

Bringing Together Worlds Apart

BY LARA EVANS

At Stanford University, a young Navajo woman is striking a busy but harmonic balance in her studies, as well as in her life. She is majoring in both engineering and art. By applying aspects of different cultures, the scales hold different kinds of knowledge and are receptive to new ways of thinking. It is a world where art and engineering are not in different hemispheres, and one way is not the right way.



"Shifting Planes of Melancholy," a 2 x 3 foot section of a 4 x 6 foot piece by Holly Grimm.



Seeing the Engineering of Art and the Art of Engineering

Calligraphy gone astray, taken on an alive feeling, and moving loosely to contain brown, black, dark green, maybe some gray chalk, too, allowing the viewer to get a glimpse of their souls...abstract trees. That is how Holly Grimm, Navajo, describes her work today—her art work, that is. In another moment, and with the same animation, she dia and electronic computer soft-in experimental new technologies her summer in-US WEST Ad-nologies. This is Holly is used to seemingly oppo-tives. After all, a double-majoring electrical engineering must be good at performing balancing acts. "Anything that I do," Holly says, "I'm pushing myself in different directions; that's just more and more experience for myself."



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Many people have recognized the difficulty this balance might entail. Some have even found it preposterous and told Holly, "That's stupid." But this 20-year-old simply knows what works best for her.

Raised just outside of Denver in Aurora, Colorado, Holly grew up on the outskirts of the city. Her mother, originally from the Shiprock Reservation, met Holly's father, an electrical engineer originally from Evanston, Illinois, while attending college at the University of Colorado in Denver. Holly's little brother, Jay, rounded out their urban home that subtly held traditional overtures. Although not on an Indian reservation, Holly and Jay grew up with frequent trips to visit their grandparents, and they attended the Denver Native American United Child Care Center, a preschool and first grade with Indian teachers and staff. Exposure to different cultures has served Holly well. "Diversity is a neat thing," she says, and leaves the matter at that.

It could be that Holly's heritage has allowed her to be particularly able to take on engineering and art simultaneously. In Native American tradition, there is not a compartmentalization of the sciences and humanities, as there typically is in the Western world. Perhaps, then, those walls never existed in Holly's holistic mind. Perhaps her views were never segregated. Or, perhaps, it was simply that her vision went beyond walls—walls that all cultures establish in one way or another. And, as with her work, she may have structure, but she won't have containment.

Holly has always been aware of her Indian-ness, just as she's always been aware of her interest in engineering and art. But she is quick to point out that she is in an indi-

vidual, and will not conform to anyone else's views of what an "Indian" or an "engineer" or an "artist" should be. Positive or not, "they are still stereotypes," Holly casually mentions. In her calm manner it is apparent she is not angry or bitter with the knowledge of her people's history. She does not want to take on the world, only to add to it. Her abstract trees give beauty; her research gives technology.

Holly's summers are spent with US West Advanced Technologies in Boulder, Colorado. This is an internship set up by INROADS, a nonprofit organization designed to find such summer positions for minorities. The intern is committed to four consecutive summers, and INROADS is committed to monitoring the student's progress throughout the four-year period and providing support when needed.

Because they are conducting research and using technology that is very much on the cutting edge at US West, Holly is limited to the basics in her explanation of her job there. "Just say that I'm researching new technologies related to telecommunications," she says. She also designs the new training materials for U S West. "Whenever there are art projects, I get to work on those, too," she adds.

But let's be logical. Chances are it will be the engineering field in which Holly will make her living. It only makes sense that she should devote more time and concentration to this aspect. She's very good at it. And she truly enjoys it. In fact, she hopes that through her engineering she will be able to make a difference in the world. She hopes she will be able to see beyond the *thing* she may be working on, to how it will affect *everything* else. But it is just this kind of conceptual

thinking that is spurred by her art. She explains, "Technology is damaging in that it's only done when it's needed. Like when the car was invented, it was made for this one reason, to travel. But they don't realize the effects it may have on the environment. It takes awhile for them to finally start putting those other factors in there." Holly's art-way of thinking helps her to "put those other factors in there."

So let's look at the big picture. To be an artist, to create...Why wouldn't Holly devote all her time to this spiritual aspect? She's very good at it. She has sold pieces, and has even had her own show. And she truly enjoys it. "Art at any time cheers me up," she says. But then in the same breath, she adds, "With art, when have I reached the goal? Whereas with engineering, I know when the project is done, when it's complete."

It seems the only option, then, is a balance. "Even if I do get absorbed in one side or the other, I'm usually bringing in all the other ways of thinking." Double-majoring makes for a busy student, especially when the two majors are so diverse. But as far as school goes, Holly enjoys learning. She makes it clear that she is attending school for the sake of education itself—not just for the degree that may get her a job. "Living each day," Holly says with emphasis, making it clear that the journey is certainly as important as the destination. Here she is referring to her education, but it is evident that this is a philosophy she applies to her life.

Getting Past the Prescription of Learning

A portion of her tuition at Stanford is supported by the Al Qöyawayma Award, established by the George Bird Grinnell American Indian Children's Education Foun-

dation. This \$2,000 scholarship was specifically established for Native American undergraduate college students who are successfully majoring in science or engineering, and exhibiting a distinct interest or talent in any of the arts. Al "Q," as he is commonly called, and Holly have a lot in common.

Al, Hopi, is an outstanding engineer and a leading potter in the art world. Receiving his bachelor of science degree in mechanical engineering from California Polytechnical State, Al never let the humanistic side of him get too far away. He realized early the competition between the schools of thought, and how this competition leads to division among people, as well as *in* people. To create "whole people," this should be our goal, says Al. Too often students receive their education from a curriculum written on stone tablets. Holly echoes his thoughts when referring to the engineering and art departments at Stanford: "Each department has its own agenda for you, and usually students are only doing one major so they can mold you. They have it set up the way they want it to be done."

This "methodology and prescription of learning," as Al describes it, pervades America at all levels today, he says. "The system grinds people out to fit slots that never existed. We are wasting tremendous resources." He pointed out that this "prescription of learning" isn't crafting *experimentalists*. It simply continues to construct *analysts*, and analysts are not willing to take risks; if risks aren't taken, then no new progress can be made. The necessity for creativity is apparent. "Too often we substitute dogma for creativity," Al continues.

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It all ties together, he feels. There is a need now to look beyond our cultural walls to the basic, underlying value systems, because maybe, under close examination, they are not all that different. Integration can be workable, but it is often difficult to determine the context. And with different cultures, just as with different majors, the context changes. While learning how to live in these different worlds, a structure is often necessary to lean on.

Al "Q" was quick to realize this need for a support system for Native Americans who are testing the Western waters. Consequently, he is one of the founders of the American Indian Science and Engineering Society (AISES). And because of his achievements and role modeling, the Al Qöyawayma Award was created in his honor.

Holly has received this award for the three years of its existence and is waiting to hear about the 1993-1994 school year. Were she to receive it again, the Al "Q" Award would be used to finance Holly's studies in Italy. She was accepted into an exclusive art program and is studying art in Florence for six months. However, for Holly, this may prove to be a teeter-totter with one side empty and the other overloaded. She has never had one part of her double life without the other. For, as different as engineering and art may be, they have in fact been, for Holly, dependent upon each other. "Art is so unstructured," she says, "sometimes it makes me crazy. Then it's nice to have the structure of engineering." Al agrees with this view and adds, "Art is more time-consuming and more difficult than engineering. Art requires more discipline."

The Color of the Soul

"There has always been a tree in my

life." Holly looks up toward the sky as she remembers the one outside her bedroom window. But it is not the tops of trees that she recreates on paper. It is their trunks and their roots. Some at first are difficult to recognize as such, but the longer a viewer looks, the more she sees. Shapes and faces seem apparent in the recreated nature. Holly says this is not intentional, but is happy that different people see different things in her ink and chalk creations.

In finished form it is difficult to understand that these images, about two feet by three feet, were born of tiny, black and white thumbnail sketches. After the sketches come medium-sized drawings, still black and white. But now Holly sees and feels where color should be. "The color is their soul," she says. And now after seeing the color in the black and whites, she can bring them fully to life on the larger canvas. The color flows continually up through the trunk and down to the roots. At ground level, it extends itself like tendrils into the soil. With continued viewing, the piece appears to reveal more and more. It is captivating.

"They are old. They are survivors," Holly says of the trees, as if she is talking about her friends rather than her subjects. The connection with her people and her trees is all too easy to assume...But she shakes her head at this. "People expect things because I'm Navajo," she said, and again refuses to be cast into any kind of stereotype. She says people often believe that, because she is Native American, her artwork must be also. Although she is aware of Native symbols or colors that she may occasionally incorporate into her work, this is not her starting point or her subject. "A lot of people say 'Oh Holly, you're an Indian artist, so you must be doing the typical stuff, like horses.' I've

studied a lot of Indian art, but I don't think I'll be doing any of it," she comments. Al "Q" has run across this attitude many times also. He responds simply, "We are artists that happen to be Indian."

A More Humane Thing

"A lot of people believe that technology is an evil thing, as though it's going to take over, and that we should go back to the old ways, the farming days. But everybody knows, too, that you really can't go back," says Holly. And since we can't go back, it is important to move forward. It is her hope that through her research and work she can make a contribution, particularly to the environment. She believes that the same thing that got us into this environmental mess may be the very thing to get us out—technology. But there is a need for technology to be humanized, to be seen from a different, more encompassing perspective. "There's this point where technology has stopped, and I think it will continue on when we start combining it with art, when it becomes more of a humane thing. It starts, too, by viewing it conceptually and seeing how it fits into the whole world."

Al reflected these same views when he commented that technology has no wisdom, and that we must remember this. "Just because we have the technology to build a dam doesn't mean that we should," he says. Holly gives voice to the danger she sees if technology doesn't become more humanistic. "What I fear in technology is that there will be a lot of little cubicles with people working on things that are so different. And they won't be talking to each other anymore. They'll all be working in the world on their own stuff, on this little part, and doing it well, but not realizing how theirs connects to the other guy's in the next cubicle."

But Holly believes the two are coming together. In the way that technology needs art to continue moving forward, art needs technology for its own progress. Computer art has just been touched upon. It will continue to evolve and diversify as more people learn to use it as a creative medium. The innovative techniques are only beginning to be realized. "The engineering side is pushing toward the art, and the art side is pushing toward the engineering," Holly says of the two. She mentions again how the art has taught her to see engineering conceptually, and the engineering has taught her to see art analytically. This has made her better at both.

Holly concedes that there have been times she has felt pressured, mostly from teachers and professors, to "choose." She has had to create flexibility to make it all work. But with the constant support of her family and friends, she has forged her own way—a way that incorporates seemingly different philosophies, different kinds of knowledge, different worlds.

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Lara Evans is a freelance writer and editorial associate for Winds of Change.



Holly Grimm

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