

## **Chapter 10 - Non-verbal Information and Artistic Expression in the Symbolosphere and Its Emergence through Secondary Perception**

### **Introduction**

One can roughly classify human communication and forms of information as being either verbal or non-verbal. We have already examined the various forms of verbal information in the symbolosphere as was the case with speech, writing, mathematics, science, computing, the Internet, and the conceptual and symbolic forms of the technosphere and econosphere. In this chapter we will examine the origin and nature of the non-verbal forms of information and communication inherent in the artistic expression through music, dance and the plastic arts of painting, sculpture, photography. Some modes of information like film, theatre and opera contain elements of both verbal and non-verbal information. The interesting question we will consider in this chapter is: What is the connection between verbal language and artistic expression both of which are symbolic? One hint of a connection is the fact that humans are the only animals that possess verbal language and express themselves artistically through visual images and music. We think this is no coincidence.

We will attempt to show in this chapter that the origin of artistic expression is linked to the origin of verbal expression through what we term secondary perception, which we define as the perception influenced by verbal language and conceptual symbolic thought. Primary perception, on the other hand, is the perception experienced by our hominids ancestors before the advent of verbal language and all other non-human animals. As was reviewed in Chapter 3 the Extended Mind model posits that before verbal language hominid thought was purely percept-based and with verbal language human conceptual symbolic thought emerged. In *The Sixth Language* (Logan 2004) it was posited that spoken language and symbolic thought evolved into writing, mathematics, science, computing and the Internet in response to the information overload of the previous languages. One form of symbolic thinking and communication that was not addressed, however, was artistic expression in the visual arts and music, which entails a combination of visual or auditory perception and concept-based thought. I have often been asked by readers of *The Sixth Language* why I had not included the visual arts and music in my theory and weren't these forms of expressions also languages. My answer has always been: yes, they are languages also but they are non-verbal languages and I do not understand the relationship between them and the six verbal languages.

I now believe I have found a link between the verbal and non-verbal languages. In the Extended Mind model the emergence of verbal language is linked to the bifurcation from percept-based thinking to concept-based thinking where the words of verbal language represents our first concepts. The insight that led to this current attempt to link the verbal languages with those of artistic expression was the realization that the visual arts and music are both percept-based because of the physicality of the artistic medium and, most importantly, conceptual as well because of the symbolic and representational nature of the arts. An artist makes use of concepts as much as a scientist but an artist is also grounded in her physical medium whether that is paint, marble, film or musical sounds.

The artist engages both our emotions through our perception of their medium and our intellect through the symbolic representations of their compositions.

The influence of verbal language is not limited to the symbolic representations of the artwork but they also impact on the nature of the artist's perceptive powers, which differs from the perceptive powers of our pre-lingual hominid ancestors. The conceptual powers of the artists change the nature of their perceptive capabilities creating what I have termed secondary perception.

If this hypothesis is correct then there should be a correlation between verbal language and artistic expression as well as evidence for their simultaneous emergence in the history of humankind. Now I must admit in all honesty that this is not a true scientific prediction as I am well aware of the putative correlation of speech and artistic expression claimed by a number of scholars and reviewed below. In addition to my knowledge of this claim I must also credit another source of inspiration for my hypothesis of the influence of secondary perception on artistic expression. That influence is Walter Ong's (1991) notion of secondary orality from which I derived the notion of secondary perception, i.e. perception influenced by verbal language and concept-based thought.

### **Secondary Perception**

In the Extended Mind model (Logan 2007) it was suggested that before language emerged hominid thought was purely percept-based and the brain was basically a percept processor. With the emergence of verbal language the brain bifurcated into the brain and the mind. The brain continued as the seat of percept-based thought and the mind became the seat of concept-based thought. The metaphoric formulation of this notion was captured with the equation: mind = brain + language.

The new insight regarding the emergence of art is that with language and concept-based thought secondary perception emerged in which perception is transformed by conceptual thought in much the same way that orality was transformed by literacy giving rise to secondary orality. Secondary orality is Walter Ong's (1991) simple idea that there is a difference between primary and secondary orality, where primary orality is the orality of a pre-literate culture and secondary orality is the orality of a literate culture. Ong observed that literacy changes the nature of orality creating what he called "secondary orality". Once humans acquired verbal language and conceptual symbolic thought the nature of their perceptual sensorium changed into what we are now calling secondary perception. Secondary perception is to primary or pre-verbal perception what secondary orality is to primary or pre-literate orality. Secondary perception allows the potential artists to combine their perceptual capabilities with their ability to create symbols and to think symbolically, which are the necessary ingredients for artistic expression.

The mechanism by which secondary perception emerges is through downward causation from the mind, the seat of conceptual thought to the brain, the percept processor. This formulation yields a theory for the emergence of art as the product of secondary perception and concept-based thought. It also explains the apparent correlation of the

emergence of speech and symbolic art. Unfortunately this hypothesis can be construed as a just-so story as the emergence of symbolic art and verbal language were each one-time events in the history of humankind. However, one independent prediction is possible based on the idea that artistic expression entails secondary perception and concept-based thought. I believe that a brain scan of an artist composing or performing a work of art would reveal activity in both the part of the brain associated with verbal language and the part of the brain associated with visual or auditory perception depending on the art form. I hope that some experimental psychologists will test this conjecture of mine.

A Google search of the literature revealed that there is a definite impact of the left-brain associated with verbal language skills and conceptual thought on artistic expression, which is largely associated with right brain function.

The following excerpt from a study of an artist who suffered a minor stroke reveals the involvement of both hemispheres in artistic expression indicating that conceptualization plays a role in artistic expression (Annoni et al. 2005, p. 797).

Painting is a very complex behavior and its neural correlates involve brain areas processing the perceptive, cognitive, and emotional valences of stimuli; brain damage, therefore, could modify artistic expression... Right parieto-occipital damage resulting in spatial neglect, constructional apraxia, or perceptual agnosia can alter the spatial configuration of the whole painting or individual parts, while extensive left hemisphere damage may be responsible for simplification of detail of represented objects.

Another neurologist, Anjan Chatterjee (2004, p. 1573), based on studies of artists with neurological deficits also links conceptualization with artistic expression:

Thus, from the limited data available, the art of patients with visual agnosias seems to be largely determined by whether their deficit is closer to the perceptual or the conceptual end of object recognition processes. If the deficit is at the perceptual end, patients are likely to not produce the overall form and composition of images, but continue to render individual features of objects. By contrast, patients with deficits at the **conceptual** end are still able to draw very well if copying from a rich source, but fall apart when having to draw from memory or if guided by their knowledge of the world.

Ellen Dissanayake (1988, p. 112) argues, “the elements of art are human nature’s fundamental elements” of which she includes “Language and speech - Classification and concept formation - Symbolization.” She goes on to suggest the connection between these elements, “Inseparable from abstract or conceptual thought and language is the ability to symbolize, to recognize one thing as standing for or representing another (ibid., p 118).”

### **The Joint Emergence of Verbal Language and Artistic Expression**

A number of scholars have suggested that the emergence of language, symbolic or conceptual thought and artistic expression were all connected and simultaneously began about 50,000 years ago in what Jared Diamond called the “great leap forward” and what Pfeiffer (1982) and Tattersall (1998) call the “creative explosion”. It was at this time there was an explosion of human inventiveness when for the first time there emerged a profusion of new tools, clothing made from animal hides, decoration of tools, jewelry, rituals such as ceremonial burials, artistic expression in the form of cave paintings and carved figurines and musical instruments.

To many archaeologists, art--or symbolic representation, as they prefer to call it--burst on the scene 50,000 years ago, a time when modern humans are widely thought to have migrated out of Africa to the far corners of the globe. These scholars say the migrants brought with them an ability to manipulate symbols and make images that earlier humans had lacked... As Richard Klein of Stanford University puts it, "There was a kind of behavioral revolution [in Africa] 50,000 years ago. Nobody made art before 50,000 years ago; everybody did afterward." (Appenzeller 1998)

Dunbar (1998, p. 105) reaches a similar conclusion

Symbolic language (the language of metaphysics and religion, of science and instruction) would have emerged later as a form of software development (it embodies no new structural or cognitive features not already present in social language), probably at the time of the Upper Paleolithic Revolution some 50,000 years ago when we see the first unequivocal archaeological evidence for symbolism (including a dramatic improvement in the quality and form of tools, the possible use of ochre for decorative purposes, followed in short order by evidence of deliberate burials, art and non-functional jewelry).

Emanuel Anati (1989, p. 209), an expert on rock art, maintains that art, language and religion have a single root. He also dates the advent of visual art to 50,000 BCE.

There is no evidence of a full-scale use of visual art until 50,000 years ago. The consistency throughout the world of the same basic repertory of symbols and images exhibited in the early phases of rock art testifies to the common origin of *Homo sapiens* and of his uniquely human intellect... Early prehistoric men already operated within a framework of mental mechanisms of association, symbolism, and abstraction, which still today are defining characteristics of our species. In comparison to the preceding hominids, using these cognitive skills was not only an evolution, but also a true revolution: a leap forward that once taken has made us forever a very different Primate (Anati 2004, p. 53 &).”

David Lewis-Williams (2004), an art historian in his book *The Mind in the Cave: Consciousness and the Origins of Art*, as the title of his book indicates, links the origin of art to consciousness. Like Anati he also links the origin of art to religion. In the Extended Mind model (Logan 2007) that we base this study upon both religion and consciousness

depends on conceptual thinking and hence language. We therefore consider the work of Lewis-Williams and Anati as supporting the link between the origin of language and the origin of art.

### **Similarities and Differences of Verbal Language and Artistic Expression**

Both verbal language and artistic expression communicate the intentions of the speaker or writer and the artist and hence both entail a theory of mind, which we will explicate in the next section. Both forms of communication can be used to express emotions. Both require thought and planning although speech and some forms of musical performance tends to be more spontaneous and less planned. But even conversational speech entails a certain amount of planning even though it takes place as the speaker speaks and hence is not a very lengthy process. Both language and art are abstract in that they represent transformations of reality into words or utterances in the case of language and visual forms or sounds in the case of art. As a result both language and art are representational and symbolic. From a Peircian semiotic perspective, however, verbal language is always symbolic but art can be iconic, indexical or symbolic. Iconic representation is representation by similarity as a photograph represents a person. An indexical representation is a sign that is associated with the thing being represented as smoke indexically represents fire. Symbolic representation is when the sign stands for something else by convention. The word “dog” for example represents the four-legged animal that we think of as man’s best friend.

Another similarity is the fact that every human culture that we know of possesses both verbal language and artistic expression. They are both universals of the human condition and unique to our species.

Hominids had been evolving for 4 million years, but art only appeared with *Homo sapiens* and proved to be an exquisitely human expression. The «creation» of art was a revolution

Our ancestor early *sapiens* was characterised by the neurological capacity of creating an ideology, whose basic matrix is still present at the core of modern man’s conceptual cognition. This framework included a capacity for synthesis and abstraction, which, among other things, led man to produce art and abstract thought, and to develop an articulate and complex language (Anati 2004, p. 64 & 60).

And finally to conclude this catalog of similarities it is important to remember that painting, sculpture and music are often referred to as languages and verbal language in the form of oratory, poetry and literature is often referred to as an art form. There are many crossovers between verbal and artistic expression but let us now examine some of the differences.

The arts appeal immediately to the sensual aspect of human thought and then to the intellectual side. Verbal language, on the other hand, appeals immediately to our intellect

and then possibly through imagery to the sensual side of our mentality. Verbal language is linear whereas the arts are multidimensional. Even music, which has a temporal linear progression, is multi-dimensional because it is composed of pitch, timbre, tempo, volume, melody and harmony. Verbal language can be analytic and has led to mathematics, science and computing whereas the arts are synthetic and aesthetic. Both verbal language and artistic expression can express both ideas and feelings but the arts tend to be more about feelings and verbal language more about expressing ideas.

### **A Theory of Mind – Art as Creating an Effect**

As was already noted both the arts and verbal language are about communicating intentions and expressing thoughts and feelings. Both forms of communication therefore are based on a theory of mind, i.e. the notion that the communicator believes those who are their audience have a mind similar to their own and hence will comprehend their communication whether that is verbal or artistic. Those who study the origin of language consider the human capability of a theory of mind was a cognitive capability unique to humans that made verbal language possible. Dunbar (1998, p. 102) defines a theory of mind as “the ability to understand another's individual mental state” without which he claims,

there would be no language in the form we know it...Language requires more than the mere coding and deciphering of well-formed grammatical statements. Indeed, as has been often pointed out, many everyday conversations are conspicuous by their lack of grammatical structure (Gumperz 1982). However, important formal grammar may be in the precision of information transfer, it is surely the intentionality of speech that is the most demanding feature for both speaker and listener. (ibid., p. 101)

I believe that a theory of mind is just as critical for the origin of artistic expression as it was for the origin of language. Artistic expression is also a uniquely human attribute and also requires a theory of mind mind-set on the part of the artist to be executed. Artists through their artwork are trying to create an effect on their audience and this requires a theory of mind on the part of the artists to believe that they can create effects on their audience like the ones they experience. McLuhan (1964) described the artist's methodology as working backwards from the effect they want to create to the causal elements that will produce the effect they have in mind. In order to work in this manner the artists obviously must have a theory of mind.

### **Social Communication**

Both verbal language and artistic expression are forms of social communication. “Speech... serves two functions, that of social communication, and the representation of and a medium for abstract thought (Logan 2007).” The same may be said of artistic expression. Both verbal language and artistic expression are forms of abstract thought. While both are vehicles for the expression of emotions the visual and musical arts tend to favor emotional expression over analytic thought more so than verbal language. This

generalization is only a general trend as one can find superb examples of emotional expression through verbal language and music and visual art that is extremely analytic and everything in between.

Verbal language has been a very important tool for creating social cohesion and cooperation. There is a very strong correlation between altruism and the origin of verbal language. Speech entails the sharing of information which in itself is an altruistic act. Without the desire to help conspecifics there would have been no motivation to want to communicate with fellow humans so there is no doubt that verbal language and altruism go hand in hand. But a similar argument can be made for artistic expression and altruism.

“Why did humans have the need to record their own thoughts and emotive stimulation? No doubt this is part of the nature of *Homo sapiens*, like socialization, the sense of aesthetic, love, ambition, and solidarity (Anati 2004, p. 67).”

### **Art Arising from Mimetic Communication**

Merlin Donald has suggested that mimetic communication was the cognitive laboratory in which verbal language developed. The roots of the fine arts can also be traced to percept-based mimetic communication whose basic elements were prosody (the tones of vocalization), facial gesture, hand signals and mime (or body language). The very first art forms were all non-verbal and grew out of mimetic communication. They included music, painting, sculpture and dance all of which were a part of ritual. Music can be traced to the variation of tone and rhythm and hence to prosody. Dance is basically a form of body language set to music. The first forms of painting were body and face painting and the first forms of sculpture were masks and costumes, which can be seen as attempts to enhance and intensify facial gesture and mime. With the advent of spoken language new hybrid forms of the arts emerged which combined mimetic communication with words to produce modern (post-verbal) art forms such as poetry, which include both words and prosody, songs which combine words and music and theater which combines words with mime and dance (Logan 2007).

Secondary perception not only plays a role in artistic perception but it also contributes technological innovation and design. An inventor of a tool must be able to envisage how the tool will be manufactured and used and hence the inventor's power of perception must combine with his analytic skills.