Female Academics: Volume II

Scott Douglas Jacobsen

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Contents

Acknowledgement

To women with an impact in personal life, good and bad, for the thorough lessons in various aspects of the human experience; and specific appreciation for approval provided by Dr. Mahtab Jafari, Dr. Sally Satel, M.D., Dr. Hawa Abdi, M.D., Dr. Athene Donald, Dr. Azra Raza, M.D., Madeleine Thien, Dr. Wanda Cassidy, Dr. Diane Purvey, and Dr. Barbara Forrest to conduct and publish these uncensored and enlightened interviews, especially for an unknown and random undergraduate, some time ago.

Biographies

1. **Dr. Mahtab Jafari** Dr. Mahtab Jafari is an Associate Professor of Pharmaceutical Sciences and Director of the Undergraduate Pharmaceutical Sciences Program at the University of California, Irvine. Dr. Jafari earned her Doctorate of Pharmacy in 1994 and did a Clinical Pharmacy from 1994-1995. In 2005, Dr. Jafari joined the Pharmaceutical Sciences faculty at the University of California, Irvine. Following this, in 2006, she developed the program and major for undergraduate Pharmaceutical Sciences at the University of California, Irvine, which was approved in March of that year. In addition to these, Dr. Jafari earned awards or recognition for achievements in teaching, Honorable Mention for Innovation in Teaching by the American Council on Pharmacy Education (1997) and University of California, Irvine Distinguished Assistant Professor Award for Teaching (2007-2008), and research, University of California, Irvine Chancellor's Award for Excellence in Fostering Undergraduate Research (2008), among other recognitions and awards.
2. **Dr. Sally Satel, M.D.** is a resident scholar at AEI and the staff psychiatrist at the Oasis Clinic in Washington, D.C. Dr. Satel was an assistant professor of psychiatry at Yale University from 1988 to 1993. From 1993 to 1994 she was a Robert Wood Johnson policy fellow with the Senate Labor and Human Resources Committee. She has written widely in academic journals on topics in psychiatry and medicine, and has published articles on cultural aspects of medicine and science in numerous magazines and journals. Dr. Satel is author of Drug Treatment: The Case for Coercion (AEI Press, 1999) and PC, M.D.: How Political Correctness Is Corrupting Medicine (Basic Books, 2001). She is coauthor of One Nation under Therapy (St. Martin's Press, 2005) and co-author of The Health Disparity Myth (AEI Press, 2006).

3. **Dr. Hawa Abdi, M.D.** was born in 1947 in Mogadishu. Her father was a worker in the city's port and her mother died when she was very young. As the eldest child, Hawa was forced to raise her four sisters in conditions of poverty. But she never lost hope sight of her dreams. "My father was an educated man," she recalls, "He made sure I had the chance to become a doctor." With the help of a Soviet scholarship, Hawa studied medicine in Kiev and soon became Somalia's first female gynecologist. She then completed a Law degree at the Somali National University in Mogadishu, where she later became an Assistant Professor of Medicine. She soon opened a clinic on her family's ancestral land in the Afgooye Corridor, using the profits from her family land to provide free health care to all of her countrymen. When the civil war began in 1991, Dr. Hawa started housing her employees on her land, feeding them and caring for them. Soon their friends and relatives came seeking shelter, then after the friends and relatives of their friends and relatives. Dr. Hawa welcome them all, providing shelter to all those who came regardless of where they came from. In 2012, Dr. Hawa's land housed more than 90,000 refugees, most of whom are women and children. Today, Dr. Hawa Abdi continues to fighter for the women, children and elderly people of the Hawa Abdi Village. With the help of her two amazing daughters, Deqo and Amina, both of whom are doctors who have followed in her footsteps, Dr. Hawa continues to keep a candle of light lit for the people of the Afgooye Corridor. Dr. Hawa has won numerous distinctions and awards, including the John Jay Justice Award, Vital Voices' Women of the Year Award and a nomination for the Noble Peace Prize in 2012. U.S Secretary of State Hillary Clinton has called Dr. Abdi "a perfect example of the kind of woman who inspires me".
4. **Dr. Athene Donald** did her first and second degrees in Physics at the University of

Cambridge. She spent 4 years as a postdoc at Cornell University before returning to Cambridge. She became a full professor in 1998 and was elected a Fellow of the Royal Society in 1999. Her research on soft and biological matter, sits at the interface between physics and biology and is inherently interdisciplinary. Beyond her academic research she sits on her University Council and is their Gender Equality Champion ;she is also a Council member of the Royal Society and chairs their Education Committee; and sits on the Scientific Council of the European Research Council. More generally she is active in gender issues and writes a blog http://occamstypewriter.org/athenedonald/ discussing these and many other academic matters. She has won many academic prizes and was appointed a Dame Commander of the British Empire in 2010.

5. **Dr. Azra Raza** is Professor of Medicine and Director of the MDS Center at Columbia University in New York, NY. Dr. Raza completed her medical education in Pakistan, training in Internal Medicine at the University of Maryland, Franklin Square Hospital and Georgetown/VA Medical Center in Washington, D.C. and completed her fellowship in Medical Oncology at Roswell Park Cancer Institute in Buffalo, New York. She started her research in Myelodysplastic Syndromes in 1982 and published the results of her laboratory research and clinical trials in prestigious, peer reviewed journals. She is also the co-author of GHALIB: Epistemologies of Elegance, a book on the works of the famous Urdu poet and co-edits the blog: www.3quarksdaily.com. Dr. Raza serves on numerous National and International panels as a reviewer, consultant and advisor and is the recipient of a number of awards including The First Lifetime Achievement Award from APPNA, Award in Academic Excellence twice (2007 and 2010) from Dogana, and Woman of the Year Award from Safeer

e Pakistan, CA and The Hope Award in Cancer Research 2012. Dr. Raza has been named as one of the 100 Women Who Matter by Newsweek Pakistan in March 2012.

6. **Madeleine Thien** is the author of three books of fiction, including a story collection, *Simple Recipes*, and her most recent book explores the aftermath of the Cambodian civil war and genocide. She is a previous recipient of the City of Vancouver Book Award, the Ethel Wilson Fiction Prize, the **Amazon.ca** First Novel Award, and the Ovid Festival Prize, and was a finalist for a Commonwealth Writers Prize, the Kiriyama Prize and the Hugh MacLennan Prize for Fiction. Her novels have been translated into 18 languages, and her essays and fiction have appeared in *The Guardian*, *Granta*, *PEN America*, the *Globe & Mail*, the *National Post, Eighteen Bridges*, and *Brick*. Madeleine is the 2013-14 Writer-in-Residence at Simon Fraser University.
7. **Dr. Wanda Cassidy** is an Associate Professor in the Faculty of Education at Simon Fraser University and Director of the Centre for Education, Law and Society (www.cels.sfu.ca), an endowed centre she co-founded in 1984 with a mandate to improve the legal literacy of children and youth. In addition to her work in legal literacy, Dr. Cassidy researches and writes in the areas of cyberbullying/cybercivility, ethic of care, marginalized youth, school culture, and human rights education. In 2011 she received the prestigious *Isidore Starr Award* from the American Bar Association for exemplary work in law-related education in schools, the only non-American to have received this award. Dr. Cassidy regularly shares her expertise with the media and twice has been nominated for the President's Award for Service to the University through Public Affairs and Media Relations.
8. **Dr. Diana Purvey** is the Dean of Arts at Kwantlen Polytechnic University. She is the co-editor of *Child and Family Welfare in British Columbia: A History* (Detselig Press) and, with

John Belshaw, the co-author of *Private Grief, Public Mourning: The Rise of the Roadside Shrine in British Columbia* (Anvil) as well as *Vancouver Noir, 1930-1960* (Anvil). Her research interests include the history of deinstitutionalization as part of a Canada-wide project and educational leadership internationally. She is a contributor to *Vancouver Confidential* (Anvil). A homegrown Vancouverite, Diane attended the University of British Columbia (B.A., Ph.D.) and the University of Victoria (M.A.) and for several decades taught history in various BC colleges and universities.

9. **Dr. Barbara Forrest** is a Professor of Philosophy in the Department of History and Political Science at Southeastern Louisiana University. She is the co-author with Paul R. Gross of Creationism's Trojan Horse: The Wedge of Intelligent Design (Oxford University Press, 2004; 2007, 2nd ed.), which details the political and religious aims of the intelligent design creationist movement. She has published extensively in both scholarly and popular venues. In 2005, she was an expert witness for the plaintiffs in the first intelligent design legal case, Kitzmiller et al. v. Dover Area School District, which was resolved in favor of the plaintiffs. She is a member of the Board of Directors of the National Center for Science Education and previously served on the Board of Trustees of Americans United for Separation of Church and State. She is the 2006 co-recipient with Brown University cell biologist Kenneth Miller of the American Society for Cell Biology's Public Service Award. In April 2007, Forrest was selected as a Fellow of the Committee for Skeptical Inquiry (CSI), formerly Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). She is also the 2009 recipient of the American Humanist Association's Humanist Pioneer Award.

Preface

Female Academics: Volume II follows in the footpath tread by the first volume with the expanded focus on science, technology, engineering, and mathematics (STEM), medicine, and the humanities. *Female Academics: Volume I* emphasized the social sciences based on the number of interviews within those categorizations from the world's greatest living or dead woman psychologist, Professor Elizabeth Loftus, to recent doctoral degree earners. Most of the serious discussions and conversations, and research, occurs in the academic literature.

Implementation happens throughout the international community with deep concern for international women's rights. No single organization or individual at the helm; rather, the movement remains decentralized and fluid. The secular and the religious work towards this unified aim. A long-term goal for equality of men and women with the right for women to vote, to work, to earn education, and so on.

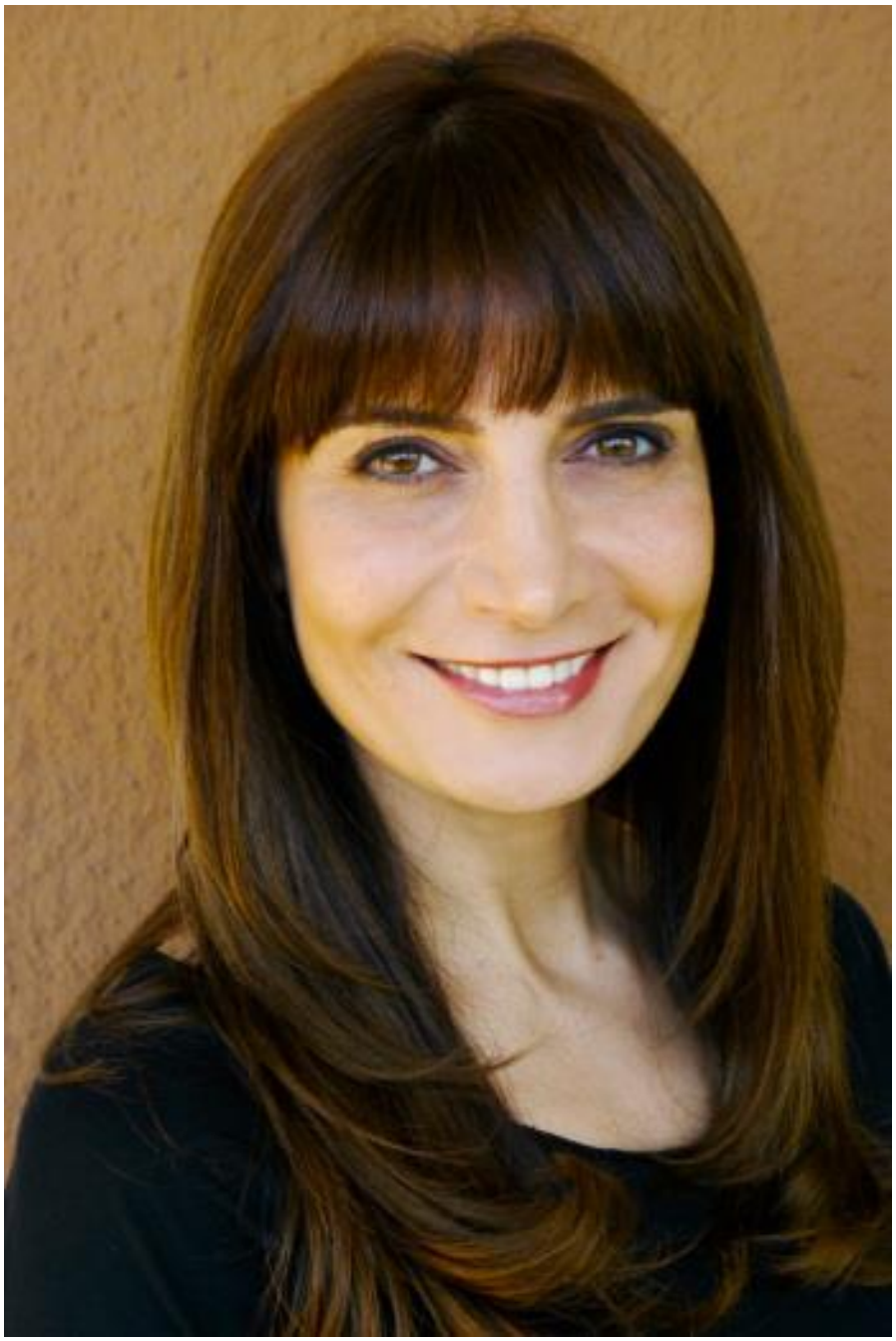
"Decentralized and fluid" comes with the apt metaphor of an ocean. The movement at large remains the same in its inertial force from the sacrifices of previous generations. Some peaks and valleys arise at moments of social upheaval in nations, in continents, in institutions, in disciplines, in individuals as representations of pathologies. Every drop adds to the ocean. The rising tide lifts all minds, raises consciousness. This is a drop.

Scott Douglas Jacobsen

STEM, Medicine, and Humanities

Dr. Mahtab Jafari: Associate Professor, Pharmaceutical Sciences & Director of Undergraduate Pharmaceutical Sciences Program, University of California, Irvine

November 15, 2013



1. What positions have you held? What position do you currently hold?

I am an Associate Professor of Pharmaceutical Sciences and Director of the Pharmaceutical Sciences Undergraduate program at University of California, Irvine. (UCI)

2. In brief, how was your youth? How did you come to this point? What was your original dream?

I was lucky to be raised in a family with loving parents. They were both educated and cared about the education of their children. They were open-minded. They encouraged my two brothers and I to choose careers that we liked, especially my mother. She was supportive of me. She was also a university professor. Growing up, I lived in 3 different countries. I think being exposed to different cultures and languages had a big impact on who I am today.
I became interested in science in the fifth grade. I describe this in a *TEDx* talk. That is the story of how I came to this point. I feel lucky because I do exactly what I dreamed about doing in fifth grade. My dream was to do scientific work and teach. I love to learn. When working in science, you have no choice, but to learn. I am living my dream right now. (Laughs)

3. When did Pharmaceutical Sciences interest you?

When I got sick as a kid, my parents used to take me to Dr. Maani. My first strep throat was painful. I had a high fever, body ache and could not swallow anything, even my own saliva. Dr. Manni got a swab culture from my throat, checked it under the microscope, and started me on

antibiotics. When we went back to see him for a follow-up, he spent a lot of time explaining to me the importance of hand washing and having a strong immune system. I loved to go back for these follow ups because the prize for getting better was always a lollipop. I also remember that every fall, my entire family would go to Dr. Maani for our flu shots. In my neighborhood, Dr. Maani was considered a hero. Everyone respected him and everyone loved him. Many kids (including me) wanted to become Dr. Maani when we grew up.

By now, you are probably thinking Dr. Maani was an amazing primary care physician, that he was the neighborhood doctor who cared about his patients. Well, you are right about thinking that he was our neighborhood doctor, but he was not a physician. Dr. Maani was an amazing neighborhood pharmacist. He had a Pharm. D., a wealth of knowledge, and a passion to teach and help people.

4. Where did you acquire your education?

I earned my Doctor of Pharmacy from the University of California, San Francisco.
And then I did a Clinical Pharmacy Residency at University of California, San Francisco.

5. What kinds of research have you conducted up to the present?

I used to be a clinical scientist. If you look at my publications and research up to 2005, I was a clinician. I mostly did research on pharmaceuticals. My main work was around cardiovascular pharmacotherapy. I left academia in 2002 and worked as a senior scientist for Abbott

Laboratories for a few years. I worked on metabolic complications of Central Nervous System (CNS) drugs.

Then in 2005, I came back to UCI and joined Pharmaceutical Sciences. The focus of my research shifted from diseases of aging such as cardiovascular diseases and neurological disorders to aging. I became interested in slowing the aging process. At present, I am working with botanical extracts because I believe if we use them at the right dose and quality they are safer than medications. So we work with botanical extracts and try to extend lifespan, but I have to tell you I didn't choose to work with botanical extracts from the start. Sometimes, I like to think my fruit flies chose this for me. We were screening for anti-aging drugs, compounds, supplements, natural extracts, and botanical extracts. Plants and botanical extracts, did the best during this screening process. With fruit flies there is no placebo effect, I cannot tell you, "They felt real good having *Tumeric*." (Laughs)

6. If you currently conduct research, what form does it take?

Mainly, I work with *Drosophila*, fruit flies. That is our main model system. Additionally, we conduct cell culture research. We work with human-cultured cells. Again, we use these as a model system to identify agents, which are all botanical extracts at the moment, that extend lifespan and to understand their mechanism of action.

7. How much did you increase the lifespan of the Drosophila fruit flies?

By 25%! Our most recent publication, received much media attention with an Orange County Register article on June 26th. We have been on many media venues such as MSN, Yahoo! Voices, and others like this.

8. Since you began studying Pharmaceutical Sciences, what do you consider the controversial topics? How do you examine the controversial topics?

This could be an essay. (Laughs) I could write a ten-page essay or talk for hours. In Pharmaceutical Sciences and research, we have a few challenges. For instance, there is the area of ethical conduct of research. When we talk of randomized double-blind controlled studies, especially in psychiatry literature where you use patient interviews and scales, you are probably more familiar with it, Scott, the results can be subjective. In other words, I could conduct research to bring forth the results desired by me. Research is controversial. The safety of some of the medications, which are already approved by the FDA is controversial.

In my field, with my interest in dietary supplements and botanical extracts, my controversy is looking for the quality and safety of these supplements. For instance, the reporter from the Orange County Register asked me, "In 2008, you published a study with *Rhodiola Rosea* showing a 10% increase in lifespan. Now, you have 25% increase, what happened?" I told him, "Fruit flies don't lie. We gave them a better quality product and better things happened." That is exactly what happened. When we characterize the plant that we gave them back in 2008, the plants had the active components, which you like to see in *Rhodiola Rosea*. It was *Rosavin* and *Salidroside*, but percentage wise the extract in the 2013 paper was

superior. With this superior extract, my fruit flies did better. Therefore, a superior extract produces better results. For me, the controversy with the work right now is on dietary supplements and botanical extracts. My questions are, "How good is the quality of the product? How safe is the product?" A big controversy arising from this, which I think is applicable to both pharmaceuticals and botanical extracts is **false advertisement**.

With my position as a Professor, my primary job is to be an educator, ahead of a research. I tell my students that I consider myself an educator and a teacher above all else. If I cannot translate my science into an understandable fashion for people, what is the use of that science?
I am not familiar with the Food and Drug Administration (FDA) in Canada. I can tell you about the FDA in the United States. If you had asked me to comment about FDA four years ago, I would have told you, "The FDA is very ineffective and slow."

Now, I work closely with them and I know firsthand what an important function FDA plays in our public health. I developed an internship for our UCI Pharmaceutical Sciences students at the FDA. One of the goals is to expose them to the FDA, but an opportunity for them to become ambassadors to educate the public about FDA and to improve public health. For instance, teaching the public how to report drug adverse effects to FDA could be a major contribution. Sometimes, you may experience an adverse drug reaction. Even if you do not know what the cause is, you still have to report it to the FDA because one never knows. We see how much FDA tries. We see how much they do. Reality: they are understaffed and under-budgeted. What do you do in that situation? How could you deal with that? Their work is very important, but they need more resources.

9. How would you describe your early philosophical framework? Did it change? If so, how did it change?

I do not know what to tell you about my Philosophical Framework. I like to think that it is a philosophy that encompasses the teachings of philosophers whose goal was to improve humanity. However, I can tell you about service. I was raised in a household devoted to service. My parents and grandparents were involved with the community at many levels. I guess this framed my life philosophy.

For me, Humanism is one aspect of it, especially based on my upbringing. I have a special outlook on life. As a scientist, sometimes you are questioned about religions and the existence of God. However, our science is not advanced enough to understand the big picture. One day it will do that; I am hopeful for science.

A pillar of my philosophical framework is a strong sense of ethics, and practical ethics. I am not a philosopher or an ethicist. However, in my mind, if an ethical principle is unpracticed, what good is it?

10. If you had infinite funding and full academic freedom, what would you research?

If I had infinite funding, I would conduct the same research that I am doing now and for teaching, I would start an education reform to focus on conceptual understanding and not

memorizing. I am optimistic that if I had more funding, I could contribute a lot more to biomedical research. I would expand my basic work to clinical work. As I said, I was a clinician. I understand basic science, translational science, and clinical science. If I had unlimited funding, I would begin interesting human trials, and start testing my extracts in humans. By the way, if I had infinite funding, I did not have to spend so much time writing grants. I would focus more on research and teaching.

Scott, I see another controversy. A big problem in this country with the study of botanical extracts is taking the western magnifier to dissect botanical extracts to find out what specific molecule is functioning. What do we find with this kind of work? We may identify a few active molecules but we still see that the whole extract works best. People have used these extracts for thousands of years. They have seen results. Then we say, "*Rhodiola Rosea* is a great plant and it has many benefits, but I want to know exactly what molecules are beneficial."

If I had infinite funding, I would not worry about the grant reviewers. I would work with the whole extract, not the molecule. That is a big controversy in botanical extract research. That is probably the reason for controversy behind my research because we produce good results with the whole extract. I understand the commercial value. Many of my colleagues tell me, "If you isolate the molecule, you can patent it. You can make money." I tell them, "Why would I want to do that?" Nature knows best. (Laughs) But of course we will devote some of our efforts to identifying active molecules in the extracts we work with.

11. From the philosophical point of view, there has been much comparison between Western and Eastern philosophies. Western philosophies tend to have a particular view. It asks, especially Aristotle, "How can I separate the world into fundamental units?" It seems non-accidental to me to have the Atomists like Democritus and Leucippus come from this philosophical tradition in the West. Whereas in the East, obviously not as an absolute, but there seems to me a greater tendency towards analysis of whole systems…

…Think of Avicenna, what did he say? He was perhaps the founder of modern medicine. He is an Eastern Iranian philosopher. He said that you needed to focus on the whole person and not just on his symptoms. Until we do that in medicine, we will stay where we are right now; a reactive approach to health and an illness model. We treat the symptom and not the root of the problem. We prescribe antibiotic for the infection or a pain medication for the pain because we are interested in treating the symptom fast.

But I hope that we move away from this model to a wellness model when we treat the whole person and not just his symptoms and when we take a proactive and preventive approach. This was the reason that I offered the *Life 101* class. My students with anxiety take *Xanax*. When they are sad and depressed, they take *Prozac*. When they need to stay awake to study, they take *Ritalin*. My 20-year old students take all these medications and they sadly received prescriptions for them. I offered *Life 101*based on these facts. I wanted to give my students tools to manage their stress and aim for wellness. If you deal with the root of the problem, I guarantee that you will not need to take these medications.

12. …On the Harvard campus, I read about Positive Psychology courses. Two people doing much research are Drs. Tal Ben Shahar and Daniel Gilbert. Positive Psychology is one of the most popular courses on campus…

I want to take that course! Their popularity tells you the importance people see in this material.

13. What other areas have robust research attesting to evidence for life-extending properties of an ingested compound (or compound with a specific active ingredient in it)?

There are a number of researchers working with botanical extracts or compounds to extend lifespan. They have been successful. I take pride in our work because our results are replicable and they seem to work even in healthy fruit flies. A science that cannot be replicated in other countries or other labs is not real science. For instance, the compound resveratrol extends lifespan, mostly in diabetic and high caloric intake situations. We showed our fruit flies do not need to be unhealthy to experience life extension with *Rhodiola rosea*, which is a significant finding. Resveratrol only extended lifespan in mice with diabetes and obesity.

That is not the case with *Rhodiola rosea*. We gave *Rhodiola rosea* to both calorically restricted **and** non-calorically restricted fruit flies and still observed an extension in lifespan. As far as my research, I can tell you my research is robust because *Rhodiola* has worked in different strains of flies and different model systems and it has had a positive impact on health and tolerance to stress, but we still have a long way to go. Our findings need to be repeated in mammalian model systems and eventually humans.

16. You have a personal story of continuing forward in spite of hardship, planting seeds in the process, and sowing the later benefits of that perseverance. What advice do you have for students going through hardships – big and small?

My younger brother, Kay who is a Law student, taught me something valuable. A few months ago, I was under a lot of pressure for a grant deadline and felt stressed. Kay told me, "Stress is only a reaction. You choose to be stressed." I tell my students, "Rather than focusing on details, you should focus on the big picture." When my son, Matin, was 13 years old, he gave a TEDxYouth talk. In it, he said, "There's nothing wrong with being knocked down – just get back up." We all have hardships. The key is how fast you recover and refocus on the big picture, not the details.

17. …There is a Parade Magazine columnist, Marilyn vos Savant, who said, "Being defeated is often a temporary condition. Giving up is what makes it permanent…"

…That's right. I still go through hardships – big and small. I have my dream job, but I worry about my students and of course research funding! It sounds cliché, "Never give up." I want to add one sentence to it. It's part of life to feel down and upset, but try to minimize it. I tell my students, "You failed your MCAT. Okay, cry for a day, but not for a month." (Laughs) Take responsibility for the mistakes you make and your actions, accept it, and then move on. We have become a blaming society. We look outside of ourselves to find someone or something to blame. I do it myself sometimes. I do not understand it. In this *Life 101* class, we talk about emotional

intelligence by taking responsibility for our actions. I wish I had a better answer, but I do not have one. (Laughs)

Happiness is a funny thing. Go and help someone, see how you feel. You will notice something. You will want to help more and you feel so happy.

18. You have received multiple awards for mentorship and teaching excellence. What do these mean to you? What responsibility do these awards entail?

I feel honored and humbled. My responsibility is to keep listening to my students to improve the way I teach and mentor. Earning a reward does not mean you have reached excellence. I feel blessed, Scott. I have such an open line of communication with my students. They feel comfortable with giving me feedback as I teach. For instance, two weeks into my course one of my students said, "Dr. Jafari, why did you look grumpy in class?" I replied, "I didn't look grumpy!" He said, "Yes, you did especially in the beginning of your lecture. You did not smile once for the first fifteen minutes. When you smile, you make us feel comfortable." He was paying close attention and he was right.

19. Who most influenced you? Can you recommend any books/articles by them?

I cannot think of specific authors. I read a lot, but I cannot think of just one article or a book of great influence on me. I consider my mother the most influential person in my life. I am not saying this because she is my mother. I am saying this because she is brutally honest with me.

She never sugar-coated anything and to date she points to my weaknesses or my flaws. Of course, sometimes I don't like it, but I know I cannot change her. So, I hear her comment, I get upset and then I realized she was right and then move on. Talking about a true humanitarian, my mom is one of those people.

One book comes to mind, which I had one of my graduate students read. It is called *The Purple Cow* written by Seth Godin. It is a marketing book. His message is this, 'if you want to be successful, you need a high quality product and a very outside the box product.' You can apply this to science and teaching too.

20. Where do you see Pharmaceutical Sciences going? Regarding lifespan extension through botanicals, what future do you envision for this research?

I can tell you what I hope for Pharmaceutical Sciences to go as a field. I hope that Pharmaceutical Sciences move towards discovering new therapies to treat diseases in a collaborative fashion. I wish that one day pharmaceutical scientists in pharmaceutical companies and in academic settings collaborate and not compete because I think with collaborations we will achieve faster. As far as my research with botanical extracts goes, my goal is to slow the aging process with these extracts.

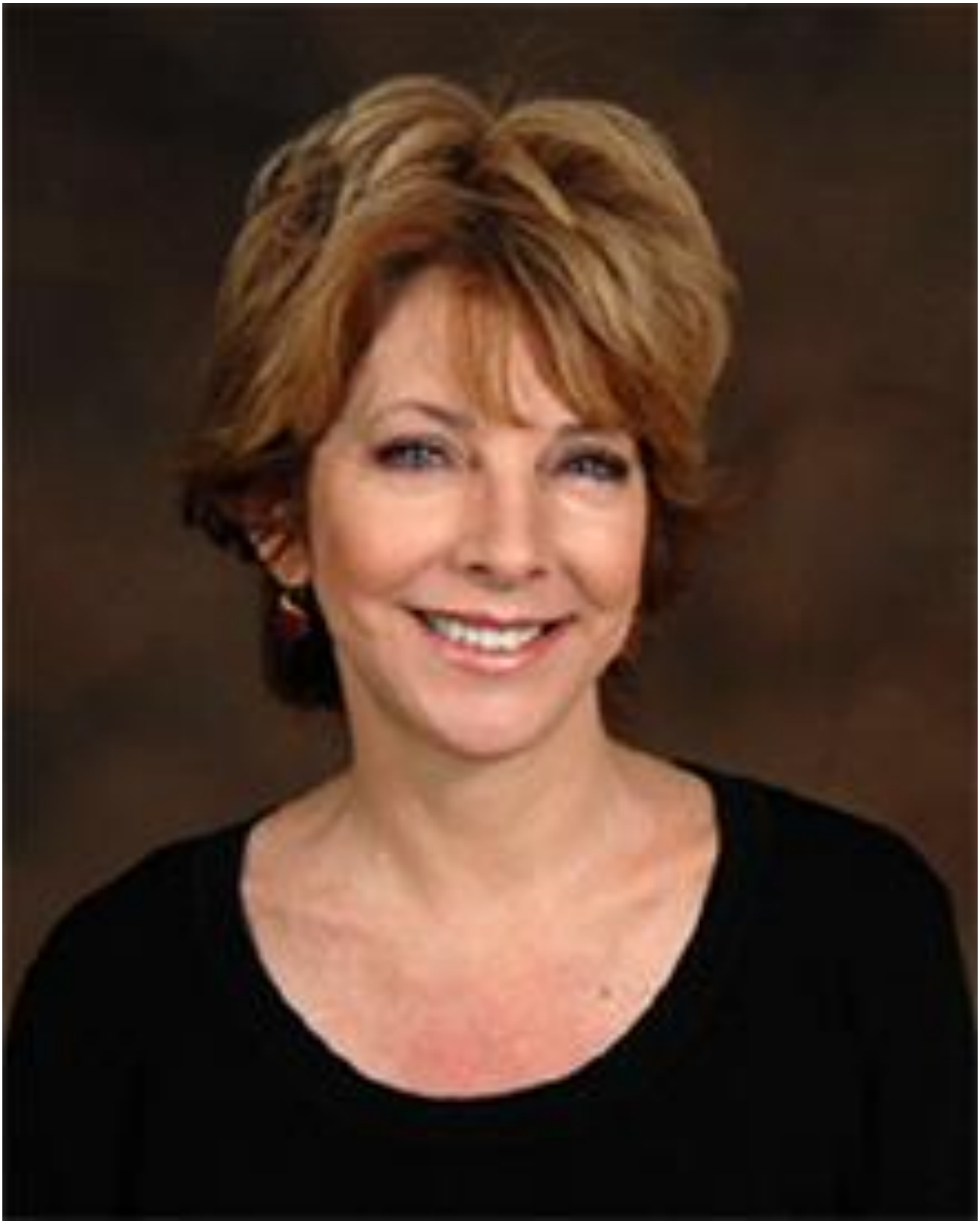
Of course I will continue devoting some of my work in identifying the active molecules in these extracts. But I still think when it comes to aging and targeting various genes and pathways,

plants work better as a whole and not when they are dissected. I would not think this way 5 or 6 years ago.

In 2005, when I started developing an anti-aging lab using fruit flies, I tested many pharmaceuticals and some botanicals. My findings surprised me because botanical extracts did much better than the molecules or pharmaceuticals. Of course, how we approach and work with a plant extract in my lab is exactly how we would work with a drug. We control for their quality and we have consistent standardization methods – meaning you standardize every time you use them. Working with botanical extracts is challenging because the active compounds change depending on external factors such as altitude, temperature, harvesting time, and that is why standardization is important.

Dr. Sally Satel, M.D.: Lecturer, Yale University & Resident Scholar, AEI

September 4, 2013



1. What is your current position?

I am a Resident Scholar at American Enterprise Institute (AEI) and the Staff Psychiatrist in a Methadone Clinic in Washington, D.C. I am also a lecturer at Yale University School of Medicine.

2. What positions have you held in your academic career?

I was an assistant professor of psychiatry at Yale University from 1988 to 1993. From 1993 to 1994, I was a Robert Wood Johnson Policy Fellow with the Senate Labor and Human Resources Committee.

3. What have been your major areas of research?

I have written in academic journals on topics in psychiatry and medicine, and have published articles on cultural aspects of medicine and science in numerous magazines and journals. I am author of *Drug Treatment: The Case for Coercion* (AEI Press, 1999) and *P.C., M.D.: How Political Correctness Is Corrupting Medicine* (Basic Books, 2001). I am co-author of *One Nation under Therapy* (St. Martin's Press, 2005), co-author of *The Health Disparity Myth* (AEI Press, 2006), editor of *When Altruism Isn't Enough – The Case for Compensating Kidney Donors* (AEI Press, 2009) and, most recently, co-author of *Brainwashed – The Seductive Appeal of Mindless Neuroscience* (Basic Books, 2013)

4. What is your most recent research?

My new book has focused on the extent to which brain science, and brain imaging in particular, can explain human behavior. For example, what can a "lit" brain region tells us about an individual's thoughts and feelings?

There is enormous practical importance for the use of fMRIs and brain science. However, non-experts are at risk of being seduced into believing that brain science, and brain imaging in particular, can unlock the secrets of human nature. Media outlets tend to purvey information about studies of the brain in uncritical ways, which foster misimpressions of brain science's capabilities to reveal the working of the mind.

5. You published a new book called *Brainwashed: The Seductive Appeal of Mindless Neuroscience* with Dr. Scott O. Lilienfield. What is the core argument of your new co-authored book?

My co-author, psychologist Dr. Scott Lilienfeld, and I talk about "losing the mind in the age of brain science." We mean that brain-based levels of explanation are regarded as the most authentic and valued way of explaining human behavior. Sometimes this is the proper way to go (when we want to uncover the workings of the brain for clinical purposes or to achieve new insight about the mechanisms of memory, learning, emotion, and so on). Understanding people in the context of their lives — their desires, intentions, attitudes, feelings, and so on — requires that we ask *them*, not their brains.

To clarify, all subjective experience, from a frisson of excitement to the ache of longing, corresponds to physical events in the brain. Scientists have made great strides in reducing the organizational complexity of the brain from the intact organ to its constituent neurons, the proteins they contain, genes, and so on. Just as one obtains differing perspectives on the layout of a sprawling city while ascending in a skyscraper's glass elevator, we can gather different insights into human behavior at different levels of analysis.

With this template, we can see how human thought and action unfold at a number of explanatory levels, working upward from the most basic elements. A major point we make in *Brainwashed* is that problems arise when we ascribe too much importance to the brain-based explanations and not enough to psychological or social ones.

6. You have argued against politically correct medicine. How do you define this form of medicine? How is it detrimental to the discipline? In turn, how does it corrupt Public Policy decision-making?

I refer you to my book *P.C., M.D.: How Political Correctness is Corrupting Medicine*.
In short, the book exposes ways in which the teaching of medicine and public health, and also its practice, is distorted by political agendas surrounding the issue of victimization – in particular, the notion that poor health of minority populations (e.g., ethnic minorities, severely mentally ill people, women) is due to social oppression. In *P.C., M.D.* and ***The Health Disparities***

Myth ***(Click for full text)***, for example, I show that despite insistent claims that racially biased doctors are a cause of poor minority health, there are no data to support this.

Politicized medicine (which is different that PC medicine) can come from both directions: left and the right. For example, pro-life advocates exaggerate the extent to which abortion leads to depression and misrepresent aspects of the stem cell debate.

7. Whom do you consider your biggest influences? Could you recommend any seminal or important books/articles by them?

I greatly admire James Q. Wilson and had the honor to know him through AEI, where he was the Chairman of the Academic Advisory Council. In his 1993 book, *The Moral Sense,* Wilson was impatient with moral relativism, especially the idea that man was primarily a product of his culture. He argued that a moral sense was part of our basic nature, rooted in evolutionary biology. However, he took issue with the over-correction to cultural determinism borne by rigid biological explanations of human behavior.

I am a fan of psychologists Steven Pinker (*Blank Slate*) and Timothy D. Wilson (*Strangers to Ourselves*).

8. What do you consider the most important point(s) in the cross-section(s) between Health Science and Public Policy?

Disability Reform and Mental Health Treatment are among the most important to me. In the case of Disability Reform, constructive ways exist to use incentives for guiding people back to the workforce or some kind of productivity. Unfortunately, the system of disability entitlements, Social Security and veteran's benefits, do not make good use of incentives to counteract the kind of learned invalidism that comes with chronic dependence upon disability payments.

As for Mental Health Treatments, there are enlightened programs in use (though not widespread enough) to ensure that the most ill patients follow treatment recommendations and stay safe while living in the community. These programs entail a kind of civil commitment called 'Assisted Outpatient Treatment' and they require some strength of will on the part of policymakers to both enact and then enforce. For an effective example from the New York Times, click title: ***Program Compelling Outpatient Treatment for Mental Illness is Working*** Additionally, organ shortage interests me.

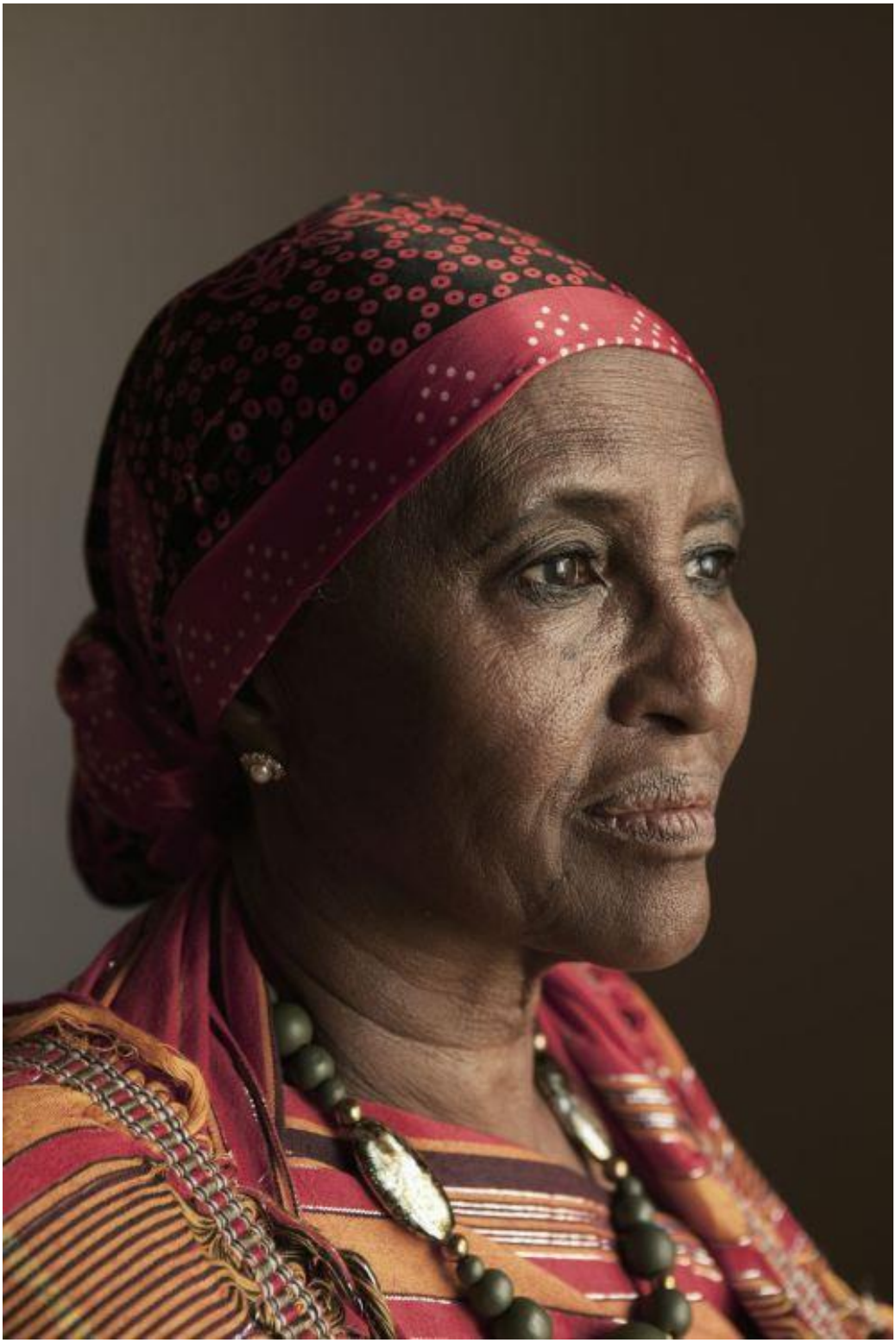
Today, 118,000 people await a kidney, liver, lung, or heart. Eighteen of them will die tomorrow because they could not survive the wait for a donated organ. Current law (*1984 National Organ Transplant Act*) demands that organs are given as "gifts," an act of selfless generosity. A beautiful sentiment, yes; but for those without a willing loved one to donate or years to wait on an ever-growing list, altruism can be a lethal prescription. (Full disclosure: in 2006, I got a kidney from a friend. If not for her, I would have spent many miserable years on dialysis.) The only solution is more organs.

We need a regulated system in which compensation is provided by a third party (government, a charity, or insurance) to well-informed, healthy donors. Rewards such as contributions to retirement funds, tax breaks, loan repayments, tuition vouchers for children, and so on, would not attract people who might otherwise rush to donate on the promise of a large sum of instant cash in their pockets.

With private buying kept unlawful, available organs would be distributed not to the highest bidder, but to the next needy person according to a transparent algorithm. For organs that come only from deceased donors, such as hearts, or those that are less often given by loved ones, like livers and lungs, a pilot trial of government-paid or charity-financed funerals makes sense.
I went into detail here because I feel passionate about changing the law that makes it a felony for anyone to give something of value to a potential donor.

Dr. Hawa Abdi, M.D.: Physician & Human Rights Activist, Hawa Abdi Foundation

August 17, 2013



1. Where did you grow up? What was youth like for you? What effect do you feel this had on your career path?

I grew up in the Mogadishu area, where my mother and father lived. Growing up, I saw that in my society people were respecting and loving each other. Parents were educating their children to work hard, respect their elders and also to respect other children. It affected me in that I viewed society as sincere, and I felt that way myself and I was trusting of others. But, in this world today, I have come across many people who are cheating their way through life. However, because of my youth, I always believe that everyone has some good in them. That is why I always want to help even in the most difficult times.

2. Where did you acquire your education?

I studied medicine in the Soviet Union, in Kiev. When I returned to Somalia, I studied law at the University of Mogadishu.

3. Did you have a childhood hero?

My childhood hero was my grandmother, the mother of my mother. She was a wise, calm, strong, and intelligent woman. She was a natural philosopher. When I read the books of renowned philosophers today, I can find the same words that my grandmother used to tell me.

She always advised me to work hard, because after working hard, you can rest. She also said to me, “sitting is empty, but working is plenty.” When I was a young girl, she would wake me up at 4am every day before the sun was even up.

We would together pray, exercise, do chores, and prepare breakfast for the family. She taught me how to farm, how to take care of the animals. By going the extra mile and not limiting your work, you will find joy and good in life.

She also taught me to be forgiving and fair to everyone you meet. If you cheat or inflict harm onto other people, you yourself will become lost in this world. But, if you are fair and honest, you will succeed. I have kept with her words my entire life, and I am happy.

4. What was your original dream? If it changed, how did it change? Furthermore, what changed it?

When I was a child, I only wanted to satisfy my parents and make them happy. At that time, life was difficult and it was hard to get enough food for everyone in the family. But even as there were no jobs, it was raining plenty every season. People were farming, animals were eating grass, and in that way people were living. It was hard, but there was more honesty and happiness.

Then, when after my mother died, I had a dream to become a doctor. My mother died from delivery complications, and I was very sad. She was suffering right before me, but I could not do anything to support her. I felt a very deep pain. At that time many children like me also lost their

mothers. So I wanted to help future generations and children to avoid the pain I felt. That was when I had the dream to become a doctor.

5. What have been your major areas of work?

While I work in healthcare, I also do work in education, agriculture, and law. Throughout my life, I have been working to fight poverty and malnutrition in Somalia. This includes doing very simple things like going to fishing and giving the children fish, which is full of protein. I founded a primary school on my land to educate the children. As a lawyer, I can understand what is wrong and what is right, and each person's obligations in society. Every citizen has rights, and each citizen has to defend their own rights while completing their obligations to the government, society, family and children.

6. What is your most recent work?

Most recently, my Foundation has built a new library and science lab at the Waqaf-Diblawe Primary School with the help of the Global Enrichment Foundation. We have some English children books in the library, which were brought to Somalia when President Bush visited our camp in 1992. We are looking to obtain more books, start reading classes with the students, and build a reading culture in our community. We still need to get more tools for the science lab as well so that the children can learn both from the books and from the hand.

7. If you had unlimited funding and unrestricted freedom, what research/work would you pursue?

If I had unlimited funding and unrestricted freedom, I want to educate the 25,000 students who have grown up in my camp. I believe education is the key to everything. After their education, I want to create jobs for the students.

8. Not many individuals know of the situation in Somalia, and the work you do to improve the conditions there, you founded the Hawa Abdi Foundation. It has served to help those most needing assistance in Somalia. For the readers, what is the function of the Foundation? What kind of work does it do?

The Dr. Hawa Abdi Foundation works to give everyone equal rights and justice. During the civil war, times were very difficult and Somalis had to flee from constant violence. They found refuge on my land, where I provided healthcare, education, and food security to all Somalis regardless of gender, religion, clan, political affiliation. I treat everyone equally and I believe that everyone should be able to access their basic rights.

Today, we continue to do the same work in healthcare, education, and agriculture. We have the Dr. Hawa Abdi General Hospital and Training Centre, which is the only place of free healthcare in a 33-km radius. We have the Waqaf-Diblawe Primary School and a Women's Education Centre to educate women and children. Also, I am cultivating my 400-hectare farmland to strengthen food security in the region.

Even as the war has ended now, there is still a lot of work to do in Somalia to help people rebuild their lives. We continue to receive up to 40 families a day looking for a safe place to live. We need to continue to give them access to basic rights and opportunities for jobs. That is what we do at the Foundation now.

9. Related to the previous question, what is the core message of the Hawa Abdi Foundation. What can people in society do to help with your foundation's work?

The core message of my Foundation is that everyone must have equal rights and justice. The people who have come under my care learn that it is important to be honest and friendly to all people. Whereas people are fighting because of clan divisions outside my camp, when they enter my camp, I tell them they cannot identify by clan. If they do, they cannot stay.

As I am fighting illiteracy, poverty, and disease, I will be happy if people in the society can help me in this. I want to educate and create jobs in fishing, farming, animal rearing, business, and healthcare. Some students of mine are now studying medicine, some are in Sweden, Turkey, Germany, Mogadishu – they all want to become doctors because they admire the profession. About ten of them will finish in the coming six years. This is the kind of future I see in Somalia. But this takes time, and Somalia right now still needs help and capital to take-off. People in society can help through contributing the human and financial resources needed to train two generations lost to war.

10. You have received numerous awards for your work. Recently, you earned a nomination for the Nobel Peace Prize and won the BET Social Humanitarian Award. What do nominations and awards like these mean to you?

I am very happy and grateful towards those who have given me these awards. It gives me the strength and self-confidence to continue to work. Sometimes it can get difficult, where it seems like everything and the world is working against me. In the Somali community, it is more difficult for recognition because people are busy, there is war going on and many people are doing destructive work rather than constructive work.

That is why I get a lot of awards outside my country. When I receive an award, my spirit becomes alive again, and I can continue to do my job. I am grateful that I am still working and I still have my hope. I thank those people.

11. How would you describe your philosophical frameworks inside and outside of medicine? How have your philosophical frameworks evolved?

In my life, I always believe in equality, justice, and honesty. If you are honest and committed, you will not lose anything. There are challenges, but that is the will of the God. I find this in the Italian proverb, *l'uomo propone ma dio dispone,* which says that if God doesn't allow it to be successful, it will never be.

12. Whom do you consider your biggest influences? Could you recommend any seminal or important books/articles by them?

Hilary Clinton has always given me the strength to work. When I met her and she said that I am doing the right thing, I felt that someone knows me and understands what I am doing. Socrates also has influenced me. He has said that if you want to know what it is to be a human being, you have to know yourself first. What you need, they need. What you hate, they hate. I believe that human being is one.

Their needs are one and the world is one. I suggest that the world work together. If something bad happens in one corner of the world, it will spread to other corners. Things like war, disease, hunger. But if we collaborate, we can try to achieve justice, peace, and happiness. The human being is one and we have to defend each other collectively, regardless of color and differences.

13. What do you consider the most important point(s) about your life's work?

The most important points about my life's work is to save a human being and care for a human being. Caring for a human being is a difficult task, you have to educate, train, and advise them. While their needs are the same, their characters differ. You have to learn to care and guide them according to their character. Some can be nervous and aggressive, while another may be patient. But even if someone has a bad character, we cannot just discard them. I have found that everyone has something good inside of them. We just need to learn to approach them in different ways.

14. What do you see as the future of the Hawa Abdi Foundation and similar humanitarian organizations aimed at helping people?

I see DHAF will be a place of pride in the future. It is something that is built by Somalis for Somalis, educating and training our people. If we continue to be honest and committed in our work, the Foundation will be like a kingdom to be continued for generations and generations. There are many other humanitarian organizations, international ones like the International Committee for the Red Cross (ICRC). They have continued to operate for many years because they are committed.

They make immediate decisions, knowing their purpose is to care for the human being, give life and hope. In Somalia, there are many local NGOs but many lack capitals to provide for the people. They have to depend on larger and international ones.

I believe that DHAF will become sustainable and generate income from our economic work at our farm. But it will need some help to take off. After more fully developing our agriculture capacity, I believe it will become sustainable.

15. Finally, your most recent book *Keeping Hope Alive: One Woman: 90,000 Lives Changed* outlines a major theme in your life, perseverance. How important is perseverance for changing the world for the better?

Perseverance is very important. We have come from the medieval times to many new inventions and advancement in medicines that better the lives of everyone in the world. As mentioned before, the world is one and we cannot separate. In order to change the world for the better, we must first learn to love and respect one another, then we can work towards peace, then finally, unity in the world.

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To support the Hawa Abdi Foundation's ongoing work you can visit www.dhaf.org/donate/

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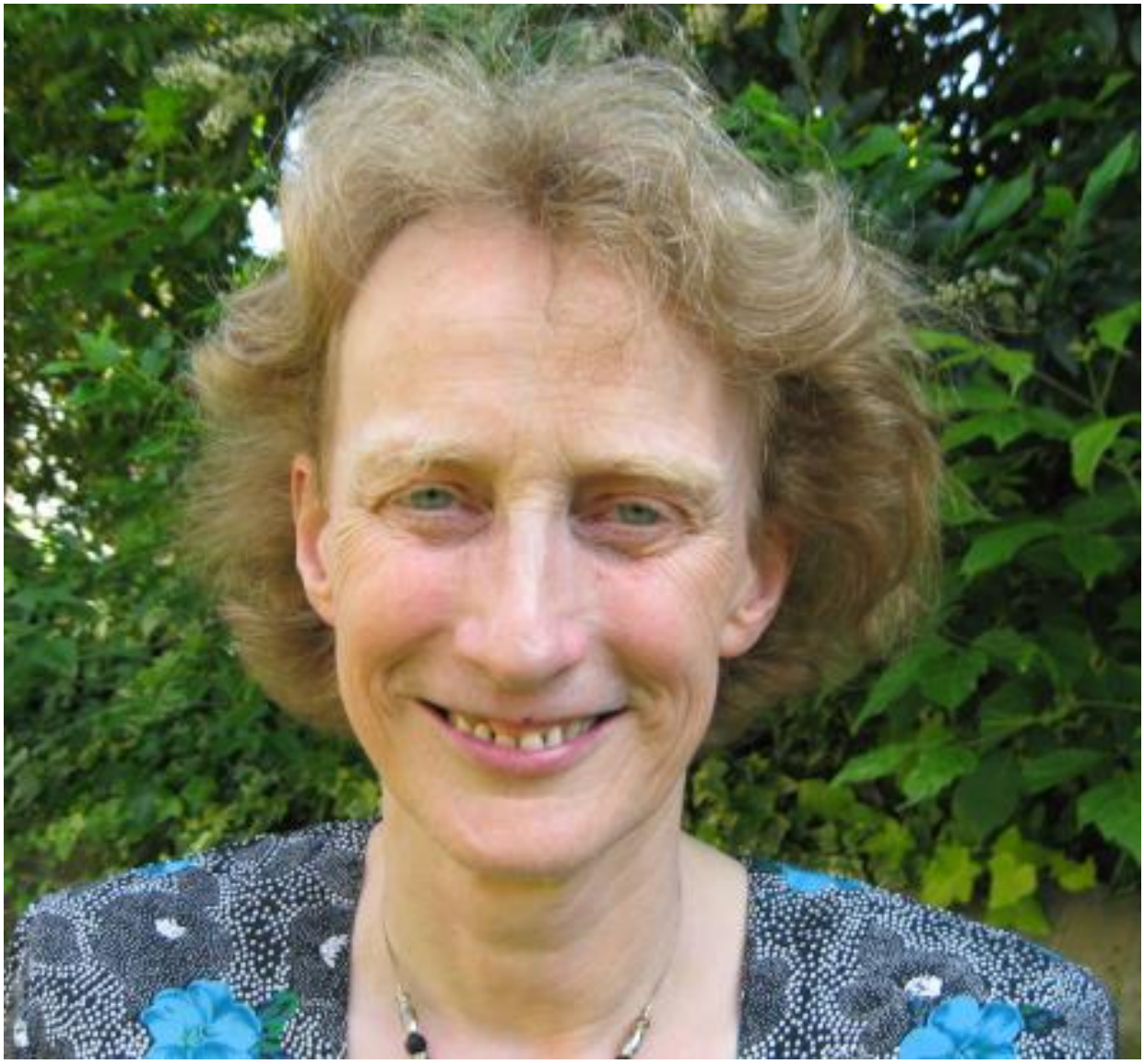
Dr. Athene Donald: Experimental Physicist, University of Cambridge

June 28, 2013



1. What is your current position at the University of Cambridge?

Professor of Experimental Physics. I am also the University's Gender Equality Champion and a Deputy Vice Chancellor (mainly an honorary title which permits me to confer degrees)

2. Where did you grow up? What was youth like for you? What effect do you feel this had on your career path?

I was born in London. Neither of my parents had been to University, although my Grandfather had, and there was always an expectation that I would. I attended a single sex school which, probably unusually for a girls' school of its day, had an excellent Physics teacher, something I am sure was very significant.

I had an older sister and we all lived with my maternal grandparents. My parents' marriage broke up when I was 10 so I lived in a household of 4 women and 1 man (my grandfather). I think the most significant thing was the fact that I was always surrounded by books and with this expectation that if I wanted to go to university that I should. It was just taken for granted, particularly since I did well at school.

I was jumped up a year at school. My birthday is in May and during my secondary schooling (which is normally from 11-18) I was nearly 2 years younger than the oldest child in my year. I am sure this was significant as I didn't fit in well with my 'contemporaries', probably because

during adolescent such a big age gap can make a big difference. Probably this encouraged me to keep my head down and work hard, because I wasn't going to fit in anyhow.

No one in my family were particularly interested in science, nor was it a subject I remember being discussed in a serious way. I did get taken to the Science Museum (in London) but I didn't really connect that with my lessons at school or with any idea of a future career.

The hobbies I had were ornithology – which perhaps reflects an interest in 'systematizing' but again, it was just what I did for fun and I didn't connect it with anything I did at school – and music. There was a lot of music during my growing-up and as a teenager I was very involved both with singing in choirs and playing in orchestras. I played the viola and, since not many children do play this instrument, I had lots of opportunities to play with seriously musical peers. It was a major source of relaxation and also a way for me to socialize with other girls – both older and younger – given the trouble I had with fitting in with my ordinary classmates.

2. Where did you acquire your education? How did you come to the University of Cambridge?

My mother says I declared at 7 I was going to go to Cambridge University to read maths. This is probably an apocryphal story, but I think somehow I always fixed on the idea of going to Cambridge. It was where my grandfather had been after all (he read Classics there before the 1st World War), so there must have been some sense of connection. I first had Physics lessons when about 13 and seem to have known almost at once that this was what I wanted to study.

Cambridge University back then was overwhelmingly male, as none of the colleges was yet mixed. I am not sure I really thought very hard about that. One had to do a special entrance exam. I was very badly prepared for this as my school had been participating in a pilot course of study in Physics, with only about 7 schools pursuing this exam at A level.

So I knew little of what others knew but lots of other stuff, particularly 'modern' physics. As well as an entrance exam for Cambridge, the colleges interviewed prospective students. Probably then I came across as much stronger for exactly the same reasons: I knew stuff they weren't expecting interviewees to know. For whatever reason I was accepted by 2 colleges (there were only 3 that admitted women), and I chose to go to Girton, the college I had always had set my mind on.

3. Was Physics always 'in the cards' for you? Were you mathematically precocious in childhood and adolescence?

I always was highly competent at maths, but I don't think I was precocious in the sense that I didn't pursue it beyond the classroom in any way that I remember. I just got on with it. But physics was just something that clicked with me. I did then start reading around the subject, certainly by the time I was 16 or so, but I had no clear idea of what it might mean as the start of a career. In my day, and in my school, I got no careers advice and I simply didn't think seriously about life beyond university. All I knew was that I wanted to study physics at university; it just seemed the logical thing to do.

4. Did you have a childhood hero?

No, I don't think I thought in those terms at all. I had neither heroes nor heroines. Nor did I really think of gender as an issue either. I am sure that was in large part because I just didn't really know any teenage boys – other than beyond the orchestra I played in and we simply got on with our music. When I met a bunch just before I started at university who asked me what I was going to study, their reaction for the first time told me it was odd for a girl to want to do physics. I don't think, having been at an all-girls school, that had really crossed my mind before. There was no one to discourage me.

5. What was your original dream? If it changed, how did it change?

I also didn't have a dream. I didn't look ahead. If I thought about the future I just assumed that I would marry, perhaps a few years after college, and have a family. There was no expectation of a career as such. Having a career in academia was just something that happened; I never looked more than a year or two ahead. I was probably well into my 20s before I even started thinking about this. By then I was married (I got married to a mathematician during my PhD – and we're still married!) and the complications of trying to sort out two lives to the satisfaction of both reared their heads. It is never easy.

6. What have been your major areas of research?

My field of research has constantly evolved. That is how I like it. I started off studying metals, using electron microscopy to study their internal structure. The technique of electron microscopy has remained a constant during my research career. After my first, and very unsuccessful postdoc in the USA (Cornell University) I switched to apply electron microscopy to plastics. It wasn't till that point, after 5 years of research, that I really fell in love with it. I had an incredibly productive 2 further years in the USA and then returned to Cambridge.

Over the years I have moved from the study of largely synthetic polymers to naturally occurring biopolymers including those relevant to food. I researched the internal structure of starch granules for many years, during that time building up collaborations both with industry and with plant geneticists. Then I moved on to study protein aggregation, a subject relevant both to food and to those studying many neurodegenerative diseases. I have continued to do electron microscopy, developing a technique which allows one to study samples without the dehydration usually necessary; this approach is known as environmental scanning electron microscopy and we did a lot of development work on it, analyzing how to interpret images and seeing just how far we could push the technique. We also applied it to a wide variety of biological samples from bacteria to plants. This move into biological problems was also reflected in a modest research activity in cellular biophysics.

Overall the sorts of physics I do can be summed up as soft matter physics moving into biological physics. When I started working on starch, physicists doing this sort of work were regarded as very unusual. Now it is much more main-stream physics.

7. What is your most recent research?

As I say, I have moved systematically towards biological problems. The work we do on protein aggregation has implications for various neurodegenerative diseases, although I am always very careful to spell out we won't be curing any diseases ourselves, we simply hope to provide some basic underpinning knowledge.

But, as a physicist, I try to look for generalities of behaviour, particularly since we are interested in what happens when biological control is lost. In our case we typically use heat to study the response when proteins are denatured, which of course is totally non-physiological, but in the diseases of old age proteins also lose their native structures due to loss of biological control, so the parallels are fairly close.

8. If you had unlimited funding and unrestricted freedom, what research would you conduct?

I would like to be able to get much closer to biology and work in truly interdisciplinary teams on the subjects of neurodegenerative diseases such as Alzheimer's and Parkinson's Diseases.

9. There exist many cases of silence, even denigration, about the lack of women in science, especially young women. In fact, a case of speculation comes to mind on the part of an ex-President of Harvard – no less, Dr. Larry Summers, about innate average differences between men and women potentially explaining the difference of the sexes' scientific

prominence. To me, it seems silence on debating these issues exacerbates the problem. Given your involvement in advocacy for women in science, does silence exacerbate the problem? What things need doing? What message backed by data needs more advertising?

In the UK at least I don't think silence is the issue any longer. I think many leaders appreciate the problems and are actively trying to overcome the under-representation and the lack of voice some women feel. Within UK universities we have a benchmarking scheme, the Athena Swan awards, for STEM departments which are very effective at making universities and individual departments look at both their statistics and practices, and come up with appropriate action plans. Indeed, some funders make such awards a condition.

This has really changed the climate. However, there is no doubt there are still pockets of resistance, the unconsciously held views that all of us hold which stereotype people (and not just women in science) in all kinds of ways without stepping back and being objective.

We do need statistics, but we also need to recognize how much social conditioning affects every child from birth. I get fed up with being told that the statistics 'prove' girls don't want to do physics, when we cannot tell much more than that boys and girls are encouraged to do different things as children, are treated differently and cultural messages are different.

10. In line with the previous question, what can people in society, without the influence of the Academy, do to help bring a new generation of women into science?

Avoid stereotyping any individual, boy or girl. Make sure that they appreciate any field is wide open to them. Encourage girls to explore their world – be it putting new washers into taps or climbing trees. Let them be brave and not be put off by being 'nice' or pretty. Give them solid aspirations and not just aiming at domestic virtues.

11. As an addendum to the previous two questions, can you describe the *Matilda Effect* to our readers?

The Matilda effect describes how women's contributions to research are systematically undervalued and under-described. One specific example would correspond to the role Rosalind Franklin played in the discovery of the double helical structure of DNA, with Jim Watson never giving her contributions the credit they deserved. More generally, women working as part of a team may find that their names aren't mentioned and their deeds can be attributed to others. Even when women are quite senior and leading teams you find comments being made implying such collaboration is a weakness not a strength, as it would be for a man.

12. How would you describe your philosophical frameworks inside and outside of Experimental Physics? How have your philosophical frameworks evolved?

I don't think in these terms! What I do know is that I enjoy constantly exploring new areas, evolving from one area of research to another. A lot of the work I do is interdisciplinary. To succeed at such work one needs to be prepared to put the time into learning the language of

someone else's discipline, at least sufficiently far that you can explore the shared problem together. This can be challenging, but ultimately it is very rewarding. I am not the kind of person who likes to know everything about a small area, I prefer to take a broader brush approach, look for connections between different areas and forge new connections. This means all the work I've done forms a sort of connected web, even though there may appear to be many different threads.

13. For students looking for fame, fortune, and/or utility (personal and/or social), what advice do you have for undergraduate and graduate students in Experimental Physics?

Work out what it is that you enjoy about physics. Is it simply the ability to problem solve, or getting stuck into some experimental technique or another? What motivates you – curiosity, solving some specific problem or contributing to a team effort? There can be so many reasons for pursuing physics and you have to work out what it is that you particularly enjoy. If you are seeking a fortune, then you will probably either want to do something more entrepreneurial or quantitative (e.g. in the financial sector), but if it is simply that you are curiosity-driven, there are many directions to head in. Physics is often described as a 'difficult' subject. If you are struggling it may simply be that your motivation isn't high enough and you should choose some other path that excites you more.

14. Many assume a need for a genius level-intellect or above-average levels of mathematical facility (even in childhood) to think of a career in science. How much of this seems true? How much of this assumption seems like a myth?

You undoubtedly need to be competent at maths, but genius level is an overstatement for many parts of the field. I think it is probably more the case you need to be very logical in how you approach problems, able to think things through by breaking down a tough challenge into its component parts. You also need to be able to think in abstract terms. Physics isn't just a case of memory work; you need to be able to understand underlying mechanisms and be able to see how to apply the mathematics and models you have learned in one situation to another, perhaps less familiar one.

15. Whom do you consider your biggest influences? Could you recommend any seminal or important books/articles by them?

Having a teacher at my school who was on top of the subject and able to answer my questions without anxiety was a great start. At university, having a 'director of studies' who was very supportive when I was struggling and encouraged me not to give up was also crucial. After I'd moved into research my supervisor at Cornell (Professor Ed Kramer, now of UCSB) and my head of department after I'd returned to Cambridge (Sir Sam Edwards) were also great influences on me, inspirational in the way they tackled their own research.

They believed in me, believed I could follow a research career and gave me many opportunities early on that enabled me to lay down a firm foundation for my subsequent research. Finally, the Nobel Prize winner Pierre-Gilles de Gennes, who was a friend of Sir Sam's and whom I met fairly often in Cambridge, also was immensely supportive and inspirational. De Gennes wrote a

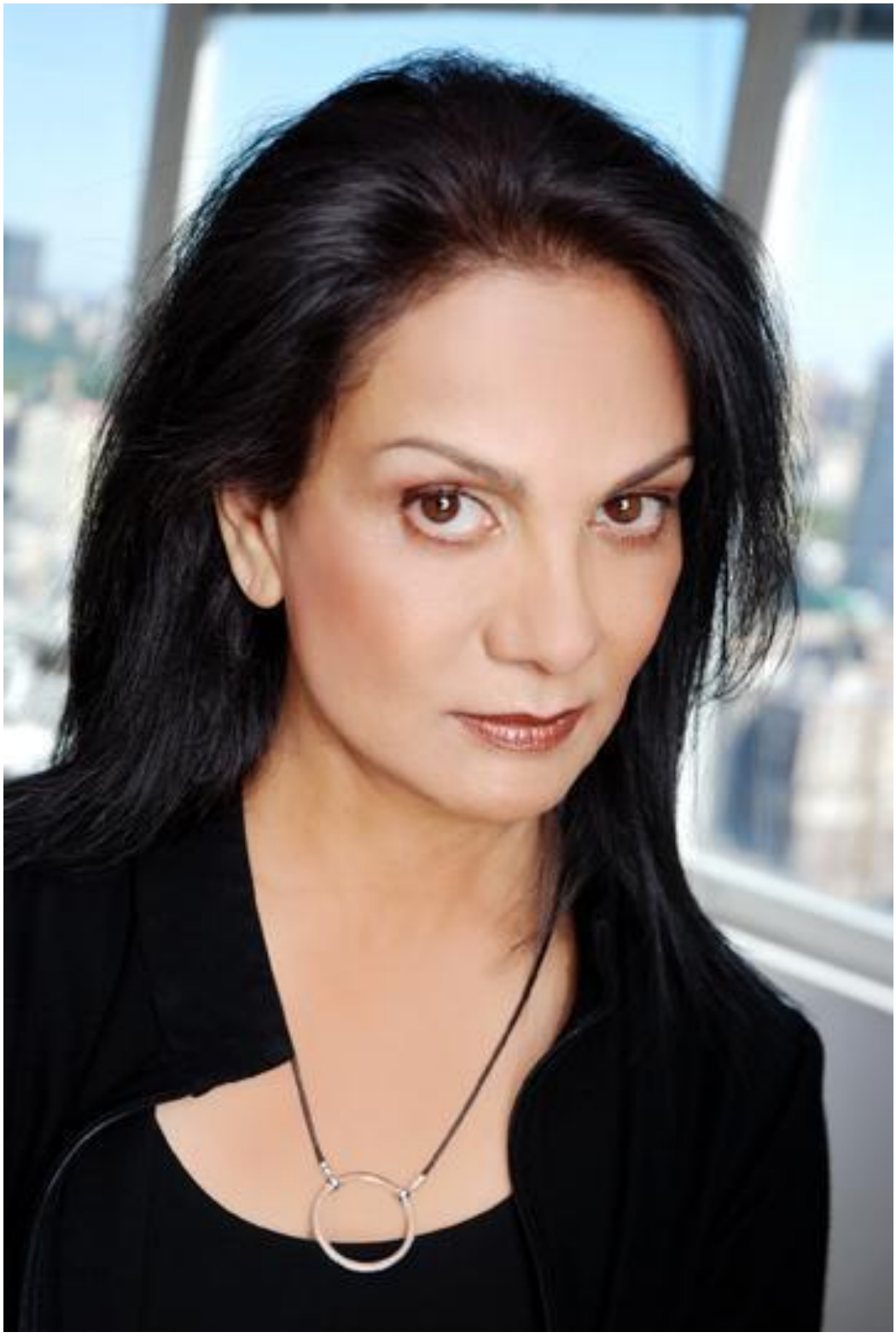
number of books, of which ‘Scaling Concepts in Polymer Physics’ was probably the most important for me, even though at the time I found it very hard to understand!

16. What do you consider the most important point(s) about your line of research and work?

My research has moved from being fairly traditional for a physicist, working on conventional synthetic polymers, to working on natural materials such as starch and proteins. Initially some of my colleagues were very critical of me working on such materials, thinking they were far too messily complex to be able to do physics on them. But I persisted, applying standard physical tools and approaches to them. Ultimately I think others understood better that this was perfectly good physics. However, now much of my time is focused on issues around gender and I read a lot of sociology papers. This work is obviously not research-based. Some of it is experiential and it seems that, because I have a successful academic pedigree, people are more willing to listen to what I have to say. There are still many issues for women in science, so I am keen to use my voice to encourage others to think about their local practices and possibly prejudices.

Dr. Azra Raza, M.D.: Professor and Director of MDS Center, at Columbia University

June 18, 2013



1. What is your current position?

My position is Professor of Medicine and Director of Myelodysplastic Syndrome (MDS) Center at Columbia University.

2. What positions have you held in your academic career?

I earned the appointment of Full Professor at Rush University in Chicago (Age 39). Subsequently, the University of Chicago appointed me the *Charles Arthur Weaver Professor of Cancer Research*. The Department of Medicine created a Division of Myeloid Diseases, where I was first Director. I moved in 2004 to the University of Massachusetts as Director of Hematology and Oncology. They gave me the *Gladys Smith Martin Chair* in Oncology. I have been in New York since 2007. Presently, I direct the MDS Center at Columbia University.

3. Where did you grow up? How do you think this influenced your career direction?

I grew up in Pakistan. This greatly influenced my career and life. Post-graduate work in Science was non-existent. I entered medical school as a tangential way of becoming involved in Molecular Biology. However, once I began seeing patients, I knew that I would never give that up. This led me to the idea of doing translational research.

When I felt ready to graduate medical school, it had become abundantly clear to me, even after those three years of clinical work, that if I stayed back in Pakistan, I would not be practicing translational research, but would have no choice other than to become an activist. The conditions under which an impoverished population faces disease are such that one has few other options. I felt that way. Here, I came to understand my primary duty – sincerity to my passion: Science. In a way, I took to heart the advice of Polonius to Laertes:

> "This above all: to thine own self be true,
> And it must follow, as the night the day,
> Thou canst not then be false to any man.
> (Shakespeare, HAMLET, Act I, Scene III).

4. Where did you acquire your education?

Pakistan.

5. What was your original dream?

I became obsessed with ants at a very young age, maybe 4 years old. I used to lie for hours and watch them zip in and out of their little holes in long hot summer afternoons in Karachi and imagine their lives. I constructed imaginary homes for them and social lives complete with romance and all. As I grew and read about biology, I obsessed over Darwin and Freud.

In fact, I obtained the **first** position in my pre-medical examination by scoring high during the viva part of the test, when I engaged the external examiners in a heated debate over Darwinian versus Lamarckian theories of evolution and showing why I was a diehard Darwinian at the ripe old age of 16. If I had grown up in the West, I feel confident I would be a scientist, and not a physician, but I had no way of following my dreams there. Medical School was the only option to study Biology. So I went to Medical School.

6. What have been your major areas of research?

I have focused extremely on studying the biology and pathology of myeloid malignancies since the start of my career, even before I started my Residency. This happened because I had come to the US soon after graduation from Medical School and had six months before the start of my Fellowship.

I started working at Roswell Park Cancer Institute (RCPI) in Buffalo New York, where I started working with Acute Myeloid Leukemia patients. On completion of my Residency, I returned to RPCI for my Fellowship and stayed on as a faculty member for another 6 years. During this period, I had an experience with a patient who had acute myeloid leukemia (AML) which had evolved from a prior MDS or a pre-leukemia.

This made me interested in MDS. As a Fellow and young Faculty member, I defined the Cell Cycle Kinetics of Myeloid Leukemia cells *in vivo* in both MDS and AML by developing a novel technique of studying cellular proliferation directly in patients. These studies led to a startling

revelation that the low blood counts in MDS patients were not because of bone marrow failure. Rather paradoxically, the marrow was in a hyper-proliferative state.

This led to the logical examination of rate of cell death and we were able to resolve the paradox by showing that the majority of hematopoietic cells in the marrow were undergoing a suicidal self-destruction by apoptosis. Further, this cell death appeared mediated by pro-inflammatory cytokines, especially tumor necrosis factor (TNF). Next, we treated MDS patients with the anti-TNF drug thalidomide, which produced complete responses in 20% patients. Thus, over a course of 10 years, we were able to develop biologic insights into the disease that translated into a novel treatment strategy.

7. What is your most recent research?

I remain completely focused on understanding the Etiology and Biology of MDS and now use the latest genomic technology to interrogate the pathology of these diseases. With the enabling technology, this whole field has become extremely productive and exciting. We are using exome sequencing, RNA Sequence and global methylation studies to carefully study large numbers of patients to identify new drug targets in MDS cells, and hopefully develop novel non-toxic therapies for these malignant diseases of the elderly.

8. If you had unlimited funding and unrestricted freedom, what research would you conduct?

My commitment is to therapy driven research. How can basic molecular research improve the outcome for my patients? I feel strongly that many effective drugs already exist to treat common cancers, but we do not know how to use them intelligently. Instead of tailoring therapy for individual patients, we blindly treat many with the same drug with the result that 20-30% patients respond. Usually, we do not know the responders.

The goal would be to match the right drug to the right patient. A goal for which we need detailed cellular signaling and molecular information. Basic concept: it seems that while multiple signaling pathways that start proliferation in normal cells, cancer cells become addicted to a particular pathway. These pathways of addiction differ between patients. It is critical to identify which pathway a particular patient's cells are addicted to and then devise ways of interrupting it.

If I had unrestricted funding, I would start a dedicated program to perform detailed genomic and methylation studies described above on every patient at diagnosis. Hopefully, this would eventually help identify the vital signaling pathways in individual patients. With this information available, the elegant concept of Synthetic Lethality can be applied where drugs or natural compounds are identified that can interrupt the particular pathway to which the cell is addicted and cause it to stop proliferating. So my dream research revolves around individualized targeted translational research. I would like to give one example here. In a recent patient, we identified a mutation that leads to over activity of the b-catenin pathway of proliferation.

I was planning to treat the patient with a monoclonal antibody against TGFb, which is in trial at the MDS Center. However, it turns out that one of the checks on the b-catenin pathway is TGFb.

In other words, if I had not performed whole exome sequencing on the genome, I would have treated the patient with an agent that would likely have worsened the disease by allowing the b-catenin to run amok with no checks at all.

This information alone, which is the direct result of using genomics is probably life saving for the patient. In addition, we found that one possible way of interrupting the b-catenin may come from using small molecules that interrupt this pathway. Several of them being in trials in humans already, and also that Vitamin A (all trans-retinoic acid or ATRA) could do the same. In short, we saved the patient from getting a potentially harmful agent. Additionally, we may have found a perfect treatment for individualized therapy, which is a vitamin! This is my dream research if I have all the resources at my disposal.

As a second dream project requiring unlimited resources, I want to describe the Virome or viral make up of every MDS patient. The goal is to identify all endogenous and exogenous viruses that have become part of each patient's genome and see whether any of these could have the label of causative. After all, cats regularly get MDS. In their case, the disease is because of the Feline Leukemia Virus. Practically every cat is infected with this virus, but only a handful get MDS. There must be other co-factors involved in MDS causation. Defining the Virome would help all of this research.

9. What is your philosophical foundation? How did it change over time?

Humanism dictates the foundation of my philosophy. However, the practice and ultimate goals have undergone subtle changes over time. In my formative years, I felt more interest in dedicating myself to grander themes. For example, believing that the thinking and work of a few can change the lives of millions (penicillin is a prime example), I became consumed with a desire to find the cause and cure of cancer. Whether I would ultimately achieve it or not, at least I was ready to dedicate my life to the pursuit of this goal.

With age, and one hopes, some level of maturity, the issues for me have transformed to more immediate and individual goals. Human conduct is connected by a series of incidents where one act is the result of another. This necessitated a philosophy that requires a dynamic accounting of one's knowledge, desires, and deeds, and then to harness these in the service of humanity with humility and forbearance.

In other words, instead of the grand designs of curing cancer for many, each individual patient has acquired a special place in my life and caring for their every physical, emotional, and psychosocial need has become far more important. This by no means indicates that my obsession to find the cure for cancer has lessened, but it means my focus shifted from many to one, from cancer patients to Mrs. X, Y, or Z.

It is similar to Salman Rushdie saying in *Midnight's Children*: "*To understand one human, one has to swallow the world."* For me, the road to understanding and treating the disease is through grasping individual variations at the clinical level and caring for each patient as a special case.

Of all the philosophical ideologies, humanism remains mine, but with an altered vision over time about how best to conduct myself in a manner that would be faithful to its basic principles.

10. What do you consider the controversial topics in your field? How do you examine the controversial topics? What do some in opposition to you argue? How do you respond?

In the current atmosphere of cancer research, researchers study the evolution of a cancer cell rather than its etiology. In at least a subset of patients, I have hypothesized for about two decades that MDS may begin as a viral disease. I committed a form of professional suicide by presenting very early work related to this hypothesis at an MDS Foundation meeting held 19 years ago in Prague. They have not invited me back to that meeting in the last two decades. I learnt a tremendous amount from this experience.

For one thing, I became more self-critical and stringent in examining our own data. For another, I started collaboration with the top virologists in the country (Drs. Robert Gallo, Don Ganem, and Joe DeRisi). Finally, it made me more committed to finding the proof for my hypothesis. In that, instead of throwing up my arms in frustration, by persisting in our search for a virus, we are taking full advantage of next generation sequencing to identify non-human elements in the human genome and re-construct viruses from these pieces.

The technology has reached a point where we are poised to unravel possible new retroviral sequences from the RNA Sequence data we have generated. This will still be only half the battle. The important study will be to prove the etiologic relationship of the pathogen to the MDS

under study. This is where all the controversy creeps in again because the pathogens are often known organisms and no one is ready to believe they are the agency for causing the malignancy. Remember that to prove that *helicobacter pylori* was the cause of gastric ulcers, Barry Marshall had to swallow the pathogen and nurse ulcers in his own stomach before anyone would believe him! (Eventually, he got the Nobel Prize). Now we know that this bacterium is the cause of many stomach cancers. So, in my opinion, the etiologic studies remain extremely controversial and many a career has been sacrificed on the altar of virologic basis of malignancy. I nearly lost my career, but have been able to survive – thankfully. I continue my studies in the area, always trying for that moment:

> *"Chance will strike a prepared mind"*

11. What advice do you have for young MDs?

A life without work is a life without worth, and this work should be done for the good of mankind as well as for one's own good. Last year, I was fortunate to win the Hope Award for Cancer Research and in my acceptance speech; I gave advice to my 18-year-old daughter which I wish to quote for the young MDs:

> "At the risk of being a spendthrift of my own celebrity, I want to address my teenage daughter who is a sophomore at Columbia University and like her parents, plans on a career in science and medicine. You might be wondering why I have to use the 3 minutes allotted to me to do so in this room…well, as Nora Ephron once said, "When your

children are teenagers, it's important to have a dog so that someone in the house is happy to see you." Actually, it is for two reasons…first because she is a captive audience and second because of the presence of all of you in this room and what this moment means and how indelibly what I say today may be etched on her brain. Sheherzad, as a result of several decades of experience and observation, I have narrowed down the formula for personal success to three cardinal rules: find your passion, find a mentor and then give it everything you've got. However, there is a different kind of success, one which many in this room epitomize. As living beings, we know that death will come inevitably, but thankfully, we do not know the hour of our death. What goes through the hearts and minds of souls who have received a diagnosis of cancer and hear the footsteps of death approaching closer every day? Theirs are the heroic stories of hardiness, ingenuity and resourcefulness. Some of us have the privilege of witnessing on a daily basis, the remarkable dignity with which they face their ongoing ordeals. You have decided to join the ranks of these privileged caregivers. As a little girl from age 3 to 8 years, you have already witnessed your father go through a losing battle with cancer. When faced with such human suffering, your qualifications, your CV or your degrees do not help. What helps is your heart, your sensitivity to feel the pain of others. On this special day, realize that you are fortunate to be in a room full of such compassionate and deeply committed individuals, realize that you will not need magic or miracles to help your patients but you will need serious scientific research and deep sensitivity to their anguish and suffering. Today, I use the honor bestowed upon me through this award to urge you to pledge that even as you will strive for excellence and follow the three rules to guarantee success in

your personal life, you will never forget the dues you owe to the patients you will be caring for very soon."

14. Whom do you consider your biggest influences? Could you recommend any seminal or important books/articles by them?

As far as my personal life is concerned, I am a reader of classics where the themes are grand, the language is noble, and the message is startlingly fresh for all times. When my husband Harvey Preisler died after a five-year long battle with cancer, the way I dealt with the loss was to read (and re-read in most cases) the 100 Great Books of the Western Literary Tradition starting with Euripides and Aeschylus and working my way to Rushdie and Morrison. In this, my biggest influences have been the great authors. I feel deeply moved by poetry.

My favorite poets are Shakespeare, Dante, Milton and Ghalib. I come from an oral tradition and committing poetry to memory was a given for as long as I can remember. Currently, I am memorizing the entire 33rd canto from Dante's *Paradiso* during my morning runs. I feel profoundly affected by the thinking of these poets and have translated and interpreted (with my co-author Sara Goodyear) Ghalib's Urdu poetry for our English speakers in a book, *Ghalib: Epistemologies of Elegance.* Among the American writers, the books of fiction I admire most are Melville's *Moby Dick* and Morrison's *Beloved.*

Among the Europeans, it would have to be Cervantes's *Don Quixote* and Dostoyevsky's *The Brother Karamazov*. Finally, in non-fiction, my two favorite books are both autobiographies called *The Confessions* written 1000 years apart by Augustine and by Rousseau.

As far as my professional life is concerned, the biggest influence comes from patients. In particular, I had an encounter starting me on the path to dedicate my life to MDS, when I was barely 30. Here is a short accounting of that episode:

I had just finished my Fellowship in Medical Oncology at Roswell Park Cancer Institute in Buffalo, New York. A beautiful, young 32 years old woman was admitted with a diagnosis of acute myeloid leukemia (AML). The story she gave was rather peculiar. She had become pregnant almost two years before this admission with twins. During the pregnancy, she developed a fetish to smell gasoline. Most days of those nine months, she would go to the corner gas station, buy a dime's worth of gasoline and smell it all day. At the end of nine months, she delivered a healthy set of twin daughters, but six months later, she was found to have low blood counts. Over time, a diagnosis of MDS was made. This was probably in some part at least, related to the toxic exposure she had experienced from smelling gasoline. In any case, there was no treatment for MDS at the time, and she only received supportive care with blood transfusions. Six months later, the disease progressed to AML and that is when she came to see us at Roswell Park.

We gave her high dose induction chemotherapy, to which she responded well and after a rather stormy course, entered a complete remission six weeks later. How sweet it was to see her going

home with her lovely daughters at the end of this therapy! We then gave her three courses of standard consolidation therapy. She did well. During these repeated hospitalizations, and interim outpatient clinic visits, we became very close to each other. During each encounter, we talked to our hearts' content, and JC shared many of her personal anxieties with me. I learned to appreciate the challenges of a schizophrenic life torn between fighting a potentially lethal illness at the ripe age of 32 while pretending to be a normal mother to 3-year old girls. At times, it felt heart breaking. At other times, the sheer force of her courage and sublimity of human spirit was brought home with incredibly graphic detail.

> *Courage takes many forms. There is physical courage, there is moral courage. Then there is still a higher type of courage; the courage to brave pain, to live with it, to never let others know of it and to still find joy in life; to wake up in the morning with an enthusiasm for the day ahead.*

After stopping the final round of chemotherapy, JC returned to her normal life. She got caught with the daily routine of raising 3-year old twin daughters. Unfortunately, after a year and a half of remission, her leukemia relapsed, and this time around, none of our therapeutic approaches seemed to make much of a difference to her resistant leukemia. She developed a fungal infection of the lungs too. We were not able to give her any chemotherapy for fear of making the fungus spread faster. At this time, she made a wish to be admitted to the Hospital for her terminal illness as she did not want her daughters to be frightened unnecessarily. With a heavy heart, I took her in. It was instructive and astonishing to watch her face almost certain death with such unparalleled grace and equanimity. I noticed on my daily rounds was that she would be writing

furiously. Finally, I mustered enough courage to ask her one day, “JC, what are you writing?” The answer she gave me changed my life forever. She said, “I am writing letters that I want my twin daughters to open on their birthdays. I have reached their twelfth. Keep me alive till I reach their twenty-first”.

Alas, we could not keep her alive for the few days she had asked for. I went home that day. I told my husband that I should study MDSs because this stage precedes the development of acute leukemia in a number of patients. Maybe, I could have saved JC, if I had treated her at the MDS stage of her disease. My idea was that the molecular and genetic lesions in frankly leukemic cell are too complicated. Perhaps, it would be better to start studying the biology of these cells at an earlier stage of the disease, say as in JC’s case when it was still MDS. If we follow the course of the disease and study serial samples, it may become possible to identify the sequence of events that convert a normal cell into a leukemic one. Another advantage of studying MDS would be that if we could effectively treat the patient at this earlier stage of the disease, then the patient would never evolve into the potentially lethal acute leukemic phase. Finally, I felt that at the MDS stage, the drugs required for treatment may not be as toxic as those needed for the acute leukemia stage. For all these reasons, back in 1984, I decided to dedicate myself to the study and treatment of MDS along with my continuing research in acute leukemias.

Madeleine Thien: Writer-in-Residence, Simon Fraser University

February 22, 2014

1. In terms of geography, culture, and language, where does your family background reside? How do you find this influencing your development?

My parents speak different dialects of Chinese (Hakka and Cantonese) and so our common language was always English. Although, often, my parents would speak their own dialect to each other – so two languages simultaneously – and they would understand. My mother was born in Hong Kong and my father in Malaysia, but they rarely spoke about life before Canada.

I think, for different reasons, and with different degrees of success, they both tried to forget. They couldn't afford to return home, and so they had to accept that it was gone or else feel the constant pain of being cut off. For a long time, I felt an incredible sadness when I thought about the sacrifices my parents made for us. Now that I'm older, I see their courage, selflessness and their extraordinary reinvention.

2. How was your youth? How did you come to this point? What do you consider a pivotal moment in your transition to writing?

It was chaotic. We moved a lot and my parents were under constant financial stress. My siblings left home at very young ages, and my father left when I was sixteen. That was probably one of the earlier pivotal moments, because for a while he simply disappeared. I was living with my mother, but we were really cut off from one another emotionally. I lived in my head. Writing became a way to express things that were unsayable, either because they were private and

confused, or because they might injure another person, or because I didn't know what the truth was. Writing was a space to lay things down.

3. Where did you acquire your education? What education do you currently pursue?

I studied contemporary dance at Simon Fraser University (SFU) and, later on, creative writing at The University of British Columbia (UBC). My devotion to books, reading and learning is intense but also exhausting. I'm deeply interested in 20th century history, particularly transitional times; I'm utterly fascinated by the Silk Road, and also the post-independence years in Southeast Asia, and lately, Communist China. I'm also working on documentary projects, art installations, and I occasionally choreograph. I want to live about a thousand lives! I think that's why the novel, and fiction, have been the mainstay in my life.

4. At present, you hold the 'Writer-in-Residence' position at Simon Fraser University. What does the position provide for you?

Yes, I'm incredibly lucky. The English Department is full of creative, questioning and generous scholars. And SFU has brought me back to Vancouver where I grew up, but where I haven't lived for more than twelve years.

5. You have written four major works: *Certainty, Dogs at the Perimeter, The Chinese Violin, Simple Recipes: Stories*. Most recently, *Dogs at the Perimeter,* I read it. I urge

readers to go and purchase the book. For those interested, what inspired this book? What is the overarching theme?

I had been spending months at a time in Cambodia, and the country preoccupied me more and more. For me, Cambodia is like nowhere else – inhabiting his seam between the ancient cultural reaches of India and China, all filtered through a formidable Khmer culture. The Cambodian genocide happened when I was a child and has been largely forgotten by the rest of the world; or, if remembered, is remembered almost abstractly.

That our governments played an undeniably large role in the de-stabilization of Cambodia and its civil war, and that the ensuing genocide claimed the lives of 1.7 million people, and that hundreds of thousands of Cambodians had to seek refuge outside of their country – has become a footnote of history. I wanted to think about how people begin again, how they remember and how they forget, and how these acts change over the course of a life. The Cambodians I know live both inside and outside their memories, they carry ruptured selves and also, in their own philosophy, multiple souls.

6. If you currently work and play with a piece of writing, what do you call it? What is the general theme and idea behind it?

It has no title as of yet. I've finished a draft and am fine tuning now. The centre of the book is the story of three young musicians studying at the Shanghai Conservatory in the 1960s. They're Chinese musicians studying Western classical music, trying to express themselves through Bach,

Beethoven, Prokofiev, Debussy, and also trying to express the tenor of the times. Because of Mao's extremism during the Cultural Revolution, this expression proves not only to be untenable, but it alters their lives forever.

This novel is about how ideas and artistic practices move from East to West and West to East, what it means to speak in another language (be that music, ideology or literature), and it's also about copying, repetition and the desire, however illusory, for transcendence, to be outside of one's time.

7. If any, what do you consider the purpose of art? More importantly, what role do artists play in shaping, defining, and contributing to society and culture?

To be a witness to this time and place, and to each other. I don't see it as a record of one's self. I want my art to be a record of the people and the world around me. A complicated questioning of what is, and a way to learn how to see more than I do now.

8. If you had sufficient funding and time, what would you like to write?

I think it would be the same. I think of funding and time almost solely as a means to write, and so I try to create the conditions for this in my day to day life.

9. What do you consider the most controversial topic in writing at the moment? How do you examine the issue?

Race. It makes everyone afraid. A few decades ago we could talk about race, but now even saying the word is difficult, in both national and geopolitical contexts.

10. In terms of representation of 'minority populations' in literary circles, presentation of awards and honors, and media time provided, what do you consider the present conditions? What do you think and feel about these conditions?

I think literary culture in Canada and America has been adversely affected by the closing down of bookshops and the merging of publishers. It's extremely competitive, and bookshops and publishers are simply looking to survive. It makes sense that, with such fine margins, they support (financially, emotionally, intellectually) work that has the potential to be mainstream. But how do we imagine mainstream?

Sadly, I think that we mean white middle- or upper-class. So this audience (or the way a publisher envisions this audience and what they want) is reflected, in some way, in the novels that are published and supported. A Chinese novelist might sell a million copies in China, but a publisher here may still see that work as foreign, other and unlikely to appeal.
I think we should widen our understanding of the reader.

I'm a pretty stubborn person, and so these conditions make me want to push back the boundaries even more.

11. Furthermore, in concrete, or practical and applied, terms, what needs doing? How might these aims come to fruition? What about their short- and long-term implications for impacting the literary culture in the Lower Mainland, in Canada, and abroad?

Deeper engagement and from those of us who have another perspective. Acknowledgement that New York literary culture is an echo chamber and increasingly narrow.

I'm teaching an Asian Literature course in the US right now, I teach in a Master of Fine Arts (MFA) program in Hong Kong, where I work with writers from around the world, and I'm helping to develop the curriculum for a fine arts university in Zimbabwe. I love the responses I get when I ask this younger generation why literature matters, why they are studying it, and why bookshops are shelved with stories that are already familiar to us.

Does it matter to us as individuals or as a society if our literature supports singular concepts of national identity, or when celebrated literature is narcissistic or apolitical, or when the majority of the world is invisible in 99% of the literature we read and discuss? We have a stake in trying to see what the system makes invisible, and then articulating these gaps in forthright and intelligent ways.

12. Who most influenced you? Why them? Can you recommend any books or articles by them?

James Baldwin. Cees Nooteboom, *All Souls Day.* Alice Munro. Michael Ondaatje, *Running in the Family* and so many other books. Dionne Brand. Ma Jian, *Beijing Coma* and *Red Dust*. Liao Yiwu. Sven Lindqvist. Tsitsi Dangarembga, *The Book of Not* and *Nervous Conditions.* Hannah Arendt. Antonio Damasio and Oliver Sacks. Shirley Hazzard, *The Great Fire* and *The Transit of Venus.* Colin Thubron, *The Hills of Adonis* and *In the Shadow of the Silk Road.* Dostoevsky and Chekhov.

The literature, memoir and reportage around Cambodia, from Vaddey Ratner to Bree Lafreniere, Loung Ung, Elizabeth Becker, Francois Bizot, Jon Swain and Peter Maguire. Bao Ninh, *The Sorrow of War*. Kazuo Ishiguro, *The Unconsoled*, *The Remains of the Day*, *Never Let Me Go* and *When We Were Orphans*. All these writers break form and enlarge content, they are humane and, in my eyes, fearless.

13. Where do you see writing, the teaching of writing, and publishing in the near and far future? How does, and will, the internet change the landscape?

I'm curious about the publishing worlds of India and China. I wonder how they'll influence and alter the English-language market, how soon will they become centres of influence alongside London and New York. I hope the internet will break down some of the stagnation in the way we talk about books, and which books we encounter.

14. What advice do you have for young writers?

Fiction is not outdated or tired. Fiction is what you make of it, what you bring to it, how far you're willing to travel both into yourself and outside yourself. Don't knock the imagination.

15. What worries and hopes do you have for the world of literature regarding the older and younger generations – writers and readers?

I'm not worried. I think that even when things seem stagnant or narrow, fissures always appear. I love multimedia and the experimentation with the new forms available to us via our laptops and phones and interconnectedness. But I also value closing all that down, turning inward, reading a book, and giving time, attention and focus to the interpretation and engagement with story.

16. Besides your own organizational affiliations and literary interests, what associations, writers, and even non-/for-profits can you recommend for interested readers?

The Documentation Centre of Cambodia (DC-CAM) and the Bophana Centre. And, in Vancouver, the extraordinary Thursdays Writing Collective.

http://www.dccam.org/

http://www.bophana.org/site/index.php

http://thursdayswritingcoll.netfirms.com/wordpress/

Bibliography

1) Bophana Centre (2014). Bophana Centre. Retrieved from http://www.bophana.org/site/index.php.

2) Dangarembga, T. (1988). *Nervous Conditions*. Ney York, NY: Seal Press.

3) Dangarembga, T. (2006). *The Book of Not: A Sequel to Nervous Conditions*. Oxfordshire, UK: Ayebia Clarke Publishing Ltd.

4) Documentation Centre of Cambodia (2014). Documentation centre of Cambodia. Retrieved from http://www.dccam.org/.

5) Hazzard, S. (2003). *The Great Fire*. New York, NY: Farrar, Straus and Giroux.

6) Hazzard, S. (1980). *The Transit of Venus*. New York, NY: Penguin Books.

7) Ishiguro, K. (2005) *Never Let Me Go.* New York, NY: Random House Inc.

8) Ishiguro, K. (1995) *The Unconsoled.* New York, NY: Random House Inc.

9) Ishiguro, K. (1989) *The Remains of the Day.* London, UK: Faber and Faber Limited.

10) Ishiguro, K. (2000) *When We Were Orphans.* London, UK: Faber and Faber.

11) Jian, M. (2008). *Beijing Coma: A Novel.* New York, NY: Farrar, Straus and Giroux.

12) Jian, M. (2013, November 10). *My Life: Ma Jian.* Post Magazine. Retrieved from http://www.scmp.com/magazines/post-magazine/article/1349783/my-life-ma-jian.

13) Jian, M. (2001). *Red Dust.* London, UK: Random House.

14) Ninh, B. (1991) *The Sorrow of War: A Novel of North Vietnam.* New York, NY: Riverhead Books.

15) Nooteboom, C. (2001). *All Souls Day*. Orlando, Florida: Harcourt.

16) Thien, M. (2011). *Dogs at the Perimeter.* Toronto, Ontario: Mclelland and Stewart Ltd.

17) Thien, M. (2006). *Certainty.* New York, NY: Little, Brown and Company.

18) Thien, M. (2002). *Chinese Violin.* Vancouver/Toronto: Whitecap Books Ltd.

19) Thien, M. (2001). *Simple Recipes.* New York, NY: Little, Brown and Company.

20) Thubron, C. (2006). *In the Shadow of the Silk Road.* New York, NY: HarperCollins Publishers.

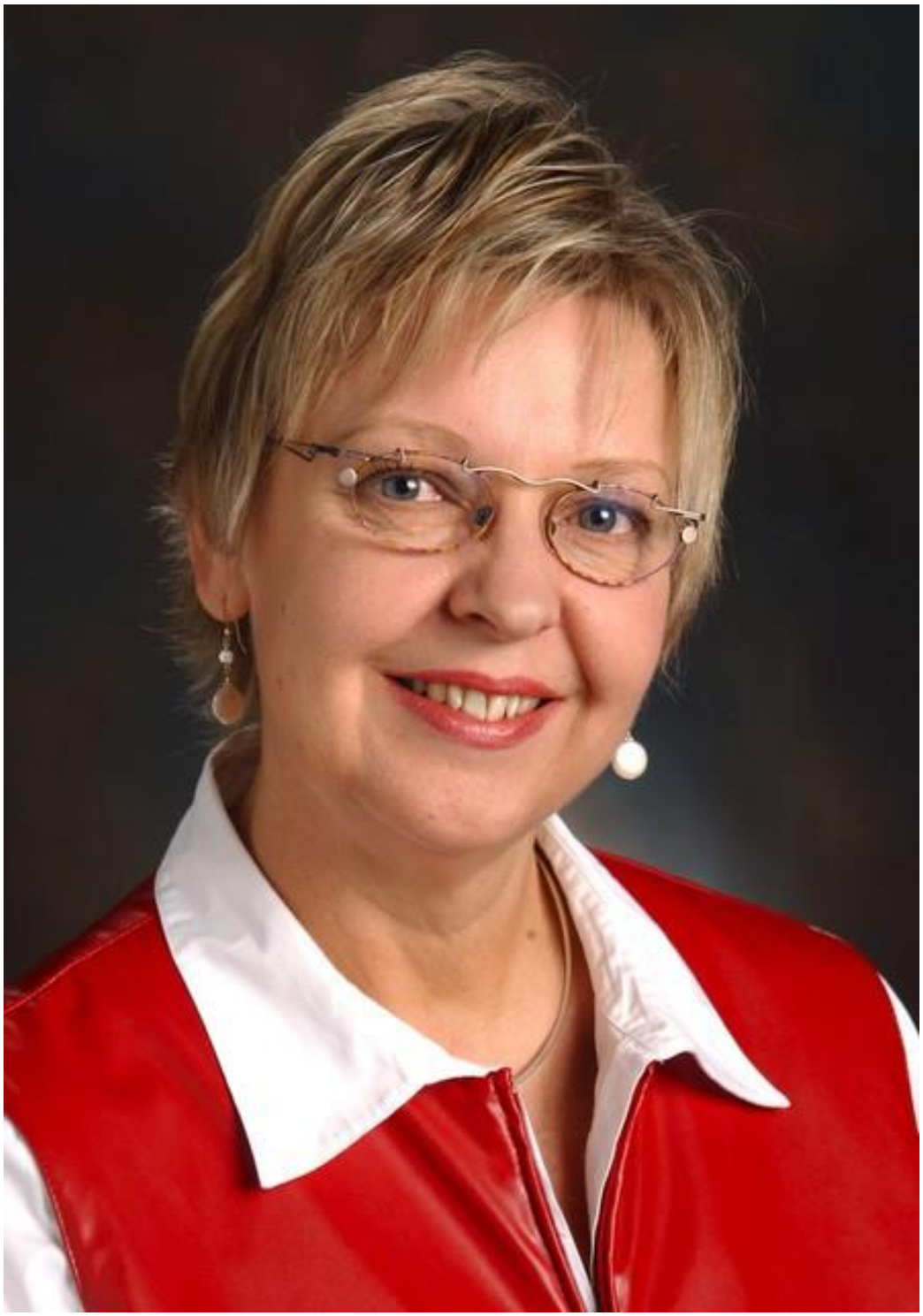
21) Thubron, C. (2009). *The Hills of Adonis: A Quest in Lebanon.* Toronto, Ontario: Random House Canada.

22) Thursdays Writing Collective (2014). Thursdays Writing Collective. Retrieved from http://thursdayswritingcoll.netfirms.com/wordpress/.

Dr. Wanda Cassidy: Associate Professor, Faculty of Education, Simon Fraser University;

Director, Centre for Education, Law & Society

April 1, 2014



1. In terms of geography, culture, and language, where does your family background reside? How do you find this influencing your development?

My mother's background is Swedish– from northern Sweden, near the Arctic Circle. My grandfather came to Canada and set up a homestead in Alberta. His wife and their oldest five children – my mother had not yet been born – were scheduled to follow two years later, on the Titanic…seriously! My grandfather didn't know that the Titanic was overbooked and his family had to take a later boat; instead, he thought they were lost. Of course, communication was poor in those days.

My father's background is Irish, English, and Scottish. His grandparents immigrated to Nova Scotia, with 3 of the children (my grandfather being one), later moving west to Saskatchewan, where my grandfather made a living as a professional boxer. (Laughs). Apparently, he never lost a fight and won most matches by knock-out. I guess, he had a bit of an Irish temper. (Laughs) From both sets of grandparents (and from my parents), I learned the value of hard work, kindness towards others, and being adventurous. Even during the difficult days of the Depression, my maternal grandfather never turned away anyone asking for work on his farm, for food, or a place to stay. There was a generosity of spirit, which was communicated to his children and grandchildren.

2. How was your youth? How did you come to this point? What do you consider a pivotal moment?

Growing up, I always wanted to make a positive difference in the world and to help others. Back when I was in university, not a lot of doors were open for women, and I did not have a lot of professional roles models. For example, among my 73 first cousins, I am the only one who went on to do a doctorate. Because I loved teaching and enjoyed working with young people, I followed in my mother's footsteps and became a teacher. When I was offered the job, I was asked, "Would you like to teach Law 12 as part of your teaching assignment?" As a history major, I thought, "I know nothing about law, but I want the job." (Laughs)

I said, "I will approach it as a person who knows little, but knows people who do know." So developed my course around a community-based curriculum, inviting many guests into my classroom and learning with the students. II received funding from the Legal Services Society to share the model I had developed, since very few Law 12 teachers had a law degree, and later was hired by this agency as their Schools Program Director. My job was to provide curriculum resources and professional development for teachers and students in British Columbia, to improve their overall knowledge of law.

This position was pivotal in my own career. While planning a national conference I met a professor at Simon Fraser who encouraged me to develop a program with him in the Faculty of Education. We were able to secure funding from the Law Foundation of BC, the Real Estate Foundation, the Notary Foundation and other agencies and law firms, and began what came to be called the Centre for Education, Law & Society.

While developing the Centre (CELS), I obtained my Master's degree in law-related education from SFU and later secured a scholarship to attend the University of Chicago, where I earned my Ph.D. in Curriculum and Instruction. I returned to SFU in a professorship position, where I happily remain.

In terms of what motivates me: I like to be creating new things, to push the boundaries of "what is" to "what could be." I like to be challenged and seek to draw like-minded people together to advance these goals.

3. At present, you hold the position Director for the 'Centre for Education, Law & Society'. What responsibilities and duties does this imply?

It is a part of my work as an Associate Professor of Education. The centre's mandate is to improve the legal literacy of youth and young adults, in the school system, in community settings and at the post-secondary level. We do this through a program of research, teaching and community-based initiatives. We developed 3 undergraduate courses and recently completed our first offering of a Master's program in justice, law, and ethics. Our research topics vary: for example, recently we completed a 4-year study on legal literacy of youth in grades 6 to 10, which focused on human rights, citizenship, identity issues and environmental sustainability.

We've also investigated cyberbullying in schools and at the post-secondary levels. I also helped establish a school for students who face multiple challenges in their lives and who don't succeed

in the regular public school. I continue to be an educational consultant to this unique and highly successful school (see **http://www.focusbc.org**).

My job as Director is to manage our current projects, seek additional funding for new projects, provide support to graduate students, and work with other agencies to improve the legal literacy of youth. Legal literacy involves understanding the role law plays in our society and what it means to be an informed, engaged citizen.

The law can be a tool to create a society that is respectful and caring towards others, sensitive to human and civil rights, and inclusive of diversity. Legal literacy also involves knowledge of those aspects of law that affect our daily lives in a practical way, such as purchasing goods from a store, holding a job, renting a home, or getting married.

It also involves an understanding of broader influences which guide our society, such as the UN Declaration of Human Rights and other UN documents. Also, asking, "Are we implementing those basic human rights in our own society and elsewhere in the world?" And if we are, what role can Canada play in providing for the needs and rights that all human beings should have for themselves?

4. In some recent research, you note the unfortunate global occurrence of bullying. In particular, the existence of cyberbullying. For readers, can you define cyberbullying? What negative psychological, emotional, and physical consequences arise from cyberbullying for the victims and the perpetrators?

'Cyberbullying' is bullying through online sources such as smart phones, Facebook, e-mail, blogs or chat rooms, or any of the various technological tools at our disposal. It involves sending harmful, derogatory, harassing, negative, sometimes repulsive – even sexual, messages or images to somebody with the intent to harm or hurt them. The impact is often quite devastating. It can cause sleeplessness, anxiety, depression, fear, inability to concentrate, and sometimes leads to suicidal thoughts.

Cyberbullying is different from face-to-face bullying in that it can be anonymous: "Where is this coming? A friend, an acquaintance, a stranger, someone I sit next to in class, why are they doing this to me?" People are so connected online. They open their social networking sites and see a derogatory message from someone. How do they deal with it? Oftentimes, they cannot get rid of the message, which results in them being bullied over and over again.

Research shows that cyberbullying can start as early as age 9 or 10, extending into adolescence and dying down somewhat by age 15 or 16. In our current study we are looking at the extent of cyberbullying at the post-secondary level, among undergraduates and towards faculty members. We were surprised to learn that approximately 1/5 of undergraduate students at the 4 universities we studied had experiencing cyberbullying from another student, and approximately the same number of faculty members had been cyberbullied either by students and/or by colleagues. These messages can be hurtful—indeed devastating– at any age.

5. Your conceptualization of 'cyberkindness' seems to me, in essence, digital civility, bringing civil discourse in the real world into the electronic media.

Yes, I call the internet and other outlets for communication a 'flat medium', in that, they cannot convey facial expressions, body language, or tone of voice, and therefore the intent of a message may be misinterpreted. Further the sender does not see the impact a message might have on the recipient, such as they might see in face-to-face bullying. We have yet to learn more effective ways to communicate through technology.

Also, we have cyberbullying because bullying is present in the wider society, and too many are rewarded for their bullying behaviour. Politicians bully each other and sometimes seem to relish in the experience. Countries bully each other, employers bully employees, corporations bully each other to get an edge in the market, and so on.

We need to look at what is being modelled by adults, since modelling is one of the most powerful teachers. Young people learn not only from what they are told, but what they experience and see being modeled around them.

6. What strategies can students employ individually and collectively to reduce the occurrence and harms of cyberbullying and bullying in general? In addition, within your recent work, you discuss the development of "cyber-kindness" and an "ethic of care". For readers, what is the abridged definition of this terminology, and the practical application and outcome of them?

I began researching cyberbullying because I had done research on the ethic of care and the positive impact this philosophy had on students, teachers and the school culture. When I began to investigate cyberbullying, I did not want to deal with the negative alone. I wanted to look at the notion of "cyber-kindness" and the ways in which technology could be used to communicate positive, respectful and kind messages.

This notion of care is situated within the broader philosophical worldview of Nel Nodding's and Carol Gilligan's work – caring being a relational ethic. Here caring is not a 'fuzzy' feeling, by rather showing empathy towards the other, understanding the needs of the other, and working in the other's best interests.

Schools that embrace the ethic of care have less bullying and cyberbullying, because they focus on relationships, empathy and the understanding of others. For example, a couple of years ago, we worked with a school where five grade 7 girls were actively cyberbullying each other with really nasty comments on a social networking site. The principal, rather than suspending them, saw their leadership potential and re-directed the negative energy they had towards each other into working on productive projects at the school.

She met with them once a week and, as the discussions unfolded, they apologized to each other about the hurtful messages they had been sending. They stopped these negative interchanges, but more importantly, ended up contributing to the school, and influencing the culture of the whole

school. Their enthusiasm for doing positive things was infectious and spilled over to the other grades as well.

What this principal demonstrated is that it is important to address the root causes of cyberbullying, not just the symptoms (i.e. the behaviour).

7. In a hypothetical perfect world with plenty of funding and time, and if guaranteed an answer, what single topic would you research?

Ways to create a kinder world, how do we change the 'human being' to become more respectful and kinder to one another? I am somewhat of a utopian in this regard.

Perhaps we can start by getting to know our neighbour, and by this, I mean getting to know others outside of our circle or enclave. Entering into a dialogue, listening to others and learning from others. A kinder world would be a more peaceful world and a happier world.

8. If any, what responsibility do academics and researchers have for contributing to society and culture?

I believe we have a 100% responsibility to share our knowledge. Further, our research should connect with real issues facing the world. We not only have a responsibility to research important issues, but to also communicate our findings to the wider public. In my own work, I

try to focus on areas that will benefit society. Also, I engage with the media and the public to bring an academic perspective to issues.

For example, everyone has an opinion on cyberbullying, but we need to situate this discussion within the research. We should not develop policy based on opinion. It is important for academics, policy makers, government, the media and the public to work collaboratively to solve social problems.

9. Who most influenced you? Why them? Can you recommend any books or articles by them?

There are many, many people who influenced me, but I'll just mention a few. My parents, of course. Also four particular women. A pastor's wife when I was a teenager who made me feel that I was important and that my opinion was valued, even though I was young; she listened attentively, asked gentle but probing questions, and encouraged me to find my future.
Anna York, a friend I met when studying at the University of Chicago.

Although she struggled with MS, she was always authentic, a real person with depth, honesty and integrity. Her book, *Rising Up!*, documents her physical and spiritual journey into health.
Another woman I have known for years, Doreen, who now lives in Texas. She has experienced many challenges and setbacks in life, but is always positive, hopeful, with a deep faith that plays out in the practice of her life. She has always been there for me, when I've faced my own struggles and challenges.

Finally, I must mention the impact my daughter has had on my life.

Having a child has taught me so much — to be wise in what I share with her, to model what I feel is important in life, to have that wonderful opportunity — indeed a gift — to influence someone so inquisitive and open to learn. Being given the gift of motherhood has caused me over and over again to re-evaluate my priorities and to consider what is important in life. Probably more than anyone else in my life, just as I've influenced her, she has influenced me and now that she is a young adult, she continues to surprise me with her insights, her creativity, her commitments, and her wisdom.

10. Please elaborate on a point made earlier about 'building a culture of compassion', and focusing on the important things in life and in one's work.

We are all busy. There are too many things to distract us. We need to be constantly reflecting on 'who we are' and, maybe this sounds trite, on our purpose in life. In other words, asking ourselves, "What difference do we want to make in the world?" It could be just influencing one person. We do not need to look 'big' in that sense.

If someone helps one child, it may be just as significant as what Mother Theresa or Nelson Mandela accomplished. We all come to that point in our lives where we ask the question, "Why am I here? Why are we here? What am I doing?" Reflecting on these big questions of life, helps us focus and work towards goals that matters.

11. What worries and hopes do you have for the educational settings of the Lower Mainland, Canada, and international settings regarding bullying and cyberbullying?

I worry about people gravitating to quick-fixes–buy this program, bring it into the schools, and it will solve the problem of bullying or cyberbullying. This approach is not effective. Rather, we need to do the hard work of building relationships and working on the root causes of negative behaviour. This also involves each one of us examining our own behaviour.

Another worry is that people will think, "Bullying has always been with us, just deal with it." This is not helpful to the victim nor does it show empathy. I'd like to think we can reduce incidents of bullying/cyberbullying rather than merely "learning to live with it."

Bibliography

1) Agatston, P., Kowalski, R., & Limber, S. (2012). Youth views on cyberbullying. In J. W. Patchin, S. Hinduja (Eds.), Cyberbullying prevention and response: Expert perspectives (pp. 57-71). New York, NY US: Routledge/Taylor & Francis Group.

2) Beck, K. & Cassidy, W. (2009). Embedding the ethic of care in school policies and practices. In K. te Riele (Ed.) *Making schools different: Alternative approaches to educating young people* (Chap. 6), pp. 50-64, Thousand Oaks, CA: SAGE Publications.

3) Brown, K., Jackson, M., & Cassidy, W. (2006). Cyber-bullying: Developing policy to direct responses that are equitable and effective in addressing this special form of bullying. *Canadian*

Journal of Educational Administration and Policy, Issue 57.**http://www.umanitoba.ca/publications/cjeap/articles/brown_jackson_cassidy.html**

4) Cassidy, W. (2006). From zero tolerance to a culture of care, *Journal of Safe Management of Disruptive and Assaultive Behavior: Special Edition on School Safety*, Fall 2006, 22-26.

5) Cassidy, W., Faucher, C., & Jackson, M. (2013). Cyberbullying among youth: A comprehensive review of current international research and its implications and application to policy and practice, by invitation, in special international issue of *School Psychology International, 34*(6), 575-612.

6) Cassidy, W., Faucher, C., & Jackson, M. (2013). An essential library of international research in cyberbullying, by invitation, introduction to SAGE special collection of articles published by *School Psychology International.* [virtual special edition, published online with accompanying podcast by C. Faucher]

7) Cassidy, W., Brown, K., & Jackson, M. (2012). 'Making kind cool': Parents' suggestions for preventing cyber-bullying and fostering cyber-kindness. *Journal of Educational Computing Research, 46*(4), 415-436.

8) Cassidy, W., Brown, K., & Jackson, M. (2012). 'Under the radar': Educators and cyberbullying in schools. *School Psychology International, 33*(5), 520-532. Doi: 10.1177/0143034312445245

9) Cassidy, W., Brown, K., & Jackson, M. (2011). Moving from cyber-bullying to cyber-kindness: What do students, educators and parents say? In Dunkels, E., Franberg, G.-M., & Hallgren, C. (Eds) Youth *culture and net culture: Online social practices* (pp. 256-277). Hershey, NY: Information Science Reference.

10) Cassidy, W. & Chinnery, A. (2009). Learning from indigenous education. In K. te Riele (Ed.) *Making*

schools different: Alternative approaches to educating young people (Chap. 15), pp. 135-143, Thousand Oaks, CA: SAGE Publications.

11) Cassidy, W., Jackson, M., & Brown, K. (2009). Sticks and stones can break my bones, but how can pixels hurt me? Students' experiences with cyber-bullying. *School Psychology International, 30*(4), 383-402.

12) Centre for Education, Law & Society (2014). Center for Education, Law & Society. *Simon Fraser University*. Retrieved February 18, 2014, from http://www.sfu.ca/education/cels.html

13) Faculty of Education (2014). Dr. Wanda Cassidy. *Simon Fraser University*. Retrieved February, 2014, from http://www.educ.sfu.ca/profiles/?page_id=111

14) Faucher, C., Jackson, M., & Cassidy, W. (in press). When on-line exchanges byte: An examination of the policy environment governing cyberbullying at the university level. *Canadian Journal of Higher Education.*

15) Gilligan, Carol (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

16) Jackson, M., Cassidy, W. & Brown, K. (2009). Out of the mouth of babes: Students' voice their opinions on cyber-bullying. *Long Island Education Review*, 8(2), 24-30.

17) Jackson, M., Cassidy, W., & Brown, K. N. (2009). "you were born ugly and youl die ugly too": Cyberbullying as relational aggression. *In Education, 15*(2).

18) Kowalski, R. M., Morgan, C. A., & Limber, S. P. (2012). Traditional Bullying as a Potential Warning Sign of Cyberbullying. School Psychology International, 33(5), 505-519.

19) Noddings, Nel. *Caring: A Feminine Approach to Ethics and Moral Education*. Berkeley: University of California Press, 1984.

20) Noddings, Nel. *The Challenge to Care in Schools*. New York: Teachers College Press, 1992.

21) Noddings, Nel. "Excellence as a Guide to Educational Conversation." *Teachers College Record, 94*(4) (1993): 730-743.

22) Noddings, Nel. *Educating Moral People: A caring alternative to character education*. New York: Teachers College Press, 2002.

23) Patchin, J. W., & Hinduja, S. (2012). Cyberbullying: An update and synthesis of the research. In J. W. Patchin, S. Hinduja (Eds.), Cyberbullying prevention and response: Expert perspectives (pp. 13-35). New York, NY US: Routledge/Taylor & Francis Group.

24) SFUNews (2014). Symposium: Cyberbullying at Canadian Universities. *Simon Fraser University*. Retrieved February, 2014, from http://www.sfu.ca/sfunews/stories/2014/symposium-cyberbullying-at-canadian-universities.html

25) Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. Journal Of Child Psychology & Psychiatry, 49(4), 376-385. doi:10.1111/j.1469-7610.2007. 01846.x

26) Smith, P. K., & Slonje, R. (2010). Cyberbullying: The nature and extent of a new kind of bullying, in and out of school. In S. R. Jimerson, S. M. Swearer, D. L. Espelage (Eds.), Handbook of bullying in schools: An international perspective (pp. 249-262). New York, NY US: Routledge/Taylor & Francis Group.

27) Topcu, C., & Erdur-Baker, O. (2012). Affective and Cognitive Empathy as Mediators of Gender Differences in Cyber and Traditional Bullying. School Psychology International, 33(5),

550-561.Vandebosch, H., & Van Cleemput, K. (2007). Cyber Bullying Among Youngsters. Conference Papers — International Communication Association, 1.

28) von Marées, N., Petermann, F., Kowalski, R., Morgan, C., & Limber, S. (2012). Traditional bullying as a potential warning sign of cyberbullying. School Psychology International, 33(5), 505-519.

Dr. Diane Purvey: Dean of Arts, Kwantlen Polytechnic University

March 22, 2014

1. What positions have you held in Academe? What position do you currently hold?

My positions held have been: Assistant Professor in the School of Education in the Faculty of Human, Social and Educational Development at Thompson Rivers University, where I was promoted to the position of Associate Professor. I was also Chair of a large department. I applied for and was offered the position of Dean here at Kwantlen Polytechnic University. Also, I have done a lot of different sessional and online teaching, at both the undergraduate and graduate levels. In fact, I recently taught a couple of courses at Royal Roads, in both online and face-to-face formats. However, this is my first full-time administrative role.

2. How did you come to this point in your academics? Who/what influenced you the most?

Soon after I started a permanent job at Thompson Rivers University (TRU) I became Chair. I discovered I was good at it. It felt right. What is more, I liked it. However, administrative work is not highly valued in the Faculties. It is not something faculty desire to go into. For example, when I told people I had taken on the position here, many of my colleagues responded that I had gone onto the dark side. It is seen as a negative rather than something to aspire to. While at TRU, I slowly started doing more administrative work.

I sat on more internal and external committees. In 2012 I was invited to apply for my current Dean of Arts position, but I was on sabbatical at the time and I had full intention to return to TRU. It was one of those situations where I thought it would be interesting to go through the interview process. I thought I will see what it is like.

It was low risk for me because I had a job which I liked and looked forward to there. And, the more I looked into the position at KPU, they more I was intrigued. The interviews were great. I liked the people I met. I like the trajectory of Kwantlen Polytechnic University (KPU) from a college to a university-college to a polytechnic university. It felt like a good fit for me.

3. How did you gain interest in Social and Educational Studies? Where did you acquire your education?

I think of myself as a historian. I did my B.A. and M.A. in History. When I decided to do my Ph.D., I wanted to work with a particular historian. Her name is Veronica Strong-Boag. At the time, she was at Simon Fraser University (SFU) in the history department. About the time I talked to her, and she agreed to be my supervisor, she had accepted a position at University of British Columbia (UBC). She would become the head of the *Centre for Women's Studies and Gender Relations*.

That position was affiliated with Social and Educational Studies at UBC. Now, Nicki, my supervisor, is a historian, but she became associated with Social and Educational Studies. Therefore, being her student, I became, *de facto*, associated with Social and Educational Studies. I do not have a teaching degree, nor a teaching background in terms of K-12, but I began to teach in the teacher training program and the courses I taught had to do with history of

education, history of childhood, history of women, and the history of the family. These were the history courses within Social and Educational Studies.

Social and educational Studies at UBC is composed of sociology, history, anthropology, and philosophy of education. None, or few, of the faculty within Social and Educational Studies have teaching degrees. The courses are called foundational because they look at the history or sociology of education. That is how I got into it. It is a bit odd because many people think I come from education, but I do not.

4. What kinds of research have you conducted up to the present?

Lots of research, it is kind of funny. As I became affiliated with Social and Educational Studies, and earned my Ph.D., I became aware that a lot of the jobs available were the jobs in education. I took the job at TRU in Educational Studies. However, my research continued to be in history. My Ph.D. was on women in the family in Canada in the post-World War II period (1945-1960), and the transition from war time to peace time and the way this played out in the context of the family during the Cold War. For instance, the context of the Cold War was creating a discourse of 'a stable nation is a stable home'.

My Masters was on orphanages, which was on the history of childhood. So my Ph.D. was a continuation of research on the history of the family, but in a different time period. I published and edited a collection of articles on the history of family and childhood issues. I worked on roadside shrines, which was a history of grieving and memorialization in British Columbia

(BC). I published more recently a book co-authored with my husband called *Vancouver Noir*, which is Vancouver between the 1930 and 1960 period.

Also, I recently began work on de-institutionalization. Beginning in the 1950s in Canada, people began to leave mental health facilities. I looked at their experiences. What was the experience of deinstitutionalization like for them? In addition, I studied de-institutionalization of the developmentally disabled. I focus much of my research in the domain of. About three years ago I thought, I really am in a Faculty of Education, I should do some educational research. Opportunities arose around the history of 'principal preparation' programs in the province, 'diversity', and diversity education and administration.

When I was on sabbatical in 2011/2012, I did a lot of that research which is coming out in a number of publications this year. I have oscillated between history and education, which for me are two separate tracks of research with modest intersections. As of late, it is difficult to continue researching because of the demands of this position, but I consider it really important for me, as Dean of the Faculty of Arts, to continue with a research agenda. So, although difficult in terms of finding the time, it is important and a definite priority for me.

5. In your current role as Dean of Arts, where do you see 'The University' (as an abstract) going?

Good question, I could talk a lot about that, but I think we are re-defining 'The University'. Is it a place for people to become credentialed for a skill or job? Is it job preparation? Or is it the

place for people to become enlightened in terms of liberal education? I do not necessarily consider these antithetical, although they are often presented as such.

I do not think they necessarily need teasing apart. For instance, in the university, we can prepare people for jobs and for living in a global society. Prepare them for living in a society with people who have a multitude of diversities. It does not necessarily mean not equipping them with the tools for a job. At KPU, we have the polytechnic title, but we have liberal education courses. The courses do not necessarily have pragmatic applications for an immediate job. For example, philosophy does not necessarily teach someone a skill for a job, but it does open our minds by making us consider things in a different way, especially those things that we have not considered before.

We may not have questioned ourselves and our assumptions before, which is essential, to me, to be a citizen in today's world and to be a good employee at virtually any job. In terms of the direction for the University, I think universities will be around for some time. I would like to see universities having more open access regarding the constraints people have with respect to the cost of university. Even though universities may not be very expensive, while attending university you may be unable to work, which is a negative expense.

I want universities to be more open, more available, and **much** more flexible in terms of when we offer courses. Not simply a more fulsome summer semester, but I mean weekends, evenings, early mornings, that sort of stuff to make education way more accessible for people. Education

or a university is becoming more than graduating from high school, doing your four years like I did, but becoming a place to come back to for continual learning.

This is the place where I see universities going. In terms of our post-secondary institutions, I like the idea of various institutions connecting to one another. For instance, a student could live in Dawson Creek going to Northern Lights College (NLC) can take those courses and go to Athabasca University (AU) for open learning, come here, and then put things together from a variety of experiences. Also, I am a big believer in prior learning assessment. Putting things together from these various life experiences and different courses that they have taken. It is fundamental to the institution.

You know, not all faculty at KPU conduct research. They may not conduct research in the traditional academic sense, but they are actively engaged in the research and the scholarship of teaching and learning, they re-work assignments, think about their classes, re-design their courses, and they think about this in consistent and constant ways without even realizing it or recognizing it as a form of research. I think research in all its forms is important for me to recognize and value.

6. In some cases, you have sciences such as biology bringing the knowledge and experiments down to the high school level, and having ambitious teachers and their students, at least in some cases, attempt, and in occasional cases succeeding, to publish their work.

I love that. I think more high school students should come into the university setting and receive dual-credits. I love the idea of having students engage in the university in this way. I think KPU should do more of this, and I have been an active supporter of the dual credit program, which at KPU is called Xcel.

7. Since you began studying social and educational studies, what do you consider the controversial topics? How do you examine the controversial topics?

I work with people have mental health issues. They have problems, obviously, and this impacts the research. For instance, I worked with a woman in creating a video. She disappeared for about six months. I worried about her. As it turns out, she went through a bad time. She did not want to be part of the world. Now, she is back – to my delight.

However, these factors come into play when conducting the research. It can come into their own experiences with poverty, stigma, homelessness, and so on. All of those things are much different compared to going out to the library and having total control for four hours to conduct research on archival materials. This has made me appreciate working with people, and the challenges of that. The dynamic between you, as the researcher – let's face it, a middle-class privileged white researcher – and the way it plays out in the research, how this plays out in our relationship, and the way I need to understand and research their lives.

It has led to really, really understanding other people, and by that, also understanding myself. I am a historian through and through. I love history. I do not want to devalue history, but working

with actual people is a different animal – let me tell you. It has hugely changed my attitude to research and to people.

8. In both cases, we have qualitative research.

I do mostly qualitative research; a little quantitative, but not a lot. Most of my historical research is 20th century, recent history.

9. How would you describe your philosophical framework? How did it change?

When I was first in university, I was exposed to Marxism and Socialism, which was huge for me. Labor history had a huge influence on me. Then I was introduced to feminist history during my masters, and that had a big influence on me as a female in the academy because I came to realize I had only a few female role models. In terms of both faculty and historians, at that time in the 80s, it was much different. Even when I was a history student, to make it from there to a professorship was a huge challenge, I will give a little example.

When I decided to do my Ph.D., I had finished my B.A., worked for a while, began my masters, had a child, finished my master's dissertation, had two more children, and then decided to do a Ph.D. I applied to various universities and for a few that included an interview process. In one interview, the interviewers wondered about the gap between finishing my masters and starting my Ph.D.

I worked at (what is now) KPU, Douglas College, University of the Fraser Valley, Simon Fraser University, and Vancouver Island University, all of the institutions of the lower mainland going back and forth between them attempting to gather together a life. An interviewer asked, "Why did you take a 5 to 6 year break?" I paused and said, "I had three children."

He replied, "I put it to you. If you were serious about your academic life, you would not have had children." That was in the 90s. I thought, "That makes a statement." Maybe, that is the reason for women not existing in significant numbers in the academy. If he treated me like that, I wonder of the treatment of his female colleagues.

10. If you had unlimited funding and unrestricted freedom, what would you enjoy researching?

That is a good question. It goes to my previous statements about working with people having mental diagnoses. That is, although I love history and think of myself as a historian, and believe a historical perspective benefits our understanding of everything in our society, I have to tell you, from working with people having mental diagnoses and seeing their experience, the way they walk through life and stick with it, especially coupled with my living in Gastown, Vancouver now.

One and a half blocks from Hastings Street, the population, the homeless population, addicts, I know many of these people are deinstitutionalized. They have a ton of mental health problems. I

cannot help but think, if we focus our research on people suffering from addictions and if they received appropriate help, we would be a much better society.

If I could have unlimited funds, and research anything I wanted, I would research the way to support people with mental health diagnoses. How do we help them? How do we get them to a point where they can help themselves? How do we create real choices for them? How do we get them more housing? How do we get services for people? What is the intersection between crime and the legal system with the homeless and addicted population – even diagnosis? All of that stuff. I consider this a huge social justice issue in our society today.

I think many people think of this as too much to take in. It's overwhelming. Therefore, they blame the victim. I think this problem is screaming out for attention in the inner cities and committed citizens want to do something about it. I would really focus energy on this issue.

11. Sheryl Sandberg made a statement in her TED talk akin to that, but from the female side of the ledger, "If it's me who cares about this, obviously, giving this talk, during this talk, I can't even notice that the men's hands are still raised, and the women's hands aren't still raised. How good are we as managers of our companies and our organizations at seeing that the men are reaching for opportunities more than women?"

Yes, I began to realize this at a certain point in my life. I went to seek out female faculty members as mentors. I searched my faculty, female members of the Ph.D. committee, and so

on. Interestingly, the ones I found were tough. Sometimes tougher than males. I asked a woman on the Ph.D. committee, "Why is that the case?" She said, "It's a tough world out there. You have to be tough. That is my attitude towards it. I had to deal with it. You will have to deal with it." At the time, I thought this was unfair because my experience does not have to replicate her own experience. Her experience was twenty years previous. In terms of influences, I would say feminism.

I went from the labor history to looking at feminist historians. I think of some of them like Natalie Zemon Davis, a French historian, as being particularly influential. She wrote a number of books, which I like because of their interface between academic history and history for a popular audience. She wrote a book called *The Return of Martin Guerre*, which was a book set in 16th century France. It became a movie. She was the historical consultant on the movie. I found that amazing to bring history to the people through this medium.

Actually, I heard her speak a short time ago at UBC. She is wonderful. She was the second woman president of the American Historical Association and in 1971 she co-taught at the University of Toronto one of the first courses in North America on the history of women and gender, and hence has been an important figure in the development of that field. In terms of my philosophical orientation, I would say a social history perspective. In other words, a history of marginalized people whether that be due to labor or class, gender, ability, race or ethnicity, sexuality, or the intersection of these.

12. One mistake of people: the fundamental attribution error. We look at the contextual factors and the individual. We attribute the surrounding environment for our faults/accomplishments and the individual for other people's faults/accomplishments. For instance, we, as individuals, say, "I *am* good because of talent." For others, we say, "They *are* evil because of them."

We need to develop empathy. My regular driving route to KPU has recently become re-routed. Now, I travel through the alleys for part of the drive. I regularly drive by 10 to 15 women. They are street workers in the downtown eastside. It is sad. Do not misread me, I am not saying that it is a bad thing to do because I am not commenting on these peoples' choices or the circumstances that drove them to this place.

However, these women are severely marginalized. Most of the women are addicts; many are aboriginal women; some of them are in their teens. It is tragic. We live amongst this and we are educated people with lots of resources who know about past crimes such as Robert Picton and who nevertheless turn a blind eye to the suffering of others.

13. Yet, it does not seem like an idealistic notion to me. Here's my sense of you, on the one hand, you state the observation, and "This is a problem. We have to fix it." On the other hand, it does not seem like much lay commentary on war, "War is horrible. We should end war." Of course, people consider war bad. In that, you seem pragmatic in problem-solving here compared to the idealistic, optimistic paying of lip-service to negative societal

issues. In other words, we need reasonable consideration of the amount of reduction in these problems.

Absolutely right, we do have some solutions. We do have harm reduction, safe-injection sites, INSITE, and so on. But things like 'Just Say No' do not work. Again, I know myself as a historian and historians don't have the reputation in the academy of leading social causes, but this is something that we can do. We can do *something* about this.

14. In short, other than the theoretical, we need to do concrete, on-the-ground research. In the immediate, something practical.

Yes! In my work with colleagues on this mental health project, one of things we are developing are educational resources for people in professional programs. When individuals receive a mental health diagnosis they inevitably end up meeting with a lawyer, doctor, a nurse, a social worker, and so on. When those professionals are being educated, what do they need to know about the people with a mental health diagnosis?

I ask the people in the group I am working with, what would you want these professional people to know about your life? We are developing these resources that will be used in education. We work with colleagues who have various mental health diagnoses, fascinating! We have a group of about 20 or so. 2 of them are doing their masters in history and ended with mental health concerns and on the street. Their lives completely changed. I was a student. I was doing my

master's degree in history. People have narrow assumptions of people who are homeless, living in poverty, and who have a mental health diagnosis.

15. What advice do you have for undergraduate and graduate students?

I think going into the world and experiencing in all of its terror and beauty is important. Take risks, even for university students, go into a course unrelated to your field, try a lab, go out there and work with community people. One of the things I consider important, not everyone has the opportunity, travel out in the world – even volunteering in the downtown eastside. Go to India, Germany if you want, and do a year abroad, even a semester – travel up north!

These experiences are worth it. When you take risks, leave the comfortable behind, whether for a sustained period of time or one day or a week, the benefits are huge.

16. What is the most important point about education?

I considerate it important to understand history. If we understand, we know why things are the way they are today. So a classic, easy-to-understand example, is the place of aboriginals in society today. If we understand history, and acquire a history of aboriginal people before colonization, look at the colonization period, look at the epidemics of disease, and, more recently, residential schools and the sixties scoop, that would allow us to have a deeper understanding of some of the challenges facing our society today – especially in terms of aboriginal people.

Another example of the importance of history is simply developing an understanding of our education system. You go to school from September to June, why these dates? Why is school something paid for by the state? Why is it that people without children pay for the education of all of our society's children? Our ancestors wanted our society full of people educated a certain way. It was a form of indoctrination. It was also a way of creating a viable workforce. There was a belief that if you had to train children to be good productive workers so you began by training them to go to school at a specific time and days of the week. Think of a difference that made to children and to our notion of childhood.

Previously, most children got up with the sunrise and slept at sunset. They lived with the rhythms of the seasons. Imagine how different it was to always have to be at school at 9:00 am no matter the time of year. People previously did not have a sense of time that was coupled to a clock. Suddenly, you have to be at school at 9 o'clock. At 10 o'clock, you have to open your algebra textbooks, and so on. The purpose of school, of mass school, was to pave the way for people in the workforce: industry.

There was a reason for the development of public schooling. There was a historical reason for that. Without understanding that, I consider it difficult for people to understand the grounding for our educational system. People take it for granted. It is paid for by the state. It runs from September to June, and so on.

To me, that lesson is a critical thinking lesson. If you begin to question things like that, you begin to learn that the taken-for-granted structures in our society are not simply there. They happened for a reason. It allows you to re-think anything in our life. Also, it allows us to think of the possibility of change. If our schools, as an example, were developed these structures in these ways, then they can change. It seems to me a hopeful notion for change.

Bibliography

1) American Indian. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/405873/American-Indian

2) colonialism, Western. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/126237/colonialism

3) education. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/179408/education

4) Faculty of Education: Department of Educational Studies (n.d.). Veronica Strong-Boag. *Department of Educational Studies.* Retrieved March 6, 2014, from http://edst.educ.ubc.ca/facultystaff/veronica-strong-boag/.

5) higher education. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/265464/higher-education

6) historiography. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/267436/historiography

7) Natalie Zemon Davis. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/1566421/Natalie-Zemon-Davis

8) Purvey, D. & Belshaw, J.D. (2009). *Private Grief, public Mourning: The Rise of the Roadside Shrine in British Columbia*. Vancouver, BC: Anvil Press.

9) Purvey, D. & Belshaw, J.D. (2011). *Vancouver Noir: 1930-1960*. Vancouver, BC: Anvil Press.

10) Purvey, D. & Walmsley, C. (2011). *Child and Family Welfare in British Columbia: A History*. Vancouver, BC: Detselig Press.

11) Purvey, D., Vermeulen, & Power, C. (2011). Restorative Justice: Does it have a place in elementary schools?. International Perspective on restorative Justice in Education.

12) Purvey, D. & Webber, C. (2011). 'Something Greater was Happening': A Novice Principal Reflects on Creating Change Through Building Community Relationships. New Primary Leaders: International Perspectives.

13) Saunders, J. (2012, June). Kwantlen welcomes Dr. Purvey as dean, faculty of arts. *Kwantlen Polytechnic University Newsletter.* Retrieved March 6, 2014, from http://www.kpu.ca/news/kwantlen-welcomes-dr-diane-purvey-dean-faculty-arts

14) Sandberg, S. (2010, December 21). Sheryl Sandberg: Why we have too few women leaders [Video file]. Retrieved from http://www.ted.com/talks/sheryl_sandberg_why_we_have_too_few_women_leaders.html

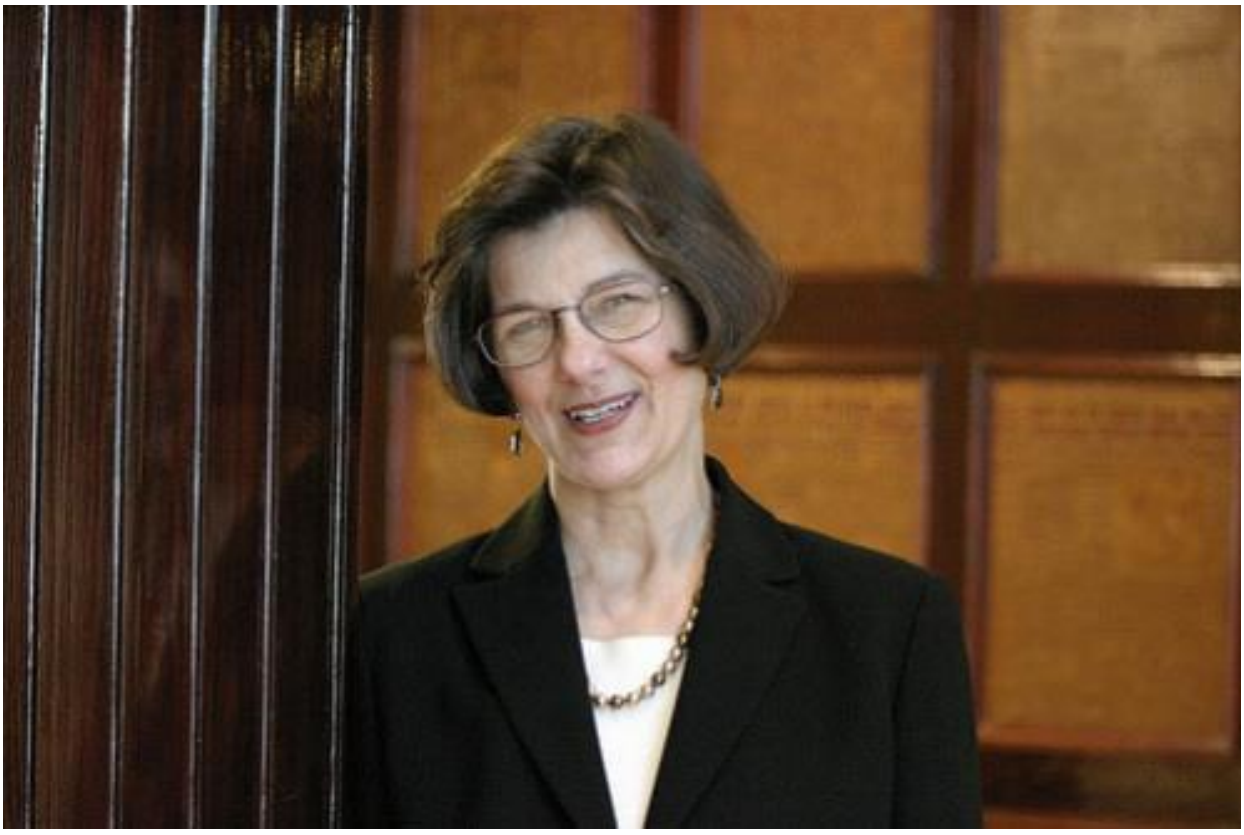
15) Sandberg, S. (2014, December). Sheryl Sandberg: So We Leaned In… Now What? [Video file]. Retrieved from http://www.ted.com/talks/sheryl_sandberg_so_we_leaned_in_now_what

16) Sheryl Sandberg. (2014). In Encyclopaedia Britannica. Retrieved from http://www.britannica.com/EBchecked/topic/1698757/Sheryl-Sandberg

17) The Runner (2012, June). *New Dean of Arts at Kwantlen*. The Runner. Retrieved March 6, 2014, from http://runnermag.ca/2012/06/new-dean-of-arts-at-kwantlen/diane-purvey-web-01/.

Dr. Barbara Forrest: Philosophy Professor, Southeastern Louisiana University & Member, NCSE Board of Directors

November 1, 2013



1. What academic positions have you held? What academic positions do you currently hold?

My current position is Professor of Philosophy in the Department of History and Political Science at Southeastern Louisiana University, where I have worked since I began teaching in 1981. I started as a part-time philosophy instructor and remained in that position for seven years until I completed my Ph.D. in philosophy at Tulane University in 1988. That year, the university created a tenure-track position for me as an assistant professor in philosophy, making me the first full-time, credentialed philosopher Southeastern ever hired. I earned tenure and promotion to associate professor in 1994, and ten years later I was promoted to full professor.

2. How was your youth? How did you come to this point?

I was born and grew up in Hammond, Louisiana, a small city of 10,000 people that was the epitome of what people typically understand as the "deep South." I was a bookworm and spent most of my spare time reading. Growing up in the 1950s and 60s, my childhood and adolescence were shaped mostly by the civil rights struggle, which was taking place in my own immediate area and throughout the South.

I watched my town change from one in which the public schools were segregated to one in which both white and African-American children attended school together. I was among the first group of students to attend high school under the federal desegregation order, which, believe it or

not, is still in effect in my old school district. So my early life was shaped by issues of social justice, particularly concerning race.

3. What was your original dream? If it changed, how did it change? Furthermore, what changed it?

My earliest career plan, my "dream," was to become a physician. This dream was rooted in my concern for social justice and the deep religious faith that I had during childhood and adolescence. My role model was Dr. Albert Schweitzer, the famous Alsatian physician and theologian who left his life in Europe to run a hospital at Lambaréné in French Equatorial Africa. One of the highlights of my childhood was receiving a reply from his secretary to a letter I had sent to him in Lambaréné — several years after I wrote the letter! During recess in the sixth grade, I used to sit on the sidelines and read books about medicine rather than play with the other kids.

I was a "nerd" before that word even existed! But at some point my goals changed. I had little aptitude for mathematics, which I knew that I would need in the study of the sciences necessary to medicine. I was also by nature more suited to teaching, and tackling the problem of ignorance was a very pressing concern to me since I was literally surrounded by it in the form of racism. I was extremely idealistic! So I went for the Ph.D. rather than the M.D. One of my sons is a physician, but he's much better at math than I was!

4. When did Philosophy interest you?

I began taking philosophy courses when I was about halfway through college. My original goal was to become a high school English teacher since I loved books and had wonderful English teachers in the public schools I attended. I married at eighteen, so I was married when I started college. (And I am still married to the same guy after 43 years!) My husband urged me to take at least one philosophy course before I graduated, as he had done: "Everyone ought to take a philosophy course." So my husband actually gets the credit for steering me toward my profession.

I was an English major and had always loved reading fiction. I loved "highbrow" fiction such as the novels of Thomas Hardy and philosophical poetry such as Alexander Pope's "Essay on Man," so I was clearly leaning in the direction of philosophy although I didn't know it. I didn't know anything about philosophy and had never considered taking any courses. So at my husband's suggestion, I took a class and was hooked immediately. I loved ideas, and I thought that this was what would save mankind: using great ideas to overcome ignorance. As I said earlier, I was really idealistic.

I became certified to teach high school English, but my student teaching was enough to convince me that I didn't want to spend my life disciplining other people's children! I went straight to graduate school in philosophy and never looked back.

5. Where did you acquire your education?

I attended public schools in Hammond, where I grew up. Family circumstances required that I attend college and graduate school in my immediate area, so I was fortunate to live near public universities. The taxpayers of Louisiana provided me with scholarships, which enabled me to earn my B.A. in English at Southeastern, where I now work, and my M.A. in philosophy at Louisiana State University.

I earned my Ph.D. in philosophy at Tulane University in New Orleans. Tulane was, and still is, the only Louisiana university to offer a Ph.D. in philosophy. Fortunately, I live only about an hour away, so I could drive to my classes and go home at night. My husband worked full-time for the state of Louisiana, but we also operated a commercial poultry farm that he inherited from his parents. We used the farm income to pay for our doctoral degrees. I am probably the only person in the history of Tulane University who financed a Ph.D. in philosophy by raising chickens.

6. What kinds of research have you conducted up to the present?

Most of my scholarly research has revolved around the issue of creationism, although I didn't start out with that intention. Events in Louisiana — including a creationist threat to my own children's science education — steered me in that direction. Fortunately, I was well prepared to write about creationism since my doctoral dissertation was about Sidney Hook's philosophy of education.

Hook was John Dewey's most prominent disciple and worked closely with him, so I studied Dewey as well. They wrote extensively and insightfully about the importance of science and democracy to public education and about other, related public policy issues. These three concerns — science, democracy, and public education — were interwoven into much of their philosophical work.

I corresponded with Hook while writing my dissertation and eventually went to visit him; he helped me enormously. I learned from him that philosophers must understand the way the world outside the academy works if they want their professional work to be useful to people other than their fellow philosophers and if they want to be involved in policy issues. I have never wanted to be isolated in the "ivory tower," producing publications that would be read only by other philosophers.

I have always wanted my work to be useful to people outside my discipline. I also learned from Hook that careful attention to empirical data is essential to producing informed philosophical work. (Hook read avidly about history and science.) Finally, Hook was a master of clear, incisive analysis of other people's ideas. Studying Sidney Hook's work prepared me for writing about creationism.

I have also published on the subjects of philosophical and methodological naturalism, which was also one of Hook's central concerns. Methodological naturalism is the procedural stance of the scientist, who is limited to seeking natural explanations for the natural world. Science doesn't work when unverifiable supernatural concepts are incorporated into it.

Philosophical naturalism, on the other hand, is a metaphysical view that excludes the supernatural. Scientists need not — and many do not — adopt naturalism as a personal worldview, even though they must leave the supernatural out of their work as scientists. They can be both good scientists and faithful believers as long as they respect the procedural limitations of their science and the epistemological limitations of their faith.

Creationists, however, especially the intelligent design creationists about whom I have written so much, deliberately conflate philosophical and methodological naturalism. They argue that leaving God out of scientific explanations is tantamount to personal atheism. So my concern as a researcher has been to clarify the relationship between philosophical and methodological naturalism.

I argue that although philosophical naturalism rests on what we have learned about the world through the naturalistic methodology of science, methodological naturalism does not, conversely, require philosophical naturalism as a personal worldview because it does not exclude the logical possibility of the supernatural. I think that this is the most accurate and intellectually honest position to take even though I myself am no longer religious.

Finally, I have applied my research concerning creationism and naturalism to the discussion of public policy in regard to public education and the separation of church and state. These were natural extensions of my research into creationism.

7. If you currently conduct research, what form does it take?

I am not currently doing any research. My answer to this question is not what you expected, but I hope that you will print it. It illuminates what is happening across the United States to institutions whose operating budgets — hence whose students and faculty — are bearing the brunt of a conservative political philosophy that treats public universities, young people, and teachers as liabilities rather than assets. Ultimately, American society will pay a high price for this shortsightedness.

Louisiana is governed by a conservative Republican, Bobby Jindal, who treats public institutions as a liability rather than an investment in the future. In only five years, he has cut $650 million from public universities while privatizing state services and giving hundreds of millions of dollars in tax breaks to out-of-state companies.

My university alone has absorbed $48 million in cuts since 2008. As a result, the university revoked reassigned time for faculty research, and teaching loads have increased. Despite being a tenured full professor who has published extensively in both scholarly and popular venues, I now have the teaching load of a beginning tenure-track instructor. I absolutely love teaching, but my philosophy colleague and I are currently teaching a total of nine undergraduate courses this semester alone. So my teaching load leaves me no time for research, despite the fact that I have achieved an international reputation for my work.

I am proof of the value of public schools and universities, having more than repaid the investment that my fellow citizens made in my education. Moreover, my work has been useful to people outside my discipline, which is something that I think most philosophers cannot say. The book I co-authored with scientist Paul R. Gross, *Creationism's Trojan Horse: The Wedge of Intelligent Design*, was a central resource for the plaintiffs' attorneys in the first legal case involving intelligent design creationism, *Kitzmiller et al. v. Dover Area School District* (2005).

But because of the current political priorities in Louisiana, I have no time for research any more, despite the fact that I could still be doing productive scholarly work. On the other hand, I now have the luxury of reading books that I want to read for my own enjoyment. And my first grandchild was born recently, so I am delighted to have more time to be his grandmother!

8. If you had infinite funding and full academic freedom, what would you research?

I am fortunate to already have full academic freedom at Southeastern. The university has been wonderfully supportive of my work, despite its being more controversial than what professors typically do. I would be quite happy with just enough funding for a one-course-per-semester teaching reduction! But if I had infinite funding, I would establish a research center for finding effective ways to counteract the influence of the Religious Right — specifically, the Christian Right — in American education, culture, and government policy.

That's a tall order, I admit. However, I see the Religious Right as one of the most destructive and pernicious influences in America today. It is the force behind creationism, anti-gay bigotry, and

some types of mean-spirited economic policies. If I had infinite funding, I would use it to support focused, results-oriented research by philosophers and other scholars, journalists, and policy analysts in an effort to find effective ways to get past this perennial problem in American life.

Please note: I am not saying that *religion* is the most pernicious influence in America. I don't believe that. Although religion has been a divisive force throughout most of human history, it is also a fascinating and important aspect of human experience. Having once been very devout myself, I have been on both sides of the religious divide and understand both sides. But the Religious Right has infused American culture and politics with bigotry and ignorance.

Counteracting its agenda has required the expenditure of both time and money by people and organizations that otherwise could have and should have been doing more productive work. So the country needs a well-integrated, long-term commitment by people who can focus exclusively on how to help the country transcend the Religious Right's influence. Even with infinite funding and infinite academic freedom, I couldn't do that all by myself!

9. Since you began studying Philosophy, what do you consider the controversial topics? How do you examine the controversial topics?

I think that the most controversial topics concern the theory of knowledge, or epistemology. Both historically and today, the ways in which people claim to know things have influenced everything that humans do, from founding religions to running governments. Knowledge claims also shape our moral conduct. Depending on what the answers to

epistemological questions are, human beings can either benefit greatly or suffer terribly at each other's hands.

The two most basic epistemological questions are these: (1) What truly qualifies as knowledge? and (2) How do humans acquire it? Given the fact that humans must get things done together on the basis of shared understandings of the world, nothing is more important than clarifying what it truly means to know something and creating a body of shared, publicly accessible knowledge. Actually, we already know how to do both of these things, but few people outside philosophy are either familiar with or concerned about epistemological questions. I was flabbergasted to read in Barack Obama's book, *The Audacity of Hope*, his insightful discussion of precisely this issue. He understands that "the best we can do is to act in accordance with those things that are possible for all of us to know, understanding that a part of what we know to be true — as individuals or communities of faith — will be true for us alone" (p. 220). We cannot build public policy on private, hence unverifiable, religious experience, even if it is a genuine epistemic state. But such epistemological awareness is unusual in anyone outside academia, much less politicians.

There are only four basic ways in which people can claim to know things: (a) supernatural revelation, (b) some form of intuition, (c) rational reflection (reason), and (d) sense experience. The first two are highly problematic because they are by definition private and unverifiable. Revelation requires the psychological influence of charismatic leaders and the power of authoritative institutions to convince people of its truth. Intuition, similarly, can be used to assert *literally anything* without any accountability for one's claims. So that leaves reason — or rational reflection, which everyone can do — and sense experience, which everyone naturally

has, as the only reliable sources of knowledge. All humans have the natural equipment for those. Whatever progress humanity has made during our collective history has come from those two sources.

I see the lack of understanding of epistemological issues as at least part of the reason that the Religious Right has been able to accumulate the influence that it has. (But the problem is much more complicated than that.) People such as Tony Perkins, who runs the Family Research Council, promote harmful, insidious ideas that are unsupported by any rationally defensible arguments or evidence. The beliefs that Perkins and his FRC associates promote, such as the false claim that gay people are more likely to be pedophiles, are fueled and funded by their supporters' uncritical acceptance of their claims.

Consequently, in some of my work I have examined the issue of how public policy — for example, concerning the teaching of evolution in public schools — is shaped (or mis-shaped) by ideas about what qualifies as knowledge.

10. How would you describe your early philosophical framework? Did it change? If so, how did it change?

I am by nature a generalist. I think that the study of philosophy is enriched by integrating data from history, science, and other disciplines into it. I never teach my students about any philosopher without first setting up the broader context in which the philosopher's work was done. This makes philosophy much more accessible to students. So I have always been drawn to

philosophers who were interdisciplinary thinkers and who made a conscious effort to make their work accessible and useful to people outside philosophy.

The greatest philosophers — for example, Plato, Aristotle, David Hume, Immanuel Kant, and others — addressed societal issues, and they interacted with people other than philosophers. These thinkers were broadly knowledgeable in areas other than their own disciplines. In addition to their purely philosophical work, they used their expertise to address matters of concern to their fellow citizens. This is why they are still worth studying.

So I began my formal study of philosophy with a strong attraction to whatever kind of philosophy would be useful in helping to solve "real-world" problems. The philosophers I studied who most effectively addressed such problems were the pragmatic naturalists, especially Sidney Hook and John Dewey, who understood, among other things, the importance of science and public education to democracy. They weren't narrow specialists. I also studied some of their like-minded colleagues such as philosopher of science Ernest Nagel.

Hook and Dewey's pragmatic naturalism was a natural fit for me since I already leaned strongly in that direction. Of all the modern philosophers I have studied, their work made the most sense to me and still does. So I have not had any major shifts in my own philosophical framework.

11. In 2007, you co-authored with Dr. Paul R. Gross *Creationism's Trojan Horse: The Wedge of Intelligent Design*, what is the origin of the title? What does the book depict?

Our editor at Oxford University Press suggested the main title, *Creationism's Trojan Horse*. Although at first I thought it was trite, it captures the essence of the intelligent design (ID) creationism movement: ID is nothing more than the most recent variant of creationism, which its proponents promote as science to gullible people. Paul and I came up with the subtitle to capture the most important aspects of the book's focus.

The book actually grew out of my research into the Discovery Institute's "wedge strategy," which is its plan for promoting ID. The strategy is outlined in a 1998 document entitled "The Wedge," which was aimed at prospective donors. I was able to authenticate this document, which was leaked and posted on the Internet, and to establish that most of the strategy was being executed — with the exception of producing real science, of course. Paul, who is a distinguished scientist, did a very thorough and careful critique of the "scientific" claims of ID proponents.

The book brings together a huge amount of evidence showing that the Discovery Institute's aims and rationale for ID are — as stated in their own words — explicitly religious. The Discovery Institute's primary aim is to create an opening in the public mind — analogous to using a metal wedge to split a log — for the idea that the supernatural is essential to scientific explanations. They also aim to get ID into the public school science curriculum by exploiting policy-making processes.

12. You served as a Plaintiff on the first legal case involving Intelligent Design, *Kitzmiller et al. v. Dover Area School District,* in 2005. What events preceded the case? How did the

litigation proceedings conclude? What does this case entail for future legal battles of this kind?

I was so proud that my work resulted in my being called as an expert witness for the plaintiffs, all of whom were parents of children in the Dover, Pennsylvania, school system. In 2004, eleven parents sued the Dover school board in federal court for trying to present intelligent design to children as a scientific alternative to evolution. The school board members weren't doing this because they knew anything at all about science.

In fact, they were completely ignorant about the science. They simply had personal religious objections to teaching evolution and were determined to force their views into the science classrooms of Dover High School.

The litigation ended in December 2005 with a ruling in favor of the plaintiffs. Judge John E. Jones III ruled that because ID is creationism, it is a religious view and therefore cannot be taught in a public school science class. He issued a permanent injunction against the school board. Even though his ruling is legally binding only in the Middle District of Pennsylvania, it has already dissuaded school boards in other parts of the country from following suit. Whenever and wherever the next ID legal case comes up, the first thing that the presiding judge will do is read Judge Jones' *Memorandum Opinion*, which is a powerful and thorough decision that he wrote with future cases in mind.

13. In 2006, you were the co-recipient with Dr. Kenneth Miller of the Public Service Award from the American Society for Cell Biology. What does this award mean to you? What further responsibilities do the award entail?

This was a very nice award from the scientific community in appreciation for the work that both Kenneth Miller and I had done to defend the teaching of science. Ken was also a *Kitzmiller* expert witness. We were both involved in such work even before that case. To me, the award signified the fact that I was able to successfully put my philosophical training to use for the public good, which I had always wanted to do. My work was just as important in the *Kitzmiller* case as that of the scientists.

As for further responsibilities, the award didn't formally require anything. But I view my work against creationism as a civic duty, so I have continued to do it. For example, I serve on the Board of Directors of the National Center for Science Education. I would have done the same things even if I hadn't received the award.

14. Who most influenced you? Can you recommend any seminal books/articles by them?

Keeping the list to just a few is difficult. As I said earlier, I am a generalist. But I would have to say that the philosophers whose work most influenced me are Plato, Aristotle, David Hume, John Stuart Mill, and Sidney Hook. Their influence stems from their ability to use their expertise to illuminate issues outside philosophy.

In the *Republic*, Plato stressed philosophers' civic obligation to their fellow citizens, who, through a public education system, provided them with the finest education available. Philosophers must therefore make a concerted effort to contribute to the public good in payment of this debt. The *Republic* has guided me throughout my career in this respect.

The other thinkers influenced me because of their interdisciplinary orientation to philosophy. They thought deeply and broadly about practical issues. Aristotle, for example, in his *Nichomachean Ethics*, offers a still-workable ethical system based on virtues of character acquired through one's actions. He stresses the civic importance of virtuous conduct.

In *an Enquiry Concerning Human Understanding*, David Hume, who was a major figure in the Scottish Enlightenment, presciently recognized the need to study human cognitive faculties empirically in order to analyze their capabilities and shortcomings. In doing that, he illuminated the epistemological deficiencies of supernaturalist religion. He also analyzed religion as a human phenomenon in *The Natural History of Religion*.

He respected (although he was not convinced by) its more rational aspects, reflected in traditional arguments for God's existence, while warning against its irrational manifestations such as clerical charlatans and what we now call fundamentalism. A century later, John Stuart Mill, a 19th-century thinker who embodied the best aspects of the Enlightenment, offered one of the most powerful defenses of intellectual and personal freedom in the English language in *On Liberty*. Everyone should read that.

No one, however, influenced me more indelibly than Hook, who was one of the most important public intellectuals of the 20th century. He wrote with a clarity and incisiveness that made the most complex ideas understandable. He avoided unnecessary philosophical jargon and never lost his ability to communicate with non-academics. I think that this stemmed from his very humble beginnings in the slums of Brooklyn.

Hook's essays in *The Quest for Being and Other Studies in Naturalism and Humanism* influenced my own philosophical work. (This book is available in pdf at Internet Archive: **https://archive.org/details/sidneyhooktheque033567mbp**.) He discussed diverse topics such as "Philosophy and Human Conduct," "Modern Knowledge and the Concept of God," and "Scientific Knowledge and 'Philosophical' Knowledge." He was never jealous of his philosophical turf.

He understood that science has deprived philosophy of most of the metaphysical territory that philosophers have considered uniquely their own and argued that philosophy is more than metaphysical pipe dreams (my term, not his!). In *Philosophy and Public Policy*, he states forthrightly that philosophers must take time to learn the relevant facts if they wish to contribute effectively to policy issues. This statement struck me as I was casually browsing through the book in the university library when I was in graduate school. Knowing how disconnected philosophers can be from life outside the academy, I never forgot it, especially in my work on intelligent design creationism.

15. Where do you see Philosophy going?

My answer here is shaped by the fact that, except for a few other philosophers who are involved in the creationism issue, I have actually worked more with scientists than philosophers. So my vantage point is mostly from outside the community of academic philosophers.
Concerning philosophy as a teaching discipline, I think that reputable universities will continue to see its value in helping students learn to think about major questions with which human beings are concerned.

Unless a university education is reduced to little more than vocational training, philosophy will continue to be a vital part of the humanities. Young people should learn to think critically and insightfully about how to live a moral life, how to address societal issues such as social justice and equitable distribution of resources, how scientific reasoning works, and, of course, how these issues intersect with epistemological ones. Students are very interested in those things. There is also tremendous value in studying the history of philosophy.

Much can still be learned from Plato and Aristotle, Descartes, Hume, etc. Good teaching — which is the most important job of any academic — can highlight the continuing relevance of the great philosophers.

I am not as optimistic about the relevance of philosophy as a research discipline. Philosophers will certainly continue to do research and publish, but much of modern philosophy, in my opinion, has become largely irrelevant to what is happening outside both the discipline and the academy. If the budgets of public universities continue to be cut, philosophers will become

vulnerable unless they can demonstrate that what they do is valuable to someone other than themselves. You probably couldn't find ten people in a hundred in the United States who can name a single working philosopher.

Most of them have heard of scientists such as Stephen Hawking because of the reach and influence of their work. One can learn about scientists merely by reading Google News! But people don't know anything about living philosophers.

This is because philosophical research has become so specialized and insular that it benefits virtually no one except other philosophers who are doing the same kind of work. Most philosophers live in a very comfortable academic bubble. (That is true of academics in general, however.)

There have been historically and are currently notable exceptions. For example, Kant was concerned about political issues and directed some of his work at a broader audience than other philosophers. Currently, Phillip Kitcher writes about the intersection of science, democratic society, and politics, and he makes an effort to address issues of concern to non-philosophers.

Kitcher, too, has expressed concern about the "the increasing narrowness and professionalization of academic philosophy" (http://philosophy.columbia.edu/directories/faculty/philip-kitcher). In addition, my friend and colleague Robert Pennock, a philosopher of science at Michigan State University, set the standard for addressing the problem of creationism. And there are other

philosophers who are using their professional expertise to communicate with and benefit the wider world.

Certainly, someone has to do the pure, basic philosophical thinking that helps to clarify the conceptual foundations of broader, more practical questions. But if that pure, foundational work is not at some point useful to people other than philosophers themselves, there is little point to it.

To the extent that academic philosophy has a future, I think that it lies in taking a more interdisciplinary approach that demonstrates the relevance of philosophy to the concerns of scholars in other disciplines and, ultimately, to the concerns of ordinary people. Otherwise, most of us philosophers could drop off the planet tomorrow and the world would neither notice nor be any worse off.

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