

Following is a portion of a correspondence discussing evidences for Christianity with a girl who is convinced that only blind faith is involved and that the resulting adherence is a major part of the reason for the problems of division and divisiveness in the world. I have no objection to sharing this correspondence with anyone wrestling with these issues even though some very personal experiences are shared.

Ross S. Olson

August 25, 1985

Dear Miss. _____,

I hope this letter will not be perceived as an invasion of privacy, but some of your thoughts, made public by Sunday Magazine, reminded me of intellectual territory I had once wandered.

I have taken the liberty of mailing a book that changed my thinking on the topic of evolution. Even if it has no such effect on you, an intellectual should make a practice of being familiar with the best arguments of the opposition.

The conflicts within your family, as mentioned in the article, put you at risk for an emotional rejection of any argument that leads in the direction of God, but if $2+2=4$, it continues to do so regardless of how much we like it.

Evolution does indeed imply that we are nothing but chemicals, but there are a couple of big problems with that (known to but suppressed by many who are committed to evolution.) First, there is design in life that cannot be accounted for by chance, using all the time and matter there is. Secondly, there is no mechanism even theoretically possible for free will in a materialistic universe. Which molecule is going to tell the others which way to bounce? The human machine will have input, random processing and random output, modified by previous experience (which was also randomly processed). You could come up with a scenario of a machine that is good at preserving itself (although to have it occur by chance can be shown mathematically absurd). Yet with no real choices possible, but at most only apparent choices that are actually predetermined by the position of the molecules, how can the output have anything to do with truth? One must then conclude that reason and truth are illusions and all logical conclusions absurd, including that one. Thus one is painted into a philosophical corner.

Certainly, that is not the sort of message necessary to "straighten up the world".

I'd be happy to correspond on these matters if you wish.

Sincerely,



**ROSS S. OLSON M.D.
8512 14TH AVENUE SOUTH
MINNEAPOLIS, MN 55417**

9/24/85

Dear Dr. Olson,

If I hadn't misplaced your letter (I have your envelope and address, and did receive your book), I would have responded much sooner. Now that I have a spare moment (late summer and early fall here are quite busy), I'll get this off. We're securing our wood supply and busy with other preparations for winter right now, so this note will be brief.

I'm not sure but what you may have encountered something a bit difficult for you to comprehend. I carried on quite a lengthy correspondence with Duane Gish in San Diego when I was 10 and 11. The overwhelming problem I find with the proposition of his Creationism is how it's underlined, overscored, shot through, and overshadowed by faith. Since faith demands no answers, it's an interesting paradox to see how Creationism prostitutes faith with apologetics ...and how science is prostituted by the faith of apologist Creationists.

I would like to make one point ...and ask one favor. In attempting to understand the Creationist Christian's view, I find one major question unanswered.

When I was 10, a tape I prepared was played for the annual convention of the American Association for the Advancement of Science. I had material published in the magazine Science 81, and I was invited to appear on the Today Show in New York. When I was 11, I was a guest on two talk shows, one in Denver and one in Houston. Since then, I have given talks to many women's (and other) groups. Wherever I go, if the listeners are of the Christian/Creationist persuasion, they refuse to talk directly to me. They invariably approach any adult who may be accompanying me. When I'm subjected to a Christian atmosphere, I'm expected to feel like an appendage or an afterthought of the adult world, or treated as if, somehow, I'm 'inferior' in Christian's eyes. Are all of you afraid of the directness and honesty of children?

My favor is this; I've enclosed my direct and honest response to another Christian/Creationist reader's letter, along with copies of two talks I have given at various functions. I do not expect you to agree with what I say, but these few pages state exactly where I'm coming from. Will you read them as carefully and as critically as I read Judao-Christian and Creationist literature? If you would, it might give me a new slant on my perception of at least one Creationist person's honesty, courtesy, and desire to learn beyond pure faith. Thank you Dr. Olson.

Sincerely,

11/15/85

Dear ___/Miss _____ (if you're _____, I'm Ross)

Thank you for responding to my shot in the dark letter. I write to many people who never even peep. Sorry for the long delay in this response. I have my desk on a demand schedule. Also sorry for the large envelope--a sort of escalation in the war of reprints--but I can *see* that you like to read and this can give you a chance to *see* a little of my thinking if you want. Included is a totally irrelevant Wafting Guide to show that Christianity does not have to pickle one's sense of humor.

I enjoy discussing ideas with someone capable and inclined to do so. Many folks just like to cheer for the home team. If I have overestimated your interest in corresponding on these matters, just let it fade. Yet I think it can be a valuable part of the educational process for both of us. Probably a majority of people refrain from thinking and follow the herd so that the chances for conflicting viewpoints to interact are few and hard to find. People do not like to face questions they have not previously dealt with and your willingness to find out what makes Christians and Creationists tick is refreshing and appealing. Still, I do not want to spoil it by burdening you with an unsolicited correspondence.

I got a chance to learn some of the story of your life, first through the colored glasses of the reporter, then as corrected by your own comments. I think it only fair that you get a chance to see a little of my story to put us more on equal footing, although without the intervention of a reporter to drag out parts I might like to omit.

I am firmly in the adult camp by chronology (42 years old) although I am frequently accused of never having grown up. I am a Pediatrician and talk to kids both as a vocation and an avocation. I find children to have the unpretentiousness to see things as they are and, even at a young age, to have the ability to comprehend deep truths if put into ordinary English. In your case, I would not classify you as a child (you are already to that age where people will stop going "gee whiz" until you reach 85 or 90) and I certainly do not have to translate any jargon for clarity. I probably do not know enough big words to even keep you from falling asleep.

I was born the first of four children to devout Christian parents and attended church from infancy. At age 7, I told my parents I would be a medical missionary to Africa when I grew up. I was taught the necessity of giving myself to God as the prerequisite to a meaningful life and repeatedly made this commitment. In my second year at the University of Minnesota in Pre Med (I had continued to follow that early vision for Medicine) I began to have doubts about my faith. I felt that I was just fooling myself and that there were irreconcilable inconsistencies to Christianity. The next few years were a roller coaster spiritual pilgrimage although I somehow graduated magna cum laude and got elected to Phi Beta Kappa, got accepted by and managed to graduate from Medical School.

In 1967 at age 24 I left home for the first extended period and went to U.S. Naval Hospital Pensacola for my Internship (I also learned for the first time that winter was not necessary). I was busy but lonely. I was corresponding with Karin (now my wife) whom I had met in the Senior year of Medical school. I avoided church for several months, then decided to visit one and stopped at the first edifice I saw coming out of the Naval Base. The Pastor greeted me at the door and, hearing that my name was Olson, remarked that he was good friends with an Olson in Seminary. My first thought was that he certainly lived a long way from Minnesota to think that there might *be* any connection, but to my surprise there *was*. It was my Uncle who had been his classmate. He and his wife almost adopted me and I spent

every free Sunday afternoon at their home. Finding them was an amazing coincidence, one of many that began later to add up to evidence. Their kindness kept me from the depression that was to come the next year.

Those were Viet Nam years and my orders came through for the next duty station. I had joined the Navy because all doctors were being drafted anyway and I thought that showing enough interest to take a military internship might make them treat me nicer, like potential career material. The orders, however, were for Da Nang. I do not recall my exact reaction. If I had not been a physician, I know there would have been thoughts of becoming a conscientious objector because I had difficulty picturing myself ever killing someone, even in self defense. The thoughts of suicide, that maybe it would be better for me, for my family, my friends and the world if I were dead, those were not yet as formed as they would be the following year. Then I would have welcomed the opportunity to die honorably and could have easily made it a real possibility. Yet the chance never came because of another coincidence. My orders were inexplicably changed to the USS Boxer, a helicopter carrier that sailed the Caribbean out of Norfolk. I reported after a brief leave and return home to Minneapolis.

I sank into depression, not because of external circumstances so much as internal. I was aboard the Boxer, had excellent living conditions and pay, and yet I had time to look hard at myself. There were grave defects in my character and psyche that made the future look black. I came to the point of feeling that I would certainly bring unhappiness and disgrace on any close to me and therefore ought to get out of the picture. If there were a God, He did not seem anxious to get me out of my mess and I was probably only imagining Him anyway. I asked the advice of a fellow officer who said that if a person saw no reasonable hope of pleasure, suicide was the proper response. His counsel seemed odd, cold and uncaring but completely in line with his philosophical underpinnings. As I seriously considered taking my life, I saw clearly that a Universe without God really did not make any sense; no meaning, no purpose, no free will, no hope.

I was ready to write Karin, tell her that I was no good for her when a phone call came to the ship from Minneapolis. Karin called to tell me some sad news. She had developed diabetes. I did my best to comfort her and said I still loved her. Then it became clear that if I now broke up, it would appear that the reason was her diabetes. Even on the brink of suicide, I was still concerned about my public image.

As I looked up from the psychological bottom, I renewed my commitment to God, saying, "I know you have to be there, God. The Universe with all its complexity, the human mind with its incredible capacity, the existence of free will, the desire for meaning and purpose that would be a mockery in a mechanistic reality. I do not know why you have allowed me to go through such deep depression, but I give myself to you. I obviously cannot make anything of my life so I give myself to you for whatever purpose you have."

Things did not change immediately but slowly. As I saw sailors at sick call I began to recognize signs of depression and emptiness similar to what I had experienced. With some, I shared parts of my own experience and the hope I was finding. As they responded, it became clear that the very vulnerability of the wounded healer gave a rapport that could not be gotten any other way. The sensitivity to *see* and empathize was real. The fact that there was no real distinction between me and them released them from guardedness. In it all, I began to recognize that I was a valuable person, that I could be used by God to be of help to others.

That was not the only deep water for me to wade through. The following year

while at Great Lakes Naval Hospital, a patient died as a result of an error I made in ordering intravenous fluids. To be sure, others shared the blame for not catching it but I was devastated. The one thing I thought I could do--medicine--I messed up badly. Yet I committed it to God and told myself that He had used experiences that seemed bad for an ultimate good in the past and I would trust Him for that now. The emotions still boiled but I began to be convinced that I should talk to the husband of the woman who died. Fellow physicians and superior officers advised against it for medical-legal reasons but there seemed no other alternative from the point of view of humanity. I told him and said I was sorry and that I wished I could bring her back. He told me that I should not blame myself. I do not know if in his own sorrow he really understood. His wife had been admitted for an overdose, a suicide attempt, but was recovering when the error occurred. One thing for sure, it made it a lot easier for me to admit mistakes after that.

After my three years in the Navy, Karin and I were married. After two years of preparation, one at seminary and one raising financial support, we left for Hong Kong as Medical missionaries. Our first son, Jeff, was just over a year old and Karin was pregnant when we arrived in the Orient. About six weeks after we arrived, Karin went into premature labor and Matthew was born, about 28 weeks gestation, borderline viability at that time, and very questionable for the facilities in Hong Kong. I had no Pediatric training at that time and the doctor caring for Matthew was the obstetrician who did her best with what was available. Our hopes went from zero to high to low and back again for the next six weeks while he fought for life. Finally he died and we wrestled with all the conflicting emotions. If we would have stayed in the U.S., would he have lived? Would he have even been born prematurely if we had not travelled? What if the doctor in the U.S. had pulled out the IUD (Karin conceived with a Dalkon shield in place) in early pregnancy before the placenta grew over it?

We continued to hurt, but were certain that God had guided through a number of circumstances that convinced us we were in the right place at the right time. We just had to trust that He could have arranged alterations of any of the crucial circumstances to make it come out differently. As time went on, we began to see what had happened. For one thing, much interest and support and prayer had been focused on Hong Kong by many who knew us and had had time during the six weeks of Matthew's life to hear about him. Also, we had managed by this to cut through some of the complicated politics within the mission (that we were not yet even aware of) and develop a unity among our colleagues. And with the Chinese, whom we had come to serve, we had been given a rapport. Many expressed their love and concern. When Matthew was buried, it was next to the grave of the child of one of our Chinese Pastors. Now we too had a share in the suffering of the people of Hong Kong. As before, the experience had made me a better doctor and given me points of contact to use when my patients face serious illness or death.

In the eight years before we left Hong Kong for the last time, obviously much happened. If you were sitting here, we would show our slides. But this letter is already getting old just on the introduction. Regarding evolution, I was at the time a Theistic evolutionist. I saw no incongruity in believing that God could have thrown out the time-space continuum with the innate ability to organize itself into everything that is. I only saw the need for a special intervention when mankind was given the special characteristics that make up the image of God, namely self-consciousness, creativity, intelligence and free will. My brother, a junior high science teacher, had sent me a book on creationism, one of Wilder-Smith's earlier books, The Creation of Life. I had no interest in even looking at it. The thought of creationism seemed revolting, so far out, with a young earth, "apparent age," and so many other affronts to scientific orthodoxy. What I had heard before was basically, "Science tells you

this, but the Bible tells you this." I felt that if evolution were false, the scientific evidence ought to go against it.

In our second term in Hong Kong, I read the book. I was amazed and began to read more on the topic. Evolution was in fundamental trouble with the best established principles of mathematics and physics, and in all the fields bearing on it, people doing basic research were finding grave difficulties. Yet the vast majority continued to accept it "on the basis of all the evidence." I began to share this information with medical and scientific colleagues both in Hong Kong and after we returned to Minneapolis. I somehow expected them to calmly accept it. On the contrary I got all sorts of rejections and brushoffs, but strangely no real dealing with the data. Most either avoided looking at the probability and thermodynamic questions or parroted answers that just do not stand up to scrutiny. Some, like Stephen Gould, essentially say, "Life must have evolved because it is here." One medical researcher at the University was more blunt, saying, "I know where you are headed, Jesus Christ. I have no place in my life for him."

The answers should not have surprised me but did puzzle me. I had expected that a careful presentation of the scientific evidence would cut through the fog. The feedback from evolutionists was that creationists just appealed to the Bible and faith. Yet confronted by evidence, they squirmed. In some cases, basic philosophical errors were being made, so close to the bone that they never came up for consideration. For instance, Dr. Gould's quote above assumes that the physical universe is the totality of reality. If that were the case, one could say that despite the lack of a mechanism, evolution is the only way life could get here. Of course, the physical universe is commonly considered to be the scope of science and in order to avoid shunting any difficult phenomena into the realm of the miraculous and therefore beyond investigation, it has long been the practice of science to exclude any supernatural considerations. But when faced with evidence that evolution needs to go contrary to all known processes in the universe and that life contains design that cannot be accounted for by chance, why hang on to a convention of science as if it were a rule of logic. Who could say, without fear of contradiction, "There is no supernatural," except someone who was omniscient. The medical researcher was, perhaps unintentionally, the most honest. For evolution does not rule out God, but creation rules Him in. And that is a conclusion that some want to avoid at all costs.

The biographical data seems to have wandered into the polemic. At present I am in the Pediatric Department of Group Health in Bloomington. Karin and I have four children, Jeff 14, Susie 12 (who was born in Hong Kong one year after Matthew died), Jason 11 (adopted from Hong Kong 3 years ago) and Stacy 7 (also from Hong Kong as of one year ago). I work with children even in my "free" time, for example, in Children's Church. In answer to one of your questions, no, not all Christians avoid children. Jesus appreciated kids although his followers did not always. By the way, while in the medical setting, I am used to being called "Dr. Olson" (it's part of the placebo effect). In all other situations I prefer to be known as Ross.

I would like to touch on several areas brought up by your letter and articles. It would be much easier to talk face to face rather than risk saying too much, too little or missing the point of disagreement altogether. Nevertheless, with no feedback, sketchy background information on your overall fund of knowledge in the areas of my special interest, and a "hypnotic" literary style, here goes.

I am impressed with, not only your academic ability, but your considerable gifts for insight and expression. I use the words "gifts" intentionally because I am convinced that they are precisely that, and that with them goes greater responsibility. I think that you

already feel that way even without a *sense* that these came from God, by your desire to help solve some of the world's problems.

The fact that you know more than I do in many if not most fields of human knowledge and the fact that you can probably skate circles around me intellectually do not deter me from entering discussion, however. Opinions have as much to do with human characteristics as with objective data and, even there, we often learn as much by being reminded as by being taught. You have recognized some of the foibles and frailties responsible for so much foolish thinking, in a manner reminiscent of Stephen Gould, but it is an almost qualitatively different animal to also apply these insights not only to those with whom I may be in agreement but even to myself.

May I ask a very personal question? It is one that ought to be asked by every intellectually honest person. If you were wrong about a deeply held and publicly defended position, would you be willing to change? What would it take to convince you of being wrong? This is not just an empty exercise, because I have met people who feel obligated to agree with themselves or disagree with some designated enemy come what may. I know physicians who would be unable to accept the suggestion of the correct diagnosis, if it came from grandma. These preliminary considerations need examination, for, like the color of our glasses, we don't recognize what is happening if we only concentrate on the "world out there."

The first major topic I would like to consider is that of faith. There is much confusion about what it is. Let me put it this way, as the Bible speaks of faith, the opposite is not doubt, but unbelief. Doubt is the other side of the coin of faith. The Bible does not speak of faith as in the power of positive thinking, a subjective benefit that comes because I really believe, aside from any evidence. Rather, the Bible speaks of believing the truth and not believing anything else (see Deuteronomy 13 and 18). To do that, there must be some way of distinguishing one from the other. Faith in God could be defined as believing and trusting God (to the point of commitment) for those matters I cannot independently confirm, on the basis of those matters that I can confirm. Thus if the evidence leads me to believe in God and believe that the Bible is a revelation from Him, I ought to believe what it says about life after death, even though I cannot check it out directly...until death, anyway. The opposite of faith, or unbelief, would be to be confronted with adequate evidence of God and to refuse to acknowledge, simply because I do not like the idea. This is what Paul writes about in Romans 1. To believe a lie is to see the evidence but to account for it wrongly and therefore to solve or attempt to solve problems on a false premise, looking to a false hope.

But perhaps you say, why do I need to bother with faith at all? Why not just stick to what I "know for sure?" When you consider this in the light of the Biblical definition of faith as presented above, it is clear that we exercise that sort of faith all the time. We can't live without faith, just or unjust. In the realm of information, for example, have many people actually confirmed the world events they read about? What about those earthquakes and volcanoes? What about all those Russian leaders dying? But, you say, we have that from reliable sources. Exactly.

If you read a report about an invasion of extraterrestrial aliens, what would be your reaction? If it were The National Enquirer, you would probably look no further. But if it were later picked up by Time, Newsweek, NBC, CBS, ABC, and the Wall Street Journal, and the date were not April 1, you would have to give the matter serious consideration on the basis of the multiplicity of usually reliable sources. Those sources have, of course, earned that trust by accuracy in matters that we have been able to check out for ourselves or confirm with other trusted means. In a case

like this, naturally, your trust would be stretched a bit and would require a tad more scrutiny than the report of Med Flies in California. (Aliens in California might, incidentally, *escape* notice for some time.) If the sources were unimpeachable, the stories had the "ring" of truth and still you had personally not seen any direct evidence, would it be sensible to say, "I won't believe it until I see the whites of whatever they use for eyes!?" That might be ideal for 100% confirmation, but the truth or falsity does not logically turn on whether you have personally experienced the presence of the aliens. In addition, if there were some sort of precautions or preparations advised, it might be downright foolish to wait for your last doubt to topple. As in all real life situations, a decision must be made on the basis of the best information available.

How about matters of daily life, how can you be sure that your food is not poisoned? The possibility does exist, of course, and because giving up eating is not one of the choices, it is a question we are actually facing every meal. To avoid exercising faith, one would have to have complete control of the production and 24 hour a day surveillance over every aspect of the food--a more than exhausting consideration. It simply would not be possible. To entrust it to anyone else would require faith. To test the food for all possible toxic substances would require expertise, equipment and supplies for which you would have to trust someone else. Therefore, it is easy to conclude that the person determined to live without faith would starve to death. For most of us, if it looks good, smells good and tastes good, we go right ahead. If it doesn't, we think "spoiled," not "poisoned."

Okay, you are probably saying, but the point still is, where is the evidence for Christianity? It is coming. I just want it to be perfectly clear that evidence for anything requires faith to accept. Even if I make the observation myself, I have to believe that I exist (a fairly easy choice tactically since the alternative heads straight for the twilight zone) and I also have to believe that my senses and reason are reliable. If I am experienced, I will recognize the penchant for seeing what I expect to see and thus may design my study accordingly, for example a "double blind" study of the effects of a medical treatment in which neither the patient nor the doctor knows who got the real medicine and who got the placebo. In evaluating scientific evidence from other sources, I must likewise use my judgment, consider the quality of the work itself, the consistency with other data and even, sad to say, the potential for ulterior motives. Remember the brilliant young cancer researcher who fabricated results to further his career? More common would be the Tobacco Industry investigator who finds no health hazard in cigarette smoke.

There is a tendency to think that the history of knowledge has progressed smoothly from ignorance towards perfect understanding, and that we must be fairly close right now except for a few details to fill *in* here and there. This view sees journal articles and finally textbooks as repositories of truth. It is not an illogical approach to begin with, yet a perusal of the history of science reveals that the progress has not been smooth in all cases. Often strong personalities dominated certain fields until their deaths. Ideas contrary to their own life work and reputation would not be given a fair hearing until they were off the scene. It does not just happen in the Soviet Union. Other times whole chunks of the intellectual edifice that were known "for sure" had to be discarded. A generation ago, Continental Drift was being laughed out of school. Now it is scientific orthodoxy. Truth is not always welcomed, as in the *case* of Ignaz Semmelweis who discovered that post partum infections could be prevented if the Obstetrician would wash his hands, especially if he had just been to the morgue. He died a broken man because his colleagues would not even take this simple step or take his findings seriously. Scientific opinion has as much to do with concern for reputations, politics, pride and herd behavior as *does* any other field of human endeavor.

My own personal fund of knowledge is far more complex than a dichotomy of things I know and things I do not know. There is a continuum: from things I do not know and do not even suspect, through ignorance I am aware of, to things I am uncertain about but could support as true, through items I can prove to myself but not necessarily to anyone else, up to those matters where I can provide convincing proof for others. (Of course, I probably cannot convince everybody of anything, even $2 + 2 = 4$.) And I have to recognize the possibility that anything I hold to be true may in fact be false if I have made some error along the way.

Truth may also have complexities and twists that make it difficult to understand and even accept. For example, two people relating the same accident, each with partial information said, "He was a passenger in a car, struck by a truck and died instantly," and "He was a pedestrian, struck by a car and died on the way to the hospital." These accounts *seem* incompatible until one realizes that each is partial and the second sentence describes what occurred first, after which the injured person was loaded in the car that was ultimately struck by the truck.

This brings me (after a gap in my attention to this letter of about 2 weeks) to the basic argument for creation. There are many areas of evidence, but those in the basic "hard" sciences are the most reliable and unequivocal. That is a point you also made in your writing. Mathematics and Physics, in their treatment of probabilities and thermodynamics, are the unbiased officials who blow the whistle on evolution. Because the structures of many molecular components of living systems are known, it can be mathematically determined what the probability would be of their coming together from a "soup" of their component parts. This area is covered in detail in the article by Kofahl, "Life's Probability" but let me touch on the key points.

Living cells consist mostly of protein molecules. These are long chains of amino acids, which become arranged into a folded or globular structure with a distinctive shape and distribution of electrical charges and sites for molecular bonds. The shape and other characteristics are determined by the sequence of amino acids that make it up. Those characteristics then determine what that molecule will do when placed in contact with other molecules. And what proteins do, in general, is to catalyze chemical reactions, by bringing together the necessary substrates and/or transferring energy to them. Everything that is done by a living cell is done by or with a substantial contribution from protein molecules. That means the muscles you are using to guide your eyes across the seemingly endless lines of this letter, the processing of the patterns of light and dark into intermittent signals to the occipital cortex of your brain, the uncoding of those signals and recognition of words, thoughts and concepts as well as the immediate storage of that information in short term memory later to be reprocessed without conscious intervention into long term memory, not to mention the immediate retrieval on receiving this information of related existing long term memory...(got all that on your short term?) all this is being done by molecules bouncing around and reacting with each other in a manner modulated by protein molecules. While this is going on, hundreds and even thousands of other processes are being carried out automatically by other parts of the body, such as digesting and transporting nutrients from the intestinal tract, pumping blood and maintaining a stable blood pressure (of course these autonomic functions may be influenced by chemical mediators from the areas of the brain not directly concerned with their function but dealing with the intellectual tasks at hand such that brief waves of nausea may relate to the atrocious grammar, spelling and typing, and temporary elevations of blood pressure may accompany encounters with distasteful conclusions). All the while, the white blood cells continually monitor every accessible surface in the body, comparing its topography with the master files of all "self" variants and loosing a barrage of destructive but carefully modulated chemical and cellular attacks on

anything that does not pass the inspection.

All these complex processes require a complex array of macromolecules integrated structurally and controlled by an intricate system of feedback mechanisms and yet it must all function automatically, without a "little man" sitting somewhere pushing buttons. The various protein molecules, if the sequence of their 100 to 10,000 amino acids is altered by omission, addition, or substitution, the functions of those proteins may be changed or even destroyed, depending on the position on the molecule and the specific change that is made. For example, Sickle cell anemia, a serious and potentially fatal defect of hemoglobin is due to the substitution of one amino acid on the large protein complex that happens to be at a particularly critical location. In contrast, mistakes at some other locations may make no measurable difference in the function of the protein, but in general, careful duplication of the active structure is necessary to put together a functioning organism. In a similar vein, there are a lot more wrong than right ways to put together a functioning radio from a box of components. In living things, for the most part, the information regarding the correct sequence of amino acids for all proteins manufactured by that organism is kept in coded form in the DNA (deoxyribonucleic acid). The long chains of DNA look like a spiral staircase with the rungs made up of nucleic acids of 4 different kinds, adenine, thymine, cytosine and guanine. They are of such a nature that adenine attracts thymine and cytosine attracts guanine. The rungs of the "staircase" are constructed of one or the other of these pairs, turned one way or the other. Thus if you walked up the right side of the staircase, you would be stepping on a seemingly random sequence of four different nucleotides. On the other side of the staircase would be the exact complement of the nucleotide on your side, such that if it were split down the middle (as happens in cell division) each side would attract its complement and reconstruct, barring mistakes, the structure of the whole.

The code of the DNA consists of three letter words constructed from an alphabet of four letters. Three "steps" of one side of the "spiral staircase" (the other side simply being the template used for copying purposes) is the code for an amino acid. Since there are 4^3 or 64 possible combinations and only 20 amino acids (of the naturally existing hundreds or thousands) there are apparently more than one code for any one amino acid. Other codes of the DNA say things like "start here," "stop here" and serve as chemical locks that will open up the contained information only at the proper time, when activated by the appropriate chemical mediator. This is particularly important when you remember that the DNA of every cell in your body contains all the information for building and operating every cell and organ. Thus, if the code for growing arms were activated when, for example, some white blood cells had detected a foreign invader and wanted to activate the production of endogenous pyrogen, the substance responsible for setting up the body thermostat in developing a fever, then as you felt the effects of getting sick, you may not only have a pounding headache, you may have a cute little embryonic fist pounding the midbrain. The retrieval of appropriate information from the DNA to read out the code for a protein sequence must be in response to a chemical mediator, a molecule made by some cell or cells in response to some other event.

To put it simply, you cannot put it simply. The system is incredibly complex and interrelated. The protein molecules are made according to the code on the DNA which has to be "unzipped" in just the right location when that particular protein is needed, through the aid of a properly activated protein molecule that only "unzips" that particular location. The information is then recorded on a strand of RNA, identical to DNA except for the substitution of uracil for thymine. This is messenger RNA which floats out away from the DNA and then attracts transfer RNA, triplets of nucleotides corresponding to the codes for amino acids, with the appropriate amino acids hooked on to the other end. When stretched onto a ribosome, the protein is lined up, linked together and folded into the three dimensional structure it was intended to have. Once

made, the protein will start to catalyze the chemical reactions it was manufactured for. It will keep on doing just that, without the vaguest suggestion of good sense, as long as it exists. If the organism needs to turn it off, it must come up with a method for inactivating or even destroying it, also by means of a feedback mechanism opening the coded information on an appropriate area of DNA.

To have life, the minimum functioning cell must be present, combining a set of proteins with their corresponding DNA, all organized with the proper feedback systems to perform the minimum number of tasks to maintain its own internal environment, gather energy from the outside, repair various sorts of minor damage and reproduce itself. It has been said that the theoretically simplest cell would have to have 230 different protein molecules with their controlling DNA, organized into an appropriate spatial relationship to function. The proteins would range from over a hundred to perhaps several thousand amino acids in size. How could this come about by chance? It could begin with the protein or with the DNA. Since the DNA would not be useful without the protein and RNA facilitators, it would be most direct to start with the protein. Of course, it is the DNA that has the mechanism for self duplication. But let us look at just one protein molecule, as an example. What would it take to organize it by chance?

Amino acids are relatively simple molecules that do occur outside of living systems. It could be envisioned that the primitive earth had an abundance of them, especially in a "reducing atmosphere" of ammonia, methane and very little oxygen. Now, we can ignore for the time being that there is no geological evidence for such an atmosphere ever existing. It was a "logical necessity," not an observed fact. (This introduces the topic of blind faith in evolutionary science, not only faith, but faith unsupported by any evidence but only by the assumption that evolution must be true.) We also can ignore the fact that the amino acids would be mostly the simplest ones with almost none of the more complex ones utilized by living systems. We will also ignore the fact that the amino acids would exist as a racemic mixture of "d" and "l" isomers (right and left handed forms) rather than all "l" as incorporated in living systems.

What would be the probability of a soup of amino acids organizing themselves into the 230 different proteins necessary for that first living cell? Let's instead consider the probability of forming only one very small protein. Consider a 100 unit protein and consider that the soup out of which it is to be formed is made up of large numbers of each of the "l" form of the 20 amino acids necessary for the protein. The only task is to string them in the proper sequence to form the active enzyme, a protein capable of doing what is supposed to do. We can even assume that forming them into a string of 100 would be no big problem although in fact, a string could grow only if energy were used to tack on another amino acid and that same energy would be much more efficient at knocking the chain apart. But forget all that and only consider the well established laws of probability to produce by accident a predetermined pattern. It is analogous to the accidental typing of a meaningful sentence with no errors. Perhaps this entire letter could serve as a qualitative example but let me try to be more quantitative.

Consider a typewriter with 20 keys including the punctuation and space. What is the probability of typing, by accident, the following: NOW IS THE TIME FOR ALL GOOD MEN TO COME TO THE AID OF THE PARTY...TO COME TO THE AID OF THE PARTY. This happens to be 100 characters long using 20 different characters. Striking a key at random, which would be equivalent to taking a letter at random from a bowl of alphabet soup or grabbing an amino acid from the special recipe primeval soup I have described above, if the ratio of the choices is equal in the soups and there is one each of the character keys on the modified typewriter, the chance of getting the correct choice in the first position on the first try is 1/20.

On the average, 20 tries would have to be made before you would be likely to get it. Of course, you might get lucky right off the bat, then again, you might have a long string of bad luck. Having struck the first key correctly, the chance of striking the second correctly is also 1/20 so that the chance of sequentially striking the first two correctly is $1/20 \times 1/20$ or $1/400$. The chance of striking the first three is then $1/20 \times 1/20 \times 1/20$ or $(1/20)^3$ or $1/8,000$. So, on the average we would have 7,999 scraps of paper on the floor before we see one that correctly spells "NOW." Suddenly I don't feel so ashamed of my typing To get the entire phrase would require on the order of 20^{100} trials which is 10^{130} . Now we certainly are not yet asking monkeys to write the complete works of Shakespeare or amino acids to form a living cell. We are asking considerably less than that, yet the chance of success is incredibly small.

What kind of a number is 10^{130} ? It is estimated that there are 10^{47} molecules of water in all the oceans of the earth. Let's suppose that the primitive ocean contained, not a few parts per million of amino acids, rather that every molecule of water was replaced by an amino acid Let's suppose that they all try for 30 billion years (10^{18} seconds) at one try per second to put themselves together into a chain 100 units long. After 30 billion years how many combinations have been tried? It would be $10^{47+18-2}$ or 10^{63} . The -2 is because each combination is 100 or 10^2 amino acids combinations that are being tried. Are we anywhere near getting lucky? Only $1/10^{67}$ of the possible combinations have even been tried. We have already used up more than the allotted time of the earth's existence and do not even have the smallest protein of the simplest possible cell. There is no time for it to evolve into the myriads of species living today, with such intricate adaptations as flight and navigation systems of birds, sonar of bats and porpoises, not to mention the incredible capacity for data processing in the human brain. To get in the ballpark for even getting that simple protein, with all the concessions made for the sake of argument, concessions that would not be made in the real situation, there would have to be 10^{47} earths (the same as transforming each molecule of water in the oceans into an earth) each with an ocean like ours, each molecule of each of those oceans exchanged for an amino acid. Then let each amino acid try with 99 of its neighbors 10^{20} times per second to come up with the winning combination. If this could be arranged under these conditions, there is a good chance that somewhere in the universe one group would raise their hands and say "Bingo" once in the 30 billion years. Of course, the poor thing would fall apart waiting for all the other components of a living cell to come along, organize themselves and afford the protection that every macromolecule needs to avoid the destructive forces about it. Unfortunately, also, for this scenario, the matter of the universe has already been exhausted before the cast is complete. There are about 10^{80} atoms in the universe. Even if it is 10 billion times bigger and there are 10^{94} atoms, the above described protocol requires 10^{47+47} or 10^{94} amino acids.

Well, you must be saying, the evolutionist certainly cannot have missed such a simple point. There has to be an answer! If there is, I have not heard it. What I have heard is a lot of squirming. For example, one prominent geneticist said, "Those arguments don't impress me." It's as if one claims to not be impressed by a Mack truck about to run over him. Another answer is that if infinity is the numerator, it doesn't matter what the denominator is. The problem there is that we do not have an infinite universe. What one would have to propose is that there be an infinite number of universes and this is the one that just keeps rolling sevens. Behold another leap of blind faith to solve a logical problem. Yet another is to try to bargain down the odds, for instance by figuring all the "non-essential positions on various protein molecules, the figuring that one combination might succeed in forming some other essential protein while being counted as trying for this one. All in all, this approach fails to comprehend the magnitude of the problem, like to connect 6 billion brain cells, each one a mini computer, in a way that can coordinate the writing or playing of a symphony, the pinnacle of athletic achievement or the communication of complex information or the conception of new ideas. Kitcher, in his book Abusing Science, appears to have a sophisticated answer to the randomness problem. He separates "apparently random" processes from those which are

"irreducibly random." The difference is that the ones that are apparently random are actually governed by natural laws so that if one knew in detail the initial state of the matter, one could predict what event would take place. His example is of a coin being flipped. If the position, amount of force used in flipping the coin, the direction of the force and its placement on the coin, the coin's mass, the air resistance, the elasticity of the surface on which it might bounce and all other relevant parameters were known, the outcome could be predicted. The process is not random since it can be described. Excuse me for being disrespectful, but since Dr. Kitcher begins that section of his book saying, "I shall begin by disarming this weapon of obfuscation," I cannot let his distinction pass without saying that he is either deluded or deliberately deceptive. Of course the toss of the coin can be described by natural laws. The outcome will still be 50/50. That is an experimental fact of science. Only if some incredibly clever and dexterous coin flipper learns to control the various parameters does the coin start coming up anything but a random mix. By going on to say that some processes are deterministic, some probabilistic and others chaotic, Kitcher has given the illusion that something profound lurks behind his words. Yet the plain fact is that all real processes that can be examined show the effects of chance. You may be able to predict which water molecule will be the first to leave the surface of a container when it is heated, but that still does not mean that it will line up with billions of its peers in the air to spell out the symbol "H₂O." That would be a clearly incredible occurrence that would be open to study by the laws of probability and eventually lead one to consider the possibility that some intelligent force had acted on the dumb molecules to make them behave in a most uncharacteristic manner.

I suspect that Kitcher knows now even if he were fuzzy at the time of his writing that the distinction of types of probability is irrelevant to the real question. However, the section in his book will be referenced for years as "disposing of" the probability argument. Along that line, if this letter does not pick up its pace, years may go by and see it included in a post-humus mailing. Therefore, allow me to be even more sketchy in outlining the basic principles of the next point, to be filled in where you ask for more data.

The second law of thermodynamics is based on uniformly reconfirmed observations that all measurable real processes tend towards disorder and decay. An abandoned car rusts and falls apart. It does not become an airplane. A farmer's field left unattended reverts to a wild state. Photocopies of photocopies become gradually less clear and more invaded by random noise. Individuals grow old, deteriorate and die. Stars are putting out energy and losing potential energy. The whole universe is moving in the direction of increased entropy, which means basically increased chaos and *decreased* order. This, of course, is in exactly the opposite direction from that required by evolution. Evolutionists do not deny the conflict. Rather they claim that evolution is allowed in an "open system" in which energy from the outside is allowed to increase order in one specific location even though the overall direction of the universe is in the direction of disorder. Again, this sounds like an answer, just like Kitchen's randomness distinction, but does not hold up under close examination. What is needed for the formation of living systems, as pointed out by Wilder-Smith in several of his books, is not energy but ordering. Raw energy is very efficient at tearing down complex molecules and not at all good at building them. For example, place two objects in the hot sun and see what happens. One is a dead fish; the other is a living plant. The fish decays. The plant grows. The difference is in the presence of an ordering mechanism in the plant that transforms raw energy into controllable chemical energy by way of the chloroplast and then, through the synthetic mechanisms of the cells, into structural additions following the preset pattern from the DNA. Now, to be sure, the decay of the fish is hastened by the presence of microorganisms, but even in a sterile environment, the effect of the sun's radiation would be the breakdown of complex molecules into progressively simpler components. Only in grade B horror movies would anything alive, not to speak of "improved,"

crawl out. To use unordered energy for increasing order, decreasing disorder and performing work requires the presence of a "machine." Evolution tries to build the machine with unordered energy. In another example, put a pile of bricks on the ground. For them to become organized onto a brick wall would require going counter to the general direction of the universe as described in the second law of thermodynamics. But to allow this to happen, let us open the system to energy from the outside. So we have the sun shining on the bricks. It does not help. Why? Because the energy is not appropriately ordered for the task at hand. How about wind caused by differential heating of the atmosphere? Maybe if we get a tornado there is some possibility that the outside energy could make a difference but it clearly is still much more likely that walls would be broken down than built up and no one in his right mind would ever seriously suggest that the Taj Mahal could be constructed by "natural forces."

What about all the other evidences for evolution? Are not these problems only small temporary gaps in the otherwise tightly woven fabric of scientific reasoning? These points of probability and thermodynamics are of crucial importance because they are the products of hard data and straightforward reasoning. The other "proofs" of evolution are subject to other explanations and also present problems for the evolutionist point of view. For example, mini evolution is undoubtedly true. Darwin's finches do show variations of beak size and shape. Peppered moths do vary in color. These variations can be affected by environmental factors so that long beaked birds did better when the food supply was bugs in holes of tree bark. Dark moths survived better than light when the surfaces on which they sat were darkened by industrial smoke in England and the birds saw the light colored ones easier. All the breeds of dogs that can be artificially selected out of the genetic variability of "primitive" dogs shows how much hidden potential is present. (In natural settings, of course, many of those breeds of dogs would not survive.) Yet the point that Darwin missed is that there are limits to that variability. In size, for example, once you have bred to a certain size, the offspring will no longer include some that grow larger than the parents. The size will reach a maximum. Some progeny will stay at that size but the tendency will be for most to be smaller. To exceed that limit in any given parameter, and certainly to produce a feature, such as a dog that has wings and flies or one that plays chess and speaks Latin, requires new genetic material. The production of that genetic material by accident (a mutation) would be subject to all the improbabilities that we talked about in connection with forming the first simple protein molecule. It is like putting a floppy disc into your computer incorrectly and finding that it has written a tax reform bill or printing a book starting each word one letter to the right and finding that it not only makes sense but becomes the great American novel.

What of "Ontogeny recapitulates Phylogony?" The idea that the embryo retraces its evolutionary history is pretty much rejected by those who have looked at it in detail because the crucial stages are not correct. For instance, gill slits are not the same as the pharyngeal pouches seen in mammalian development. The embryo has a structure suited to its needs at each stage of development. What of analogous structures both on the anatomical and biochemical level? Logic does not require that this lead to the conclusion of a common ancestor when it could also represent variations on a theme by a creator. Stephen Gould claims that a creator would have come up with an independent engineering solution to each species' needs. Firstly, he is a bit overbold to claim to psychoanalyze not only the God he claims is not there but any possible God as well. Also, he is inconsistent in that when he does find a novel structure in the Panda's "thumb" (Can elongated bone of the wrist) he claims that this ad hoc solution to a certain feeding need is not the sort of thing expected of a creator either. What of the fossil record? In dealing with this gigantic topic, some few basic points are demonstrable. The gaps in the phylogenetic tree are significant enough that the theory of "punctuated equilibrium" was proposed to rescue the geologic column for

evolution. Thus it is proposed that the changes between major kinds took place so fast in terms of geologic time that the transitional forms were not preserved. This to begin with would only be in a relative sense because if the transition took any time at all there would be some chance of catching one of those missing links somewhere. Evolution expects to do so well with chance in the production of evolution, I don't see why they don't find all the necessary fossils. The exception would be the case of the "hopeful monster" theory where due to massive changes, a bird hatches out of a reptile egg. But as I hope has been apparent from the discussion so far, even gradual change over millions or billions of years stretches credibility when improvement has to be weeded out of random changes. To happen rapidly or instantly makes it even harder to come up with a mechanism. Even the form Archeopteryx now is passe because a modern bird fossil has been found in an older stratum. The entire fossil record and geologic column can be explained as differential burial of life forms in a catastrophe or series of catastrophes such as might surround a worldwide flood. There are plausible mechanisms for such an event when one considers the nature of tidal waves that might accompany collision with a moderately sized asteroid or comet and/or sudden tectonic movement. Anyway, the preservation of any fossil requires at least a mini catastrophe in that organisms buried by sediment at the rate of fractions of a millimeter per year do not form fossils but rather decay. Also, polystrate fossils, such as tree trunks spanning tens of feet of sedimentary rock had to be buried quickly or the tops would rot long before they were covered. I agree that there are many areas of uncertainty and debate concerning some of these "softer" areas of *evidence*, but I maintain that creationism is on a solid foundation while evolutionism is shakey to the core. Much of the apparent consistency of the case for evolution is because of selection of data that fits the "correct" conclusion and the presence of a great deal of circular reasoning, such as dating rocks by fossils. By this method, it would not be possible to recognize a rock in which an "index fossil" exists as anything other than the period that it has been assigned to. The age of the rock is then assigned and the fossil age attributed to it. When radiometric dates are correlated with it, the "obviously incorrect" dates are rejected when out of line with the geologic ages.

My conclusion is this. An open minded person looking at the universe will see the need to consider that there is an intelligent creator behind all the intricate design. The universe does not explain itself. It appears to be running down. It has a direction; it must have had a beginning and will have an end. It must be seen in the context of something bigger, more comprehensive and permanent. Also, philosophically, the materialistic world view does not adequately account for all the data. For if I am a product of molecules in motion, then there cannot be any true free will. My brain is an accidental configuration of matter that has some sort of survival value in that it has been passed down through the eons and its ancestors have survived. (Although survival in real life has a lot to do with other factors besides "fitness.") But as far as making choices, there is not even a theoretical mechanism for it. I have input (the data that come through the senses), processing (according to the hardware and software with which I am equipped--the software mainly being the past experiences and the patterns they have established) and output. The whole scenario is chance input into randomly designed machinery that cranks out responses. At what point does free will exist? What molecule can tell another one which way to bounce? Who is this "me" that is conscious of these processes. The materialistic viewpoint says that for any given instant in time, the position of the molecules and their energy data completely determine the output of my brain whether that be words, actions or thoughts. "I" have nothing that can be altered. Any "choice" is only an illusion. And if that is the case, why do my words and thoughts have anything to do with truth? Do random messages produced by dropping stones on a typewriter have anything to do with truth? Hardly. Therefore, if my assumptions and logic have led me to this point, then all statements I make are nonsense including the ones that got me there. The mistake, I submit, is in assuming that the material universe is everything.

How does one get from this knowledge that there must be a spiritual dimension to existence and that there must be an intelligent designer, to where you consider the God of the Bible? Is it just a leap of blind faith? A spiritual multiple choice? No, the God who is there has communicated and accredited that communication with signs that indicate it came from the one who created and can therefore suspend natural laws. The prophets were given power to perform miracles that confirmed to the people of their day that they were in touch with the supernatural. Their writings incorporated prophecies that confirm it for those who know of the fulfillment. The historically documented fact that the claim of Jesus' resurrection was being circulated well within the lifetime of those who were there means that there would have been opportunity to refute it. The Jewish leaders who were most damaged by the claim certainly had the motivation to crush the movement if they could have. In our own day, the prophecies concerning the rebirth of the nation of Israel, its persistence in the face of numerous enemies and the focus of world politics on the middle east, all make one think that the Bible has something more than ancient moxy going for it. Consider the description it gives of the human condition, that we are valuable and have great potential because we are created by a God who loves us and has an individualized plan for each of us. Yet there is something wrong in that we have been given free will, the opportunity to really choose to love and serve our Creator and we have chosen our own way, the wrong way. Because of this, we have spoiled much of what was created and allowed ourselves to be deceived by spiritual forces, also in rebellion against God, who wish to destroy or damage as much as they can of God's work and prevent people from recognizing God and their responsibility to Him. God did not want to leave us in this condition and satisfied justice by taking on human form in the person of Jesus Christ and taking our punishment so that all who acknowledge their need of forgiveness and His ability to give it, and give Him the rightful place in their lives can be restored to fellowship with Him. He shows the greatness of His power by taking the results of so much of the tragedy and violence in this world, and making of it something beautiful in the lives of those who trust Him. That change in outlook, circumstances and even character provides the final evidence to the one who comes that far.

Let me close this overgrown letter with a few comments on points brought up by your letter and articles. You state that "Babies do not start wars. Toddlers are not intolerant of skin color, sex or alien cultures. Children are not divisive...not until the adult culture teaches them this non-survival trait. What is the most divisive pastime practiced by adult humans? Again the answer is religion." Please forgive me for touching a raw nerve when I say that you must have been really young when separated from your sister because she only remains in your memory as a fantasy. Oh, I agree that there are people with much exposure to young children who still have a very idealistic view of them and perhaps you do have much practical experience. Yet, I would contend that the idealism is based on philosophical rather than empirical underpinnings. A baby represents more selfishness per pound than you will ever see in any other stage, demanding instant and total gratification of all needs with no compromise for impossibilities. No one teaches toddlers the concept of private property or competition when two or more inhabit the same space. Watch an older sibling resent the new baby. Also watch kids organize themselves into ingroups and outgroups, pick mercilessly on those with differences of any kind and try to associate themselves with the desirable rather than undesirable elements. Hear me correctly, I speak as one who likes kids. What I do not see, however, is an innate perfection. Rather, I see potential...for good and for evil. If you will permit an insider joke, a friend couple had their first baby when my wife and I had ours. They stated, "Having a baby has taught us much about God's love." I responded, "Having a baby has taught us much about original sin." Actually, both are true, for in parenthood, God has given us an object lesson, a glimpse into that relationship which exists between Him and His children. Thus we sense His sorrow and pride at the alternate failures and successes, insight and foolishness that

mark the path (hopefully) toward maturity in our offspring. It is no accident that He calls Himself our Heavenly Father, for He not only uses the comparison, He created it. Thus when the two year old feels compelled to refuse ice cream just to be contrary or the four year old plans to run away from "the meanest parents in the world" we can also imagine God suppressing a smile as He responds to our equivalent spiritual behavior.

The problems of the world are much too deep to be solved by educational and child rearing alterations. There is an evil bent in every individual, manifested differently in different personalities and controlled to varying degrees by enlightened self interest but only reversed by a radical solution, a spiritual regeneration that begins with a new birth and will not be completed in the world as we know it. By the way, the view that children are subhuman fits much better with an evolutionary world view than a Christian one. In the Christian perspective, human life has a special value unrelated to abilities or potential but self existent because each human being is endowed with that value by God. By the evolutionary perspective, we are justified in using "lower" animals for our own purposes only because we are smarter. Some might argue that we have no right to kill any other living thing for our own purposes and I think they have touched on a principle of the world as it was originally intended to be. I think that the medical evidence supports a scenario in which all essential nutrients could be synthesized from a plant product diet, but that as genetic information was garbled and lost through the operation of the processes of deterioration, it became more and more necessary to eat preformed rather than basic nutrients. The need to kill animals was thus a concession to a world in the process of decay and the choices available, like so many we are faced with, are selected among something less than perfect options. In that case, the soft heart that cannot bear to think of killing any living creature is touching the ideal that once was reality. The opposition to that view is resignation to the reality in which we must exist.

The distinction, in the evolutionary framework, between us and other organisms is in our intelligence. We also tend to value other animals more if they are more intelligent so that tremendous interest and resources were mobilized, for example, to help guide a whale back to the sea while salamanders, earthworms and whale sharks fail to generate much public support. There is even a detectable tendency to consider less intelligent humans to be a little less human and certainly less valuable. Thus a child whose contributions are still for the most part potential and whose outcome is subject to all sorts of vagaries would be worth less on the average than a proven performer. A fetus would fare even less well in this sort of system, and indeed does.

Children are cute. They have to be. If they were not, they would be extinct. In every child there is great potential, great opportunity and great danger. By looking at the world with a fresh point of view, children help to keep appropriate wonder alive...the wonder and awe at the beautiful and intricate universe...as well as the capacity to see the good in people and to trust, to forgive and to face difficulty. I agree with you in many of your observations along this line. Yet there is still the crucial flaw, present in every human heart, spoiling the charm and blunting the impact of the immature point of view. The great contradiction puzzles all who do not see the explanation revealed by God Himself in the Bible. As you have said, "Only correct information solves anything." Correct answers may not be popular answers or even palatable answers, at least to those not prepared to accept them.

Regarding cultural errors, handed down the generations as truth but leading to disaster, I agree that it can be difficult to overcome them. Of the examples you gave, plowing furrows up and down hills is actually a technological newcomer to the scene. The older societies which preserve ancient wisdom are basically very

conservationist. It is 20th Century Western Civilization with its assumption that "new" means "improved" that is most prone to that sort of shortcut leading to an unpleasant surprise. Science and technology sometimes deal with the small picture to the detriment of the big picture and "advances" in morality and social structure usually turn out to be retreads of old mistakes. Regarding the building of homes and farms on the edge of volcanoes (and the sites of earthquakes) that has been done and continues to be done from ancient times to the present. This is because of the human tendency to consider oneself relatively invulnerable to disaster and to trust in some method of controlling events such as making sacrifices or following rituals. This is still common whether the trust is put in animistic religion, or even to a certain extent in science. Do the people living on the San Andreas Fault really expect that there will never be a major earthquake there? But, you might say, is not belief in God likewise an invented hope in order to avoid feeling adrift? No, because as we have shown, that belief is based on an independent chain of evidence. Also, the focus is not on controlling events but on trusting the One Who is outside and above the events. Contrast the occult contactee who thinks he knows the secrets that give the power of the spiritual world to him. In reality, that person is being tricked and enslaved by beings who despise him and seek to destroy him. Even though his recognition of the reality of the spirit world puts him more in touch with reality than many of his peers, his naiveté as to the nature of that aspect of reality makes him an easy prey for deception.

People do need hope. If they find no hope in their situation, it is not tolerable. Strategies to cope, however, are varied. Some just avoid thinking deeply about anything. Others invent a false hope. Some commit emotional or physical suicide, ceasing to care about anything and living for the moment if at all. People who come to the end of themselves and their hope are open to reevaluating their world view. Some, for the only time in their life, look beyond the daily routine when tragedy strikes. Those who are deprived may be more open to spiritual realities than those who have the illusion that they can handle life on their own.

The Christian has a unique opportunity (which may not be realized since human failings are still pervasive) to see life realistically and yet optimistically. In other words, I can see the evil bent to my own nature and still have a sense of great self-worth and potential because Jesus Christ was willing to die for me and offers power to remake me by guiding and energizing. Similarly, I can see the essentially insoluble nature of so many of the problems facing this world and have real compassion for those who are brought to my attention and within my power to help, and yet I am not overwhelmed because I know that God is ultimately going to triumph and the strategy for dealing with the problems in the present imperfect age is His and not mine.

This all has undoubtedly been a lot to stomach and probably has the net effect of evulsion. Every sign of smugness, condescension and unfairness seem to leap from the page and cry for the mass rejection of these thoughts. But please do not be put off. Let it sit for a while and then reread and rethink these matters. It takes time for an unfamiliar paradigm to get a fair hearing. I am very interested in hearing back from you but not before the dust settles.

I have not forgotten your references to the Essenes. There seem to be a whole series of conclusions about Christianity based on material from the Dead Sea Scrolls. I would be very interested to see the material on which you are basing those conclusions. Let me make some general comments based on the little information I have. Christianity is not a collection of truths gleaned from many cultures but, rather, it is the genuine one on which the counterfeits are based. It is the accurate account of truths garbled by other chains of transmission from ancient times. The Essenes were apparently eclectic but the fact that they preserved the messianic prophecies does not mean that they were the originators or the fulfillers or even representative of those who read them. The major significance of their copies

of Isaiah is to show the faithfulness of the copying process between that time and the manuscripts of 1,000 years later. The historical existence of Jesus and the reliability of the New Testament documents stand on their own. The esoteric interpretations of Biblical words to which you refer do not appear and cannot be inferred by any stretch of the imagination from the reference books available to me and I assume that these are derived from very private interpretations whether based on Essene writings or something else. Funny things can be done with language. Even Carl Sagan probably has said at least once in his life, "look at the sunset" without meaning to imply that the sun actually sets rather than the earth turning. Also, ancient etymologies may have no real significance for present connotations. Regardless, I could find nothing to lead in the direction you suggested and would appreciate knowing the sources.

Thus comes the end of this seemingly endless stream of consciousness. You may wonder what my motivation has been to produce such a massive document. I wonder myself a bit except it is a challenge to try to organize thoughts and ideas in response to your last letter, ideas that previously may have only been used in conversation. Also, I feel that this is no chance event and that the future may well be different because of this correspondence.

Enclosed are a few reprints on related topics, some articles, plus a couple of poems and, for a bit of comic relief, The Wafting Guide. The Commentary, "Sanctity of Life or Quality of Life?" appeared in Pediatrics. My reply was not published. "Dear Colleague" was a letter regarding sexual abuse of children which I sent to co-attenders of a conference at which we were first told to accept and facilitate the homosexual lifestyle and then told about the horrors of sexual abuse of children. "Life's Probability" goes into great detail concerning the mathematical argument. "Earth's Young Magnetic Age" touches on an area of great significance, one of the many areas of evidence for a young earth in the order of magnitude of thousands rather than billions of years. The book review of Betrayers of Truth: Fraud and Deceit in the Halls of Science is a look at a book by a non-creationist about the human factor in science. "Scientists Puzzle Over Coincidences of the Cosmos" is a newspaper article concerning the sorts of reevaluations by evolutionists that are piling up evidence for design. Even the laws of physics themselves are incredibly precise, for example, why do exponential functions come out even, like $E = mc^2$, not $E = mc^{2.1}$ but exactly the second power. Along that line, Barnes' article on "A Unified Theory of Physics" outlines the work which has arrived independently at all the verifiable aspects of Einstein's physics but without relativity. He has even achieved what Einstein failed to do in unifying all the forces of physics under electromagnetism. The shortcomings, even contradictions, of relativity are pointed out and the result is an example of "The Emperor's New Clothes" for physicists. Contrast talks about intolerance in the scientific community. "The Parable of the Physicist" is a parable. "Do Your Thing" and "If I'd Made the World" are two poems I wrote some time ago, the first in the Navy, the second after Matthew died. The Wafting Guide is a flight into pure fantasy. I hope the correspondence will continue.

Sincerely,