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## My Mentors in these atomic times...

[September, 2020] I was born in 1958—full-on Cold War... my family lived upwind of the Nevada nuclear weapons test site and air quality was the reason my parents gave when they moved our family back to the Midwest... I was in kindergarten in a tiny town in Illinois during the Cuban Missile Crisis, when a bomb drill caused me to become aware of nuclear annihilation at that age. I opted out: that very night I got sick and stayed chronically ill dropping out of kindergarten and was mostly homeschooled for the next 12 years. I am fortunate that my brilliant parents were my teachers and I learned a lot on that journey. When I emerged well enough to go college and work, I learned even more from amazing women; these six, my MENTORS:

### **Diana Bellamy, MFA**

At Reed College I majored in Biology—focused on evolution, and History of Science. As a Junior I fulfilled an arts requirement by taking a theater course, for the first time. Professor Diana Bellamy was a working actor, and in her Introduction to Acting class I discovered that embodiment of an experience is something that others can see and recognize, and at times, experience with the actor. My ability was spotted by Bellamy. She invited—urged me—to change my major and come to the Theater Department, even so late in my coursework. I was shocked into an evaluation of my own priorities and goals.

The following summer was a deep-dive into determining whether to stay the course in my original science major, or jump. The process of discernment, largely via discussions with my father, brought me to a deep understanding of WHY I was studying science: I knew that society's decisions and actions would be, more and more, made in the worlds of research and technology, and I also knew that ordinary people do not speak those languages. I wanted to become fluent enough in that world to be able to help

translate for those who are affected, but outside that bubble. Eventually, ten years out, I attained that role...and have stayed with it.

Diana's recognition of my ability to project experience challenged me to find the reason I would stay in Biology besides a more stable work-life. It was an empowerment for me to find how to use my gift as a communicator. I bow to her every time I take the stage to speak to 10's or to 1000's of people, and help them experience the vital importance of what I am there to say.

### **Helen Caldicott, MD**

Helen Caldicott deserves a much greater place in our histories of the Cold War and ending the USA / USSR arms race than she generally gets. This is, perhaps, because she is powerful and a woman. A pediatrician, who in the 1970's would not tolerate the radioactive fallout she and her patients were suffering from nuclear weapons tests in Australia, Helen and her family came to the USA. She and another physician named Ira Helfand revived what had been a local Boston organization of physicians and created a Nobel Prize winning organization called Physicians for Social Responsibility (PSR), which later participated in the creation of another Nobel Prize winning group, the International Physicians for the Prevention of Nuclear War (IPPNW). These two along with hundreds of other organizations committed to peace and nuclear disarmament formed the International Campaign for the Abolition of Nuclear Weapons (ICAN) which has helped to create the new Treaty on the Prohibition of Nuclear Weapons (see <http://icanw.org/the-treaty> ) and also won the Nobel Prize (2017).

Helen herself is a powerful communicator and will move audiences at a level that can change the course of someone's life and work. She followed her own destiny to winning meetings with Mikhail Gorbachev, President of the Soviet Union, where she educated him about Nuclear Winter and the fact that nuclear is not a war that anyone can win. She also met with President Reagan in the era and diagnosing early-stage dementia... Her ability to bring the reality of the world to these men, and reality of these men to the world set her aside, in a class by herself—and was an enormous contribution to us all.

I first met Helen in the body of her Cold War block-buster book "Nuclear Madness." I was in the midst of an existential crisis that could have become an even bigger health crisis. After college I needed a job (not yet a career) because I was broke, broken up from my first "true" love, and far from home. I got a job as a research assistant in a lab at a prestigious medical school; it was 1984.

Within 2 weeks, I was inadvertently contaminated with radioactivity (without my knowledge) by carelessness of a lab-mate. The radioactive material, Phosphorus-32 is used in research to trace biochemical activity in living organisms. This type of radioactivity is not deeply penetrating, so there was some reason not to panic, however the I was exposed continuously for over a week, and I also found radioactivity at home-- my toothbrush was "hot"—so I had also had some level of internal exposure. I was terrified. The lab used concentrations of the tracer thousands of times higher than is typical.

The institution told me there was no danger, but because I was upset, they helped me transfer to a different job. No accident report was filed, and in the midst of transition, my radiation detection badge was never processed. It is not possible to know the dimensions of my exposure—I began having

symptoms that were not normal for me. Many people, including some family members told me I was imagining things. No one in my circle understood how terrified I was.

I was fortunate that Helen had already written “Nuclear Madness”—the first edition came out in 1978, just before the March 1979 Three Mile Island nuclear meltdown in Harrisburg PA—an event that propelled the book into multiple printings including a Bantam Paperback edition that I found. It turned out that 7 years later I helped Helen to revise and update the same text for the 1994 WW Norton edition. It was Helen’s deep commitment to truth, to speaking and writing that truth, to empowering people to take action for good. Helen’s words accurately described radiation and its potential for harm, and in my panic about the unknown, this calmed me.

Every other authority I had encountered was trying to tell me there was no problem—when I knew they had no right to dismiss what had happened to me. I am quite certain that had I remained alone with my fear, despair, and confusion my panic would have resulted in behaviors that would have compounded any harm bodily from that radioactive contamination. Reading Helen’s work let me know there was at least one woman walking the Earth who did know what I was going through... it made it possible for me to choose recovery and walk away from a legal battle that would have forced me to maintain, hold and prove a myself a victim. Instead, following in Helen’s wake, I chose Peaceful Warrior. Thank you Helen!

### **Sharon Barry, CPA**

As I left research behind at age 25, I needed stability, clean air and water, and a different kind of stress as I rebuilt my health. In 1986 I got a job running the retreat, conference center, and camp in Michigan where my parents had been summer staff when I was a toddler—and I had attended camp. Circle Pines Center is both legendary, and unknown. I created, and served on a Management Team for five years and built a strong tool-box of non-profit organizational skills. That portfolio includes business management and administration. It was my dear friend and mentor, Sharon who helped me learn. Our relationship was not easy—but Sharon stood by me as she taught me the craft, and helped with the art by serving on the Finance Committee of the Board. We rebuilt the Center which had been in tough shape...to its strongest financial footing in decades. Sharon went on to win her own CPA and has been part of my financial life ever since as my accountant. I am not wealthy, but I am also deeply committed to accountability. Sharon taught me, and continues to support me in this. It is her strength I pull on to get through my own tough times. THANK YOU!

### **Judith Johnsrud, PhD**

I met Judy in 1990 at the Backyard Eco Conference in Michigan. I left my submersion job at Circle Pines and drove to the gathering, expressly to hear Johnsrud speak about radioactivity in the environment. I had been recovering from my radiation exposure, and learning about new proposals from the federal government to deregulate a large share of the radioactive waste generated in the processing of uranium for nuclear fuel, and the operation of nuclear reactors for energy and nuclear weapons materials production. The Below Regulatory Concern Policy would put metals, building materials, soil and many other materials that were measurably radioactive into unregulated county landfills and also allow

recycle into consumer products, with no warning or label. The deregulation is what I wanted to talk to her about. It seemed to me that what happened in the lab with a tiny plastic petri dish might happen in a Walmart to someone who never knew what had happened since radioactivity is invisible, has no smell or taste...

When I got to the conference, event organizers were looking for a volunteer to drive Judy across the state to the airport near Detroit. I immediately volunteered—it was a 5 hour drive and that gave us plenty of time to get to know each other. Judy remained my friend, my confidant and my teacher for the next 20 years as I moved into working at the national and global level for the peaceful end of the nuclear era—ending the production of more nuclear waste and better protection for our living systems from the waste we already have made. Nuclear Information and Resource Service (NIRS) was founded by a small group, including Judy Johnsrud. I was hired in 1991 as Staff Biologist and Radioactive Waste Specialist, and Judy was always there—and in the first decade, we were often the only women in the room. Judy died in 2014; I retired from NIRS, five years later, in 2019.

### **Joanna Macy**

The paths of Joanna Macy and I have crossed and re-crossed—I first met her work in her first book, ‘Despair and Personal Power in the Nuclear Age,’ published in 1983, before my radiation accident...I actually met her in-person, briefly at that time because of her leadership in the Buddhist Peace Fellowship... and our paths crossed again, briefly, when she and her husband Fran introduced me to their concept of Nuclear Guardianship. It was not until a younger friend and protégé of mine convinced me to attend a short-course at Schumacher College in Devon England (1998) led by both Fran and Joanna that I got to know her...a little. It was a two-week session rooted in community work that formed the later book, ‘Coming Back to Life’ (1998). I include Joanna here, as a Mentor, even though we have spent little time together, because when I open my mouth to speak, it is most often her influence I hear. The basic insight that we are all one is a foundation for me—and she brings that insight to the nuclear work. I honor her, and in doing so, I hear echoes of her in me.

### **Rosalie Bertell, PhD**

It was Rosalie who most let me know that I am able to contribute original work towards the day that People, to decide not to split atoms any more. Human beings began splitting atoms in Chicago, in 1942. Rosalie, a PhD in mathematics and member of the Order of Gray Nuns, knew more than anyone else I have worked with, that all of it—every last nuclear license, and radioactive emission, all the waste and all the bombs and all the money congress gives to nuclear activities are choices. People made, and continue to make these decisions...and **we can change our mind.**

Rosalie studied radiation impacts and was committed to service on behalf of future generations. She won the Right Livelihood award for her work with communities impacted by nuclear industry. Often called the “alternative Peace Prize” – she was one of the first women to be honored. As a laureate, she was encouraged to find and mentor students. Rosalie hoped that I, and my coworker Diane D’Arrigo would go to graduate school and she could be our mentor. We decided since we were already in our 50’s to simply study with her, informally. We traveled, 5 or 6 times to the Mother House where she

resided and she generously met with us in the last two years of her life. She was always small in stature, but at that point her back was bent and she barely came up to my chest, but still had the intensity of a wolverine!

It was Rosalie Bertell who helped me tackle one of the biggest challenges I have faced. After a public talk on radioactive waste policy that I gave during this time, a woman asked me if radiation was more harmful to women, to her, compared to a man. Even though I had studied and known many of the top independent radiation researchers, including Bertell, I had never heard that biological sex could be a factor for harm—other than in reproduction (pregnancy)—but that is more about the embryo and fetus than the woman. I told her that I was sorry, I did not know and would get back to her. In fact, I forgot.

Two years later, when nuclear reactors exploded in Japan at a site called Fukushima Daiichi, I remembered that question and knew it urgently needed an answer. I was unaware that Dr Arjun Makhijani and a team had written on sex differences in radiation harm in 2006 (see [www.ieer.org](http://www.ieer.org)) and also did not turn that up as I searched for any information on differences between males and females. My findings, five years later are an independent confirmation of the IEER work.

Since I found nothing on a basic google dive, I called Rosalie, who was at that point nearing the end of her life, to ask if she had studied biological sex. She had not, and the one report she pointed me to was out of print. It was my second call, a week later, that prompted her to tell me that I would have to look at the data myself.

I had no idea that the National Academy of Science (NAS) had published tables with 60 years of data on cancers and cancer deaths among the survivors of Hiroshima and Nagasaki. Rosalie told me to find out for myself. I was shocked. I had stopped any formal study of math in the 6<sup>th</sup> grade...she was a mathematician—I asked her to do it, and she reminded me that she was dying. I protested again. It was her next words that pushed me. Rosalie said, “The data is divided by males and females so you can look at this question—and if there is a difference, it will be a simple pattern. It is good you do not have more math because if there is a difference, you will find it and not make it more complicated than it is.” She said to get a few pencils, a sharpener, an eraser and lots of paper, and go to it. I did.

The result was my first paper on the topic, “Atomic Radiation is More Harmful to Women,” (October 2011) published to the web in time for Rosalie to congratulate me. Three years later the paper was the basis for my invitation to speak at the global Vienna Conference on the Humanitarian Consequences of Nuclear Weapons. Three years later as the new Treaty on the Prohibition of Nuclear Weapons was in the work, I founded the Gender and Radiation Impact Project. Rosalie is the one who put rocket fuel in my determination to help. If the world decides to base radiation protection on Refence Little Girl—make every regulation in terms of protecting females who are infants—five years old, future generations have a chance. Rosalie is the one who modeled for me that it is possible to reach for the best possible outcome, and, indeed, we have an obligation to do so.

Mary Olson, September 26, 2020