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Interview with Barbara Oakley

THE INTERVIEW

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Barbara Oakley



Author Barbara Oakley, PhD is an associate professor of engineering at Oakland University in Michigan, where she does research on the effects of electromagnetic fields on biological tissues, as well as on novel antenna designs. One of the few women to hold a doctorate in systems engineering, Oakley is a recent vice president of the IEEE Engineering in Medicine and Biology Society. She has been at the forefront of efforts to expand the bioengineering profession and has won teaching-related awards from such organizations as the National Science Foundation. Oakley's work has appeared in publications ranging from The New York Times to the IEEE Transactions on Nanobioscience .

Oakley's academic career came after a series of globetrotting adventures that got her dubbed " a female Indiana Jones." While knocking back tumblers of vodka with the captain of a Soviet fishing boat during the height of the Cold War, she was told, "You know too much, it's time to kill you"- a rhyme in Russian. She chronicled her stint as a maritime translator in Hair of the Dog: Tales from Aboard a Russian Trawler .

Other exploits include rising from U.S. Army private to captain, during which Oakley was recognized as a Distinguished Military Scholar, and teaching in Qíqíha'er, Manchuria-"the Red Chinese equivalent of Fargo, North Dakota, but with six million people," she says. And she literally went to the end of the earth to find her husband, whom she met while working as a radio operator at the South Pole Station in Antarctica .

It took six years of obsessive research and writing to bring forth Evil Genes , which Oakley calls "a nonfiction thriller." The book was inspired in part by an unusual family history-Oakley's sister, a deeply sinister woman who died under mysterious circumstances, really did steal her mother's boyfriend. But inspiration came as well from the patterns Oakley discerned in people's behavior as a result of her wide-ranging adventures. As preeminent biologist David Sloan Wilson notes in the foreword: "It's doubtful that anyone coming from a standard academic perch could have crossed so many disciplines-and perspectives-to develop such an encompassing, thought-provoking thesis." But Oakley's in-depth knowledge of both psychology and science are on display even as she exposes the gaps of the standard ivory tower perspective.

Oakley is also co-editor with Guruprasad Madhavan and Luis Kun of Careers in Bioengineering and Biotechnology , forthcoming next month from Springer. This book has also earned wide-ranging accolades-Bruce Alberts, Editor-in-Chief of Science, and President Emeritus of the U.S. National Academy of Sciences has written:"I am very impressed with the enormous dedication and skill that created this major, highly original contribution-I know of nothing like it."

To read reviews of Barbara's excellent books, or to contact the author, visit her website: http://www.barbaraoakley.com/

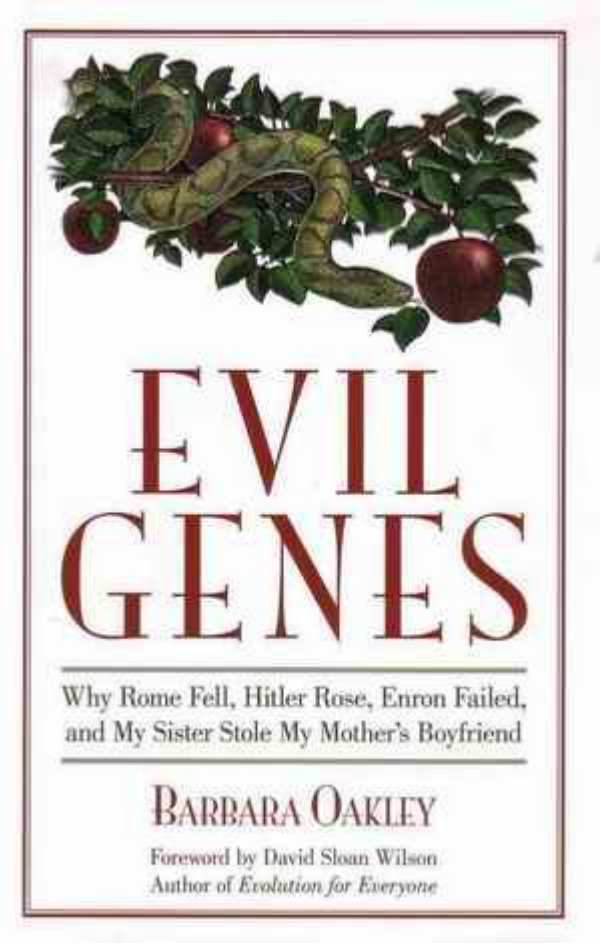
Her book Evil Genes (Prometheus, 2007) won rave reviews in our journal. Naturally we couldn't contain our desire to know more about her. We at the "Anil Aggrawal's Internet Journal of Book Reviews" approached him for an online interview and she graciously agreed. The interview was conducted by the Editor-in-chief, Anil Aggrawal. Some excerpts....)

Qu.1. For our readers, can you please tell us in plain and simple words, what do you mean by "evil genes"?

Ans. The title of my book *Evil Genes: Why Rome Fell, Hitler Rose, Enron Failed, and My Sister Stole My Mother's Boyfriend* , is meant to be taken humorously, (even though my sister really did steal my mother's boyfriend). As research shows, thousands of genes can affect our personality traits. Genes

that might foster bad behavior when mixed with a certain set of other genes could well foster good behavior when mixed with yet another set of accompanying genes. So there can be no such thing as getting rid of a few "evil" genes and thereby eliminating bad behavior, even if there really were evil genes. (There aren't.)

Cover jacket of Barbara Oakley's Best selling book. Click cover to read its review published in this journal



Qu.2. When and how did you conceive your theory that evil resides in genes?

Ans. Research has shown that genetics has an influence on virtually every aspect of our personalities. Sadism, narcissism, impulsivity, lack of empathy-all of these traits have been shown to have a strong genetic component, although environment can clearly play an important role as well. It is obvious that some people have nasty temperaments that are to a varying extent related to their genes, but evil no more resides in genes than it resides in hair follicles or toenails.

Qu.3. If evil does reside in genes, would it not be proper for criminal lawyers to assert that their clients are criminally not responsible, because they "had it in their genes."

Ans. Science has a long history of being stymied by well-meaning people who think the results might be misused. That's why the church tried so hard to suppress findings that showed that the earth revolved around the sun, instead of the sun being the center of the universe. If the source of some bad behavior is affiliated with our genes, that's important to know-it shouldn't be hidden. If criminal lawyers take advantage of scientific findings to create new loopholes for their clients to escape what is due them, changes in the law will soon follow. Ultimately, this could be beneficial for everyone concerned.

Qu.4. Are you aware of the philosophy of biological determinism? Does your theory support biological determinism?

Ans. It's clear that the brain is capable of enormous plasticity if a person has the desire to change-in other words, we are not necessarily biologically determined. Many people with the more malevolent personality disorders, by virtue of their disorder, cannot see that there is anything wrong with themselves no matter how obvious their problems may be to others. Consequently, these individuals simply have no desire to change. Does this mean that their personality traits are biologically determined? I leave that question to you.

Qu.5. Is *Evil Genes* your first book? Which books have you written before? On which subjects?

Ans. *Evil Genes* is my second book. My first book was *Hair of the Dog: Tales from Aboard a Russian Trawler* . I used to work as a translator on Soviet trawlers during the 1980s-a time when there was a great deal of animosity between the United States and the Soviet Union. Between the rough seas, heavy drinking, and ideological differences, it was a very interesting experience. Having these experiences makes teaching lots of fun-whenever my students' eyes begin to glaze over from too many engineering equations, I wake them back up by telling them a funny story from the trawlers.

> *...My third book is a co-edited volume entitled "Career Development in Bioengineering and Biotechnology", coming from Springer next month. My co-editors are Guruprasad Madhavan and Luis Kun. It is *not* your typical career book! For example, where else could you learn how a murder can inspire an engineer to become a politician...*

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Qu. 6. What is your next book about? Does it have anything to do with genetics, like the first book?

Ans. My next "book" is actually two books. One is a co-edited volume entitled Pathological Altruism. The other is a popular book entitled Too Kind. Yes-genetics will play a role in these books.

Qu. 7. Can you tell us about your career? Your educational background?

Ans. I am a professor of engineering at Oakland University in the American Midwest. I have degrees in Slavic Language and Literature, electrical and computer engineering, and a doctorate in systems engineering with a good deal of background in mechanical engineering topics.

Qu. 8. When were you born? How were you attracted to science? Any interesting experiences?

Ans. I was born in 1955. I hated science and mathematics as a child. I did everything I could to avoid the topics-I just wanted to study language. I think part of the problem was that we moved around all the time because my father was in the military. By the time I was in tenth grade, I'd lived in ten different parts of the country. This made it difficult for me with mathematics, because I was always out of sequence. I might have just finished learning multiplication only to arrive at a school that had already finished learning division. So instead I just inhaled books.

> *...When I graduated from high school, my father wouldn't pay for me to study linguistics in college, because he said there was little possibility of getting meaningful work as a result. (He was right.)*

> *But I really wanted to study language, so I enlisted in the U.S. Army and spent the next year and a half as an enlisted woman studying Russian. (My father laughed when I announced I was going into the military, saying I'd surely get more of an education than I bargained for!)...*

When I graduated from high school, my father wouldn't pay for me to study linguistics in college, because he said there was little possibility of getting meaningful work as a result. (He was right.) But I really wanted to study language, so I enlisted in the U.S. Army and spent the next year and a half as an enlisted woman studying Russian. (My father laughed when I announced I was going into the military, saying I'd surely get more of an education than I bargained for!) I always did well at my studies-that allowed me to get an in-service scholarship to go to the University of Washington and get my first degree-a B.A. in Slavic Languages and Literature.

But then the Army, in all its great wisdom, made me a Signal Corps officer. I didn't know how to use electrical equipment-I didn't even know what a volt or a watt was! So I spent four frustrated years in West Germany trying to understand technology. When I got out, I was determined to learn more, so I settled on a course of studies in electrical engineering. I had to start all over again with high school trigonometry and work my way up. But by the time I got into calculus, I started to understand mathematics. The higher I went, the more I liked it, and the better I did. By advanced calculus, I was a star student.

I could only take so much by way of engineering studies, though. I'd work for six months or a year or so, and then I'd go out and make good money working as a Russian translator on Soviet trawlers. I also went to the South Pole station for a while when the opportunity arose and worked as a radio operator. Eventually, I worked as a more mundane engineer for a laser research and development company near Seattle in Washington State, and for Ford Motor Company in Michigan. Then I went on to get my masters and doctoral degrees in engineering.

Qu. 9. Any fascinating experiences while writing this book, or while researching for this book?

Ans. In some sense you could say I spent my life researching this book. I think experiences like working with Soviet KGB agents, who are almost preternaturally nasty, and working as well with small percentages of naturally mean people the world over, helped me to get a big picture view of people's personalities that you can't get by just studying the topic academically. I still remember one fellow at the South Pole Station who I knew vaguely. He popped in early one morning, grabbed all the papers I was working with from the desk and threw them on the floor, called me a bitch, and said women shouldn't be working in Antarctica. Of course, I responded by throwing my coffee in his face. He immediately went to the station manager and said I'd attacked him without any provocation or warning whatsoever. Incidents like these certainly gave me food for thought as I worked on the book.

Barbara Oakley's Superlatives



First Award : Stars for reading more than twice as many books as anyone else in third grade

First Book :Tintin

Greatest Love of my life : My husband. I met him while I was working at the South Pole Station in Antarctica-I always say I had to go to the ends of the earth to meet him. We'll be married 25 years on this coming Feb 1 (2009).

I am superstitious about : Answering when someone asks me whether a speech I gave went well. I think that's something others should answer.

I hate : People who are very biased but are certain that they are not biased.

My favorite activity I do for mindless pleasure : Read gossip magazines

My biggest assets : A willingness to listen even when I disagree with someone.

My biggest fear : When you're naturally anxious like me, you're afraid of everything!

My Birthday : Thanksgiving Day, 1955. My mother cooked the traditional turkey, and then had to go to the hospital to have me. It set my pattern of interrupting people's activities.

My favorite possession : A tea mug made in Yixing

My favorite quote and/or one-liner : "If this is the worst that ever happens to you, you're lucky." Said by my father (and now me) after anything goes wrong for someone.

My greatest extravagance : Travel!!!

My greatest necessity : My family. They make me whole.

My greatest regret : I'm scratching my head on this one. I don't really have any great regrets.

My Hero : Kemal Ataturk. He had the perfect combination of vision, decency, firmness, and fun.

My idea of perfect happiness : Swimming the underground river at Xel-ha in Cancun and then eating Mexican food while watching horses perform.

My most overrated virtue : Answering emails

My passion : Helping other people

My spice : Practical jokes

My strength : My husband

My wildest fantasy : Living for a year in India and traveling to all of the different tea plantations.

Place Of Birth : Lodi, California, known for inspiring bad songs and terrorists.

Real Name : Barbara Ann Grim. Barbara means "barbarian," Ann means "gracious," Grim means "fierce." So I'm a fierce but gracious barbarian.

Thing closest to my heart : Helping people live happier lives.

What touches me most : When my husband sings silly songs.

Qu. 10. Could you tell us about your family? Did you inherit the love of science/writing from your parents? How many children do you have?

Ans. My father was an extraordinary human being-I talk about him in the book. He was a bomber pilot during World War II, and then settled down to become a country veterinarian. Eventually he rejoined the military. He was very creative scientifically and won awards for his ideas. I think I got my aptitude from him, although he didn't teach me about science directly, because during my childhood I was just passionate about reading. My mother comes from a very literary family. Her brother is a talented artist, her grandfather wrote a newspaper column. Unfortunately, both my mother and father's families were rife with alcoholism. My father never had an issue with this, but my mother and oldest sister had terrible difficulties as they grew older.

My husband Philip is a down-to-earth, practical genius-he inspires me every day. He's really fun to travel with, or just plain hang out with. He always makes me laugh. We have two girls of our own, and two adopted sons who were war refugees from Kosovo. Having our kids around is the most wonderful feeling in the world. They make me so happy!

Qu. 11. What do you love most (besides your professional work and writing of course)?

Ans. I love two opposite things the most. One is travelling on a new adventure, seeing new places and meeting fascinating people. The other is being home with no one but my family around, tucked away reading a good book.

Qu. 12. Your favorite dish, book, movie, star, person?

Ans. I love tacos made the way my Mom used to make them. My favorite book is *Evolution for Everyone* , by David Sloan Wilson. My favorite movie is *Lawrence of Arabia* . My favorite person is my hubby.

Qu. 13. What do you dislike most?

Ans. Comm'on, you can't ask that question again. I already answered this one for the sidebar.

Qu. 14. Sorry, I didn't realize that. On to other questions - what do you consider as your biggest achievement in life?

Ans. A happy family and personal life. My secondary passion is writing-my family is also very, very supportive of this. To date, I think writing *Evil Genes* has been my biggest achievement along the lines of writing.

Qu. 15. If God asked you choose your profession again, what would it be and why?

Ans. I would be exactly what I am doing now. I don't know how I've been so lucky to get to this point.

Qu. 16. Have you ever traveled to India, or to the Indian subcontinent? Would you like to visit, if such an opportunity arose?

Ans. My great dream is to spend time working in India. I have been all over the world, working in Europe, China, and Antarctica. Our older daughter is married to a Chilean, so we have spent a good deal of time in South America. But I've never been to India! I would love to somehow be on an exchange program, so that I could teach there for six months or a year and my husband and I could also have a little time to travel around and get to know the country.

Qu. 17. That's indeed great! We will see, if we can arrange an exchange programme through our journal. Can you tell us, what you consider as your biggest failure or disappointment?

Ans. Not being very good at my job in the Army. I was assigned to be a signal officer, but I had no technical expertise whatsoever and I was lousy at it. That's part of why I changed careers and retrained myself as an engineer.

Qu. 18. If you could change one thing about yourself, what would it be, and why?

Ans. To be less self-conscious. I enjoy laughing, and I laugh a lot more when I'm not judging myself. Oh yes-one more thing. I'd love to have a better memory!

Qu. 19. If you could change one thing about your family, what would it be, and why?

Ans. Seriously, it would be to eliminate the allergies. They make my husband and children very uncomfortable.

> *...In history, I most admire Kemal Ataturk and Abraham Lincoln. Both were kind, forward-thinking, funny people who were visionary leaders during very, very difficult times. It's hard to imagine the daily opprobrium and vitriol these individuals had to deal with-yet they held their heads high and did the right thing. How very different Turkey and the United States would be today without those two extraordinary leaders...*

Qu. 20. Which living person do your admire most? Which person in entire history? Why?

Ans. I admire my husband the most of all living people. He has thousands of great traits, but one of his best is that he thinks for himself-he never just follows the crowd. In history, I most admire Kemal Ataturk and Abraham Lincoln. Both were kind, forward-thinking, funny people who were visionary leaders during very, very difficult times. It's hard to imagine the daily opprobrium and vitriol these individuals had to deal with-yet they held their heads high and did the right thing. How very different Turkey and the United States would be today without those two extraordinary leaders.

Qu. 21. What is your life's *mantra*?

Ans. Figure out the next step in the bigger picture of things. Then do it.

Qu. 22. In one line, how would you best describe yourself?

Ans. A very nice troublemaker.

Qu. 23. Are you interested in Science Fiction? Do you think SF is a good means to teach science to children?

Ans. I grew up reading science fiction and still love it, although I tend to read more nonfiction and historical and literary fiction nowadays. Heinlein shaped my personal libertarian-leaning

philosophy. I think SF is a good supplement for children who have an interest in science. But SF can teach so many different topics that it's good for any child. I still remember meeting an anthropologist who was amazed that I knew a lot about the Beaker people in ancient Europe. I'd originally read about them in Andre Norton's *Time Trader* books. My sister was amazed that I scored in the highest percentile on the verbal section of the Graduate Record Examination. "But all you did was read science fiction!" she said.

Qu. 24. Any awards?

Ans. Yes, several.

Qu. 25. If you were marooned on a desert island, who/what would you like to be marooned with and why?

Ans. My hubby-he knows how to do everything. Next thing you know, he'd have a raft cobbled together and we'd be off the island.

> *...I would like to be born in a gifted but poor family that was supportive of my dream to become a doctor. After working through many hardships and becoming a doctor, I would like to inherit from an obscure uncle hundreds of billions of dollars. In that way, I would have the background I would need to know how to spend those dollars wisely to help people all over the world...*

Qu. 26. What do you do first thing in the morning?

Ans. Brush my teeth.

Qu. 27. And the last thing at night?

Ans. Reach out to God.

Qu. 28. Who/what would you like to be born as in your next birth?

Ans. I would like to be born in a gifted but poor family that was supportive of my dream to become a doctor. After working through many hardships and becoming a doctor, I would like to inherit from an obscure uncle hundreds of billions of dollars. In that way, I would have the background I would need to know how to spend those dollars wisely to help people all over the world.

Qu. 29. That's ingenious! Okay, if you were allowed a choice to live in one era of time (past, present or future), which one will you chose and why?

Ans. I would live as a Nez Perce Indian in the late 1700s. That was a nice group of people with a great deal of freedom in how they lived their lives. It was easy to see how each day's activities-whether skinning a buffalo or making a cradle, contributed to a better life.

> *...I try to set aside an hour or two in the evenings to just read whatever I feel like reading. I love reading biographies and true crime. I also love to travel, although now that I'm a older, I do find that I enjoy traveling with a little more comfort...*

Qu. 30. What do you do in your spare time? Your hobbies, interests?

Ans. I try to set aside an hour or two in the evenings to just read whatever I feel like reading. I love reading biographies and true crime. I also love to travel, although now that I'm a older, I do find that I enjoy traveling with a little more comfort.

Qu. 31. Are you religious? If yes, how do you reconcile religion with science, which is your profession?

Ans. I'm not religious in a conventional sense. I do feel a connection at times with something far greater than myself. Perhaps that's my molecules of emotion, perhaps not. I did have an experience once when I was about twenty years old with a group of five people where I saw a classic poltergeist phenomenon in an out-of-the-way Army barracks room. It was quite intense, frightening, and not possible to have been faked. I have never had another experience like it. But that one experience was enough to leave me with the knowledge that there is something more to life than meets the eye, even if we don't understand what that "something more" is.

Qu. 32. If a youngster of about 12-13 years wanted to take up writing/science writing as a career, how should he proceed?

Ans. Keep a journal. Take writing classes and workshops and be willing to accept criticism. Read *a lot* . Meet many people and do lots of different things-get out of your comfort zone. Things can be easier for you if you have some sort of respectable "platform" when you try to get an agent. For example, if you submitted your first novel or nonfiction book to a literary agent and described your background as a doctor, your manuscript would get a careful look. But if you instead described your background as a stay-at-home full-time writer, well, your submission would probably not get as much attention. More than that, having a platform of some sort, whether it be doctor, professor, lawyer, or jack-of-all-trades, can infuse your writing with expertise. Writing is a brutally competitive profession, and if you don't have something that helps you stand out, you don't stand much of a chance.

> *...Among my favourite books are Jared Diamond's "Guns, Germs, and Steel" - although flawed and a little dated now, I love the panache with which he attacked an idea through a broad spectrum of disciplines, and Augustine Brannigan's "The Rise and Fall of Social Psychology". He pulls no punches in dissecting the field!...*

Qu. 33. Your favorite authors/books?

Ans. • Jared Diamond's *Guns, Germs, and Steel* -although flawed and a little dated now, I love the panache with which he attacked an idea through a broad spectrum of disciplines.

• Augustine Brannigan's *The Rise and Fall of Social Psychology*. He pulls no punches in dissecting the field!

• Paul Mason and Randi Kreger's *Stop Walking on Eggshells* . I think Randi typifies the fact that some of the most interesting and helpful work in psychology nowadays is being done by people who are not psychologists. I've read her forthcoming *An Essential Family Guide to Borderline Personality Disorder* . I think it will be a classic. People often ask me what advice I can give them if they work for or are related to a person who shows the manipulative, deceitful traits of borderline personality disorder. Now I can direct them to Randi's *Essential Family Guide* for answers.

• Jack Weatherford's masterful *Genghis Khan and the Making of the Modern World* . What an adventurer Jack is-now that's how you write history!

• Joseph LeDoux's *The Synaptic Self* . What can I say? It's fascinating!

• Ann Rule's true crime novels or Jerry Oppenheimer's celebrity exposés. Give me a bowl of popcorn and one of these books and I'm absorbed. I hope I live long enough to read the next

generation of authors who write about these subjects but can also inform readers using information from neuroscience instead of pop psychology.

Qu. 34. What are the three most important questions you would ask Barbara Oakley, if you were interviewing her? And what would be her answers?

Ans. Gosh, Professor Aggrawal, I think you've covered those three questions already, and many more as well!

Qu. 35. Any message for our readers?

Ans. Professor Aggrawal is an utterly inspiring individual. I am honored to "speak" with you-Dr. Aggrawal's readers-because we share a common bond in love for learning and for books.

Evil Genes is available at Amazon.com or BarnesandNoble.com (Please click here to buy directly from Amazon at a discount through this journal). Readers can check the author's website for further details, http://www.barbaraoakley.com/**.**

Barbara loves hearing from readers. You can email her at ***oakley@oakland.edu.***

For Barbara's interview with Michael F. Shaughnessy, Senior Columnist EducationNews.org, Eastern New Mexico University, please click here.

Barbara Oakley can be approached via E-mail at oakley@oakland.edu.

Interviews - Collective Index (Appearing in *Anil Aggrawal's Internet Journal of Book Reviews*)

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-Editor-in-Chief

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