial Star This is a fresh, big-picture canvass of the lack of coherence in the current geological, palaeontological, biological, and astro-physical findings and models. Astrophysicists have noted various problems with the formation of planets out of circumstellar disks, but mainstream scientists continue to promulgate such creations as if the problems do not exist. In some theories of origins. And yet the Sun is claimed to have been much dimmer at the very time life rose on Earth. In some theories of origins, the emergence of life also required vast electrical discharges, but the electric energy that Earth can produce through atmospheric lightning lacks the required potency to accomplish what is needed. Life forms somehow progressed into ever larger sizes until progression outdid itself in the age of dinosaurs. But the present force of gravity is much too strong to have enabled the existence of such colossal beasts. Moreover, while the extinction of these giants has by and large been blamed on an extraterrestrial impact of some sort, evidence from geology does not tally with this impact scheme. Nor, has an adequate explanation ever been offered to account for the disparity in glacial melting that occurred between the Arctic and Antarctic regions. Various theories have been proposed in an effort to get to the bottom of the above conundrums, but their sheer number, to say nothing of the contradictions they end up piling on each other, tends to hurl them all into a veritable gladiatorial arena from which none of them has so far escaped unscathed. And while it was never by any means an orphaned world, one of those adopted children was our own mother Earth. Review Remarks In an age of specialization, bounded vision, and narrowed focus, the author of Primordial Star and its prequels, God Star and Flare Star, is fleshing out a coherent big-picture concerning ancient times. He continues to amass and organize huge amounts of referenced information that allows him to effectively but gently excoriate modern academia and its dedication to unworkable theories of Solar System and planetary development. This author shows that mainstream large-scale geological paradigms are woefully inadequate by appealing to formations and patterns that preclude them. He also shows that cosmologists have eschewed recent Solar System rearrangement and look mainly for support for its uniformitarian theories while indulging a penchant for papering over and ignoring anomalies that preclude this paradigm approach. He shows that these schemes are a denial of far too many cosmological, geological, and archaeological findings, a great many of which are chronicled in the book and which reveal a distinctly different and troubled ancient past for the Earth and its human passengers. About the Author Dwardu Cardona was born, raised, and educated in Malta, Europe, from where he emigrated to Canada in He helped in the publication of the journal AEON from to , and served as its Editor from to He was a Founding Father of the Canadian Society for Interdisciplinary Studies now defunct , and has acted as a consultant on mythology and cosmogony for Chronology and Catastrophism Review, which is the official organ of the British-based Society for Interdisciplinary Studies. As a writer, Cardona has now published well over a hundred articles in various periodicals, most of them on the subjects covered in his present series of books. He has additionally lectured at the University of Bergamo, in Italy, and at various organizations in Canada, the United States, and England. He is the author of two previous volumes, God Star and Flare Star, which actually form the prequels to this present work Primordial Star. He presently makes his home, together with his wife, in Vancouver, British Columbia, Canada.

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Chapter 7 : Primordial Star Book page

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Chapter 8 : Dusty 'Earth' | Vigilante 8 Wiki | FANDOM powered by Wikia

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