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FINDING MY RELIGION
Sondra Barrett found God through a microscope

- David Ian Miller, Special to SF Gate
Monday, March 7, 2005

Are spirituality and science incompatible? It's an age-old question with no easy answers. To some, the acrimonious debate over whether to teach about the Bible in America's biology classrooms is reason enough to believe these two sides are mutually exclusive.

Yet science can also be a doorway to the spiritual realm. Take Sondra Barrett, a self-described "hardcore scientist" who had no interest in spirituality but became convinced of a higher power while examining human blood cells as a UCSF cancer researcher in the 1970s.

Since then, Barrett, 64, has used her microscope to photograph everything from caffeine molecules to chicken soup to pinot noir. As a scientist and an artist, she sees these images as evidence of the sacred, revealing the invisible forms and forces at work in everyday life.

Tell me about your religious background. Did you grow up with a particular faith?

I was raised Jewish but basically rejected organized religion as a young adult because it seemed hypocritical to me. At that time [the early 1960s] women couldn't become rabbis, and we weren't counted as part of a minyan (a prayer group). I turned instead to the religion of medical science. Only what was provable was real to me. Life was cells and molecules -- it was purely physical. I wouldn't define myself as an atheist, but I had no spiritual leanings at that time.

But eventually, after completing your Ph.D. in biochemistry and beginning your work as a cancer researcher, you became a spiritual person. What changed for you?

Two things altered my deeper view of the world. One was the microscope. I always find it surprising that a tool of science would lead to my ever growing spirituality, but that's what happened. Seeing living cells up close, I was captivated by their intelligence, energy and order. It opened a window for me to the sacred world. The other factor in my spiritual development at this point was working with children whose disease, leukemia, I studied as a research scientist. Through this work, I was forced to see human beings as more than just physical,

and spending time with one of those children when he died made me look at life and death in much larger terms. I began asking myself about why disease happens. What purpose did it serve in these children? This pushed me to investigating alternative ways of looking at life, including Buddhism, shamanism, Taoism and other mystical traditions.

Do you ever see a conflict between being a scientist and being a spiritual person? I mean, you can't design a lab experiment to prove that God exists.

I don't see a conflict. There are so many things that science cannot explain. As a scientist, I saw that even in a laboratory situation where you could define every variable, you didn't get the same results every day. And I would see that people with one kind of cell type that was supposed to go into remission sometimes didn't. That made me wonder what happens when you base your whole belief system on only what's measurable in an experiment. I began asking myself, "What other dimensions are part of the picture?"

How do you answer that question?

Well, I can tell you that I've looked at life from the inside out, and my perception has been permanently changed. I now see that every part of the living cell can be interpreted as having a spiritual message -- that our cells are spiritual. If you look at their architecture, you see some of the same forms found in sacred art. Why is the spiral considered to be one of the most sacred symbols? Could there be any relationship between this seemingly abstract form and the shape of our DNA? Perhaps our spiritual practices and beliefs have their origins in our cells and molecules, and our ancient ancestors were capable of visioning inside like the shamans can do today. I'm not sure about that, but now I do see that everything physical is sacred.

Tell me about your art. You began photographing with your microscope in the 1970s. What gave you that idea?

My research was on distinguishing differences between normal and malignant blood cells, and part of the evidence came through the microscope. So I began taking pictures of my work. Then, one Saturday afternoon, I took a break from the lab and walked over to the science museum in Golden Gate Park. They had a photographic exhibit of chemicals of the brain. That's when it hit me that this was art -- I mean, truly a kind of visionary art. So I went back to the lab and started pulling chemicals off the shelf to see what they looked like under the microscope.

What kinds of stuff did you shoot?

Vitamins, minerals, salt, sugar -- things like that. I started showing them to the kids in the cancer clinic at the hospital. I was doing all this research on them, examining their blood and bone marrow. I wanted to give something back. I suppose some of the kids didn't know what they were looking at, but a lot of them really enjoyed the experience. And, for some, it made a difference in terms of their understanding of their bodies.

What else did you photograph?

Later on, I got very curious about mind-altering substances. I had this idea, which is very common in science, that form follows function. In other words, things look like what they do. I wanted to know, what do substances like LSD, ecstasy and peyote look like?

What did you discover?

The peyote looked like yarn paintings. LSD looked like a hallucinogenic landscape. I thought, "Well, this is very interesting." So I started taking photographs of other chemicals people take, like caffeine, to see what they look like.

It's interesting that your photo of caffeine has these sharp, jagged lines that look a lot like how someone feels after drinking too much coffee. I suppose that's what you mean by "things look like what they do."

Yes, exactly.

What else do you think these images can teach us about ourselves?

I often use them when I'm teaching about the mind-body connection. Sometimes, there are 300 health professionals in the room, and they see what adrenaline looks like, or caffeine or [the stress hormone] cortisol, and I would say that 95 percent of them get this "Aha!" feeling. It's like they realize this is part of them, and it gives them a greater appreciation of the whole picture, a sense that they're a part of something larger than themselves. Beyond that, what they teach us is that we and everything else in our universe are filled with incredible beauty. And, sometimes, what we can't see [with the naked eye] is even more beautiful than what's visible.

Is there a spiritual message in that for you?

I like to think that spirituality resides in the invisible -- that's where God is. It's unknowable. Through these pictures, a little bit of the unknowable is made visible. So, in that sense, the microscope becomes a sort of spiritual doorway. It's making tangible the workings of the universe -- the workings of biology, anyway. When I give slide shows, which I've probably done thousands of times, there are always people who say, "That really touched me." And it isn't just a matter of them realizing, "Wow, this is adrenaline." It takes them someplace else because they know it's from the real world -- I mean, if you talk about reality TV, this is the real reality TV.

I suppose you could say that looking at a photo of your own cells or the wine that you drink changes your view of reality, of those material things, in some way.

I think it does expand consciousness. I mean, if you know about the history of the microscope and the telescope -- somewhere in the 17th century, common people weren't allowed to use them because, in a sense, they altered people's perceptions

of the universe. There were times when coffee was forbidden, for similar reasons. The microscope is a spiritual doorway because it really shows how we're all connected. On a molecular level, we're all the same. We might have more of one thing than another, but we're still related at the atomic level. At the level of DNA, everything alive on the planet has the same code.

Earlier, you mentioned that watching a child die at the cancer clinic where you were working was one main reason why you began exploring spirituality as an adult. Have you given any thought to what happens when we die?

The only person I ever saw die was Alvaro, the kid with leukemia who I showed my slides. And it looked like when he died, the light left him. I mean, one moment there was light in him, and the next there wasn't. I realized then that I didn't know what happens when people die. At one level, my mind acknowledged that the minerals or the substance of our bodies return to the earth. At another level, I believe that energy -- the essence of Alvaro and all of us -- gets recycled, too.

As a scientist, how do you explain that?

Well this could just be a way of comforting myself, you know, thinking that our energy doesn't die. But if you think about it, physics says that energy is neither created nor destroyed -- it is transformed. So, according to the laws of physics, it doesn't get quashed or erased. That doesn't mean that we necessarily come back in a form, but that our energy might be used to fill another being somewhere. It's like they say: all the atoms of Jesus are still circulating around, and the atoms of Buddha.

To see more of Sondra Barrett's art, visit www.mysticmolecules.com.

During his far-flung career in journalism, Bay Area writer and editor David Ian Miller has worked as a city hall reporter, personal finance writer, cable television executive and managing editor of a technology news site. His writing credits include Salon.com, Wired News and The New York Observer.

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