

The Aesthetic

A bigger picture of what we do

By Vance Breshears

What do artists, engineers, musicians, scientists, explorers and adventurers all have in common? At first glance they may seem to be at varying ends of the personality spectrum and share very little.

But dig a bit deeper and it becomes apparent that there are a number of common traits: passion,

drive, creativity and curiosity – to name a few. I believe the most significant shared trait, however, is that the pursuit of these respective disciplines provides significant personal reward that fulfills a common internal desire.

The greatest reward lies in the appreciation for the “aesthetic” found within each endeavor. It’s good for the human spirit.

In my younger (and leaner) years, I was moderately involved in the sport of rock climbing. I’d scale vertical rock faces, using the equipment necessary to ensure a safe return home, but generally do little else to relieve the physical and mental challenges of conquering the route. When you’re just about to lose your hold on a rock, leading to a 20-foot fall, only to be saved by your rope and climbing harness, life’s little problems take on a different perspective.

Early in that experience, I became aware of the obsession of many of the sport’s participants to climb with proper style. The aesthetic of the route and the manner in which one conquers the face are paramount.

Great debates rage within the climbing community. Staunch traditionalists demand that in order to truly accomplish a climb with proper style, or to be credited with the first ascent on a route, there can be no cheating. No “hang-dogging” (practicing through a series of moves while hanging from a rope) or “beta” (videotaping someone else climbing the route), and of course, not a hint of the cardinal sin of chopping holds into the rock.

One is expected to perform with a certain style that’s worthy of the aesthetic of the environment itself. For many, the style with which you participate is equally as important as what is achieved.

This mentality was displayed in the 1975 film *The Eiger Sanction*, where Clint Eastwood and one of his partners are on the north face of the notorious Eiger in the Swiss Alps. They find themselves in a very dicey situation where one climber has already



perished. Eastwood's character insists "we're going to make it," but his fatalistic partner says, "I don't think so... But we shall continue in style."

In the HBO production *From The Earth To The Moon*, one episode offers a portrayal of a room full of NASA engineers and scientists debating over where the Apollo 15 mission is going to land. The two prospective sites each present advantages and disadvantages, but one is clearly more hazardous than the other.

Finally, when the disagreeing factions have reached an impasse, astronaut and mission commander Dave Scott chimes in with his vote. Influenced by recent months of geologic and scientific training, and armed with a renewed appreciation of the purpose of exploration, he votes for the more treacherous Hadley-Appenine landing site.

"The Appenines have something else," he says. "Grandeur. I believe that there is something to be said for exploring beautiful places. It's good for the spirit."

After a long pause, everyone realizes that while safety and procedures are essential to the success of the mission, there is an overarching aesthetic component that gives greater purpose and meaning, not only to our need to explore, but also to our innate curiosity to discover and appreciate the beauty found in the universe, and more immediately, the world around us. Thus their final decision was an easy one.

ORDERED FRAMEWORK

When studying or researching any of the scientific disciplines, it's amazing to see the aesthetic component of each. Mathematics, chemistry, biology and physics all have incredibly ordered framework into which everything seems to fit. Even basic study reveals the unique order of it all.

When I discover something new, I'm amazed at just how little I'm actually aware of: "the more you learn, the less you know," as the saying goes. To me, it's fascinating how the disciplines of science and engineering have an aesthetic component to them.

Many "artistic types" may not find a differential equation to be a thing of beauty, but with deeper delving into

any scientific discipline, the more a sense of both elegance and order is revealed. Numerous scientists studying all that is around us find such breathtaking beauty – yet with such seemingly unlikely logic and order – that many of them clearly state that only an omniscient creator could have devised it all. (Albert Einstein fell firmly in this camp.) Even the brightest and best of these scientists struggle with the task of trying to understand and explain how it all works.

Where Isaac Newton's laws of mechanics break down in explaining behavior of heavenly bodies and subatomic particles, the theories of Relativity and Quantum Mechanics take over. And while these two theories themselves might conflict, the principles being developed within the "String Theory" are actually dependent upon each of them to work together. String Theory has the goal of putting all these divergent principles together into one elegant set of ideas that explain how our universe functions. Each principle presents a unique aesthetic made even greater if all fit together. ("The sum is greater than the individual parts.")

Music provides a beautifully creative mode of artistic expression. It can tell a story and express deeply felt emotion from within the composer or musician, experienced by the listener. Yet the complex timing and pitch relationships of this most artful form can be defined – and described – through mathematics.

The ability to describe the structure and form of music through musical notation provides a means by which a composition can transcend space and time. It could be said that music is the ultimate blending of mathematics and art.

Those of us in the professional sound business can certainly appreciate the aesthetic and beauty of the equipment we use – say, a programmable digital console, an open-architecture DSP processor, or a well-designed loudspeaker system. Each provides a uniquely beautiful engineering solution to an operational challenge.

A loudspeaker that provides broadband directivity control to a defined coverage area is a superb achievement. If the implementation of such a

system is simple and elegant, then the achievement is all the greater.

Most loudspeaker manufacturers are working to refine and improve performance, and at the same time, improve ease of installation. When compared to previous designs, the efficiency with which loudspeakers function today is remarkable. We not only have better and more useful tools, but they increasingly meet a certain aesthetic quality.

PLEASING ENDEAVOR

I've also always appreciated the aesthetic component of any sound, video or lighting system design. It's a most pleasing endeavor to engineer a system that works well, looks good, offers efficiency and is cost effective.

This comes with greater difficulty; it's usually a lot harder to create an efficient and elegant design than a slap-dash one. But with difficulty comes a greater sense of accomplishment not found by simply throwing equipment (and money) at a design problem. The result gives substantial benefit to the client, and I feel, a deep personal reward to the designer.

It's incumbent upon us to do our part to improve the world around us by being ever aware of the aesthetic while working toward solutions. Whether that aesthetic is functional, engineering or visual, each – alone or collectively – is so vital.

The aesthetic of a clever system that functions well and is intuitive to use is always appreciated by its users, even if only subconsciously. Smartly engineered and aesthetically pleasing equipment can have a notable impact on the quality of the end result.

The way a system looks and feels and fits into its environment is worthy of careful attention. Awareness results in a positive contribution to those in our sphere of influence. While only a small piece of the big picture, it's a piece nonetheless.

When the pieces are put together correctly, it leads to wonderful experiences for our listeners, one that is good for the spirit – theirs and ours. ■

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