THE LIGHT BULB
IDEA
Intelligent Design and Evolution Awareness Center

"Biology is the study of complicated things that give the appearance of having been designed for a purpose."

-Richard Dawkins

Volume 6, Issue 1 Spring 2008

FEATURE ARTICLES:

- DR. CAROLINE CROCKER NAMED FIRST EXECUTIVE DIRECTOR OF THE IDEA CENTER P. 1
- A RESPONSE TO DR. DAWKINS' "THE INFORMATION CHALLENGE" PGS. 2-8
- SOCIAL AND ECONOMIC COST OF APPLYING DARWINISM PGS. 10-11

Dr. Caroline Crocker Named First Executive Director of the IDEA Center

IDEA Center Press Release
January 15, 2008



Dr. Caroline Crocker, a biologist featured in the upcoming documentary film Expelled, has been hired as the Executive Director of the IDEA Center. A trained biologist who loves working with students, she received her Ph.D. in immunopharmacology from Southampton University, U.K., and an M.Sc. in medical microbiology from Birmingham University, U.K.

Dr. Crocker taught various biology courses for five years at George Mason University (GMU) and Northern Virginia Community College. While at GMU, she won three grants, including one from the Center for Teaching Excellence, and she received commendations for high student ratings and wrote a cell biology workbook. Nonetheless, after she mentioned intelligent design in a class at George Mason in 2004, she was subsequently banned from lecturing. Her story is told as part of the upcoming documentary film about persecuted pro-ID scientists, Expelled, featuring Ben Stein.

"Having personally witnessed the hostility in the academy towards intelligent design, I am excited about helping students in IDEA Clubs to investigate intelligent design in an intellectually honest manner," said Dr. Crocker.

Dr. Crocker did her post-doctoral studies in analysis of fluorescence resonance energy transfer interactions between proteins of the T-cell receptor/NF-kappaB signal transduction pathway at the Uniformed Services University in Bethesda, MD.

"Caroline Crocker is the ideal person to come on board as the first Executive Director of the IDEA Center," said Casey Luskin, president emeritus and co-founder of the IDEA Center. Luskin continued, "Dr. Crocker has top academic credentials, and she received rave reviews as a professor working with students at George Mason University before the university ousted her because she mentioned intelligent design in a class. I can't think of a better person to help students discuss and debate about intelligent design through extracurricular IDEA Clubs."

Caroline Crocker's primary role as Executive Director will be to work with students involved with IDEA Clubs around the world. For more information, please contact Dr. Crocker at caroline@ideacenter.org.

A RESPONSE TO DR. DAWKINS' "THE INFORMATION CHALLENGE" P.2

By: Casey Luskin
October 4, 2007



In September, 2007, I posted a link to a YouTube video where Richard Dawkins was asked to explain the origin of genetic information, according to Darwinism. I also posted a link to Dawkins' rebuttal to the video, where he purports to explain the origin of genetic information according to Darwinian evolution. The question posed to Dawkins was, "Can you give an example of a genetic mutation or evolutionary process that can be seen to increase the information in the genome?" Dawkins famously commented that the question was "the kind of question only a creationist would ask . . ." Dawkins writes, "In my anger I refused to discuss the question further, and told them to stop the camera." Dawkins' highly emotional response calls into question whether he is capable of addressing this issue objectively. This will be a response assessing Dawkins' answer to "The Information Challenge."

Part 1: Specified Complexity *Is* the Measure of Biological Complexity.

Dawkins writes, "First you first have to explain the technical meaning of 'information'." While that sounds reasonable, Dawkins pulls a bait-and-switch and defines information as "Shannon information"—a formulation of "information" that applies to signal transmission and does not account for the type of specified complexity found in biology.

It is common for Darwinists to define information as "Shannon information," which is related to calculating the mere unlikelihood of a sequence of events. Under their definition, a functionless stretch of genetic junk might have the same amount "information" as a fully functional gene of the same sequence-length. ID-proponents don't see this as a useful way of measuring biological information. ID-proponents define information as complex and specified information—*DNA which is finely-tuned to do something*. Stephen C. Meyer writes that ID-theorists use "(CSI) as a synonym for 'specified complexity' to help distinguish functional biological information from mere Shannon information--that is, specified complexity from mere complexity." As the ISCID encyclopedia explains, "Unlike specified complexity, Shannon information is solely concerned with the improbability or complexity of a string of characters rather than its patterning or significance. "***The Inconvenient Truth for Dawkins:*** *The difference between the Darwinist and ID definitions of information is equivalent to the difference between getting 10 consecutive losing hands in a poker game versus getting 10 consecutive royal flushes. One implicates design, while the other does not.*

It is important to note ID proponents did not invent the notion of "specified complexity," nor were they the first to observe that "specified complexity" is the best way to describe biological information. My first knowledge of the term being used comes from leading origin of life theorist Leslie Orgel, who used it in 1973 in a fashion that closely resembles the modern usage by ID proponents:

> [L]iving organisms are distinguished by their specified complexity. Crystals are usually taken as the prototypes of simple, well-specified structures, because they consist of a very large number of identical molecules packed together in a uniform way. Lumps of granite or random mixtures of polymers are examples of structures which are complex but not specified. The crystals fail to qualify as living because they lack complexity; the mixtures of polymers fail to qualify because they lack specificity.

(Leslie E. Orgel, *The Origins of Life: Molecules and Natural Selection*," pg.189 (Chapman & Hall: London, 1973).)

Orgel thus captures the fact that specified complexity requires both order and a specific arrangement of parts or symbols. This matches the definition given by Dembski, where he defines specified complexity as an unlikely event that conforms to an independent pattern. This establishes that specified complexity is the appropriate measure of biological complexity. This point will be important in the next installment, Part 2, which rebuts the heart of Dawkins' article.

As a final note, Richard Dawkins' article admits that "DNA carries information in a very computer-like way, and we can measure the genome's capacity in bits too, if we wish." That's an interesting analogy, reminiscent of the design overtones of Dawkins concession elsewhere that "[t]he machine code of the genes is uncannily computer-like. Apart from differences

in jargon, the pages of a molecular biology journal might be interchanged with those of a computer engineering journal." (Richard Dawkins, *River Out of Eden: A Darwinian View of Life*, pg. 17 (New York: Basic Books, 1995).) Of course, Dawkins believes that the processes of random mutation and unguided selection ultimately built "[t]he machine code of the genes" and made it "uncannily computer-like." But I do not think a scientist is unjustified in reasoning that in our experience, machine codes and computers only derive from intelligence.

Part 2: Does Gene Duplication Increase Information Content?

In this section, I will show why merely citing gene duplication does not help one understand how Darwinian evolution can produce new genetic information. Dawkins' main point in his "The Information Challenge" article is that "**[n]ew genes arise through various kinds of duplication.**" So his answer to the creationist question that so upset him is gene duplication. Yet during the actual gene-duplication process, a pre-existing gene is merely copied, and nothing truly new is generated. As Michael Egnor said in response to PZ Myers: "[G]ene duplication is, presumably, not to be taken too seriously. If you count copies as new information, you must have a hard time with plagiarism in your classes. All that the miscreant students would have to say is 'It's just like gene duplication. Plagiarism is new information- you said so on your blog!'"

Duplicating Genes Doesn't Increase Biological Information in Any Important Sense

I now have 2 questions to ask of Darwinists who claim that the mechanism of gene duplication explains how Darwinian evolutionary processes can increase the information content in the genome:

(1)**Does gene duplication increase the information content?**
(2)**Does gene duplication increase the information content?**

Asking the question twice obviously does not double the meaningful information conveyed by the question. How many times would the question have to be duplicated before the meaningful information conveyed by the list of duplicated questions is twice that of the original question? The answer is that the mere duplication of a sentence does NOT increase the complex and specified information content in any meaningful way. Imagine that a builder of houses has a blueprint to build a new house, but the blueprint does not contain enough information to build the house to the specifications that the builder desires. Could the builder obtain the needed additional information merely by photocopying the original blueprint? Of course not.

Darwinists Must Give Detailed Accounts of how a Duplicated Gene Acquires its New Function

The Darwinist would probably reply to my objection by saying, "Well, it isn't just gene duplication that increases the genetic information — such information is increased when gene duplication is coupled with the subsequent evolution of one of the new copies of the gene." Aye, there's the rub.

Darwinists laud the mechanism of gene duplication because they claim it shows how one copy of a gene can perform the original function, freeing up the other copy to mutate, evolve, and acquire a new function. **But the new genetic information must somehow be generated during that subsequent evolution of the gene. To explain how Darwinian processes can generate new and meaningful genetic information, Darwinists must provide a detailed account of how a duplicate copy of a gene can evolve into an entirely new gene. But ask Darwinists for details as to how the duplicate copy then starts to perform some new function, and you probably won't get any. At least, Dawkins didn't given us any details (as I explain below) about this in his "The Information Challenge" article, which I am rebutting here.**

A recent study in *Nature* admitted, "Gene duplication and loss is a powerful source of functional innovation. However, the general principles that govern this process are still largely unknown." (Ilan Wapinski, Avi Pfeffer, Nir Friedman & Aviv Regev, "Natural history and evolutionary principles of gene duplication in fungi," *Nature*, Vol. 449:54-61 (September 6, 2007).) Yet the crucial question that must be answered by the gene duplication mechanism is, *exactly how does the duplicate copy acquire an entirely new function?* Stephen Meyer explains in *Proceedings of the Biological Society of Washing-*

ton that it is difficult to imagine how duplicated genes acquire new functions since they must successfully undergo "neutral evolution" and traverse a random walk in order to acquire a new function:

> [N]eo-Darwinists envision new genetic information arising from those sections of the genetic text that can presumably vary freely without consequence to the organism. According to this scenario, non-coding sections of the genome, or duplicated sections of coding regions, can experience a protracted period of "neutral evolution" (Kimura 1983) during which alterations in nucleotide sequences have no discernible effect on the function of the organism. Eventually, however, a new gene sequence will arise that can code for a novel protein. At that point, natural selection can favor the new gene and its functional protein product, thus securing the preservation and heritability of both.

This scenario has the advantage of allowing the genome to vary through many generations, as mutations "search" the space of possible base sequences. The scenario has an overriding problem, however: the size of the combinatorial space (i.e., the number of possible amino acid sequences) and the extreme rarity and isolation of the functional sequences within that space of possibilities. Since natural selection can do nothing to help generate new functional sequences, but rather can only preserve such sequences once they have arisen, chance alone--random variation--must do the work of information generation--that is, of finding the exceedingly rare functional sequences within the set of combinatorial possibilities. Yet the probability of randomly assembling (or "finding," in the previous sense) a functional sequence is extremely small.

(Stephen C. Meyer, "The origin of biological information and the higher taxonomic categories," *Proceedings for the Biological Society of Washington*, Vol. 117(2):213-239 (2004).)

The Inconvenient Truth for Dawkins: *At best, the mechanism of gene duplication shows how a hiker can get to the foot of a hiking trail, but never explains how the hiker finds the peak of the mountain, while doing a random, blindfolded walk. We don't need to know that genes can make copies of themselves; we need to know how the duplicate gene evolves, step-by-step, into an entirely new gene*.

Mistaking Similarity as Evidence for Common Descent, and then Mistaking Common Descent as Evidence for Darwinian Evolution

Rather than giving a step-by-step mutational account of how a duplicated gene acquires a new function, Dawkins' article substitutes bland evidence of sequence identity between different genes as evidence for Darwinian evolution by gene duplication. Dawkins gives the example of the evolution of various globin genes that he claims arose via gene duplication. His evidence is that "[c]areful letter-by-letter analysis shows that these different kinds of globin genes are literally cousins of each other, literally members of a family." Of course the "[c]areful letter-by-letter analysis" simply means finding amino acid sequences that are similar or identical between two different proteins. David Swift explains that such claims of relationship "are inferred solely on the basis of *assuming* a common ancestry and then deriving a route of polypeptide evolution, typically the most parsimonious one, to fit the known present day amino acid sequences and consistent with the observed pattern of conserved amino acids." (David Swift, *Evolution Under the Microscope*, pg. 165 (Leighton Academic Press, 2002), emphasis in original.) At best, such sequence identity demonstrates common ancestry (if one ignores the possibility of common design), but it does not demonstrate Darwinian evolution. Michael Behe easily rebutted the over-extrapolation from sequence-similarity to Darwinian evolution in both *Darwin's Black Box* and *The Edge of Evolution*:

> "Although useful for determining lines of descent ... comparing sequences cannot show how a complex biochemical system achieved its function—the question that most concerns us in this book. By way of analogy, the instruction manuals for two different models of computer put out by the same company might have many identical words, sentences, and even paragraphs, suggesting a common ancestry (perhaps the same author wrote both manuals), but comparing the sequences of letters in the instruction manuals will never tell us if a computer can be produced step-by-step starting from a typewriter. … Like the sequence analysts, I believe the evidence strongly supports common descent. But the root question remains unanswered: What has caused complex systems to form?"

(Michael Behe, *Darwin's Black Box*, pgs. 175-176.)

> "[M]odern Darwinists point to evidence of common descent and erroneously assume it to be evidence of the power of random mutation."
>
> (Michael Behe, *The Edge of Evolution*, pg. 95.)

Darwinists like Dawkins continue to make the mistake cited by Behe and Swift. (In fact, if you read the aforementioned "Natural history and evolutionary principles of gene duplication in fungi" article, you'll find it gives only anecdotal or circumstantial evidence of evolution by gene duplication, not directly observed evidence, and there certainly aren't any detailed step-by-step models for how the genes evolved.)

The Dangerous Road Faced by Duplicated Genes

If a duplicated gene cannot successfully traverse its random walk, it may die. As Lynch and Conery found, "the vast majority of gene duplicates are silenced within a few million years." (Lynch & Conery, "The Evolutionary Fate and Consequence of Duplicate Genes," *Science* Vol. 290:1151-1155 (Nov 10, 2000).) Does Richard Dawkins give a step-by-step mutational account of how globin genes evolved from one another while remaining functional at all times, such that the duplicate copies were never "silenced," terminating their evolution? Of course not. Dawkins has not demonstrated how Darwinian evolution can take a duplicated gene and evolve it into a new gene. The problem for Dawkins is that duplicating a gene may increase your amount of Shannon information, but it does not increase the amount of specified complexity in any non-trivial sense. To explain how one gene can turn into another, Dawkins must explain how new specified and complex information can enter the genome, and give a step-by-step mutational account of the origin of some gene via gene duplication. Dawkins has provided none of this.

To understand this point, consider the following sentence (with spaces removed):

METHINKSDAWKINSDOTHPROTESTTOOMUCH

If we merely consider the Shannon information of the 33 letters (not counting spaces) in the sentence, then it has about 155 bits of Shannon Information. Now we duplicate it, like what happens in a gene duplication event:

METHINKSDAWKINSDOTHPROTESTTOOMUCHMETHINKSDAWKINSDOTHPROTESTTOOMUCH

The amount of Shannon information has now doubled (~310 bits), but we have seen no non-trivial increase in the amount of specified complexity. Still, Dawkins thinks gene duplication is the answer, and that "[i]t is by these, and similar means, that genome sizes can increase in evolution."

The Shannon information in the doubled-string is twice the Shannon information in the shorter string if the shorter string does nothing to predict the sequence of the doubled-string. By granting this assumption, we are able to increase the Shannon information in the genome, even though this is a trivial informational increase that does not provide a meaningful increase in the specified complexity. The key questions are (a) what process is generating the new sequence, and (b) to what extent does that process predict the new sequence? In this sense, duplicating a gene would predict that the duplicate gene would be an identical copy of the original gene. From this standpoint, gene duplication actually does NOTHING to increase the Shannon information in the genome because you can predict the sequence of the new stretch of the DNA with a Probability of 1 (where Log (1) = 0), **leading to an increase in the Shannon information of 0 bits**. In this sense, the Shannon information in the doubled-string is not increased at all from the original, shorter string, as it remains 155 bits. Keep in mind that it is **Dawkins** who raised the issue of increasing Shannon information in the genome via gene duplication. Viewed in this fashion, Dawkins' claim that gene duplication can increase the Shannon information is even more dubious: if gene duplication predicts that you will have an identical copy of the original gene, then gene duplication not only fails to increase the

specified and complex information, it also fails to increase the Shannon information in the genome.

But we aren't trying to simply change the "genome siz[e]," and thereby change the Shannon information. We're trying to construct something functionally new. Thus, imagine that one duplicate copy of the original sentence evolves into a new sentence of the same length:

BUTIMSUREDAWKINSBELIEVESHEISRIGHT

A Darwinian theorist would find that both sentences contain the word "Dawkins," and thus share a 21% sequence identity. They would then infer that both sentences evolved from that common ancestor via Darwinian evolution. They would conclude that a duplicated version of the sentence "METHINKSDAWKINSDOTHPROTESTTOOMUCH" has evolved into "BUTIMSUREDAWKINSBELIEVESHEISRIGHT".

David Swift explains that finding such similarities is not enough to justify the claim that Darwinian evolution has produced the observed pattern: "[F]or family trees to be credible, most if not all of the putative ancestral sequences must be functional; but this presents a major stumbling block in the production by divergence of proteins with different functions. To get from one set of conserved amino acids to another is either an unlikely big jump, or the intermediates must have biological activity; but the latter seems unlikely because it contradicts what we know about conserved amino acids." (Pg. 166). Thus, in order for Darwinists to convince me that Darwinian evolution can produce new information, at minimum I need to see a step-by-step mutational account of how they can take the sentence:

"METHINKSDAWKINSDOTHPROTESTTOOMUCH"

and evolve it into:

"BUTIMSUREDAWKINSBELIEVESHEISRIGHT"

by changing the first sentence one letter at a time, and having it always retain some comprehensible English meaning along each small step of its evolution. Telling me that you can duplicate the sentence does NOT answer the question posed in the video, "Can you give an example of a genetic mutation or evolutionary process that can be seen to increase the information in the genome?" As Michael Behe requested over ten years ago in *Darwin's Black Box*, what is required is a "detailed, scientific [explanation of] how mutation and natural selection could build" the sentence. (Behe, *Darwin's Black Box*, pg. 176.)

Don't Blame Natural Selection: It's Just Acting upon What Mutations Provide

It's worth noting that Dawkins finally claims that it is natural selection that "feeds information into gene pools" by selecting for mutations that help organisms survive. Thus, Dawkins would argue that the information in the environment is transferred into the genome of the organism. Fair enough. But Dawkins isn't telling the most important part of this story. We all know that mutations must provide the raw fuel upon which natural selection can act. As Gilbert, Opitz, and Raff write:

> The Modern Synthesis is a remarkable achievement. However, starting in the 1970s, many biologists began questioning its adequacy in explaining evolution. Genetics might be adequate for explaining microevolution, but microevolutionary changes in gene frequency were not seen as able to turn a reptile into a mammal or to convert a fish into an amphibian. Microevolution looks at adaptations that concern only the survival of the fittest, not the arrival of the fittest. As Goodwin (1995) points out, "the origin of species -- Darwin's problem -- remains unsolved.

(Scott Gilbert, John Opitz, and Rudolf Raff (1996) "Resynthesizing Evolutionary and Developmental Biology," *Developmental Biology* 173, 1996, pg. 361.)

Natural selection can (given the right population circumstances, etc.) preserve traits that confer a survival advantage, and it is very effective at weeding out traits that are disadvantageous. But natural selection can only act upon what mutations pro-

vide. Thus, we can't account for the *survival* of particular mutations until we account for the *arrival* of particular mutations. We cannot account for the increase in information content of genomes until we consider how random mutations produce the raw fuel that natural selection can preserve.

My Information Challenge Reiterated:

So here is my "Information Challenge": For the sake of the argument, I will grant that every stage of the evolutionary pathway I requested above will survive, and thus I'll give natural selection every possible benefit of the doubt. What I need is a step-by-step mutation account of how one sentence evolved into the other wherein the sentence remains functional – i.e., it has comprehensible English meaning – at all stages of its evolution. In short, I request to see how:

"METHINKSDAWKINSDOTHPROTESTTOOMUCH"

can evolve into:

"BUTIMSUREDAWKINSBELIEVESHEISRIGHT"

by changing the first sentence one letter at a time, and having it always retain some comprehensible English meaning along each small step of its evolution. This seems like a reasonable request, as it is not highly different from what Darwinists are telling me can happen in nature.

How would Dawkins reply? Would he get angry and complain that this is "the kind of question only a creationist would ask"? Or would he dodge the question like he did in his "The Information Challenge" article? Personally, I'd like to see an answer to the question.

Part 3: The "Junk"-DNA Blunder.

Dawkins' article has other problems. He writes that "most of the capacity of the genome of any animal is not used to store useful information." This is another good example demonstrating how Neo-Darwinism led may scientists to wrongly believe that non-coding DNA was largely junk. Dawkins' statement is directly refuted by the findings of recent studies, which the *Washington Post* reported that scientists have now found that "the vast majority of the 3 billion 'letters' of the human genetic code are busily toiling at an array of previously invisible tasks." That strikes a fatal blow to Dawkins' argument:

	Dawkins then (1998)	Scientists now (2007)
Position regarding "Junk"-DNA:	"most of the capacity of the genome of any animal is not used to store useful information"	"the vast majority of the 3 billion 'letters' of the human genetic code are busily toiling at an array of previously invisible tasks"

Dawkins claims that there is "lots of repetitive nonsense" in the genome. But is it really "nonsense"? Recent studies are finding increasing function for allegedly non-functional repetitive DNA. Richard Sternberg surveyed the literature and found extensive evidence for function in AREs. A listing of functions for AREs reprinted from Sternberg's paper is shown below:

The known genomic/epigenetic roles of REs include the following:

- satellite repeats forming higher-order nuclear structures;
- satellite repeats forming centromeres;
- satellite repeats and other REs involved in chromatin condensation;
- telomeric tandem repeats and LINE elements;
- subtelomeric nuclear positioning/chromatin boundary elements;

- SINEs involved in translation (may be connected to stress response);
- SINEs involved in binding cohesin to chromosomes; and
- LINEs involved in DNA repair.

(Richard Sternberg, "On the Roles of Repetitive DNA Elements in the Context of a Unified Genomic– Epigenetic System," *Annals of the New York Academy of Sciences*, Vol. 981:154–188 (2002).)

Dawkins not only got repetitive junk-DNA wrong, he provides a shimmering example of the fact that neo-Darwinism has led many scientists to wrongly presume that junk-DNA has no function. Some Darwinists have tried to counter that claim by arguing that Neo-Darwinism also led other biologists to presume function for junk-DNA, since its mere presence in the genome implies that natural selection has preserved it for some purpose. Even if that were a good argument, the fact remains that the false junk-DNA mindset was born and bred out of the Neo-Darwinian paradigm. That paradigm misled many scientists on this point, and in fact continues to mislead them. Yet according to the 2006 edition of Voet and Voet's *Biochemistry*, there is insufficient selection pressure on functionless repetitive "junk"-DNA to remove it from the genome:

> No function has been unequivocally assigned to moderately repetitive DNA, which has therefore been termed **selfish** or **junk DNA**. This DNA apparently is a molecular parasite that, over many generations, has disseminated itself throughout the genome through transposition. The theory of natural selection predicts that the increased metabolic burden imposed by the replication of an otherwise harmless selfish DNA would eventually lead to its elimination. Yet for slowly growing eukaryotes, the relative disadvantage of replicating an additional 100 bp of selfish DNA in an 1-billion-bp genome would be so slight that its rate of elimination would be balanced by its rate of propagation. *Because unexpressed sequences are subject to little selective pressure, they accumulate mutations at a greater rate than do expressed sequences.*

(Donald Voet and Judith G. Voet, *Biochemistry*, pg. 1020 (Jon Wiley & Sons, 2006), emphasis added.)

In other words, Darwinists like Dawkins had every reason to presume that non-coding repetitive DNA was, in Dawkins' words, functionless "nonsense" that was, in Voet and Voet's words, a "molecular parasite," even though it persisted in the genome. But *Voet and Voet* are wrong to presume that such repetitive DNA is mere parasitic junk, given that examples of functions for it abound. Sternberg's article concluded that "the selfish DNA narrative and allied frameworks must join the other 'icons' of neo-Darwinian evolutionary theory that, despite their variance with empirical evidence, nevertheless persist in the literature." Sternberg, along with geneticist James A. Shapiro, concludes elsewhere that "one day, we will think of what used to be called 'junk DNA' as a critical component of truly 'expert' cellular control regimes." (Richard Sternberg and James A. Shapiro, "How Repeated Retroelements format genome function," *Cytogenetic and Genome Research*, Vol. 110:108–116 (2005).)

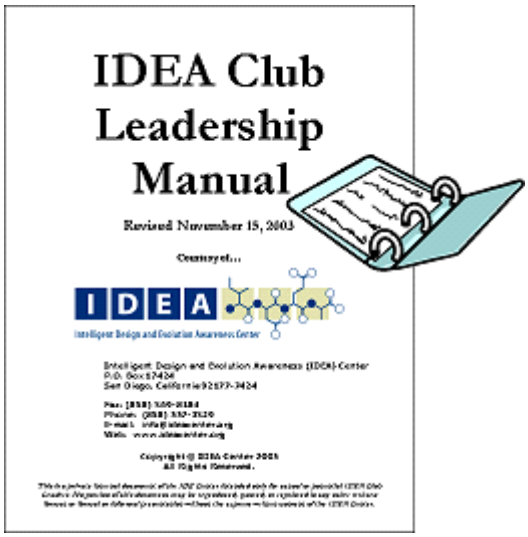
It looks like Dawkins has some work to do if he is to update all of his arguments against ID and answer "The Information Challenge."

IDEA Club Leadership Manual!

Every person who wants to form an IDEA Club, or becomes the leader of one, will receive an *IDEA Club Leadership Manual*. The manual is a "how-to" reference guide with tips and advice to help a prospective or current IDEA Club leader to deal with just about any situation that could arise. Topics covered in detail in the manual include:

- How to Start a Club
- Background on the IDEA Center
- How to Schedule Meetings and Choose Meeting Topics
- How to Start and Lead Discussion
- How to Handle Heated Meetings
- How to Create a Budget and Plan an Event
- How to Publicize Events and Meetings
- Creating a Website
- Promoting Intelligent Design with Integrity
- Answering Common Objections to Design

If would like to request an *IDEA Club Leadership Manual* please contact Caroline Crocker at caroline@ideacenter.org for more information!



Please make me an IDEA Center Member:

☐ **General Member (free):** Receive free electronic semi-annual newsletter, and e-mail updates.

☐ **Complex Member ($25 donation):** Receive free biannual newsletter, e-mail updates.

☐ **Irreducibly Complex Member ($100 donation):** Receive free biannual newsletter, e-mail updates. Choose any one of these three items: 1) Free intelligent design video, 2) Free IDEA Center T-shirt, 3) Free IDEA Center Hat.

☐ **Sustaining Member ($500 donation):** Receive free biannual newsletter, e-mail updates, and annual IDEA Budget. Choose any two of these three items: 1) Free intelligent design video, 2) Free IDEA Center T-shirt, 3) Free IDEA Center Hat.

☐ **Founding Member ($1000+ donation):** Receive free biannual newsletter, e-mail updates, and annual IDEA Budget. Choose any one of these three items: 1) Free intelligent design video, 2) Free official IDEA Center T-shirt, 3) Free official IDEA Center Hat. Additionally, receive an invitation to our annual Founder's Luncheon.

☐ **Order a T-shirt ($15 donation):** You'll receive an IDEA Center t-shirt.
Circle your size: small medium large x-large

☐ **Order a Hat ($15 donation)**.

☐ **I would like to receive an IDEA Club Leadership Manual! (free)**

Name:

Occupation / Academic Affiliation:

Mailing Address:

Phone: E-mail:

Please be sure check all appropriate boxes and mail this form to:
IDEA Center / P.O. Box 17424 / San Diego, CA 92177

SOCIAL AND ECONOMIC COST OF APPLYING DARWINISM

By: Lee Penick
November 8, 2007

When Jeff Skilling applied to Harvard Business School a professor asked him if he was smart, he replied, "I'm #&$%ing smart". Perhaps he was, and perhaps he wasn't, either way he went on to become CEO of Enron which became the 7th largest company in this country.

One of Skilling's favorite books was the "Selfish Gene" about the ways human nature is steered by greed and competition in the service of passing on our genes. According to a documentary about the Enron scandal, *Enron: The Smartest Guys in the Room*, which was nominated for Best Documentary Feature at the 78th Academy Awards, Skilling had an affinity for employing Darwinism in the workplace:

> At Enron, Skilling wanted to set free the basic instincts of ***survival of the fittest***. ***Skilling had a very Darwinian view of how the world worked***. He was famous for saying in Enron's early years that money was the only thing that motivated people. Skilling's notion of how the world should work really trickled down and affected how Enron did business.

While CEO of Enron, Skilling captained a corporate ship that sailed high and fast. He benefited greatly from executive stock options. Then, when creative accounting, fraud, conspiracy, and lying to auditors couldn't keep the ship afloat and the stock price soaring, he bailed out and used his insider knowledge to sell his stock for over $200 million. Meanwhile, investors and corporate employees (unaware of the looming problems the company faced) lost nearly everything in their 401-K's, pensions, and jobs.

On February 4, 2002, *The New York Times* explained Enron's downfall:

> The report, issued Saturday [2 February 2002], concluded that Enron executives intentionally manipulated profits....It described across-the-board failures of controls at almost every level, as a culture of self-enrichment at the expense of shareholders emerged.

Approximately 5 years after Enron's floundering, Skilling was convicted in May 2006 of 19 counts of fraud, conspiracy, insider trading and lying to auditors. He surrendered to a federal prison about 75 miles south of Minneapolis on Dec. 13 to begin serving a 24-year, four-month sentence.

The chief characters in the Enron debacle all seemed to be functioning on the same mantra, that Gordon Gekko line from the movie "Wall Street" (1987) that epitomized the 1980s: "Greed, for the lack of a better word, is good."

The aforementioned documentary (Enron: The Smartest Guys in the Room) depicted how Skilling saw himself as a master of the universe whose hubris eventually brought him down. His actions greatly affected those who depended on him, people who, unlike Skilling, didn't have millions to fall back on. In one instance, an Oregon utility worker for Enron whose $340,000 401-K nest egg (in company stock) was eventually only worth $1,200 after Enron stock tumbled in the wake of the scandal. In contract, Skilling paid his attorneys a $23 million retainer to defend him.

Quick Quote

"At some future period, not very distant as measured by centuries, the civilized races of man will almost certainly exterminate, and replace, the savage races throughout the world."

Charles Darwin, The descent of Man, Chap. vi

What's ultimately devastating about this film is listening to the tapes of Enron traders joking about how they were holding California hostage and letting people suffer without electricity or pay soaring prices. These people were cold, callous, and exemplified the Enron environment that Skilling helped create.

There's a moment in "Wall Street" when Bud Fox asks Gordon, "How much is enough?" And Gordon replies, "It's not a question of enough, pal. It's a zero sum game, somebody wins, somebody loses. Money itself isn't lost or made; it's simply transferred from one perception to another." That's basically what Enron did under Skilling. And they did it on the backs of tens of thousands of hard-working Americans, some of which lost pretty much everything.

While it's not illegal to believe in Darwinism, perhaps those who do need to be careful in how they act it out! Society at large apparently doesn't appreciate being preyed upon by those who see themselves as the most fit and the "ruling class." Skilling certainly crossed the line when it came to responsible, ethical, and legal business conduct. Now he'll have 24 years to consider the merits of his Darwinian philosophy and his application of survival of the fittest in a business setting.

Enron's Bankruptcy Facts:
20,000 employees lost their jobs and medical insurance
Average severance pay was $4,500
Top execs were paid bonuses totaling $55 million
Employees lost $1.2 billion in retirement funds
Retirees lost $2 billion in pension funds
The CPA firm of Arthur Anderson was destroyed.

Quick Quote

"The chief distinction in the intellectual powers of the two sexes is shown by mans attaining to a higher eminence, in whatever he takes up, than the woman. Whether deep thought, reason, or imagination or merely the use of the senses and hands.....We may also infer.....The average mental power in man must be above that of woman."

Charles Darwin, The Descent of Man, pg. 566

For more detail on the Enron debacle, it's cost, and causes, and the results of Jeff Skilling's Darwinian view of life and business, see the DVD, "Enron, The Smartest Guys in the Room". It's based on the best-selling book of the same name by Fortune reporters Bethany McLean and Peter Elkind, a study of one of the biggest business scandals in American history. The chronicle takes a look at one of the greatest corporate disasters in history, in which top executives from the 7th largest company in this country walked away with over one billion dollars, leaving investors and employees with nothing. The film features insider accounts and rare corporate audio and video tapes that reveal colossal personal excesses of the Enron hierarchy and the utter moral vacuum.



Intelligent Design.org

What is the difference between BBC's *A War on Science*, Randy Olson's *Flock of Dodos*, and PBS' *Judgment Day: Intelligent Design on Trial*? Absolutely NOTHING! They are all misrepresenting ID and this site is dedicated to setting the record straight.

This website chronicles the media's attempt to deride ID and gives riveting responses to those committed to silencing it.

PBS Airs False Facts in its "Inherit the Wind" Version of the *Kitzmiller* Trial

Visit: http://www.evolutionnews.org/2007/11/pbs_airs_its_inherit_the_wind.html