

# Christian Engineers and Scientists in Technology Newsletter

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## From the Editor

This newsletter is intended to facilitate camaraderie and exchange of information among CEST members. Reader responses and other inputs are welcomed. Please send me **your** input for this newsletter.

- Send an account of a project you worked on.
- Send a note about something you've seen in the news that you think others would be interested in.
- Send a response to one of our math, physics, engineering, etc. challenges.
- Send a challenge question of your own.
- Send an article about something you've been thinking about.

- Send a photo you took.
- Send a comment on something you read here.

My thanks to those who contributed to this issue, i. e., Dave Kramer, Dennis Feucht, and John Osepchuk.

I hope you enjoy Dennis Feucht's articles, some of it speculative (as usual!).

We'd be glad to hear from you!

**BY** ■

**Will Your Cell Phone Ring Inside a Microwave Oven?? John Osepchuk asks for reader help in exploring the effectiveness of microwave oven RF seals at cell phone frequencies.**

**Please Participate! See Page 2.**

**Continuing the Dialog: Aliens, ETs, Angels, Monster God, etc.**

**Dennis Feucht's Further Comments**

**See page 2.**

## Winter 2014 Challenge #1 Sailing Problem

*Submitted by Dave Kramer, Chelmsford, MA (Adapted from MIT's Technology Review magazine)*

A sailor wants to sail to an island, but the wind is coming from a direction just 20 degrees from a direct line to the island. He figures he'd have to tack. What path should he take in order to minimize his time en route? Assume his speed is proportional to the wind speed and  $\sin(2\pi\beta/360)$  where  $\beta$  is the angle between the boat's direction of progress and the wind direction.

Please send answer to [lwiyoder@ieee.org](mailto:lwiyoder@ieee.org).

**BY** ■

## Winter 2014 Challenge #2 Square Bottle Uses Less Plastic?

*Submitted by Dave Kramer, Chelmsford, MA.*

"I recently purchased a new bottle of hydrogen peroxide and noted that the container had a square rather than round cross-section. Then I noticed a statement on the bottle saying that a square bottle

uses less plastic than a round bottle. Puzzled, I calculated the volume to area ratio of the two containers, and as I suspected, for a fixed surface area a round bottle encloses a larger volume than a square bottle. What do you think about the manufacturer's claim? Does the square bottle allow for a thinner plastic? The square bottle certainly saves shelf space."

Can you explain the manufacturer's claim that a square bottle uses less plastic?

Please send us your rationale to:

[lwiyoder@ieee.org](mailto:lwiyoder@ieee.org).

**BY** ■

## Last Issue's Challenge for Readers What part is this?

**No one answered!**

In the last issue we asked you to identify the part of a modern automobile shown in these two photos. The only correct answer I received was from my brother Lawrence (Harrisonburg, VA) who was there when the photo was taken!

To find out what it is, watch the youtube video at

<http://www.youtube.com/watch?v=qDOMf-a1QUc>.



Challenge photos submitted by my brother, David, York Co., PA. **BY** ■

**Technology news:  
Cape Wind Lets Contract**

From an AP article in the 1/13/2014 Lowell (MA) Sun:

The Cape Wind project plans to build a 130-turbine, 3.6 megawatt wind farm in Nantucket Sound off the coast of Cape Cod. The project “recently announced a deal with Siemens Energy Inc. to make, install, and maintain the project’s turbines.”

“Construction ... will be subcontracted to Cianbro in Brewer, Maine.”

Details of the financing for the \$2.6 billion project have not been released, and it is suspected that the project is still scrambling to get its financing arranged.

BY ■

**Technology news:  
Power company prosecuted because  
its wind turbines killed Eagles**

From an AP article in the 11/25/2013 Lowell (MA) Sun:

“The government for the first time has enforced environmental laws protecting birds against wind-energy facilities, winning a \$1 million settlement Friday from a power company that pleaded guilty to killing 14 eagles and 149 other birds at two Wyoming wind farms.”

“We deeply regret the impacts of golden eagles at two of our wind facilities,” said Greg Wolf, president of Duke Energy Renewables Inc. in a statement.”

“... each death is a violation of federal law unless a company has a federal permit. Not a single wind-energy facility has obtained a permit.”

BY ■

**Technology news:  
The Copenhagen Wheel**

From a Lowell (MA) Sun article on 12/18/2013:

“A Massachusetts startup (Superdestrian) is launching a new device that transforms almost any bicycle into an electric-hybrid vehicle using an app on a smartphone.

“The device, called the Copenhagen Wheel, is installed as part of the rear hub of a bike wheel and is packed with a computer, batteries, and sensors that monitor how hard a rider is pedaling and activate a motor whenever support is needed. The biker’s smartphone can track distances traveled and other data.

“The Copenhagen Wheel packs sufficient power to propel a rider as fast as 60 kph

but developers have put speed limits in software ...”

View the video at <http://www.youtube.com/watch?v=S10GMfG2NMY> and check out the website at <http://www.superpedestrian.com/>.

BY ■

**Technology news:  
A Bug with a Gearbox**

From The Economist, September 14, 2013

“This week young members of a genus of stocky little insects called *Issus* were shown to use gearing in their legs to hop around plants.

“This is believed to be the first observation of mechanical gearing in a biological structure. The discovery was made by a team led by Malcolm Burrows of the University of Cambridge using a combination of anatomical analysis and high-speed video. Their findings, reported in *Science*, show that the gears in the hind legs of an *Issus*, which are commonly found hopping around European gardens, have a remarkable similarity to those used in cars and bicycles (see picture).”



Read more at <http://www.economist.com/news/science-and-technology/21586270-insect-which-uses-gears-hop-bug-gearbox>.

BY ■

**Cell Phone Inside Microwave Oven:  
Will Your Cell Phone Ring  
Inside a Microwave Oven??**

John Osepchuk, ASA Fellow, and one of the founders of CEST, is asking us to help him get some data regarding the effectiveness of microwave oven RF seals at cell phone frequencies. He explains his request:

I have been very active within the IEEE as well as IMPI (International Microwave Power Institute) since 1968 fighting Electrophobia during which technologies have been attacked as radiation hazards to humans--including radar, microwave ovens, VDTs (Video Display Terminals),

police radar, cell phones and Wi-Fi. In recent years I have debunked many false rumors about microwave ovens--e.g. that the Nazis invented the microwave oven, that the Soviets for a few years banned the "use" of microwave ovens, and that water boiled in a microwave oven is toxic and kills plants. Another rumor concerns a test that purportedly tells whether a microwave oven is dangerous because of a defective door seal. The authors of this rumor state that anyone can carry out this simple test: Place a cell phone inside of a microwave oven--the phone is "on" and the oven is NOT on. Then place a call to that cell phone. If it rings that means that the oven door seal is purportedly bad. If it doesn't ring, the door seal is OK.

This belief is false because the door seal is tuned to suppress only energy around the microwave oven frequency of 2.45 GHz and not more distant frequencies, per se. The authors also may have been confused about how cell phones work--e.g. they may think that the cell phones communicate like walkie talkies, i.e., from one phone directly by radiation to another phone. Of course, a call to a cell phone from any type of phone first goes to a cell tower and then radiates out to that cell phone. This is a complicated process so that the ability for the phone in an oven to ring depends on many factors--e.g. the distance from the cell tower, the location of the phone within a building, the type of oven as well as the fact that the amazingly low threshold for activation of a cell phone varies from -120 dBm to -100 dBm, depending on whether the operation mode is CDMA, GSM, or LTE etc.

Even though this rumor is false, I would like to invite the readers of the CEST Newsletter to join me in a group experiment that will illustrate in detail the nature of this test. I invite all readers to do the test in his or her home:

1. Place a cell phone inside of a microwave oven--the phone is "on" and the oven is NOT on.
2. Place the phone in the center of the oven with the long axis going from front to back and on the bottom surface in the oven.
3. Close the oven door.
4. Place a call to that cell phone and observe whether or not the phone rings.
5. Report the results to me ([JMOsepchuk@comcast.net](mailto:JMOsepchuk@comcast.net)) or Bill

Yoder ([LWYoder@ieee.org](mailto:LWYoder@ieee.org)) along with the following if possible:

- a. Operation mode of the cell phone--CDMA, GSM, LTE, etc., and frequency if known. Otherwise report the phone brand name, model, and carrier.
- b. Distance from the nearest cell tower of the carrier. Otherwise, the number of “bars” your phone shows in the area near the oven..
- c. Location in a building--e.g. basement, 1st or 2nd floor, etc.
- d. Brand name of oven, and size— i.e. cavity width, depth and height.

John will analyze the results of the survey and submit a report to the Newsletter. It will be interesting to know how big the spread of the results is and any correlations with type of oven etc.

**P.S. We repeat the warning to make sure the oven is not on during the suggested test.**

BY ■

P.S. My cell phone will not ring in our microwave oven! I'll report details to John, BY

**Continuing the Dialog: Aliens, ETs, Angels, Monster God, etc.**  
*Dennis Feucht's Further Comments*

I thank you who have provided responses to my recent CEST Newsletter articles. I have a few replies. First, Ken, thanks for correcting which E-prophet was involved. Ezekiel was sufficiently occupied with high-tech gadgetry as he described it (Ezekiel chapter 1) to have anything to do with bears.

The fault underlying the “monster God” view of Yahweh is that its proponents proscribe how God should be, then show that his actions are in conflict with it. Instead, I prefer (as you probably do too) to let God be God and expand my understanding of his role in human history. The incongruities observed by the monster-God proponents should serve as hints that God is not as is supposed. His love is not indiscriminate; he loves us Adamites, who are his creation. The hypothesis is that he saved us from species extinction by keeping the human gene line uncorrupted in the eradication of the Nephalim in Canaan. The Savior came through an uncorrupted Israelite genetic line (Ruth and Rahab being Israelites, but that is a different issue) from Adam. A corruption of Adamite genetics would

have thwarted the “fully human” requirement of our Representative and Substitute. The erroneously translated “sons of God” (*beney elohim*) in Genesis, who were gods (angels, ETs) in rebellion against Yahweh and who sired the Nephalim, were thus defeated in their effort to destroy the genetic line and prevent an Adamite savior of the Adamites.

As for undisclosed technology, you write: “Also I am not sure whether Dennis' UFOs and ETs article is serious scholarship or more of a 'tongue in cheek' explanation ...” First, it is hard to put this kind of exploration at the limits of scrutability in the “serious scholarship” category because the evidential requirements of rigorous scholarship demand more than what can be generally presented (or shown) at present. If Charles Hall is right (websearch for his YouTube video presentation using the key words “Charles Hall tall whites”), then it should be possible for some researcher to repeatedly visit Indian Springs, Nevada around the time of the full and new moons with a telescopic infrared camera and tripod and capture pictures of the Tall White’s spaceships coming into and leaving (respectively) the hanger near a peak about 30 miles north of the Nevada Test Site fence. The exact location of the Tall White facility has been pinpointed on the map. For really bold researchers, an escapade within the boundaries of Areas 53 and 54, or what is called Dreamland, is likely to result in an encounter with either Tall Whites or military patrols. Either could be deadly; this is demanding research! Besides this, there is an accumulated body of authentic documents acquired mostly from U.S., U.K., and other government sources, that can be the grounds for a substantial case for ETs. Therefore, a basis for scholarship of the subject-matter exists, though it is too limited to be obviously conclusive for everyone. I have pointed to these sources in the articles.

Second, I am serious about the possibilities for ETs being here. So is scripture, where they are translated as “angels”. As a working hypothesis, this clarifies and connects with our other knowledge much of what is enigmatic and seemingly fantastic or imaginary in scripture. Other awkwardly translated words, such as “clouds” (Hebrew *anan*) and “pillars” or platforms are what we

would recognize as aerospace vehicles, though one could hardly expect the ancient biblical writers to have words distinct from *clouds* for objects in the sky. “Clouds” as we know them do not have the characteristics attributed to these objects in the sky in scripture. I am glad to read that you have done some work on this topic too, and of your past acquaintance with J. Allen Hynek, head of the Ohio State U. astronomy dept. and an early prominent UFO investigator who was involved in Project Blue Book meetings and who said that the project became a cover-up. Thanks for the reference to GEPAN/SEPRA (or GEIPAN), the French official study of UFOs by France’s equivalent of NASA. Like the governments of other countries (Russia, Mexico, Brazil), the French are not so secretive about their investigations as the U.S. French engineer Jacques Vallée, an understudy of Hynek, has written extensively about UFOs and believes (similar to Michael Heiser) that they are not of ET origin but are of some “inter-dimensional” origin. The distinction brings to the fore questions about what constitutes space.

Thanks also to Harold Reed for citing more of the WW II NAZI flying-disk saga. There are, of course, various stories, some more authentic and verifiable than others, yet the overall picture that emerges is that some German R&D projects in aerospace far exceeded what has become openly known. As for government cover-ups, one need only point to the recent massive disclosures by Edward Snowden to demonstrate that secrecy is the usual *modus operandi* of the Rulers of Evil. (And *conspiracy* is but the usual means by which politics proceeds.) Knowledge is power and those seeking to maximize theirs are driven to secrecy. The fences around the Nevada Test Site attest to this.

*Dennis Feucht, December, 2013* ■

**Authority and Truth in Engineering Textbooks and Scripture**  
*An article by Dennis Feucht*

In engineering school, especially in the lower division of undergraduate school, what was written in textbooks was given as a practical absolute in authority over the subject-matter. We students knew no differently. The textbooks were our datum in learning about the subject-matter and their development of



engineering concepts became a part of our early understanding.

As decades go by, those old textbooks are seen in a somewhat different perspective. It is not as though they have lost their veracity; we still refer to them to refresh our memories or seek their counsel when puzzled. Yet they no longer are polished with the patina of absolute truth. Occasional subtleties arise in them that are questionable or incomplete. Assumptions are made that might be dubious and could ultimately mislead the reader, thereby creating opportunities to write clearer and more accurate articles or even books covering the same subject-matter. Basic but missing topics appear with our expanding experience, showing “potholes” in the road of engineering knowledge through our old school textbooks. Yet they served their primary purpose: to give us a start and bootstrap us to where we can be intellectually equipped to pursue the truth of the matter for ourselves.

A parallel development occurs in our relationship to the Higher Power of the creation about which engineering books expound its details. We have in scripture - in the Bible - a set of documents that give us a kind of minimalist start from which to bootstrap our way to a better understanding of and relationship to God, just as engineering textbooks give us a start in becoming engineers. “Minimalist” might be a bothersome adjective to some in referring to scripture, but it is the best word I know to describe it. I will illustrate by example from a Bible study gone awry out here in the jungle of Central America. One of the attendees of the get-together was adamant in pushing the notion that the scripture is a complete, self-contained body of knowledge. Anyone familiar with the ASA discussion over the years knows that the relationship of the word of God in scripture with the world of God in the creation is intertwined and indeed, is inseparable. The Bible is rooted in history and human culture, and cannot be separated from the creation in which it is given to us creatures who read and try to understand and benefit from it.

Bill insisted on the isolatable sufficiency of scripture. At first, I could not fathom the enormity of the claim, that all (significant) knowledge is found in the scriptures and that the Bible is completely self-sufficient in explaining itself. “You mean”, I asked him, “that even the

languages that scripture is written in are taught in the scripture? I don’t see that anywhere.” Somehow, Bill thought the question was a kind of red herring. “Well then,” I inquired further, “if you really believe that all knowledge can be found in scripture, where does it tell us who won the 1948 World Series?” It became clear that Bill had not nuanced his claim sufficiently, had not categorized the kind of sufficient knowledge that scripture gives us, though he did not intend to refine his claims. The event bogged down, though other silent attendees - people who were avidly seeking a better understanding of scripture - could see that there was a problem at the logical level with Bill’s doctrine. He had not asked of it the right questions.

Well, what about us? Have we asked the right questions? When I was younger, I was influenced by the evangelical mainstream to a high view of scripture which over the years has in my view become even more exalted as I learn more about the amazing (and to many evangelicals, unbelievable) facts having a bearing on it from history and also from unfamiliar sources of information. One of the big issues, like that of the creation-evolution controversy, to which much Christian time and effort had been directed last century, is over the nature of the scriptures themselves - whether they are fallible or infallible, authoritative or not, or whether it contains or is the word of God.

The “word of God” is an interesting expression in itself that does not refer as such to any writings if you take it from the opening remarks in John’s gospel as the *logos*, an expression that too often has been explained on the basis of the pagan philosophy of the Greeks and not from the many occurrences of it in the biblical tradition itself in the Old Testament. Theologian Michael Heiser ([www.michaelsheiser.com](http://www.michaelsheiser.com)) has put serious effort into study of this topic (as well as the unrelated question of where advanced NAZI technology from the aftermath of WW II disappeared to - a topic of a preceding CEST article on undisclosed technology). He propounds in regard to the OT “divine council” that (to invoke the Romanized Hebrew words) the *memre* of *Adonai* - the *word* of the *Lord* - is none other than Yahweh who is revealed in human form to us in Jesus. Thus it can be said that Jesus is the *word* of the *Lord* (*Adonai*). The word also

translated as “the Lord” is *Elohim*, who says in Genesis, “let us make man in our image” and appears in English for what it is, a Hebrew plural. In other uses, *elohim* can be rendered as “gods”. The enigmatic Genesis phrase has been given the awkward explanation that it refers implicitly to the Trinity, though an alternative is that it refers to other angels, along with Yahweh, involved in the genetic project of bringing Adam into existence as a modified *homo sapiens*. Red flags should ordinarily go up in the minds of readers in reducing Yahweh to the status of an “angel” - one of multiple extraterrestrials far advanced over us humans. Yet if Heiser is right, Yahweh is not Adonai as such; some distinction is needed between God as father and son. The OT Yahweh is often cited by scriptural critics as a primitive and localized kind of god of the Israelites because he is found to be moving along with them in history and participating in the events of Israel. He contrasts with the transcendent God as revealed in John Calvin, God as Adonai, not Yahweh as such. Thus, Heiser’s study reveals that Yahweh is God within the creation, acting and moving along with us in history, in space-time. And that manifestation of God is more fully revealed to us in Jesus. Jesus is the human incarnation of Yahweh. Heiser states that “In the original Hebrew, the phrase “sons of God” in Job 38:7 is *beney elohim*.” Furthermore, he writes:

The thought might have occurred to you that when the Hebrew writers referred to the God of Israel as “THE God” (par excellence) or “Most High” (greater and more exalted than all others) that this implies more than one god. If that question crept into your mind, kudos to you! You’d be correct—and that brings us to the reason why so many evangelical scholars and pastors want the “sons of God” to be human beings in certain passages. They think having heavenly sons of God in certain passages puts polytheism in the Bible. ... This uneasiness is felt especially acutely in Psalm 82, since Psalm 82:1 and 82:6 identify the sons of God as plural *elohim* - gods. But that is the literal and most straightforward understanding of the text. [Introduction to the Divine

Council, Michael S. Heiser, PhD, excerpted from Mike's book in progress, chapter 3]

Some assume that the gods refer to idols in the Psalms. Yet Psalm 97:7 distinguishes between idols as representations of the gods and the gods themselves: "All who served images were put to shame; those who boasted in mere idols; even all the gods bow down before him [Yahweh, from verse 5]." Thus the question of what the "word of God" means in scripture is far more interesting and loaded with new discoveries than the question of whether the scriptural text itself is the "word of God".

Another prevailing issue is what constitutes the writings of the Bible. This issue was discussed early in the first few centuries at Councils but it was revisited in the Reformation, where some Reformers threw out the OT apocryphal books on the sole ground that no extant Hebrew writings of them existed. If that is indeed the reason, which was true in the 1500s, it is no longer true today. (The full expurgation of the Protestant Bible of the OT apocryphal books occurred relatively recently, in the late 1800s.) Extant Hebrew copies of all of them have been found and the retention of them in the Roman Catholic Bible on those grounds is vindicated. Other books come close to meriting inclusion, or at least should be taken very seriously. One example is the Apocalypse of Baruch, Jeremiah's colleague and also a prophet of the stature of Jeremiah in his time. His prophecies, like those of Daniel's vision, have historically been shown to be an accurate depiction of unfolding empires.

The OT apocrypha fill in more of the answer to the question of what happened to Israel historically. A popular notion of pulpit theology - one that would suit Marcion - is that they just faded into the woodwork, as it were; that they were assimilated into the peoples around which they were relocated by the Assyrians, their divine mission fulfilled. This conjecture reminds me of the guesswork of the ardent but historically data-deprived higher-critical scholars of Tübingen in the early 1800s, who had a commendably strong drive to get to the bottom of the historical questions about scripture, yet lacked the immense revelation of ancient Near-East (ANE) archaeology, beginning with Austin Henry Layard's unearthing of the royal

library of Ashurbanipal in Nineveh in the late 1840s. As it was, they were left only with the highly parochial views of the Romans and Greeks for their facts about ancient history. (As for the 1840s, Adventism's 1844 date, which is a correct biblical calculation based on the year-is-a-day assumption, is posited by the Adventists as a highly theoretical event in heaven for which there is no empirical evidence among us grounded here on earth. My working hypothesis of the importance of the date is that it was the beginning of the revelation that has come to us in these later days through ANE archaeology.)

Archaeologist Raymond Capt, in his book *Missing Links Discovered in Assyrian Tablets* (Artisan Publishers, [www.artisanpublishers.com](http://www.artisanpublishers.com), 2006, 13th printing) tells of how he went to the British Museum and spent some time going through some of the hundreds of Assyrian tablets from Nineveh. Former archaeologists found no reference to Israel at all in the tablets, and this supported the view of Israel's demise. However, we know from scripture itself (Hosea 1:10) that Yahweh said he was divorcing Israel, that they would not use his name any longer (or the Hebrew language: Isaiah 28:11.) Covenantal promises made to Abraham and David were quite explicitly made on the basis of genetic descent. Paul's commentary on this in Romans, which some regard as generalizing the covenantal promises by "spiritualizing" them, does not detract from the wider context of Paul's discussion which rests on his acknowledgement of the existence of genetically-descended Israel in his time. James (James 1:1) and Peter (1 Peter 1:1) also address their letters to the tribes of Israel.

The point in all of this is that the scriptures, however regarded in completeness, no less authority and infallibility, function as a kind of bedrock from which a worldview is derived just as engineering textbooks did for us in our school days. The variations in worldview details among biblical adherents attests to the minimalist aspect of scripture; it does not begin to give us all the details but instead gives us something to do with our thinking and investigating abilities. Engineering textbooks do the same; they give critical hints about reality. We then must for ourselves formulate a more complete and coherent view of the

subject-matter. For biblical studies, this is theology.

Biblical and engineering study are not so different. For each we are at times left to wonder whether there is more to the concepts introduced to us. We puzzle over the wording: Is *goyim* or *ethnae* "nations" (of Israelites or non-Israelites) or "Gentiles" (from the Latin *gentilis*: non-citizens of Rome)? Is *elohim* "God" or the gods - maybe ETs - of which Yahweh is preeminent? Is *shamayim* the first and second heavens (the sky and visible outer space) or does it include the inscrutable third heaven? We are not told. How are Paul's writings to be understood? He has a complicated writing style which can leave a reader with more questions than his writings answer. He assumes (as does all of scripture) that we will understand his culturally-rooted idioms and modes of expression.

In electronic-circuits textbooks, we encounter similar challenges. Does *ac* ("alternating current") mean current that varies in time (is not constant) or is it bipolar (+ and -) current? The textbooks (and also other literature) rarely if ever tell us, and we are left to figure it out for ourselves that the expression is ambiguous (and ought to be abandoned). The same is true for *dc* (direct current), which can be constant in time or otherwise unipolar (+ exclusive-or -). (And what of the expression "dc voltage"? Is it current or voltage?) An engineer with considerable design experience knows that if introductory textbooks were to give details acquired over decades of effort, it would overwhelm the neophyte. Better to start with the most general and basic of principles and build on them. If an engineering education grounds a student deeply in the fundamentals (*fundamental* is an adjective, not a noun), then more subtle and detailed concepts can be discovered by (1) thinking and (2) investigating. Just as advanced mathematics is not as hard to learn when algebra has been mastered, so advanced concepts in state-of-the-art engineering can be acquired by those with good grounding in the fundamentals.

The same is true of scripture. The most basic, recurring themes in it, about the covenant and its related topic, the kingdom of God, tell us how and on what basis God relates to humans. This answers the most pressing questions for us in relating to God. Sometimes confusion

(and controversy) arises over misunderstandings of the basic concepts, and theological study is required to resolve them. Sometimes, long-standing doctrine is in need of refinement and has resulted in the early church councils, the Reformation, and in our time, a clarifying outlook on scripture brought by that other form of revelation, from ANE history, and even from science and technology.

Now that the human understanding of the creation is at the steep knee of the knowledge curve, it can be expected that “paradigm shifts” will occur not only in sci-tech (such as the obsolescence of electronics by bioengineering) but they will also appear in our larger, biblically-grounded understanding. Are angels ETs? Are they here on earth? Are some of them doing more than watching (observing)? Is exopolitics becoming a legitimate area of study? Some of what is in scripture, such as angels, the gods, “heaven” and the “clouds” seen in them, have been essentially unrecognizable in the ordinary framework of the world over the last millennium or two. Consequently, there is a deeply-entrenched tradition to treat these fringe concepts in a nebulous way.

Yet in our time, some of this far-out biblical talk is becoming concrete and connected to the leading edge in sci-tech, undisclosed or open. Some assumptions built into the current understanding of physics, such as the absolute maximum speed attributed to light (which would seem to prohibit interstellar travel) and the high improbability that there is other life in the universe (as Hugh Ross explains from astrophysics in *The Creator and the Cosmos*, Navpress, 1993, and in more detail by John Barrow and Frank Tipler in *The Anthropic Cosmological Principle*, Oxford Press, 1986), preclude and conflict with the increasing plausibility of accumulating data from observation that a variety of different kinds of ETs are here (via interstellar craft).

It is for theologians and other scholars to consider the implausible and ask some what-if questions. What if the existence of ETs on this planet is generally revealed? Many people would be incapable of assimilating the disclosure into their current worldview. Is the Christian church generally ready for such a revelation, especially if it is used in a way that would lead people away from trust in and support of Yahweh? Now is

the time to consider such questions. The Vatican certainly is. The Protestant and evangelical mainstream does not seem to pay much attention to the issue, though it fascinates many people. ASA and CEST is a good place for such issues to be considered.

In engineering, it took well over a decade (and in a climate of acceptance) to acclimate to solid-state active devices (transistors). Electron tubes continued to be used in manufactured products for years after transistors appeared commercially in the mid-1950s. Tektronix oscilloscopes with tubes were sold into the early 1970s. Perhaps the developed world at this time is undergoing a similar transition. Only a few people in secretive government and corporate positions know definitively about ETs. In Congress, the military, and within the NSC there is some evidence for interaction with ETs though none of this has become officially disclosed to the public. A large fraction of the American public believes ETs are here, but that is quite different from being told by the ruling authorities that they are here. Surmising of their existence (or even having a direct experience of them) leaves the ET-human situation vague at best. Official disclosure would immediately raise questions about how ETs will fit into our ordinary lives, and the public would also want to see them in some open and convincing way. Yet as higher or more advanced beings, they are not subject to human will or arbitrary scrutiny except in treaties. Public disclosure would be quite different from the existing reports of close encounters and exopolitical operations in highly secretive places. The difference in attitude is analogous to those who claim to have working *overunity* energy devices that source energy from places not otherwise tapped for it. Perhaps a breakthrough has occurred, and many engineers are prepared to believe that it might be possible, yet until such a device is publicly demonstrated and subjected to the scrutiny of energy-conversion experts, and until the devices can be replicated successfully, it is doubtful that most engineers would have an epiphany about their existence.

The shift in attitude would be similar regarding ETs, interstellar travel, and other mind-boggling notions that have been coming into vogue in the post-WW II era. It is easy to brush off some of these seemingly crazy topics because they do not impact our daily routine in life, but a

few people in the church ought to be thinking about them and thinking through their implications relative to faith in Yahweh. Can a global event involving ETs, or even what appear to be ETs, be used for uniting the world behind a global social order or a religion that undermines Christian belief? Or can it be used in other unanticipated ways?

In these last several CEST Newsletter articles, I have been writing on topics at the frontiers (if not in the twilight zone) of human scrutability. I hope that as a reader of them, you are not satisfied to merely be tantalized by what might be regarded by some as the tabloid section of the CEST Newsletter, but that you would consider them as both theological and sci-tech research topics. Physics nowadays has various wild models of space-time floating about. It is the business of theoretical physicists to explore such preposterous yet intriguing ideas. There are a few theoretical theologians exploring the ideas presented in my last several articles. (Another who has independently hit upon some of the ideas I have presented here is Patrick Cooke of Berkeley, at [www.bibleufo.com](http://www.bibleufo.com)) Are any more in the ASA? ASA has people with the best qualifications for exploring some of them - if they are inclined to go “outside the box”.

Dennis L. Feucht, December 2013 ■

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*Bill Yoder, ed. ■*

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