Circle of Serenity

One of Aspen’s best-kept secrets is the number of Nobel laureates who pass through our town, most of them attendees at the Aspen Center for Physics. By Adam Buckley Cohen

This past summer, the Aspen Center for Physics celebrated its 40th anniversary. But if my father, one of the founders, had gotten his way, there would be no Aspen Center for Physics. No four-acre campus thick with aspens, lilacs, and honeysuckles. No free Stephen Hawking lectures to pack the Aspen Music Festival tent. No office building designed by Bauhaus architect Herbert Bayer.

“The thing I had in mind,” says Dr. Michael Cohen (the aforementioned father), “didn’t have the word ‘Aspen’ in it. And it was going to be a much more primitive type of operation. I actually thought of people living in a glorified tent city somewhere.” He laughs, perhaps imagining scientists debating wormhole theory during a marshmallow-roasting session. But when it came to starting a physics institute, Robert W. Craig and Dr. George Stranahan convinced him that brick and mortar would work better than tent poles and sleeping bags.

It was 1961, and Cohen, a young physicist at the University of Pennsylvania and nascent mountaineer, was aching to spend his summers out west. But if he wanted to work on his own problems—rather than crunching numbers for the Los Alamos National Laboratory in New Mexico or for a West Coast defense contractor—his research grant obliged him to sweat out the summer
months in West Philadelphia. Two thousand miles away, Stranahan and Craig were entertaining similar notions. Stranahan, then a graduate student in physics at the Carnegie Institute of Technology in Pittsburgh, had been summering in Aspen for a number of years. Each year, he came to the Roaring Fork Valley intending to make headway on his thesis, but it would never quite pan out that way. "It's hard to work alone," he says. "I didn't have the motivation to sit there and read another article or do another integral. It was a lot easier to say, 'Well, I wonder if there are any fish biting.'" Stranahan wasn't about to stop coming to Aspen. So, he figured, why not start a physics center here? "I could go hiking and fishing and climbing, be with the family, and do physics. Everything would be perfect."

The plan was to create a sort of physics utopia—an unstructured, informal environment where physicists would be free to devote all their energy to thinking about and discussing their research. Maybe it was Stranahan who brought the idea to Craig, then the executive director of the Aspen Institute for Humanistic Studies. Or maybe it was Craig who came to Stranahan. Either way, by 1961, the two had decided to try to create a physics division of the 11-year-old Institute, which until that time had focused on bringing scholars and businessmen together to study
the Great Books. When a mutual friend put Cohen in contact with Stranahan and Craig, he joined the effort. "Coming together," says Craig, "was serendipitous."

Craig eventually sold Institute chair Robert O. Anderson on the idea, and the Institute set aside a portion of its Aspen Meadows campus to house a physics division. At Craig's urging, the Office of Naval Research and IBM agreed to provide operating funds. Stranahan raised a portion of the money needed for the new building and financed the rest out of his own pocket. In June 1962, the Center opened (although the building wasn't finished and furniture wouldn't arrive for several weeks); 45 physicists attended that year.

The Center's beginnings were decidedly humble. "We started with one phone and a mimeograph machine," remembers Sally Hume Mencimer, who began as a secretary at the Center in 1963 and served as administrative vice president for 23 years. "We didn't have any paging system," she laughs, "except for me to scream 'Hey, George!' down the hall." When a power line broke, a group of physicists set aside their slide rules and spent the better part of a week doubling as the world's scrappiest (and best-educated) work crew, shoveling ton upon ton of rocky-soil in search of the break.

But what a difference four decades make. Today, says Dr. Thomas Appelquist, a Yale physicist who now serves as the Center's chair, "there is no other place quite like it in physics." The list of past attendees reads like a Who's Who of Nobel laureates: Drs. Richard Feynman, Murray Gell-Mann, James Watson, Francis Crick, and more than two dozen others. A team from the Fermi

Top: A Physics Center trustees' meeting in July of 1978 in the new library (before there were bookshelves). Center: Past presidents George Stranahan, Mike Simmons, Eliahu Abrahams, and Randy Durand with administrative vice president Sally Hume Mencimer. Bottom: The founders themselves, Cohen, Craig, and Stranahan.
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National Accelerator Laboratory did much of the design work for the world's most powerful particle accelerator in Aspen. And the Center has played a pivotal role in the ongoing development of string theory, which The New York Times has described as "science's leading candidate for a 'theory of everything.'"

This past summer, more than 500 physicists attended, and almost half as many were turned away. "If I applied today," says Cohen, "I doubt I'd be admitted."

In the early years, the National Science Foundation provided minimal funding to the Center. "Put yourself into the shoes of a minor NSF bureaucrat. He could've gotten into trouble for funding a picnic in a rich person's spa," reasons Cohen. "On the other hand, it was an opportunity to demonstrate great vision."

Dr. Hans Bethe, who headed the theoretical physics division of the Manhattan Project, gave the Center a major boost when he agreed to attend in 1963. "Having Bethe physically there absolutely confirmed our respectability," says Stranahan. Within a few years, the NSF was supplying the lion's share of the Center's operating funds. Recalls Stranahan, "They said, 'Okay, this is not a boondoggle. You guys are actually doing..."
real physics. We can defend sending money to Aspen." Today, the NSF provides $330,000 of the roughly $500,000 annual operating budget.

"The Aspen Center for Physics has meant a great deal to the U.S. physics community and to the international physics community as well," says Dr. Joseph Dehmer, who heads the NSF's Physics Division. "The return on investment has been clearly enormous."

While the Center's facilities have been upgraded over the years—the campus now consists of three buildings, including a state-of-the-art $3 million facility completed in 1996—the culture has changed little. Every physicist, from assistant professor to Nobelist, still shares an office, none of which have phones (though they do, at long last, have Internet access). Many seminars continue to take place on a small outdoor patio, where warbling violins from the nearby music tent often fill the air. Weekly picnics and hard-fought volleyball games at the Center are still the rule, as are bicycling to work and hiking on weekends. If you need to locate a good camping spot, head to Stranahan Hall (as the center's original building is now known), where topographical maps paper an entire wall.

"The outdoors and the environment in Aspen are things that draw people and keep them coming back year after year," says Appelquist. "Friendships develop, collaborations develop, ideas are exchanged on long walks and hikes. To me, it's just completely intertwined with the life of the Physics Center."

But this close bond between the Center's physicists and nature has, on occasion, produced tragic results. When Dr. Heinz Pagels, a Rockefeller University physicist and Aspen regular, fell to his death on Pyramid Peak in 1988, Stranahan remembers that many of his eulogists tried to explain why physicists are drawn to the mountains. "One answer was that physicists like to see far. They like to look way off into the distance. And where you do that is from a mountaintop."

There have, of course, been lighter moments, too. In the late '60s, Stranahan remembers moderating a panel discussion about knowing when the act of creation is complete. Gell-Mann began with a presentation about his discovery of the quark, widely considered to be the most basic form of matter, and how he knew when his work was finished. Two other panelists followed.

Throughout the presentations, says Stranahan, the fourth panelist—artist Claes Oldenburg, who was spending the summer at the Aspen Institute as an art fellow—quietly sucked on a

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bottle of vodka. “So,” Stranahan recalls, “I say, ‘Mr. Oldenburg, it’s your turn at last. What do you know about knowing when your art is done?’ He dropped the now empty vodka bottle onto the floor and said, ‘It is finished.’”

And there was the time Dr. Stanislaw Ulam, credited as a co-inventor of the hydrogen bomb, slipped into a talk the Aspen Institute was holding about national defense. Wearing a cowboy hat, Ulam sat in the audience, unrecognized by all but a few physicists. He listened to military experts rather casually discussing the use of nuclear weapons for a few minutes, then got up to leave. As Ulam exited, he muttered loudly (or so goes Center lore), “If I had known how stupid they were, I would not have invented the H-bomb.”

At first, the town of Aspen barely took notice of the Physics Center. “Even the second or third summer, I remember getting to Aspen, and the whole front page of the Aspen Times was ‘Welcome to Aspen,’” Cohen says. “Then it listed everyone who was welcome—musicians, music students, participants, in the design conference. It listed everyone except the physicists.”

But eventually, says Stranahan, many Aspenites learned “that those people on the bicycles wobbling down the middle of Main Street were the fizzes, as we were always called.” The Center did its best to reach out to the community, throwing regular cocktail parties and, later, organizing a public lecture series. Those efforts may not have made headlines, but they built a bond between the absent-minded professors and their hosts.

“While the Physics Center was not well known, it was at least well liked,” Stranahan says.

Ultimately, Aspen’s goodwill proved an invaluable asset. Although the Center had spun off from the Aspen Institute in 1968 to form a full-fledged nonprofit—“That was very painful to me,” says Craig, who served as the Institute’s director for ten years, “because I still think the most significant thing that the Institute ever undertook was the start-up of the Aspen Center for Physics”—it had never obtained title to the land on which its buildings sat. When a real estate developer purchased that land in the ‘80s, it looked as if the Center’s days were numbered. But the city stepped in, and after years of negotiations, the developer finally agreed to deed the Center its four acres in exchange for building permits elsewhere in Aspen.

With the land dispute settled, Appelquist sees the Center’s future as “very rosy.” There are still hurdles—finding affordable housing for participants, identifying new sources of operational funds—but, he says, “the scientific base of the Center will always be strong. And there will always be a real need for a top summer research institute like the Aspen Center for Physics.”

And what of the Center’s founders?

After stepping down as the president and chair of the Physics Center in 1972, Stranahan, who lives down-valley from Aspen in Woody Creek, has devoted himself to community-building efforts, particularly COMPASS, which runs the Aspen and Carbondale Community Schools and several other local projects focused on education and art. He’s also opened a pub (Woody Creek Tavern), a brewery (Flying Dog), and most recently, a general store—souvenir shop—art gallery (Woody Creek Store and Gallery).

Craig founded the Keystone Center, a nonprofit devoted to science education and environmental conflict resolution, and headed the organization for more than two decades. And Cohen taught physics at the University of Pennsylvania for 41 years until his retirement in 1998.

So, I ask my father one day, do you ever wonder how it all would have played out if Stranahan and Craig had bought your tent city idea?

He chuckles. “It never would have worked.”