

Production Slate

Shooting into the Void

by **Bill Zarchy**



Above: Host Robert Lawrence Kuhn (right) interviews Nobel Laureate and astrophysicist George Smoot at Chabot Observatory in Oakland, Calif. for the PBS series *Closer to Truth*. Right: Kuhn confabs with philosopher John Searle inside Searle's home in Berkeley.

Presidents and paupers, musicians and moviemakers, actors and athletes, writers and regular Joes — I've shot hundreds of interviews, perhaps thousands, sometimes 25 or more in a single day. But shooting for *Closer to Truth*, a PBS science series about "cosmos, consciousness and God," presents a unique challenge.

Start with the quest for a dramatic but natural look, while shooting two people talking, with two cameras.

Then add the factor that both cameras are moving constantly. Because the cameras will show more than 180 degrees of background during their slow journeys around the room, there's nowhere to place stands for backlights. And front light just won't do — flat and boring is out of the question.

Closer to Truth's fresh visual approach highlights long discussions with some of the world's great thinkers, scholars and scientists, including five

Nobel Prize winners. All of the interviews are shot on location in high definition — a marked change from the approach used on the earlier, studio-based roundtable show of the same name. PBS member stations began showing the first 39-episode season of this newly revamped series in summer and fall 2008; director Peter Getzels has already shot more than 100 interviews, using local crews in other parts of the U.S. and Europe. Now, over 12 shooting days in the San Francisco Bay Area, we are filming about 20 of these long-form, two-camera dialogues. None of the interviewer's questions has a simple or short answer.

Start in a two-shot as the host asks the opening question, then dolly slowly, slowly, slowly to the right as the contributor, our interviewee, begins his response; gently squeeze in on the zoom as the camera rolls to a vantage point looking over the host's shoulder. Keep checking the position of the other camera — swinging on a jib arm and focused on the host — to make sure we stay out of each other's shots. Reset during the follow-up question, cut at the end of each answer, try to vary the pattern for each question, and settle in for a four- or five-hour chat.

Host Robert Lawrence Kuhn's intellect, curiosity and ability to digest and comprehend the most abstruse points of view continually impress me. He engages our contributors in spirited dialogues about quantum physics, string theory or the origin of the universe. *Closer to Truth* is Kuhn's "life journey," his attempt to grasp these beguiling concepts with the help of distinguished thinkers and academicians from across the U.S. and Britain, and even a gathering of cosmologists in Iceland — world



Photos and frame grabs courtesy of Bill Zarchy.

Cinematographer Bill Zarchy suspended Kino Flos from menace arms to light Kuhn's interview with neuroscientist Mike Merzenich. To capture the dialogue, Zarchy mounted one Panasonic VariCam on a Fisher 10 dolly and another on a Jimmy Jib.



experts on multiple universes, fundamental physics, religion, deity, brain, mind, free will and similar profundities.

A typical discussion consists of six to 16 questions on camera, each designed to fit into one of the new season's episodes, such as "How Vast is the Universe?" and "Why is Consciousness So Mysterious?" Director Getzels picks our locations carefully. "Generally, I am trying to find a place that has some depth and is visually arresting," he says. "But even more, I want it to have some kind of resonance with the content at hand."

We film two Bay Area Nobel Laureates: George Smoot, at Chabot Observatory in Oakland, and Robert Laughlin, at home in Palo Alto. Kuhn interviews physicists Saul Perlmutter at Lawrence Berkeley Laboratory and Andrei Linde at Stanford Linear Accelerator Center. We stage other discussions at the Exploratorium science museum and the ornate Flood Mansion in San Francisco, at the Women's Faculty Club and the oak-paneled Morrison Library at UC Berkeley, at several other professors' homes and on a boat on San Francisco Bay.

Our two Panasonic AJ-HDC27F VariCam camcorders, equipped with Canon zoom lenses (HJ17x7.7B IRS and HJ11Ex4.7B IRS D), record DVCPro HD in the 720-progressive format at 30 fps. Each VariCam slowly describes a different, wide-sweeping arc of the room during our coverage of the interviews.

My peripatetic camera, always pointed at the contributor, rides on a Fisher 10 dolly with skateboard wheels, creeping along on a quarter-circle of curved track. The contributor is about 7 feet away, seated at the nodal point of my dolly track's circumference, as I arc 90 degrees around him. Key grip Brook Johnson meditatively pushes my dolly at a snail's pace, following my occasional hand signals.

Across the room, Robert Barcelona's camera, focused on the host, is balanced on a Jimmy Jib 3 arm, arcing around its own fulcrum, always able to explore and exploit unusual, surprising angles by instantly resetting its height

Director Peter Getzels (standing) gleans the secrets of the universe as Stanford physicist Leonard Susskind and Kuhn talk shop. Zarchy's lighting rig was facilitated by decorative, wrought-iron rails built into the ceiling of Susskind's living room.



and position. For most of our shoot, the jib is rigged with a 6-foot arm, though it expands to 9 or 12 feet when we have larger locations. Even with the shortest arm, Barcelona can place the camera close to the ground or 9 or 10 feet in the air. We monitor each other's shots to

make certain they are complementary.

Getzels, an Emmy winner who lived in Britain for many years, has many credentials at National Geographic Films, the Discovery Channel and the BBC. *Closer to Truth* arrives in the Bay Area nearly a year after the start of



production; Getzels by now has developed a distinctive look for the series, adding more and more camera movement to the interviews as time goes on. He exploits our visually lush locations and pushes for more sculpting of the lighting on our subjects' faces — dramatic, directional and contrasty, yet motivated, if possible, by natural sources in the frame. "Since we put a lot of energy into locations," Getzels says, "we want to be able to shoot as wide as we can and get a reasonable amount of movement. So we have to fly the keys to avoid seeing stands. All the stands are on the same side of the axis as the cameras so they can be out of shot. But you can see these big, huge, sweeping backgrounds with a good amount of separation."

"Flying the keys" requires us to place each key light upstage, or behind the subject, in a $\frac{3}{4}$ -back cross-angle. As few rooms provide rafters or ceilings conducive to hanging lights, gaffer Darrell Flowers and key grip Johnson rig two 12' menace arms from $\frac{1}{4}$ -inch aluminum Speed-Rail pipes, each anchored to two steel combo stands, placed outside of either camera's view.

At the end of each menace arm, a 4' crossbar holds a 400-watt Joker HMI with an extra-small Chimera soft-box as a key light for one participant, and a 2' 2-bank Kino Flo, usually fitted with daylight tubes and diffusion, as a backlight for the other. In environments with tungsten practical lights, we sometimes clip warm gel to the Jokers and use tungsten tubes in the Kinos. Later in the shoot, in larger locations, we expand to 16' and 20' menace arms (with extra bracing) and 6' crossbars. This lighting scheme enables Flowers and Johnson and grip Oskar Ness to fly the upstage keys with fine control and adjustability.

We need the control. We're always working to splash light into our subjects' eyes — the windows to the soul — while avoiding reflections in their eyeglasses, despite constantly varying our viewing angle as each camera plods through its full range of movement. The days are long and sometimes difficult. With tongue firmly in

Under the glow of Kino Flos and a 400-watt Joker, Kuhn plumbs the depths of human knowledge at Stanford Linear Accelerator Center.



cheek, Getzels repeatedly cajoles the crew, telling us the next question is, by far, the most important of the day, sometimes the most important of the series. The joke continues to amuse as we go about our work.

When we finish each question, response and follow-up, we cut both cameras and regroup before proceeding. If the sun is moving or the light

outside has changed, we can adjust between shots, as each question will only be edited against other interviewees in an episode, not against other shots of the same person. This means we don't have to maintain lighting continuity for hours. For example, during our interview with Andrei Linde in a huge building at Stanford Linear Accelerator Center, a streak of bright sun crashes

through a massive open door into the deep, out-of-focus background of our shot, about 100' behind the subject. As our discussion continues through the afternoon, we shape and control this glowing shard of background light by creatively adjusting the door between shots.

Besides the discussions, each show features Kuhn's pensive narration about his thirst for knowledge and his search for fundamental truth, played under shots of him walking at the seashore, through vast empty landscapes, on country roads and forest paths, or in urban settings at prestigious universities. These shots mix with computer graphics, animations and other concept visuals, such as cloudy skies, the aurora borealis, sunsets and sunrises, aerial shots of countryside and seascapes, and NASA footage of Earth and the heavens. Getzels notes, "The effort we put into dressing the set, getting good locations and flying the key lights pays off in spades. When you

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come to the interview, your interest is sparked right off visually. [Then you get] a little journey where Robert wanders in the redwoods or wherever [he] happens to be. My goal is not to dumb it down, but to master the content by having high production value.

"We're taking intricate, heavy-duty, interesting content out of the closet. We're taking it out of the ivory tower, we're taking it out of the studio to people who I think will like it. Universally, people tell me television isn't made this way anymore. The interviews themselves are beautiful and visual and they work, but then you get the interstitials, so people who might not want to stick with the complex discussions — which can be a little heavy going sometimes — at least know they're going to get a reward for sticking with [the show]."

"One of the decisions we made was to not 'lower-third' the contributors because we didn't want to set up that kind of expectation — that this was



Theoretical physicist Andrei Linde (left) and his wife and fellow researcher, Renata Kallos, share the hot seat.

Robert interviewing. Robert is a questioner. But if you see static cameras, and two people sitting knee-to-knee, and it's lit in a slightly more conventional way, it signals that this is an interview show. I want [the show] to be as close to a hybrid as possible; though the format is a series of high-end discussions, I want it to feel like a documentary. It really is a journey."

Closer to Truth is produced for PBS by Grace Creek Media. Other cinematographers for the current season include Ray Brislin, Austin Debesche, Patrick Duval, Boyd Estus, Frifljofur Helgason, Brian Heller, Alan Hostetter, Kira Kelly, Peter Konczal, Sidney Lubitsch, Page McCartney, John Sharaf and Chris Simmons. ■

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