

1990

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Recommended Citation

O'Reilly, Laurie M. (1990) "The Orchestration of Nature's Writing Surfaces," *Anthós Journal (1990-1996)*: Vol. 1: No. 1, Article 11.

Available at: https://pdxscholar.library.pdx.edu/anthos_archives/vol1/iss1/11

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The Orchestration of Nature's Writing Surfaces

Interpretation of Western writing systems has developed throughout history, and views of these systems have, conversely, created and re-defined the written word. Over centuries scholars refined their understanding of these systems. When one studies the history of writing systems one develops the image of a funnel-shaped history as it progresses both cyclically and chronologically. At the outset notions of writing systems seemed plentiful. One conjures up images of ancient peoples etching symbols on cave walls or of individuals making imprints in the sand or soil by use of an implement. Other individuals recall stories of scribes gathered in a scriptorium carefully inscribing the text being read to them or of monks sitting alone in their cells hand-copying a text. The styles and symbols of writing are many and the writing surfaces are limitless. Yet, as the writings and interpretations of writing systems evolved over time, scholars saw the need to define and re-define the notion of writing in order to develop a clearer understanding

of the process and effect. These definitions and interpretations assumed a funnel shape as restrictions gradually constricted potential understandings and formed a packaged notion of THE written word. Students are left wondering — with outstretched hands — as to what might seep through the end of that conical vessel. Other individuals relax within the stark, two-dimensional limits of the now-conventional understanding of writing.¹ But not all individuals are comfortable with this process or its result. The limitations constrict, perhaps even strangle, the creative potential of definition and interpretation with both the process and the content. Is the current process too restrictive? Perhaps at some future time the funnel-shaped model will evolve into the image of an hour-glass.

Definitions of writing abound in Western philological texts. The Oxford English Dictionary enumerates the various historical definitions of “writing.”² Common elements of these definitions includes: a) an action, b) of setting down ideas, c) through forms, d) on a surface. Typically, the definitions concern the conventional notion of inscribing human language onto a surface. The surface might be the earth, cave walls, clay, stone, parchment, papyrus, bronze or other metals, or bond paper in the copier. The act of inscribing occurs via humans using their hands and a writing implement. The inscriber writes ideas by use of an alphabet, words, characters, sentences, paragraphs, and, in recent centuries, through the use of punctuation to demarcate the aforementioned elements.

In recent decades Jacques Derrida lifted the lid to the boxed definitions of writing. He suggested that writing is an imprint made by a human being.³ This definition necessarily implies a surface of some kind. He proposes the idea that a trail is indeed a valid form of recognizable writing. To seriously consider this definition one must explore the elements of imprint and surface. Whether one proceeds cautiously or not Derrida’s definition of writing has an explosive effect as to what may be considered an inscription.

I would like to offer yet another definition of writing — “that which can be read or interpreted.” The assumed element in, or nature of, writing is that what is written can be read. Again, this understanding conventionally deals with formal language whether it be English, Hebrew, Greek, Nepali, or any other tongue that can be heard, spoken, read, or written by human beings. Yet, with my

definition one can stretch the previous limitations of writing and explore other sensory interpretations of writing. For example, the visual sense of writing may indeed be cave drawings or words on a paper or other concrete surface. Yet, isn't sign language a form of writing? Or the conductor waving her/his baton through the surface of the air in order to communicate the rhythm of a musical number? Or the tactile reading of a braille text by the seeing-impaired individual? Or the olfactory nerves sensing danger through interpreting the scent of something burning? Or the aural interpretation of timeless beauty when an orchestra plays its musical piece? Or the reading of fine cuisine through the perceptions of the sensible palate? In each of these instances a sign or symbol has been read or interpreted by the senses.

Yes, writing is language used to communicate between the "writer" and the "reader." Various ethnic or national groups display their language through written form for themselves and for others to read. Such writings need not be static in their pronunciations, written form; or interpretations. Oftentimes, one sound or group of sounds can be written in a variety of forms. An example is the name "Laurie." The same combination of sounds can be written in a variety of phonetic or phonemic systems: लोरी (Nepali), λῶρι (Greek), לורִי (Hebrew). In certain instances the same sound written with different alphabets also has different meanings. Such is the case with "Annie" (a female name in German), आनि (the Nepali word for "and"), and אני (the Hebrew word for the first person singular pronoun "I"). Language, be it in oral or written form, has the potential to extend in limitless directions and for limitless distances. Yet human beings seem to prefer tightening the boundaries of language. And it follows that the understanding of writing systems are also confined. What would happen if interpretations of script be allowed to stretch? Perhaps it would be helpful first to look at current systems of writing in different academic disciplines.

Written language extends throughout academic disciplines. These disciplines require a functional level of language acquisition in order to understand the basics and then to delve deeper into the subject matter. From the three branches of Athenian education — μουσική, (sc. τέχνη), γράμματα, γυμναστική — to the twentieth century Western emphasis on arts, sciences, and mathematics (including computer technology, especially in the

United States), the student of each discipline seeks to develop a level of proficiency which is built on the understanding of the basic elements of the language of that particular discipline.

The amateur musician and the professional musician have a level of understanding of written musical notation with its designations of range through the symbols of clefs and notes as expressed spatially on the musical score. In addition, the reader of music notes the temporal designations in the piece by reading the time signature and type of notes. For example, when reading the following musical line (Fig.1) the person acquainted with the written language of music understands the range of high and low notes because of the presence of the treble clef as opposed to the bass clef. This single symbol sets the parameters which in turn designate the first note to be "G" above "middle C."

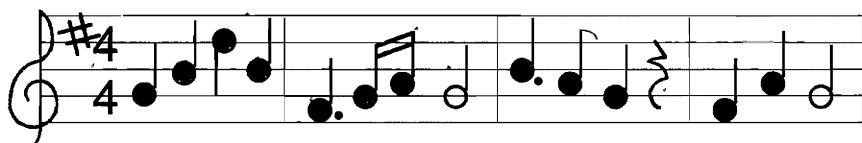


Figure 1. Range of Musical notes on a scale.

The piece is written in 4/4 time which establishes a specific rhythm to the musical piece and tells how many beats exist between two bars. The shape of the notes also designates time. In the third measure of this line the fourth beat is a rest; that is, no note sounds.

Within a single musical score designations of time and aural range can change just as an English text can include another script such as Greek or Hebrew. Each change in this manner brings a change in sound and, potentially, interpretation. Any given script possesses a set of forms or symbols. In music the mode may change from Ionian to Dorian or Phrygian or any of a number of other modes or scales.

Musical expressions differ within and between cultures. The music of Western culture includes folk, jazz, blues, and rock and roll. A specific musical piece, when played by different instruments (e.g. piano, violin, oboe, guitar), opens itself to a variety of meanings. The written language of music explodes into

many expressions and, subsequently, many interpretations. In the case of music composers establish limits through their written notations. Musicians then interpret the piece through vocal and/or instrumental means.⁴ Listeners hear and feel the musical number.⁵ The limits of interpretation rest on the ability of the interpreter to sense and to express or translate the effect of that which has been sensed. Is the ability to interpret music a learned skill, or is it a quality elicited from deep within a human's being?⁶

The sub-disciplines of mathematics also have specific writing systems. Algebraic equations, geometrical shapes and graphs express meaning. The beginning student of algebra soon learns methods about how to solve an equation like: $(a+2)(b+3)=1$. Likewise, anyone who has studied geometry does not soon forget that: $A = \pi r^2$ refers to the method for finding the area of a circle. The student simply needs to apply literacy in the written language of the specific academic discipline and then develop a fluency in expressing ideas in the particular academic language.

To this point in the paper I have focused on elements of writing as they relate to specific academic disciplines. The points made have focused on the definition of writing as an imprint made by human beings — a definition proposed by Jacques Derrida. Yet, I proposed a slightly different definition — that is, writing is that which can be read or interpreted. This latter definition stretches the definitions suggested by Derrida and the Oxford English Dictionary. It stretches them beyond their conventional limits because it does not suppose that writings, or that which can be read (as the term “writing” implies), come about only through the handiwork and intent of human beings.

In this light — or shadow, if you will — Derrida's definition seems rather tame. If we explore the new definition further it takes little time to note that all elements of nature can be read in some manner. This view shifts the role of the human being. Does not a strong tendency of human beings seem to be the act of interpreting that which surrounds them and affects them in some way? A blatant shift has occurred here. The role of human beings has shifted primarily from being the creator of an imprint and secondarily being the reader or interpreter. This expansive definition focuses on human beings and their role as interpreters of “writings.” These writings may have been the imprints of human beings but not necessarily so.



**Figure 2. Excavation site (area M) at
Tel Dan in the Upper Galil, Israel.**

In order to concretize this idea let us turn to an example which stems from the field of meteorology. Weather forecasters habitually makes reference to “reading the weather maps or satellite pictures of the weather.” Can the meteorologist indeed read that which is not written? On the other hand, did a human being write the elements in the universe which appear in the satellite pictures? The meteorologist has studied the language of atmospheric conditions and, henceforth, can interpret the natural illustrations for those who are illiterate in this discipline. However, let it be noted that even the layperson can see dark clouds rolling across the sky or feel a sudden drop in temperature and know that a storm is approaching.⁷

As the meteorologist interprets the skies so too does the archaeologist read the layers of civilization excavated on a particular site. The archaeological findings are then interpreted. Explanations are given for changes in stratigraphy, for potsherds that have been uncovered, for the presence of ramparts and rock

walls (Fig.2). In the case of excavations many of the findings are the result of having been placed in a certain position for a particular purpose (e.g. walls, tombs, ramparts). Because of this fact it can be said that the “writings” of an archaeological site are imprints made by human beings. Yet, this explanation does not account for the layers of earth which accumulate from the transfer of earth through erosion, volcanic sediment, or by wind deposition on the site of a civilization long since dispersed or buried. Archaeologists uncover recordings of history. They manifest “written” texts which have been hidden.

The geologist confronts similar issues in reading the recordings of natural history — a history that is very much present in each passing day. Elements of natural movements cause change and create altered geological forms. Since the nineteenth century the theory of plate tectonics has dominated geological discussions about the earth’s formation and continual change.⁸ This theory focuses on the belief that the earth’s movements and changes arise



Figure 3. Ocean waves

from shifts between the geological plates comprising the earth. A number of millennia ago the large land masses split and separated from each other. This drift in land masses created the continents and islands of the present global landscape. On a large scale these geological imprints arose from far below the earth's surface. The push-pull effect on the earth which results from the solar, lunar, and earth alignments causes dramatic shifts along zones of weakness within the earth's plates. Earthquakes and volcanic eruptions provide clear evidence of the shifts from far below the surface of the earth. These shifts re-write the global geological story. Geologists seek to answer the questions posed by the changing text. Meanwhile, individuals living on earthquake lines search for explanations to determine the fault of the earthquakes. However, the work of geologists does not always focus on dramatic events concerning the earth's changing surface. Subtle changes occur constantly as nature shapes and re-shapes the texture of global landscaping. Ocean waves caress sand-covered beaches and form momentary symmetrical patterns on the sandy surface (Fig.3).

Waves also wash against rocky surfaces and sculpt smooth, flowing, designs on the faces of these hard surfaces (Fig.4, 5). The viewer of these water-formed designs reads the shapes and symmetrical patterns and then forms a mental and sensory interpretation. Meanwhile, the river casually continues to etch its path — its story — on the landscape as it journeys toward the ocean. River currents cut and shape the walls of canyons and gorges. As the river cuts deeper and exposes a greater surface area, the geologist studies the walls of the canyons and learns to read the writing on the wall. An awareness develops of the recurring patterns created by nature's artistry.

The graceful artistry which underlies nature evidences itself in countless forms. The wind carves designs on the landscape as it gently brushes, or forcefully sweeps, across land surfaces. Fire scorches its imprint on a forest. Vegetation stretches forth from the soil and creates designs in the air (Fig.6).

Visually, color bursts forth from its roots and blends with the surroundings. Color allows distinction between shapes. Sunlight shortens shapes and shadows lengthen them. The ever-changing pattern of natural writing produces an orchestration of design by the hand of the transcendent conductor. Interpretation follows. The

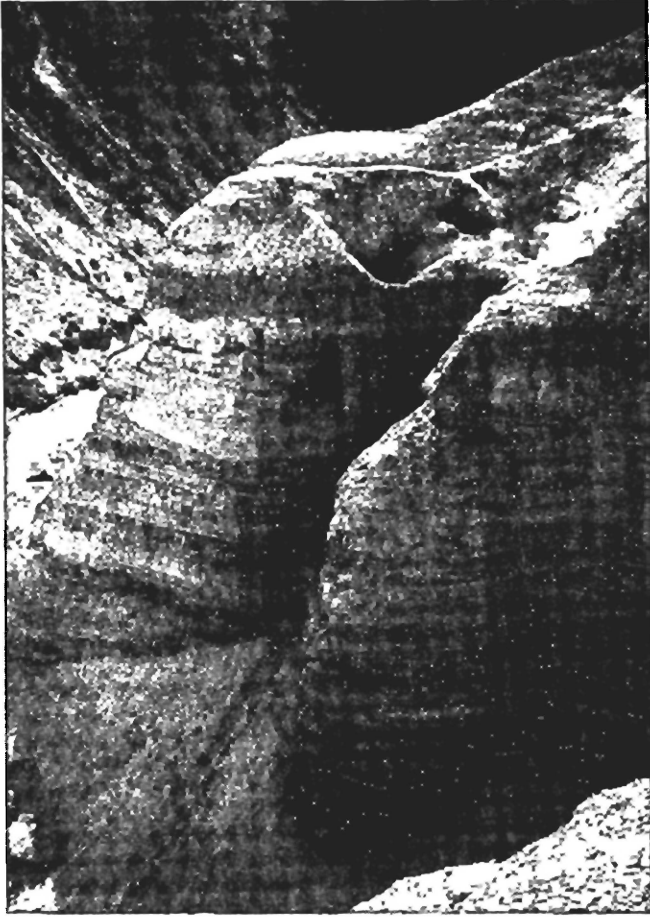


Figure 4. The caves at Qumran on the west bank of the Dead Sea.

song of nature harmonizes its endless melodies. In the timeless moment of *καρπός* nature's voice sings in unison.

In the landscape of writing... in the landscape of human emotion... in the landscape... do rises and depressions really assume different interpretations? Do the cycles of nature — the seasons of death and life — exist separately or wholly within each other? While in one geographical region the lush, pregnant earth gives birth to new life, another geographical region lies fallow. The

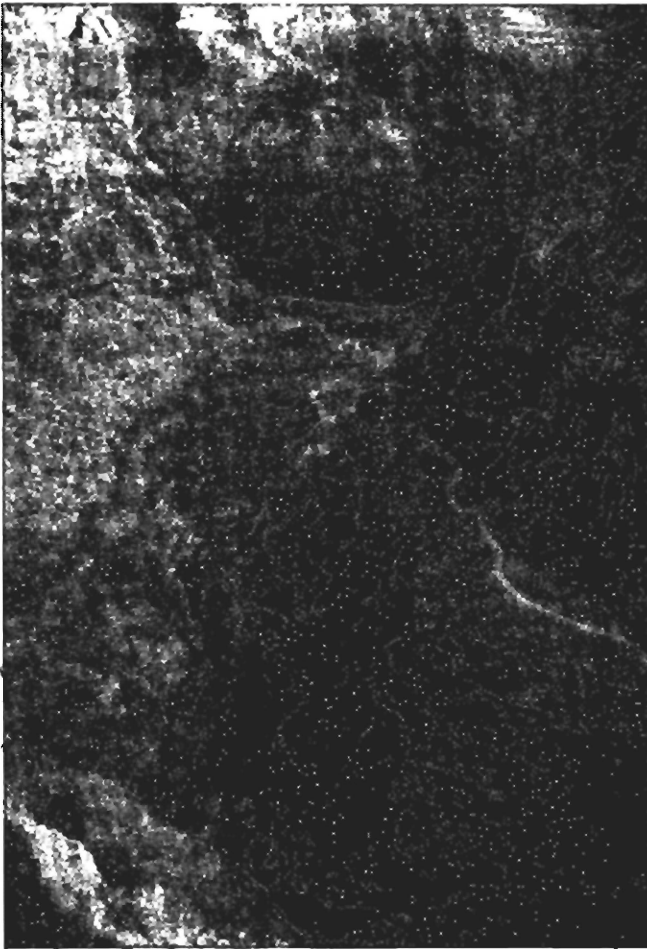


Figure 5. A wadi formed by centuries of flash floods in the Judean desert.

balance of life and death allows the harvest season to follow the planting season which follows the previous harvest. Nature's writing of the seasons expects to be read and interpreted. Nature is formed by the hand of an Other. Is not this writing? Energy is expressed through writing. Patterns of nature arise through the habitual evolution of creation.

Nature produces a literature of transcendent potential. It writes in the broad sweeps of rolling hills and desert expanses; and

it pens a story through the intricate designs of a flower or a leaf. The punctuation of nature allows the reader to grasp the written material. Through the syncopation and rhythm of nature the sensor reads the writing and the censor categorizes the input of that written material. The experiences of the interpreter layer themselves in the psyche as building blocks in the conscious, subconscious, and unconscious memory of a kaleidoscopic catalogue of interpretations.



Figure 6. Chitwan stretching from the soil.

The changes in nature beget interpretations. The inquisitive mind of human beings seeks to understand the surroundings. It seeks to answer the eternal question — Why? How do human beings learn the language of nature? In order to become literate in academic writing systems one must grasp the written symbols and their meaning. In the field of reading and interpreting natural writing, is mental understanding sufficient for literacy? It seems that a degree of emotional or, perhaps more importantly, spiritual

understanding necessarily complements an academic literacy.

Writing, regardless of its form, necessarily contains meaning. The limits of meaning are dependent upon the interpreter's range of understanding. Once a piece is written the writer releases control over the potential for interpretation. It is questionable whether the writer ever really possesses control over the way in which her/his material is read. The basic constituents of meaning are symbols, experiences, a degree of literacy, and a conscious or unconscious willingness (need?) to interpret. Colors, notes, and shapes are dialects of the eternal language. A writing sustains meaning until distinctions are no longer possible — until language and symbols become irrelevant.

What is it that allowed human beings to call a certain product "writing?" It seems that humans recognized their abilities to sense, to question and to theorize. Human beings recognized similarities within created objects and they recognized differences. They realized that they too could create symbols and designs and then expound upon these creations. They realized the concept of interpretation. Not all acts and objects to be read possessed physical traits. Some of them possessed a psychological essence or a psychological "graffiti" — as one "reads the writing on the wall" or "reads someone's mind". A person can also read the expression on someone's face or follow the "presidential" command, "Read my lips!"

Writing is durative. In writing there is movement of energy. Writing journeys. Writing begets interpretations. Writing draws the reader into its expression. Writing is more than simply "scratching the surface." Every human act is, in effect, a writing because every human act leaves a surface changed. The essential elements of temporality and spatiality perpetuate the idea of writing. When the recognition of time and space ceases the orchestration of nature's writing will gently and gracefully sound its ultimate note.

Notes

¹ Historically, writing has been understood to be words on a surface. Most typically the words have been inscribed with a writing instrument held at an angle to the surface. A two-dimensional image develops of vertical meeting horizontal.

² *The Oxford English Dictionary*, 2nd ed. (1989), s.v. "Writing." In addition, an abbreviated list of these definitions appears in the supplementary notes of this paper.

³ Christopher Norris, *Derrida*, Cambridge: Harvard University Press, 1987. Norris provide a clear exposition of Derrida's major ideas. He carefully explains how Derrida's ideas stand against ideas of prominent philosophers and linguists.

⁴ Not all musicians are capable of reading music. Some of them "play by ear." This latter type of musician reads aurally and by the touch of the fingers on the instrument or the feel of sound on the vocal chords.

⁵ The listener not only hears through the ears, but also feels the music. A hearing-impaired individual "hears" the music by feeling the pulsations of sound.

⁶ John Erskine, *What is Music?* New York: J.B.Lippincott Company, 1944, p. 13. Erskine offers the notion that "music has intellectual elements" (like speech), but its spiritual and emotional natures are its strength.

⁷ The wisdom of those at sea who read the sky resounds in the nautical insight — "Red sky at night, sailors delight. Red sky at morning, sailors take warning."

⁸ Mott T. Greene, *Geology in the Nineteenth Century: Changing Views of a Changing World*, Ithaca: City Press, 1982. Greene provides an historical overview of the theory of plate tectonics.

Supplementary Notes

“WRITING” - (O.E.D.)

1.
 - a. The action of one who writes in various senses; the penning or forming of letters or words; the use of written characters for purposes of record, transmission of ideas, etc.
 - b. at the time of writing this (i.e. at this [present] writing).
2.
 - a. the art or practice of penmanship or handwriting.
 - b. style, form, or method of fashioning letters or other conventional signs (esp. in handwriting or of penmanship); the ‘hand’ of a particular person.
 - c. the occupation of a (professional) writer.
3.
 - a. the action of composing and committing to manuscript; expression of thoughts or ideas in written words; literary composition or production.
 - b. style or manner of composition or literary expression.
 - c. the composition of music.
4. manner of setting down in written form; spelling, orthography.
5. the state or condition of having been written or penned; written form.

(an approximation of Jacques Derrida’s definition)

WRITING — an imprint made by a human being.

(another definition).

WRITING — that which can be read or interpreted.

(your definition . . .)

WRITING —

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