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## The Visual Language: Learning from Native Cultures

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**Foreword:** *I spent the first six months of 2017 researching and examining a dozen or so iconic artifacts from various North American native tribes. I had one goal in mind: the discovery of lessons in the designing and making of these artifacts with the hope that there would be meaningful lessons for contemporary designers. After all, there are few everyday things as well designed and as well made as the birch-bark canoe or the Santa Clara ceramic pot or the Navajo wool blanket. Every one of these artifacts combines practicality of use, on one hand, with an inevitable visual beauty, on the other.*

*A great deal of the information gathered during these six months came from typical sources such as books, libraries, archives and scholars. Perhaps most revealing for me, however, were the interviews with native people themselves. Overall, they shared their stories with enthusiasm and with a clear sense of generosity all the while expressing concerns for the ultimate goal of my research. Consequently, I share my experiences with the respect owed to our native communities.*

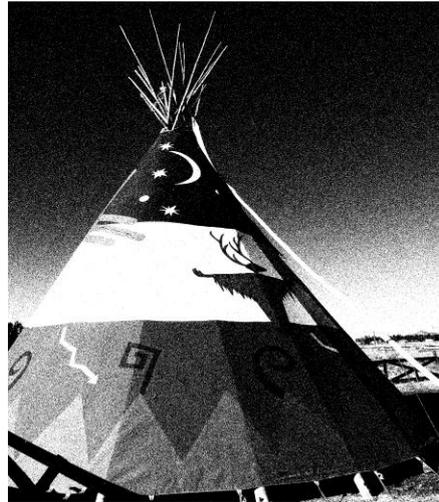
### 1. VISUAL ELEMENTS IN NATIVE ARTIFACTS

One area of designing and making became especially intriguing for me: the reoccurring presence in native artifacts of visual elements that were used as means of communication. Some, such as petroglyphs of the early Puebloans of the American Southwest, resembled what we nowadays would call doodles; that is, squiggles that at first glance appear to have little if any meaning. Petroglyphs are visual representations executed on stone by the intentional removal of a dark surface varnish that has built up on the stone over millennia. Removing the varnish reveals the lighter colored stone beneath. Petroglyphs come in different shapes, and archeologists have categorized them; some are geometrical such as wavy lines and spirals while others, known as zoomorphs, represent animals such as lizards, snakes and deer. Human figures, which are also found, are known as anthropomorphs. (Figure 1)



**Figure 1:** *Petroglyphs are found throughout the American Southwest. The ones shown are from the V Bar V Ranch in Sedona, Arizona.*

The Blackfoot tribe, a native group from western Canada and the northwest United States, also have a visual language, which is often found on the skin walls of the tipi, the tent-like structure common to a people who were once nomadic. Generally speaking, the geometric shapes are simple. For example, and as shown in Figure 2, circles on the ears of the tipi represent stars; zoomorphs represent animals important to Blackfoot culture; and the designs on the bottom skirt tells the Blackfoot where the owner of the tipi had the dream of the design of the tipi, such as the foothills or the mountains. To non-native eyes, these visual elements appear to be nothing more than applied decoration, but that is not the case. Unlike the petroglyphs, which have never been deciphered, the decorative elements on a tipi constitute a form of visual communication. For the Blackfoot, there is definitive meaning in the shapes and color used.



**Figure 2:** The tipi is the traditional shelter of the Blackfoot people in Western Canada and the American Northwest. As visually creative as the applied decoration may appear each element has meaning.

And then there are the Haida people of the Pacific Northwest and their totem poles. (Figure 3) It should be noted that many anthropologists have ceased to use the term 'totem poles'; they use the term 'totems' instead. Totems are also communication devices although most non-native people would not know it. The three-dimensional visual elements used — eagles, beavers and orcas as well as the colors red and black — are not only extremely refined but also carry a message, one of family history and lineage not unlike the family crests of prominent European families. For the Haida, the message found on the totem pole is based on a known visual language; the Haida understand it but few others do.



**Figure 3:** The totems represent the Haida people of the American Northwest, not only as unique artifacts but also as a family crest.

These examples are revealing in several ways. First, the three native groups — the early Puebloans, the Blackfoot and the Haida — all had a spoken language but not a written one, at least not a written language as we know it today, i.e. alphabet, grammar, syntax, etc. Consequently, images of one kind or another became the basis of a visual language. Second, everyday life was not a continuous struggle for survival as often believed. This is an important fact when discussing designing and making because there was time for activities other than hunting, gathering and farming. Many scholars are now of the opinion that early native cultures devoted time to decorative arts and ornamentation, both of which had little to do with subsistence and survival. Lastly, activities associated with

designing and making were self-taught and occurred as part of a natural process of growing up in a native community. As a case in point, a Hopi native shared his story of becoming a carver. He was a law enforcement officer on the Hopi reservation, that is, until his law-enforcement partner was shot and killed. This incident made him reconsider his career plans. Did he attend art school to learn carving? No, he didn't. In my conversation with him, it was quite evident that the overt presence of designing and making by most members of the Hopi community was the greatest influence in his choice of a new career: to be an artist. There was no need to go to design school because he could teach himself, in part by living in a community where most everyone was involved in designing and making.

Contemporary designers — especially graphic designers, industrial designers and architects — are very familiar with visual languages as devices for communication. It is perhaps more apparent with graphic designers but industrial designers and architects make use of the visual language as well, from preliminary sketches for concept development to production drawings for a final design. At first glance, there appears to be a great similarity between the use of the visual language by native groups and by contemporary designers. In both cases, the visual language is an integral part of a designing process that generates everyday objects that are both functional and beautiful. However, there are significant differences despite the outward appearance of similarities. And these differences provide points of reflections on how we non-natives design and what we could perhaps learn from those who have been doing it for millennia.

## **2. THE VISUAL LANGUAGE: IN THE PAST AND TODAY**

Everyone designs; there are no exceptions. Everyone also draws, no exceptions there either. What occurs, of course, is that over time we either nurture these two innate human aptitudes and become designers, architects or engineers, or we don't and forever apologize by making comments such as "I can't draw; I can't even draw a straight line." I've heard the latter declaration much too often and, in every instance, have always empathized with the sentiment but cannot help but see a missed opportunity.

Designers — I include in this category all people who visualize situations and solutions — have forever made use of one visual language or another to understand, develop and offer the means to go from an existing situation to a preferred one, borrowing from Herbert Simon's definition of design. Some visual languages are structured and follow a well-defined convention. The code implicit in production or working drawings is such a visual language. Anyone who has yet to learn its convention will most likely not be able to read them. At the other extreme is the quick doodle, which is a less structured type of visual language but nevertheless effective at communicating ideas. Generally speaking, more people can understand this kind of visual language but, again, not everyone.

My own comparison of the visual language in native cultures and non-native cultures has led me to understand differences and similarities in three areas. It begins by understanding that the ability to see — not visual acuity mind you — is essential; visual literacy, i.e. the reading and understanding of visual elements, is not instinctive but is learned. In that same vein, the ways that a person learns to see is relevant. This is the second area. Is the visual language learned informally or is it taught in a deliberate manner and with rigor? And then there is context, the third area. Does the visual language have an important presence in the context or is it secondary to other languages such as words and numbers. My experiences with these three areas are developed further next.

## **3. SEEING IS UNDERSTANDING**

In my early days in design education I taught professional practice in industrial design. I distinctly remember one of my guest lecturers telling me that she could identify easily who in my class of twenty or so students read regularly and who didn't. As an instructor, her role was to help students with technical writing. But how is it she could tell who read and who didn't? She did so by the quality of the students' written assignments. Good assignments generally indicated that the writers were regular readers; the not-so-good ones meant that they were not. In other words, people who read on a regular basis tended to be better writers. And in every case, she was right.

This revelation had me thinking. Perhaps people who cannot draw, i.e. communicate visually, are people who also cannot truly see and who are therefore visually illiterate. This insight made me think about drawing. Was there a similar connection between drawing and seeing as there is between writing and reading? Perhaps students cannot

draw well because they have not yet learned to see well. This is when I developed a 15-minute exercise at the beginning of each of my drawing classes. I would bring an artifact, usually a design object of one kind or another. I would place it on the table for students to view and examine. I would also tell a story about the object, its history and its designer. I would then put the object away and ask students to draw five different views strictly from memory. The first drawings were terrible; by the end of the semester, however, the drawings had improved immensely, and principally, I believe, because students had learned to see.

There is a point to this anecdote besides the obvious one of training the eye and mind to see better. In my experience, most design students do not arrive in their first year at college or university with well-developed drawing skills. They may all possess an innate ability to visualize but they will in all likelihood need to learn the drawing conventions that is expected in their respective design profession. Over the next four or more years these same students will be coached, cajoled and taught how to design and draw in the ways of the architect, designer or engineer. In some situations, self-expression will not only be expected but encouraged; in other situations, the rigor of the visual language will not allow for any real self-expression. Free-hand sketching exemplifies the former; AutoCAD the latter. In both cases, the learning is formalized.

A Navajo weaver recounted to me recently the visualizing experience that is more or less typical for a Navajo child. It is very different when compared to what occurs in most non-native cultures. The visualizing experience begins very early in childhood, first through unintentional observation because weaving is done in the home and in the presence of children. The child has little choice but to subconsciously absorb the visualizing activity, i.e. the parent weaving, which is often begins with simple sketches and drawings. The learning process progresses gradually as the child mimics the parent weaver, perhaps with a small loom; and ultimately culminates with a young adult Navajo becoming a weaver. In other words, the Navajo child learned to see, to understand and to relate to the visualization process of weaving gradually and over an extended period of time. With most non-native cultures, the teaching and learning experience associated with visual literacy occurs later in life and is often introduced suddenly. Rarely is it a slow, progressive process as found with the Navajos.

#### **4. INFORMAL VERSUS FORMAL LEARNING**

The weaving example of the Navajo child illustrates yet another difference in the learning process of the visual language. The Navajo child's education in visualization occurred informally. It was not compressed into a four to six-year program as is most often the case in contemporary design education.

In a way, my own education in the visual language occurred much like it did with the Navajo child. More than once my mother shared her memories of a child with a crayon clutched in a grubby fist vigorously applying colored wax, first to paper and then, as children are prone to do, onto the walls of our house. I was doing what came naturally, that innate desire to express ideas and thoughts visually. At this stage, my education in the visual language was entirely informal.

By the time I entered design college, my fists were less grubby but my drawing skills were to develop well beyond crude doodles and squiggles. I had yet to learn the visual language of design. In a strange sort of way, I was visually illiterate. Not to worry, I was going to be educated in the designerly way of communicating visually. That was more than fifty years ago. A great deal has happened since to alter the context in which the teaching and the application of the visual language has evolved, the principal one being that teaching and learning occur in a formal way and with a greater use of technology, which has widened the gap between the intimacy implicit in hand drawing, on the one hand, and the efficiency in computer-aided design, on the other.

The pencil is a good case in point. It has been around since the mid 16th century. In some respects, it's an antiquated design tool and can easily appear out of place in contemporary design education, perhaps for Millennials more so than older generations of designers. Pencils are so removed from their realities of smartphones, tablets and laptops that they appear to be from another era, which of course they are. Moreover, many students have never used a pencil on a regular basis, not for cursive writing let alone drawing. There is this belief that digital instruments of one kind or another are much more sophisticated than a cylindrical piece of graphite enrobed in wood. My own simplistic approach to this dilemma has been to call a drawing class an exercise in PAD, or pencil-aided design. The acronym PAD appears to resonate a bit more with students.

But the introduction of digital media has created another anomaly in the learning and use of the visual language, one that is different between native and non-native cultures. That anomaly is commonly known as immediate or instant gratification. Generally speaking, time does not play the same role nor does it have the same importance in native cultures as it does in many non-native cultures. Many of us remember getting a slide film developed. Seven days was not at all unusual time lapse between sending the film to the developer and receiving the slides back. Today, no one, let alone a Millennial student, would accept this kind of time delay. Immediate gratification is paramount. Moreover, time is money; therefore, do not waste it.

An acquaintance of mine at San Jose State University decided some years ago to perceive immediate gratification not as a threat in teaching drawing but as an opportunity to redefine drawing in design. On the first day of his second-year drawing class in industrial design he asked his students to find an image of something that they wanted to draw. Not surprisingly, most students picked an image that would be extremely difficult to draw by even experienced designers. Concept cars were often chosen. Anyone who knows anything about automotive design knows all too well that drawing automobiles requires very specialized skills. No instructors in their right minds would ever recommend such a subject for an entry-level exercise to second-year students. It's an exercise in failure waiting to happen. That said, the students were not daunted by the challenge. They proceeded to draw the concept cars and, as expected, made a mess of it. But what happened next is the true insight to this drawing exercise. My colleague sat down with each student, analyzed the terrible drawing, and identified the many ways that the student's drawing did not match the original. For example, the wheels did not look quite right. Why? Because the student did not understand the underlying principle of circles and ellipses. The remedy? Let's draw circles and ellipses until we understand their geometry. Some of you may say that this is what you already do. The difference, however, is that the San Jose students now had a reason to justify the drawing of endless pages of circles and ellipses. For the students, the drawing of lines or circles or squares, which could have been a boring exercise, was now meaningful. Moreover, the need for immediate gratification was met because students got to draw the concept car at the beginning of the semester instead of waiting 12 or 15 weeks, which might as well have been an eternity.

## **5. A VISUAL LANGUAGE OUT OF CONTEXT**

The early Puebloan petroglyphs, the Navajo blankets and the Haida totems all occurred in context. Consequently, time, place and culture were relevant. The visual elements were of the people and of the era as were the materials used and the symbolism implicit in the designs. The same phenomenon may appear to be the case with contemporary design education and practice but it is my contention that this is not always the case. The teaching and learning of the visual language makes my point.

Drawing is a mainstay of contemporary design education. Most programs insist that design students be capable of communicating visually via drawings. Not surprisingly, drawing is often a significant part of early design education. In my experience, however, learning to draw and learning to communicate are two very different propositions. In a way, it's like a person who cannot communicate in one spoken language. Teach that person a second language and the odds are you now have a person who cannot communicate in two languages.

Drawing and communicating are not synonymous. Unfortunately, this fact often goes unnoticed in design schools because drawing is often taught like it is in schools of art. That is, a drawing is about the representation of the world that surrounds us and our perception of it. More than that, drawings — as a finished product — are perceived as an end in themselves, not so much as a means to an end. The former is perhaps the case for the artist but not so much for designers where drawings are media by which we visualize a design challenge or how we resolve a design problem or how we communicate ideas to someone else. Consequently, the communicative effectiveness of design drawings is essential. Drawings that do not communicate well —from preliminary sketches to production drawings - can lead to anything from confusion and misunderstanding to errors in manufacturing and possible design malpractice. Clearly, design drawings have consequences that go beyond personal likes and dislikes. Pencil and paper may be used by both artists and designers but the context of the former is very different from the latter.

The purpose served by the visual language was certainly evident with early Puebloans, the Blackfoot and the Haida. It's fair to assume that petroglyphs were relevant to early Puebloans despite our inability to decipher them. For the Blackfoot and Haida, the tipi drawings and totems communicate stories important to both communities. Their

respective visual languages derived directly from their contexts. The same cannot always be said for designers, however. To base their drawing principles and practices from drawing principles and practices found in the fine arts is to use methods out of context, no matter how valid these are when used in context. Generally speaking, the visual language of fine arts is high-context communication, a term originated by Edward T. Hall, the American sociologist. In *Beyond Culture*, Hall defined an aspect of communication that works on a continuum from Low-Context to High-Context. Low-context communication occurs when “...the mass of the information is vested in the explicit code.” (p. 91) High-context communication is just the opposite, “A high-context (HC) communication or message is one in which most of the information is either in the person, while very little is in the coded, explicit part of the message.” (p. 91) High-context communications derive their meanings from the past experiences of the viewer instead of an explicit code imbedded in the communication message itself. This is why a Picasso painting communicates different meanings to different people. With low-context communication, the visual code and its meaning are the same meaning to everyone. Think of the red, octagonal stop sign as an example. Quite obviously, using the high-context communication model implicit in fine art representation and to do so with the expectation that it will be as effective as low-context communication is using the wrong tool for the task at hand. Effective communication implies that the response to the signal sent matches the message. As we know, this is not necessarily the case with drawings in the fine arts yet design schools have almost always hitched their wagon to the wrong communication model.

## **6. REFLECTIONS**

Contemporary designers use a visual language that has evolved over centuries. A great deal of it has sources in the traditions found in European art going as far back as Michelangelo and the Renaissance. A few centuries later in the Industrial Revolution, designers were essentially applied artists. Not surprisingly, they were trained in the ways of the artist. Even the Bauhaus had a strong penchant for things artistic albeit in a realm of logic and industrialization.

Native cultures going back even further than the Renaissance also made use of an indigenous visual language. Theirs, however, had origins other than artistic representation. There was a distinct usefulness to it that went beyond personal self-expression. It was communicating a message understood by those who had learned it.

Contemporary designers could learn from this comparison of two very different types of visual languages and the appropriateness of one over the other. After all, logic is essential to good design. Therefore, there's no reason to believe that the same logic cannot be applied to understanding the contextual place for the visual language in design. No one wants to be designing out of context.

## **REFERENCE**

Hall, E., 1981, *Beyond Culture*, Anchor Books Edition: New York