NOTES ON A VISUAL PHILOSOPHY

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Abstract—A visual artist takes a look at her own work in which symmetries embody an anatomy of substructure. Essences of ideas are presented in visual form to serve as a new language of communication. These notes consist of three parts. Thoughts on symmetry related to art followed by comments on the artist's own work, and are concluded by 18 of her images.

The symmetries operating in my work are subtle and complex. Some are more easily discernible than others, some operate on the surface of perceptions on the visual level, others are deeply hidden in the ideas and philosophies underlying my work. Whether obvious or subtle, visible or elusive, these symmetries are inherent and real. The fact that they were never consciously sought, since the work was not created with this goal in mind, makes their presence even more exciting.

In mathematics symmetries are precise, well-defined operations such as rotation, translation and inversion. In the sciences these operations are applied to an idealized physical world where they abound, ranging from bilateralism in people to celestial motion to time-reversible laws. Even broken symmetry, so popular among physicists today, has precise meaning. Logic, which manipulates concepts mathematically, has exact symmetries. In art and music they appear on many levels serving esthetic functions and have been the subject of numerous essays, including papers in this journal.

In my work everything, including symmetry, is created through a conscious use of instinct, intellect and intuition. When I visualize (give form to) processes such as math and logic, or when I apply X-ray technology and electron microscopy to organic and crystal structures, one might say I reveal well-defined symmetries and antisymmetries. When I deal with abstract concepts definitions blur and the symmetries go beyond ordinary mathematical confines. Some examples follow.

- Mapping the loss that occurs in communication, i.e. between viewer and artist, between giver
 and receiver, between specific meaning and symbol, between nations, epochs, systems and
 universes.
- Mapping human parameters within the changing aspects of reality, within the transformations and interactions of phenomena.
- Working with the paradox, the contradictions of human existence such as our illusions of
 freedom and the inescapability of the system; our alienation in togetherness; the individual
 human dilemma, struggle and pride versus the whole human predicament; our importance or
 insignificance in the universe.
- Trying to give form to invisible processes such as evolution, changing human values, thought processes and time aspects (pinpointing the moment growth becomes decay in an organism; penetrating the "folds of time" to record its "instants").
- Finding contradictions and balances, pitting art against existence, illusions versus reality, imagination versus fact, chaos versus order, the moment versus eternity, universals versus the self.

These symmetries are less available and definable but they are there nevertheless, working on mysterious levels in the interactions of phenomena and ideas. I may even venture to say that

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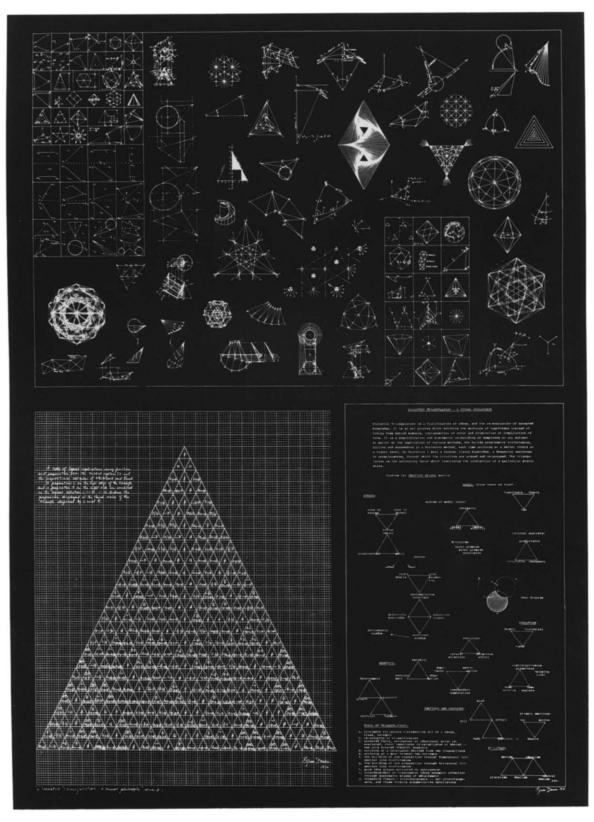


Fig. 1. Dialectic Triangulation: A Visual Philosophy. 1970. Monoprint, 37 \times 28". © Agnes Denes 1970.

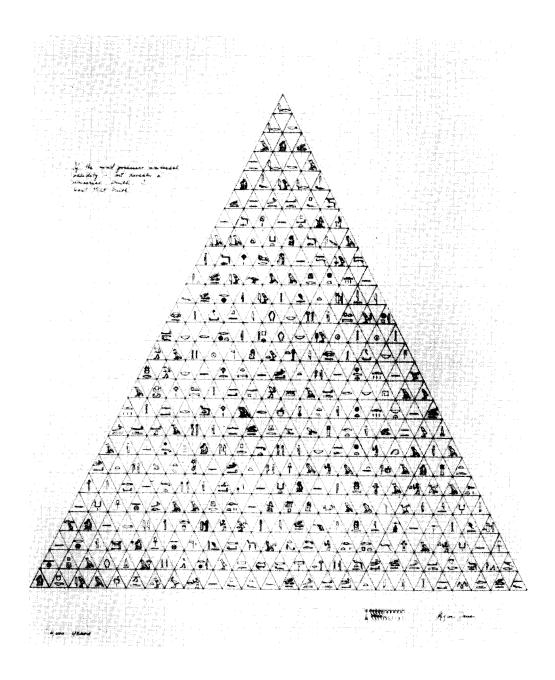


Fig. 2. "4000 Years." 1975. Ink on graph paper, 29×22 ". "If the mind possesses universal validity—art reveals a universal truth. I want that truth." (transliterated into Middle Egyptian by the artist). © Agnes Denes 1975.

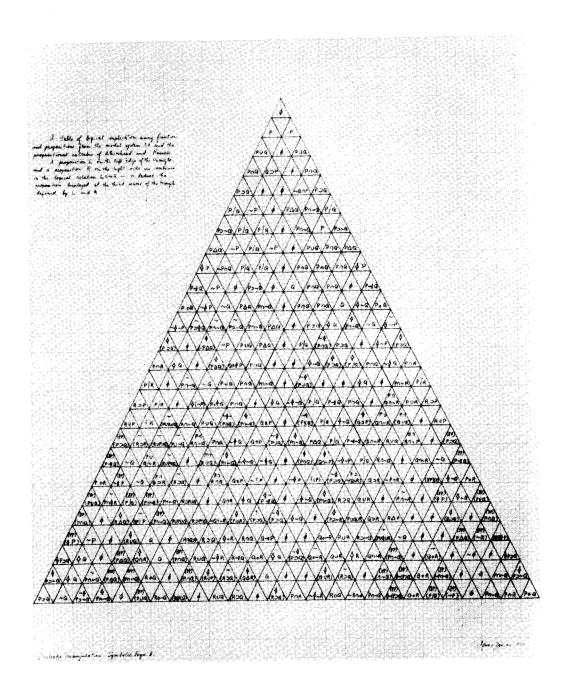


Fig. 3. The Human Argument. (A table of logical implications, using functions and propositions from the modal system S8 and the propositional calculus of Whitehead and Russell.) 1970. Ink on graph paper, $29\times 22''$. © Agnes Denes 1970.

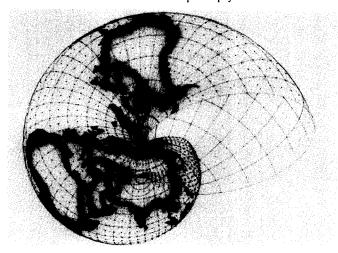


Fig. 4. Isometric Systems in Isotropic Space—Map Projections. The Snail. 1974. Ink and charcoal on graph paper and Mylar, 24 × 30". © Agnes Denes 1974.

these unnamed, unmeasured symmetries operating in the network of concepts are the anatomy or substructure of invisible underlying patterns of existence that make new associations and analogies possible.

As the world is becoming more complex and knowledge and ideas are coming in faster than they can be assimilated, disciplines become progressively more alienated from each other through specialization, words lose their precision as they take on multi-meanings and communication breaks down. A new type of analytical attitude is called for, a clear overview or a summing up. Not losing sight of abstract reasoning, but using induction and deduction in the discovery of the real and concrete structures, the substances of things and ideas emerge. In this sense they represent the primary being of things to act as universal forms or ideas when brought to the surface to interact with each other. When ''things'' are pared down to their core or essence, superfluous data fall away and new associations and insights become possible.

My concern is with the creation of a language of perceptions that allows the flow of information among alien systems and disciplines, in which essences carry pure meaning into pure form and all things can be considered once more simultaneously. From specializations to essences, from patterns to symmetries, to form, seeking ultimates in the elemental nature of things and vice versa. Thus analytical propositions are presented in visual form where both the proposition and its deductive reasoning achieve their own essence and communicate visually. The resulting art is a dramatization or "visualization" of these forms, entities or summations. They are words, sentences or paragraphs in a language of seeing. They are the universal concepts or substances I often refer to in my writings.

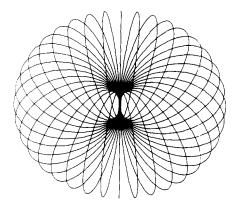


Fig. 5. Isometric Systems in Isotropic Space—Map Projections. The Doughnut—Fragmentation. 1974. Ink on vellum, 24 × 30″. © Agnes Denes 1974.

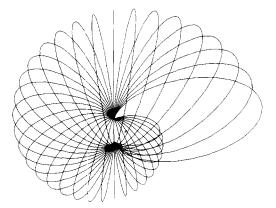


Fig. 6. Isometric Systems in Isotropic Space—Map Projections. The Snail—Fragmentation. 1976. Ink on vellum, 24 × 30". © Agnes Denes 1976.

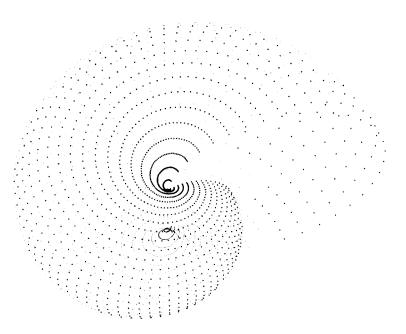


Fig. 7. Isometric Systems in Isotropic Space—Map Projections. The Snail—Fragmentation. 1976. Ink on vellum, 24 \times 30". © Agnes Denes 1976.

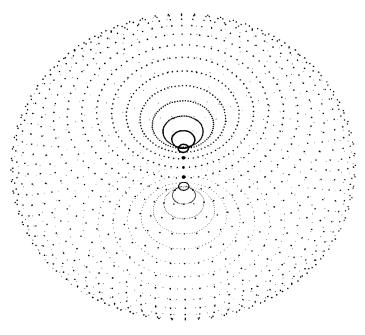


Fig. 8. The Doughnut—Fragmentation. 1976. Ink on vellum, 24 \times 30". © Agnes Denes 1974

To clarify this further, I consider a universal concept one that possesses universal validity and is the perfect representative of a system or function. It can be a well-conceived, well-balanced idea with immediate universal connotations, that communicates directly and will yield further inquiries while it can withstand the stress of experimentation (see Figs 1–18).

Universal concepts seeking analogies and new associations are not easily subjected to the analysis of symbolic logic. It takes a new type of logic and perhaps a new philosophy to categorize their symmetries and consequences.

When these hidden patterns and processes are realized in visual form ambiguities can be clarified, misconceptions reexamined and the subjective self-state of a system can be studied to seek the imperfection or restate the perfection in its design. Processes can be held still for analysis, their intricacies brought into perspective and all that is unseen, undiscovered or guessed at but feasible can gain recognition until it can establish its own validity.

Pattern finding is a symmetry operation. It is the purpose of the mind and the construct of the universe. There are an infinite number of patterns and only some are known. Those that are still unknown hold the key to unresolved enigmas and paradoxes. Thus formal and exclusively visual information can be refined to such an extent as to impart the most precise and significant information in addition to visual gratification.

These thoughts are further clarified by quoting from my lecture entitled "Evolution and the Creative Mind". This lecture was first delivered at the Smithsonian Institution, Washington, D.C., 1976.

My art exists in a dynamic, evolutionary world of rapidly changing concepts and measures, where the appearances of things, facts and events are assumed manifestations of reality and distortions are the norm. . . .

Although I deal with difficult concepts, my work remains visual. The process of "visualization" is doubly important since aspects of the work explore invisible systems, underlying structures and patterns inherent in our existence. . . .

I incorporate science, philosophy and all those disciplines that enrich my work and are so necessary to any worthwhile human activity in the world today.

I communicate my ideas in whatever form is most true to the concept. It is the concept that dictates the mode of presentation. My projects take several years to complete and they are in a constant state of flux. The work follows an evolutionary attitude and process. It

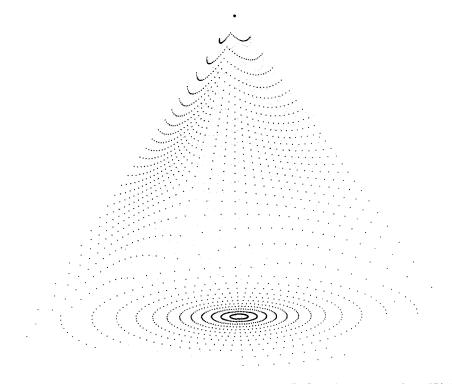


Fig. 9. Isometric Systems in Isotropic Space—Map Projections. The Pyramid—Fragmentation. 1976. Ink on vellum, 24 × 30". © Agnes Denes 1976.

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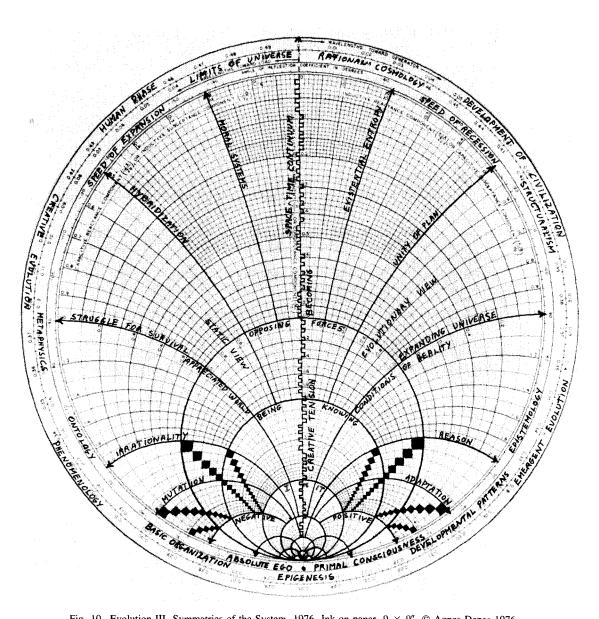


Fig. 10. Evolution III. Symmetries of the System. 1976. lnk on paper, 9 \times 9". © Agnes Denes 1976.

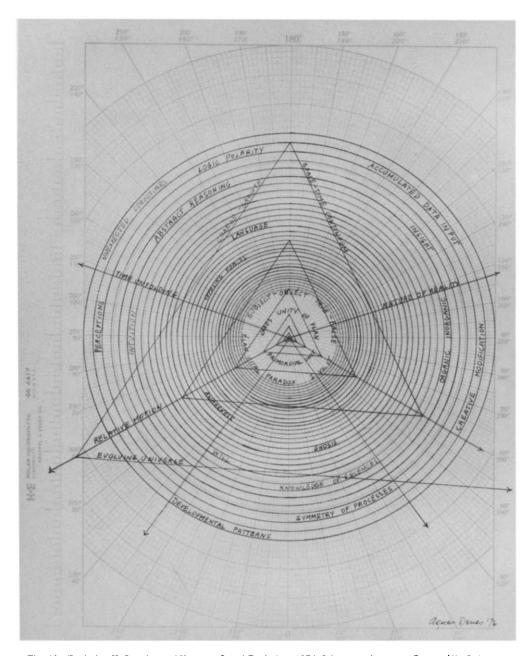


Fig. 11. Evolution II. Paradox and Essence. Spiral Evolution. 1976. Ink on graph paper, $17\times14^{11}_2$. © Agnes Denes 1976.

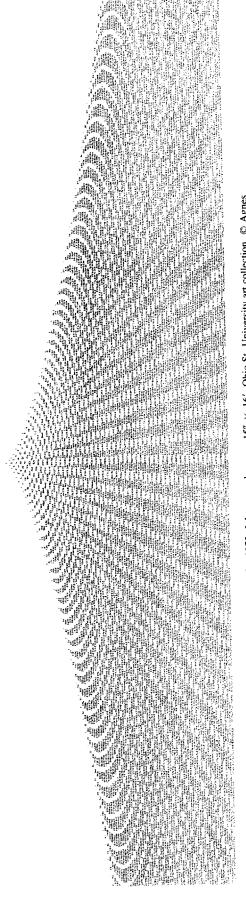


Fig. 12. Pascal's Triangle. 1973. Ink on graph paper, 15" × 16'. Ohio St. University art collection. © Agnes Denes 1973.

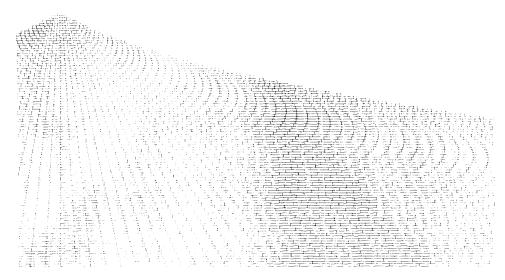


Fig. 13. The Stone Pyramid (detail). 1976. Silver ink on mylar, $28'' \times 16'$. © Agnes Denes 1976.

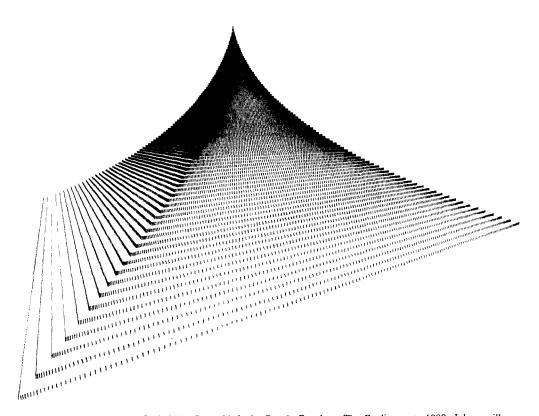


Fig. 14. Pascal's Perfect Probability Pyramid & the People Paradox—The Predicament. 1980. Ink on silk vellum, $32\times43''$. © Agnes Denes 1980.

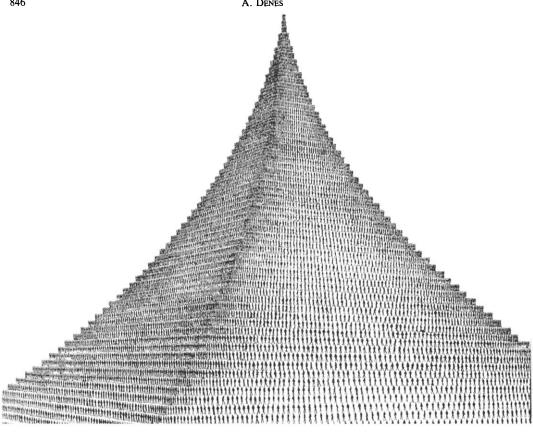
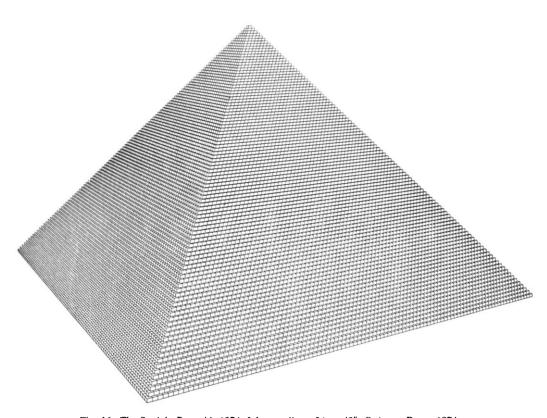


Fig. 15. Pascal's Perfect Probability Pyramid & the People Paradox-The Predicament (detail). 1980. Ink on silk vellum, 32 × 43". © Agnes Denes 1980.



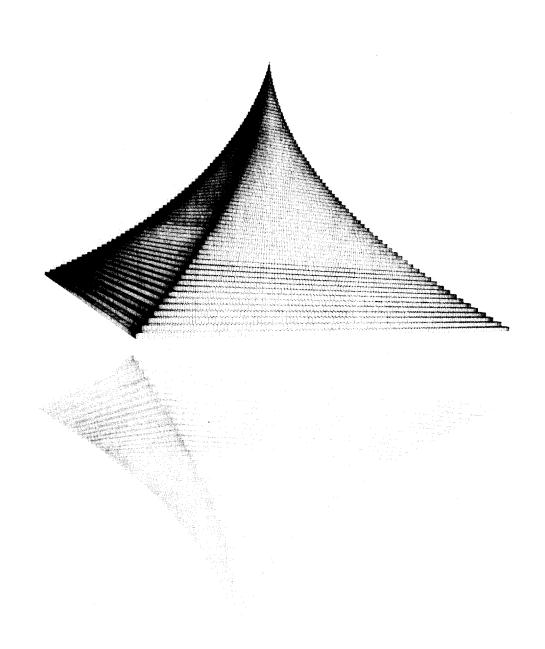


Fig. 17. The Reflection. 1978. Ink on vellum, $48'' \times 26\frac{1}{2}''$. Collection: Kunshalle, Nurnberg, F.R.G. © Agnes Denes 1978.

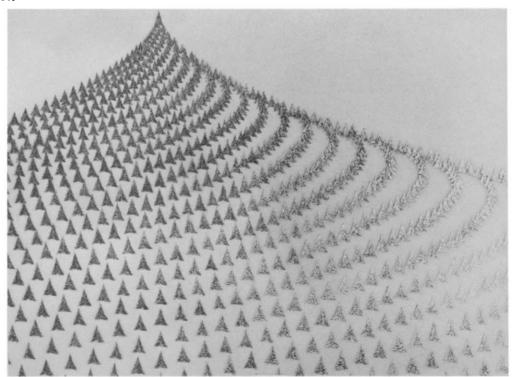


Fig. 18. Tree Mountain (study for environmental work)—1.5 mile × 285 ft high, 10,000 trees (detail). 1983. Metallic ink on mylar, 34¼ × 96½". © Agnes Denes 1983.

questions, dissects, reevaluates and reconstructs through the conscious use of instinct, intellect and intuition.

. . . By questioning our existence as well as existence itself, we create an art universal in terms of all humanity. Personally, I am fascinated by our human position of being somewhere in the middle of this "existence." We live on an average galaxy; we can't see too far or too close, can't stand too much cold or too much heat. We don't live too long, and yet, we can look out to the edge of the universe into light years and penetrate the atom chasing quarks and another world within. The world seems to begin at the surface of our skin; there is a world beyond it and a world within, and the distance is about the same. I like that.

Once we abandon Newtonian static physics and accept Einstein's four-dimensional principles of relativity, we question reality and know that even the laws of nature may undergo evolutionary changes. We even invented the uncertainty principle, although we use it for other reasons.

We haven't begun to understand the implications of this new, relativistic existence, where everything we had known and had believed now seems to be wrong. In this new dynamic world, objects become processes and forms are patterns in motion. Matter is a form of energy and our own human substance is but spinning velocity. There is no solid matter and no empty space; time becomes an earthbound reality but remains an enigma in the fourth dimension. We must create a new language, consider a transitory state of new illusions and layers of validity and accept the possibility that there may be no language to describe ultimate reality, beyond the language of visions.

In our limited existence, evolution provides answers as to where we've been and where we are going: a future prediction based on previous phenomena. The universe contains systems, systems contain patterns. The purpose of the mind is to locate these patterns and to seek the inherent potential for new systems of thought and behavior.

My work touches on the various stages of the development of my species, reevaluates and makes new comparisons in order to enhance perception and awareness, to form new insights and new methods of reasoning. . . .

This analytical attitude probes the structural and philosophical significance of an invisible world where elusive processes, transformations and interactions of phenomena go unseen, buried in the substance of time and space. I am referring to known or unknown events hidden from recognition either by their nature of spatio-temporal limitations or by our being unaware of their existence and functions.

I believe that art is the essence of life, as much as anything can be a true essence. It is extracted from existence by a process. Art is a reflection on life and an analysis of its structure. As such, art should be a great moving force shaping the future.