

The Great Silent Places

Ben Cosgrove

Appalachia, Winter/Spring 2014

As we moved along the trail, Gordon Hempton only spoke to me in the most intensely hushed tones, and when he detected other hikers nearby, he would stop talking entirely. When he did speak to passing groups it was to apologize for the slight squeak the strap on his bag made as he walked. Hempton, one of the world's foremost nature recordists and a prominent acoustic activist, was leading me to the quietest square inch in North America. It's a spot off Olympic National Park's Hoh River Trail that Hempton established in 2005 and called One Square Inch of Silence (OSI). Hempton makes his living by producing and selling audio recordings of natural sounds, but midway through his career, he discovered that his field was in crisis. Using all the data available to him, he calculated grimly that the number of places on the continent where he could still make a twenty-minute recording without having it ruined by the intrusion of some manmade sound had dwindled into the single digits. Sensing a need for action, he selected one of them, made it the symbolic center of a campaign for sites of natural silence, and has spent much of his time since then defending the spot from manmade noise of all stripes.

There's an unusual explanation for how I found myself in the Washington woods listening to my hiking companion apologize to passersby for the complaints of a plastic buckle. At the time of my hike with Hempton, I had been thinking critically about sound in one way or another for many years. I am a composer-performer with a deep extracurricular fascination with landscape and geography. This particular cocktail of interests, over time, has led me to think a lot about the relationship between sound and place. I've tried with several of my compositions to represent or celebrate the resonance of certain places, and accordingly I have spent lots of time wondering at length about what those places literally sound like.

A few years ago, I was creating a piece about Massachusetts that would partly use recordings taken from around the state to evoke the locations they came from when they emerged from

the fabric of the music. I hadn't tried this technique before and was excited about the possibilities as I loaded myself up with microphones and digital recorders and trekked out into the state. As I began to make my recordings, however, I learned quickly that Massachusetts, pretty much from top to bottom, sounds a lot like traffic.

This troubled me more than I might have expected. For one thing, I was recording in locations that I had hoped would be special somehow, and I had wanted to capture some of the dramatic changes that can be seen in the landscape between the mountains and the beach, the salt marshes and the cities, the cranberry bogs and the paper mills. Here was a place that contained multitudes, and somehow this incredible diversity wasn't reflected in its soundscape. Or when it was, the distinctions were muddied by the delocalizing effects of interstates and airplanes.

These are the biggest culprits. Most of our acoustic clutter takes the form of thick and heavy drones: airplanes, interstates, appliances, engines, air conditioners, power lines, all hanging like a veil over the world's beautifully various soundscapes. To get an idea of the problem, try thinking about the case of my stepfather, whose tinnitus superimposes a constant hiss over everything that he hears. He has likened the affliction to hearing a steam radiator running, everywhere he goes, all the time, forever. It's hard for him to hear details – only salient acoustic events stand out of the white noise, similar to the way that hills become islands in a flooded valley. And alarmingly, as our soundscape gets gradually shrouded in the hums, rumbles, and moans produced by our need to transport power, data, and people, the world that he hears is not unlike what we're making of our own.

In the end, I wound up using few field recordings in the Massachusetts piece and relied instead on speech fragments from interviews I conducted with people around the state. Soundscape concerns aside, it turns out that a regional accent delivering a few remarks about rivers and roads is better able to evoke the various parts of Massachusetts than the sounds of surf or wind or rain. There's a lot that's true in what Hempton says: we tend not to notice what the world sounds like.

The real challenge for people like him lies in somehow getting this message through to an American public whose feelings about sound tend toward the apathetic. We filter out all but the loudest, the most obviously relevant, and the most entertaining. But in a world that is becoming noisier and noisier it's increasingly easy – perhaps increasingly necessary – to filter out a vast majority of the acoustic details we're bombarded with every day. As a result, we are not inclined to be very respectful of the soundscape at large. As Hempton found, there is

still hardly anywhere you can go in the continental United States and listen for ten full minutes without hearing the intrusion of a manmade sound.

The sound of the world has undergone a rather tumultuous time in the years since the industrial revolution. Modern life has brought with it not only the whirs and hums of its machines, but myriad ways to separate ourselves from those noises: architectural acoustics, soundproofing, acoustical tiles, headphones, iPods. Even the ability to preserve and play back sounds using recording technology made music both tightly controllable (in an acoustic sense) and entirely separable from the spatiotemporal circumstances of its performance. We can now refine and polish the sounds we intend to listen to, and wrap ourselves in those so effectively that it's easy, even automatic, to filter out the rest. Our often quixotic quest for fidelity and control in our manmade spaces and recorded sounds has helped lead to a dramatic drop-off in our awareness of the acoustic environment at large.

The Canadian composer R. Murray Schafer, now regarded as something of a prophet in the field of acoustic ecology, coined the term "soundscape" in the 1970s to refer to all the sounds a listener hears at a given moment. Our unofficial policy of ignoring them (except in the cases where they annoy us) was never something we unilaterally decided on; it was honed over years of innocent unawareness. The idea that our noise doesn't matter isn't necessarily callous, but it is somewhat naive. For generations, we've cheerfully honked and stomped our way through the world without much serious consideration of our unwitting participation in – and eventually our dominance of – its acoustic reality. The unfortunate consequence of this disconnection has been neglect, making our relationship with sound a telling microcosm of our relationship with the rest of the natural world.

As with our other environmental woes, though, we seem to be the only ones so oblivious to our own impact. In early 2012, a team of evolutionary ecologists headed by Dr. Clinton Francis monitored several habitats affected by industrial noise and found that it had the power to shift entire ecosystems. Dr. Francis's group noted that because western scrub jays started avoiding the noisy sites, they failed to spread pinyon pine seeds in those areas (normally one of their chief responsibilities in the ecosystem), and hummingbirds, who quickly flocked into the areas to avoid the jays, spread flower pollen more extensively than they would have otherwise. For there to suddenly be more flowers than pine trees in a given spot may not initially seem to be too serious a problem, but as Dr. Francis told the *New York Times*, it's a domino effect, and about 1000 different species depend on pinyon pines for survival. The point is simply that our noise makes a difference in the world's ecology, no matter how adept we might become at tuning it out ourselves.

One might think that if anywhere in this country were to have a rigorously protected natural soundscape it would be our National Parks, established for the explicit purpose of preserving places where visitors could interact with the environment of an unmodified America. These places – Yosemite, Great Smoky Mountains, Olympic, Denali, Everglades, and scores of others – are internationally famous, well-respected, and in almost every way carefully maintained. “There is much to offer those who understand the language of the great silent places,” wrote Harry Karstens, the first superintendent of Denali National Park. But until surprisingly recently, noise pollution in these great silent places was left all but completely unchecked, and in some of them it had got completely out of control.

With the development of tools to measure more acoustic parameters more accurately, however, and with the realization that soundscapes could and should be considered as much a protectable natural resource as wildlife or air quality, the Park Service’s approach to sound has changed in the last couple of decades. Today, the soundscapes of all 397 units of the National Park System are overseen by the Natural Sounds and Night Skies Division, whose headquarters I found in the unlikely location of an office park in the commercial district of Fort Collins, Colorado. The office was founded in 2000 as the Natural Sounds Program and became a formal division of the Park Service when it was merged a few years ago with the Night Skies Program, which guards against light pollution.

The whole operation is headed by Karen Treviño, who brings to her position both a lifelong passion for wildlands management and an impressively wonkish command of legal history and parks policy. She was not the first director of Natural Sounds, but has been in the spot for nearly a decade now, and the division has flourished under her leadership.

“The truth is,” she told me, “you can preserve landscapes or wildlife parks, but a lot of times that’s not enough; it ignores something important. And in a way, that’s why what we do in the Park Service is so different from what they do in the Fish and Wildlife Service or in the Forest Service: we have the enjoyment of visitors as a mandate, along with the preservation of the site’s natural resources, natural and cultural. In a way, that makes life easier because we’re not spread across six different needs. In another way, it makes it harder because those two requirements often conflict.”

She’s referring to the National Parks’ Organic Act of 1916, which gave life to the Park Service in order to “conserve the scenery and the national and historic objects and the wild

life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired by future generations.” Whenever soundscape people discuss this passage, they carefully point out two things: one, the division of “wild life” into two words, suggesting preservation of the environment as a whole (i.e. including landscape and soundscape, not just plants and animals), and two, the all-important bit about providing – sustainably – for the public’s enjoyment.

This latter point is stickier than it sounds in the smooth terms of the Organic Act, however: walking the fine line between preservation and public access, as Treviño suggested, has been a leading challenge faced by the Park Service throughout its history. Put yourself in the shoes of the Park Service, trying to satisfy this Catch-22 of a dual mandate. Regulate the staggering number of air tours into the Grand Canyon and you drive down visitorship. Cater instead to visitorship, however, and you can quickly and appreciably compromise the environment of the park. In very few instances has this broader conflict ever been so starkly apparent as in the issue of soundscape management.

Here again, the public’s tendency to forget about sound is the office’s major obstacle. Treviño marvels at our ability to take the acoustic environment for granted, despite what she considers to be clear strengths of sound over sight (“We hear in 360 degrees, but we can’t come close to seeing that.”) and notes with interest that there are numerous blind vertebrates in the world but no known deaf ones. She also cites the possibility that living in a noisier world has compelled us to ramp up our audio filters. Kurt Fristrup, a senior scientist in the office, described to me an average hike he might make with an out-of-town friend into the solemn peaks of nearby Rocky Mountain National Park. “At the end of the day I’ll say to my friend, ‘Hey, when we were hiking today, did you happen to hear any aircraft?’ And they’ll say, ‘Yeah, you know, I guess I did hear one or two.’ And I’ll tell them, ‘There were 23 jets, there were 5 propeller aircraft and there were 2 helicopters.’ And after that, most people look at me and say, ‘You’re kidding.’”

Larry Gamble, the gentle-voiced director of planning at Rocky Mountain, may not be cursed with the acoustic hyperawareness that plagues full-time sound scientists like Fristrup, but he did note something similar when I met with him beside a large window in a little conference room in the park’s visitor center. “People recognize right away if something is amiss visually, you know, if there’s a big scar on the hillside or something,” he said, “but sound is trickier. It’s ephemeral. I mean, if someone clear-cuts and develops a site, the condo on the hillside is there and it’s going to be there. But think of a thunderclap: the peal of thunder might only last a few seconds. An intrusive noise oftentimes is not continuous unless you’re next to, say,

a major industrial plant. But you know, a jet goes over and people say, ‘Oh, it’s going to pass. It may annoy me for a little bit but it’s going to be better in just a few seconds.’ And we do that filtering unconsciously. It’s an interesting skill, but it predisposes us to inaction.”

Most of the work currently being done in Treviño’s division is simply a staggering amount of data collection: Natural Sounds employees trek out into the parks armed with microphones, windscreens, and several weeks worth of blank audio storage, and carefully determine, in the most quantifiable terms, exactly what the place sounds like. “Before we can make a policy case for this kind of thing,” Treviño told me, “we need to amass so much data like this. Before we protect something we need to be able to say what it is we want to protect. We need to be able to say quantitatively, we need to understand: what do these places – these places of national importance – what do they sound like? What is it that’s so important for us to save?”

Reliance on the power of information has become the office’s standard first-tier response to noise issues, and the standardization that this kind of data imposes has helped them to navigate the inherent difficulty of using a national office to address a problem that varies so dramatically from park to park. Managers of federally protected areas from across the country regularly contact Treviño and her team for consultation regarding particular noise problems. On the days I visited, microphone-laden employees were constantly setting off for (or returning from) places like Saguaro, Homestead, King’s Canyon, Organ Pipe. Follow-up work was being done on Cape Cod and Yosemite. I walked by a huge, bluish chart showing ambient acoustic data from Haleakala.

Fristrup showed me an impressive graphic that compared the average hourly ambient level of several dozen parks. Quieter ambient levels are darker in color, while the loudest events show up as a blistering yellow or white, making it immediately visually clear which parks are noisiest and when. Organ Pipe National Monument, on the border with Mexico, shows up as an urgent white on this chart long into the night, due to the noise made by border patrol. Great Sand Dunes, however, is “exceptionally dim”; so is Haleakala Crater in Hawaii, barring a strange spike around 4-6 AM, which Fristrup explains is the effect of scores of visitors hiking up the canyon every morning to watch the sunrise.

Their strategy for the moment is to slowly rack up enough information to be able to make an impenetrable argument for effective regulation – or in the short run, at least to make a strong case to the public to quiet down a little. This might not seem like a very productive strategy, at least not right away, but Larry Gamble vouches for it: “I think when you’re trying

to persuade someone, it's good if you can say 'look, this – this – is the effect that you're having on the park.' And it's not just about the experience of the visitors: how is the noise affecting wildlife interactions, affecting the ability of predators to hear their prey or the ability of prey to hear and avoid the predators? How is it affecting breeding? Noise has an impact on all of these things, and when you walk into a park you're immediately a participant in it. It can only help if more people know that.”

Interestingly, one of the most successful attempts at reducing human noise came from a relatively low-tech experiment at Muir Woods National Monument, run by a team from Colorado State University. After making some baseline readings around the visitor center, they placed a few printed signs that essentially just said, “Please be quiet” and then measured the silencing effect this had on visitors. They were surprised to note a steep drop-off in the amount of noise the tourists made after the signs were introduced, and now this strategy is used around the visitor centers of several park units in order to keep down excessive chatter.

Even this experiment, however, required an arsenal of audio equipment. Part of the reason it has taken so long for the Park Service to mount a dedicated defense of its soundscapes is that for many years the technology needed to effectively assess noise was either nonexistent or prohibitively expensive. As a result, it was impossible to adequately monitor the massive areas overseen by Trevino and her team. Now, however, it's much easier both to collect the data they need and to convert it into a powerful visual argument.

For instance, Frank Turina, a senior employee at the office, showed me a video clip he generated using noise modeling software that showed the effects of a tiny virtual motorcyclist driving the length of Going-to-the-Sun Road in Glacier National Park, realized in painstakingly accurate topographical detail. The clip is silent, but as the biker passes along the length of the road, the sound he produces, represented as a massive blue wash, pours from behind him, flooding valleys and reverberating off canyon walls, spilling violently into all corners of the park. Watching the better part of a million acres all slowly turning deep blue in the wake of a tiny motorcycle, I had to admit that the graphic made the outrageousness of the bike's impact on the park horribly clear, in a way that statistics and even the sound itself might not have been able to do.

Gordon Hempton is annoyed that the Park Service has decided to force policy action almost entirely through the evidence that human noise is harming other parts of the ecosystem.

“The Park Service thinks that if we can get hard data that proves that noise is affecting wildlife, then that’ll be what it takes to ‘sell’ sound protection to the public. That is outrageous and frankly, it’s insulting. The fact that it annoys us should be enough evidence. It’s demeaning to say that we can’t do anything until we prove it has an effect on wildlife.”

In fact, although Hempton and Treviño are both working toward roughly the same goal, there are a lot of issues on which they do not see eye to eye. For one thing, Treviño seems to be passionate about sound protection in the parks mostly for the legal reasons: because she sees it as an explicit requirement of the Organic Act, not necessarily because of any philosophical feelings on the subject. Hempton, in contrast, is driven by a passionate belief that human beings need silence and the parks are the perfect place to start. Furthermore, he’s not even convinced that the efforts of the Natural Sounds Program will ever really amount to anything. “I hate to say it, but the simple fact is that the National Park Service is not going to save quiet,” he whispered to me unprompted at another stop along the Hoh River Trail. “Bureaucratic structures will make it impossible. As long as decisions are made in noisy offices, nothing will get done.”

Many of the people working in Treviño’s office came from relatively disparate fields: Turina had been a park manager, Trevino has a legal background, Fristrup worked in ornithology. For the most part, the senior employees all cut their soundscape policy teeth on the long and tortuous fight for more restrictive air tour management in Grand Canyon National Park, a site where noise complaints had become startlingly numerous and desperate by the 1980s. The Grand Canyon has been something of a ground zero for the legal and political battle for noise control in the parks ever since, and – maybe Hempton would take this as evidence for his theory about bureaucratic structures – the situation is still not quite resolved.

It did propel the field dramatically forward, however. The 1994 *Report to Congress on Effects of Aircraft Overflights on the National Park System*, a veritable masterwork in the Park Service’s canon of soundscape protection documents, summarized the results of years and years of tests (largely done at the Grand Canyon), and even called upon the expertise of private-sector acoustical consultants to make a strong case for the importance of natural silence in the parks¹. It begins, improbably, with a brief essay by Pico Iyer:

¹ It built on the requirements of the seminal 1987 National Parks Overflights Act and ultimately led to the signing in 2000 of the National Parks Air Tour Management Plan. The latter document requires all commercial air tour operators flying over or near a National Park (with a few very notable exceptions, such as the ever-controversial Grand Canyon and – notably – every park in the state of Alaska, including the air-tour-saturated Denali National Park) to apply to the FAA for a permit to enter the airspace over each park. It further required

“We have to earn silence,” he writes in it, “to work for it: to make it not an absence but a presence; not emptiness but repletion. Silence is something more than just a pause; it is that enchanted place where space is cleared and time is stayed and the horizon itself expands. In silence, we often say, we can hear ourselves think; but what is truer to say is that in silence we can hear ourselves not think, and so sink below our selves into a place far deeper than mere thought allows. In silence, we might better say, we can hear someone else think.”

This is perhaps an unexpected note on which to begin a 330-page stack of charts, graphs, hard data, and government prose. But opening with the essay by Iyer points to an important aspect of effective noise and park management, namely the acknowledgement and validation of the visitor’s subjective experience; a congressman reading the report is reminded right at its opening that sound is a crucial (and until relatively recently, all but unquantifiable) element of that human sensory experience.

“I think that to some extent we’ve become desensitized to our natural sounds,” Larry Gamble told me as he leaned across the table. “I mean, think about how noisy our world is, even in subtle ways. We hear everything through the sound of our engines, the sound of our tires on the road, the sound of our phones ringing, the sound of this air conditioning.” I could see that behind him, though the wind was being drawn over the park’s eponymous peaks, howling through the valley of our building, and setting the leafless tree limbs to clatter violently in the wind, the whole scene was muted by the window’s thick glass and all I could hear was that air conditioning.

“We are actually uncomfortable just being quiet,” he went on. “If you think about it, I bet as soon as you get in your car, you probably turn on the radio. Or you get home or whatever, and you have the fan going, or the TV... I think it’s becoming more and more difficult for us. And I do this, too! To just sit and be quiet, either outside or in your home, just to listen to it, just to hear the nothing, just to experience what silence really is, it can be scary. It’s lonely. It’s almost as if there’s something you want to drown out, but what is it?”

Hempton maintains that greater public appreciation of stillness could not help but lead to

the FAA to work with the Park Service to develop a unique air tour management plan for any unit of the park system where such a plan wasn’t already in effect.

broader ecological awareness. “We need places of connection now more than ever,” he said. “If you sit still and listen to the world, you feel more like a participant in it; you have more of a stake in its balance.”

He also thinks part of the problem is that other sound preservationists feel the need to sensationalize the beauty of natural soundscapes. Of some of the compositions produced by Schafer and his coterie, known for their use of dynamic and evocative field recordings, he says, “I like the idea, but I don’t like that they feel compelled to choose such interesting soundscapes. It sends the wrong message.” Perhaps convincing today’s public of the value of stillness might be a hard sell, but in a frustrating sort of chicken/egg paradox, people need to understand its value before they can start to work on protecting that stillness. Quiet, he noted several times on our hike, is quieting.

What he really wants is for the FAA to reroute some flight paths in order to ensure that just a few sites are preserved from airplane noise. Just enough so that there are still some spots – and Olympic National Park is his first priority – where we might still be able to hear what the world would sound like without us. “The cost to avoid flying over this entire park, and this is based on recent Air Transport Association information – I mean fuel, salaries, maintenance, payments on aircraft, the whole ball of wax – it’s \$66/minute,” he told me as we hiked out to One Square Inch, and stayed poised, unblinking and intense, while he waited for me to realize I should be writing this down. “I ran the numbers. It takes less than a minute to avoid the whole thing. The last time I was on a plane, we wasted ten minutes waiting for a snack cart to arrive. It’s all a matter of priority.”

His lingering hope lies in something he calls “quiet tourism,” a movement whose moment he feels is coming. “What we need is a Quiet Places system, not unlike the Dark Skies program. The number one industry in the world is tourism. And the fastest growing tourism sector is ecotourism. This is seriously a question of billions of tourist dollars. They’re going to come here from all over the world and they’re going to eat well and they’re going to sleep in a soft bed and they’re going to be *quiet*.”

The Natural Sounds Division has some curious ideas about what noises the Park Service should consider part of the “natural” soundscape: foghorns and clanking buoys in Acadia, reenactors’ gunfire at Minuteman National Historic Site, the activities of native peoples throughout the park system. Obviously it’s not unreasonable to exempt these sounds from

the regulation they hope one day to enforce, but it does point to a certain fuzziness around our cultural idea of what quiet should be. "Wherever we are, what we hear is mostly noise," wrote John Cage, who famously explored the idea of silence again and again in both his music and his writing. "When we ignore it, it disturbs us. When we listen to it, we find it fascinating." It may be that we've been ignoring noise for so long that it doesn't even disturb us anymore. But it's also important to consider that if quiet is simply the absence of that noise, then it's just as difficult to define and much more difficult to achieve.

To more thoroughly investigate what a purer silence might feel like, I arranged to visit an anechoic chamber at UC Berkeley. It's a specially constructed room, used for medical studies and the calibration of audio technology, located in the sub-basement of a gigantic concrete building, and even sited on its own spring-loaded foundation outside of the building's normal footprint in order to protect against vibrations from the street. The walls, ceiling, and floor are several feet thick and coated with an elaborately ridged pattern of absorptive foam designed to completely frustrate the reflection of any sound wave. By virtually any definition, it is a totally silent space.

A graduate student kindly came in on his day off to let me poke around inside. He had his 3-year-old daughter in tow. As he quietly explained the room to me and prepared to shut me inside for a few minutes, the girl was excitedly bouncing off the walls of the adjoining office, cheerfully yelling about the drawing she just made, demanding to know about lunch plans, and wondering aloud who I was and what we were doing here. Her volume contrasted strikingly with what I heard as we closed the chamber door between us, pinching the sounds of a humming office, a harried grad student, and a hungry toddler into oblivion.

It's uncomfortably quiet in a place like this; you're aware of an oppressive silence pressing in around you on all sides and you feel something almost like claustrophobia. Most unnerving is the fact that the spatial information you're used to gleaning from sound simply isn't there: when you clap your hands, there's no tail to the sound at all, no decay whatsoever. There's nothing to suggest how big or small the room is, where you are in relation to its walls, where the room is in relation to the rest of the building. It's an eerily placeless, space less, and clinical sensation.

It was entirely different from the type of silence Hempton guards at OSI. The Square Inch itself is in a small clearing, a few hundred yards down an elk path that parts from the Hoh River Trail just a few miles from the Hoh Visitor Center, and we reached it an hour or two after we set off from the Hoh visitor center. Hempton stopped me just before we turned off

the trail, explaining that since we couldn't talk in the space (somehow this obvious requirement hadn't occurred to me) he'd better get a few last words in now.

“When we enter, what you will hear in the space are a few birds, the tall winds against those big spruce trees, and the distant rush of the Hoh River. You'll see the stone at the site, along with other stones people have brought from around the world to mark the spot. Once we're there, I'll take a SPL reading and I'll show it to you. If you like, I can take a picture of you in the space” – he has been here with more than a few silence-seeking tourists – “Then I'm going to leave, but when I do I want you to stay, and think, and listen, and just be in the space.”

He continued. “When you're in there I want you to practice a different type of listening. Remember that we don't have ear lids. We all know the kind of listening we're ordered to do by our teachers in school, to focus on one type of sound and carefully filter out all the others.” I nodded. “But – and this is important – that's not listening at all. It's focused impairment. When you're in there, do not listen for sounds. Just listen to the place.”

With that, he turned and marched under the base of a gigantic spruce tree and led me along the elk trail into the clearing. On a gigantic mossy log was a red stone that Hempton placed there to mark the space. I had known about the stone beforehand. What I hadn't expected was to find it surrounded by an astonishing number of notes, pebbles, and other items that had been placed there by silence pilgrims from around the world.

True to his word, Hempton took his SPL reading, shot a few photos, shook my hand and tiptoed back out towards the Hoh River Trail, leaving me alone in the glistening rainforest. Unsure of what to do at first, I tried my best to do as he recommended and listen a bit. It was, in fact, incredibly quiet, though I found it surprisingly difficult to keep from focusing on individual sounds, to listen broadly to the place as a whole instead. The tall winds and the river just came across as complementary soothing bands of white noise, filtered, as Hempton had said they would be, through the unique topography and vegetation of the site. The foundation they provided was sprinkled with the occasional conversation of birds and the rustling of undergrowth. After a few moments though, these noises, far from standing out in the silence, seemed to help create it. I could hear where the land stopped and the water began; I could hear the direction of the wind; I could hear exactly where I was.

Natural silence is nothing at all like the noiselessness of the anechoic chamber. It's defined not by the acoustic events that aren't there but by the ones that are. Natural silence, as I

experienced it at the top of the Hoh River Valley that afternoon, is felt not as an absence but on the contrary as a strong, orienting, and reassuring presence.