

UNVEILING THE CONSORT

PART I

"The purpose of Duchamp's later art is the creation of a mythology that looks into the future, outlining a certain trajectory for the fate of modern art."

JACK BURNHAM

The question of shop windows.
To undergo the interrogation of shop windows.

The exigency of the shop window.
The shop window proof of the existence of the outside world.

When one undergoes the examination of the shop window, one also pronounces one's own sentence.

In fact, one's choice is "round trip." From the demands of the shop windows, from the inevitable response to shop windows my choice is determined.

No obstinacy, ad absurdum, of hiding the coition through a glass pane with one or many objects of the shop window. The penalty consists in cutting the pane and in feeling regret as soon as possession is consummated. Q.E.D.¹
—Neuilly, 1913

Marcel Duchamp wrote the above when he was planning his first Ready-mades. Ending his observations with the abbreviation for *quod erat demonstrandum*, a term applied in mathematical and logical assertions meaning *which was to be shown or demonstrated*, he indicates that the Ready-mades are to be a demonstration of various esthetic principles. A brief introductory interpretation of this obscure series of statements should prove helpful before we return to the sources of Duchamp's metaphors.

Shop windows are the veils between mythic cognition and reality. Or more literally, as in the case of painting, shop windows embody the notion of the picture plane and, as Michel Foucault has pointed out in his analysis of Velasquez's *Las Meninas*², what transpires both *behind* and *in front* of it. Here the artist's understanding of the external situation, *vis-à-vis* history and culture, critically affects the construction of pictorial space. Moreover the "goods" within the shop window validate "the existence of the outside world." The artist examines the shop window, or more accurately what lies behind the window, by tentatively making art and searching for a mature and viable style. By doing so, he "pronounces [his] own sentence." The word *sentence* has a double meaning here: Duchamp is implying that all works of art adhere to specific semantic and syntactical relations which resemble any one of all possible sentence forms. Hence the artist defines his artistic destiny (that is, *sentences* himself) by the linguistic choices he makes. An artist's only possible reprieve is to review the shop window and in so doing shift to another sentence structure. One's choice is "round trip" for two reasons: first because any choice, if carried out rigorously and to its farthest limits, will result in the same destination (all sign combinations ultimately become symbols that lose their semiotic capacity); and second because all sentence types form a circular chain of relationships, leading back to the same structure when pursued latitudinally. Ostensibly every artist's entry into art is controlled by the exigencies of past historical change in painting and sculpture. To a large extent, available choices are predetermined. But Duchamp insists that he is

not going to allow any personal propensity or psychological quirk to define his choice of objects in the window; he speaks of *not* "hiding the coition through a glass pane with one or many objects in the shop window." In this case, as we shall later see, *coition* is a synonym for the act of sentence construction. That Eros is the basis of all art and human culture is a fact Duchamp has never tried to hide. So Duchamp's erotic relation to art is that of a man who understands that all forms of coition are permissible under recognized circumstances, and he insists that he is going to experiment with all forms. Only then does he admit that there are certain psychological drawbacks to practicing art logically and not intuitively like every other artist: "The penalty consists in cutting the pane and in feeling regret as soon as possession is consummated." Apparently art is a virgin construct which is about to be deflowered. Being burdened with the secret of knowing the logic mechanisms of art, Duchamp chooses to express his conquest in a series of esoteric works that proclaim the knowledge only to those who share the same degree of information.

Initially we must acknowledge the ancient taboos attached to magic, those restrictions of which the artist was acutely aware. Duchamp gained his mastery over art through inspired readings into literature, philology, cultural anthropology, linguistics, and especially through deciphering some of the sources of Western magic including ancient Egyptian religion and science, the diagrams of the Cabala and their implications in the Tarot cards, the real purposes of Astrology and Alchemy, and the rituals and goals of Freemasonry. All of these occult disciplines more or less represent the same body of esoteric wisdom. Each source maintains very heavy strictures against imparting its knowledge to outsiders or to those who might use it for malevolent purposes. So, as the great teacher Eliphas Levi insisted, "Those who know do not say, those who say do not know."

Once aware, by accident and design, of this knowledge, Duchamp had to decide whether or not to publicly divulge it. If versed in drawing up horoscopes, one soon realizes that Duchamp used his information according to the strict dictates of astrological conditions for his birth sign, July 28, 1887, and its conjunctions. Without laboriously presenting an in-depth demonstration of this, several observations may be easily made. According to astrology Duchamp's weaknesses lay in self-centeredness and a tendency to boast of personal achievements. The antidote is modesty, equanimity, and the pursuit of strategies allowing the artist to hide his knowledge while revealing it. Duchamp's strength lay in his ability as a true alchemist, a man who knew the secret of transforming base materials into gold and its cultural equivalents. Therefore it is not surprising that lead is the metal proscribed as the vehicle for Duchamp's successes; the iconography of *The Large Glass* is tediously affixed to

sheet lead mounted on glass panes. Worldly success is assured for the person following these and other dictates—providing his horoscope coincides with Duchamp's.

Presently, though, there is reason enough for breaking the secrecy surrounding Duchamp's work. Not with minimal perversity Duchamp chose the occult sciences as the basis for his iconography, even though after 1912 his art was constructed purely by the application of logic and intellect. Ironically the key to this knowledge is expressed in symbols overwhelmingly rejected by science after the 17th century. Still it is perfectly clear from Pierre Cabanne's *Entretiens avec Marcel Duchamp*³ that he maintained a steadfastly rationalist approach towards all questions of human culture.

The reader is free to draw his or her conclusions. Yet deductive evidence overwhelmingly points to a single possibility: the so-called occult sciences are based on a conception of social relationships just beginning to be studied by contemporary science. Duchamp was well aware that occult wisdom has little to do with mystical illumination. Rather it is rooted in the language-based cognitive patterns that define human social systems. His supplementary writings are occasionally interlaced with sophisticated allusions to the mythic isomorphisms found in primitive societies. Consequently we are no longer dealing with occult secrets, but with insights that have their origins in linguistical analysis.

Most importantly, the purpose of Duchamp's later art, and particularly *The Large Glass*, is the creation of a mythology that looks into the future, outlining a certain trajectory for the fate of modern art. In his first collection of notes, the *Box of 1914*, he wrote:

A WORLD IN YELLOW

The Bridge of Volumes

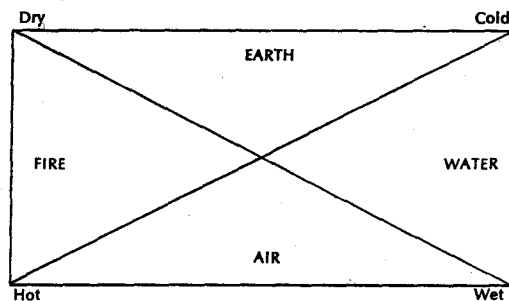
On top and under the volumes

In order to see pass the small passenger steamer⁴

In esoteric symbolism yellow is the color of illumination and intellectual penetration. Duchamp creates a panoply of forms that define the social and psychological mechanisms responsible for modern art. Installed within *The Large Glass* these volumes become an intellectual overpass whereby the progression of modernist styles in art is made visible. The word *mouche* in the term *la bateau mouche* also refers to "beauty-patch" or any artifice that would tend to enhance the environment, such as a painting. I contend that the trajectory of *The Large Glass* is historically complete and has been since about 1968. So that in terms of thwarting any possible avant-garde art of the future, there is no danger.

We should proceed by outlining some of the most basic tenets of transcendental magic, or at least those immediately applicable to Duchamp's iconography. In part, the origins of modern chemistry were an attempt to rectify mistaken ideas held by alchemists concerning

the properties of physical substances and processes. Some of these false notions are simply overly literal interpretations of the correspondences between metaphysical symbols and their material equivalents. Most essentially alchemy is a philosophy for the perfection of the human soul, a series of prescriptive teachings insuring fundamental understanding of human and natural law. The central theory of alchemy revolves around the configuration of the four primal elements: AIR, FIRE, EARTH, and WATER. All entities are thought to be combinations of these elements in varying proportions. These transmutations are based on an "eternal principle" and not on any physical admixture of the four elements. A set of four contingent properties is positioned between the elements: Wet, Hot, Dry, and Cold. Their function is to influence elements adjacent to one another. For instance Heat may change WATER into vapor, thus making it a form of AIR. Or the Wetness of WATER has the power of dissolving EARTH. Also Heat may drive the moisture out of AIR, making it ignite as FIRE.



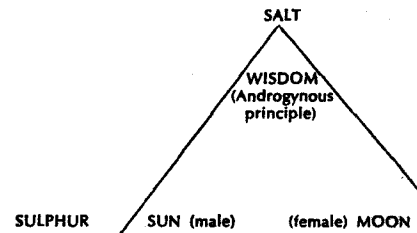
In the center of this diagram there exists a fifth element referred to variously as ETHER or the UNIVERSAL LIGHT. So that in looking at this configuration from the side it would appear to be a four-sided pyramid. The back of the Great Seal of the United States contains just such a pyramid with an illuminated eye at its apex. This eye represents the discovery that Duchamp made concerning the universal limitations of art. Notice that one only sees the front of the pyramid and a portion of the right side. In all occult science, right is the favored side (this is true also of the iconography of painting and sculpture) while the left is problematic and illusionary, extending into the future and the unknown. Life is represented by heat and dampness—prerequisites of mortal existence—while death is defined by dryness and cold. Here we must return to the preface of *The Large Glass* where Duchamp inscribes:

Given 1. the waterfall

2. the illuminating gas⁵

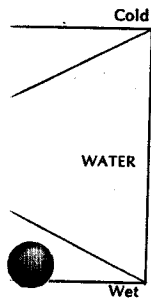
Two things are Given: that AIR ignites through FIRE providing the *illuminating gas* and that WATER gradually erodes EARTH by virtue of the *waterfall*. The illuminating gas and waterfall represent a kind of dichotomy, a balance that must be maintained in human functioning. Please note Duchamp's last major work in the Philadel-

phia Museum, entitled *Etant Donnés d'eau 2. le gaz d'éclairage* (1946-19) through the door, one's eyes are fixated on a reclining female nude holding a glass in her right hand, in fact her only visible hand. The left in a wooded background is a waterfall. So in a sense the illuminating gas is what is man-made and CULTURAL and the waterfall represents the NATURAL. As we might quote Eliphas Levi on the meaning of these symbols: "One does not invent a truth, and a shade of truth is produced . . . Analogy is the key to the secrets of Nature and the sole fundamental principle of revelations."⁶



For the alchemist the triad above represents the unification of indestructible matter. One must look upon it as joining the front and the back of the Great Pyramid. Hence Sulphur, the male principle, unites EARTH and FIRE; Mercury, the volatile principle, unites WATER and AIR; and Salt is the quintessential state, combining EARTH and ETHER. Salt is the medium for conjoining the body and the spirit. Being the male principle, sulphur is the spirit while mercury receives. In esoteric alchemy Sol (sun) and Luna (moon) are the King and Queen, gold and silver respectively. Lead may signify the medium through which base metals are transformed into gold and silver. And here note that Marcel Duchamp adopted the androgynous pose of Rose Sélavy in the early 1920s and later adopted the title *du sel* for his writings.⁷ This last inversion of the letters in the artist's name lends credence to the possibility that he possessed the Philosopher's Stone and traded it freely to those artists who were wise enough to accept it. In the operation of *The Large Glass*, the function of Salt is to provide the proper circumstances for conjunction between male and female principles. John G. Bennett's *Prelude to Chemistry* quotes from a 17th century alchemy text on the significance of the numbers in the Philosopher's Stone: "One is the quintessence of its own nature . . . The four elements, fire, air, water, and earth, are shown as proceeding directly from the one Nature; the three principles, sulphur, salt, and mercury; the two 'seeds,' the male and female, Sol and Luna, or sulphur and mercury—metals; and the one Tincture, from art." The intention of this essay is to show that the alchemical symbols represent the semi-logical principles of language fused to myth.

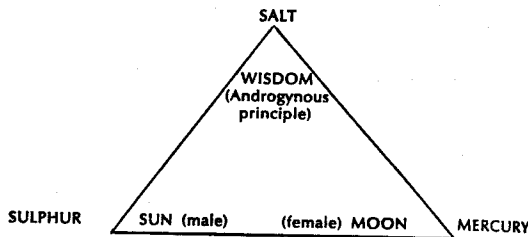
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phia Museum, entitled *Etant Donnés: 1. la chute d'eau 2. le gaz d'éclairage* (1946-1966). Peering through the door, one's eyes are fixed upon a reclining female nude holding a gas lamp in her right hand, in fact her only visible limb. To the left in a wooded background is a waterfall. So in a sense the illuminating gas represents what is man-made and CULTURAL while the waterfall represents the NATURAL. Moreover we might quote Eliphas Levi on the obscurity of these symbols: "One does not invent a dogma, one veils a truth, and a shade for weak eyes is produced . . . Analogy is the key to all secrets of Nature and the sole fundamental reason of all revelations."⁶



For the alchemist the triad above represents the unification of indestructible matter. We may look upon it as joining the front and rear faces of the Great Pyramid. Hence Sulphur, the fixed principle, unites EARTH and FIRE; Mercury, the volatile principle, unites WATER and AIR; while Salt is the quintessential state, comparable to ETHER. Salt is the medium for conjoining sulphur and mercury, a union of body and soul through the spirit. Being the male principle, sulphur bestows while mercury receives. In esoteric alchemy Sol (sun) and Luna (moon) represent King and Queen, gold and silver respectively. Lead may signify the medium through which base metals are transformed into gold and silver. And here note that Marcel Duchamp assumed the androgynous pose of Rose Sélavy in the early 1920s and later adopted the title *Marchand du sel* for his writings.⁷ This last inversion of syllables in the artist's name lends credence to the possibility that he possessed the Philosopher's Salt and traded it freely to those artists with the wisdom to accept it. In the operation of the Great Work, the function of Salt is to provide the proper circumstances for conjunction between male and female principles. John Read in his *Prelude to Chemistry* quotes from an 18th-century alchemy text on the significance of these numbers in the Philosopher's Stone: "Out of five—that is, the quintessence of its own substance . . . The four elements, fire, air, water, and earth, are shown as proceeding directly from God; the three principles, sulphur, salt, and mercury, from Nature; the two 'seeds,' the male and female—Sol and Luna, or sulphur and mercury—from the metals; and the one Tincture, from art."⁸ The intention of this essay is to show that these five arithmetical symbols represent the semiotic principles of language fused to myth.

In Duchamp's introduction to the notes of *The Green Box* he states that "The machine with 5 hearts, the pure child of nickel and platinum must dominate the Jura-Paris road." The "machine with 5 hearts" is of course the Great Pyramid, the "pure child of nickel and platinum" is an old and cryptic allusion to the Philosopher's Stone, namely that set of elemental relationships holding the key to art. The "Jura-Paris road" defines the destination of art from its 19th-century avant-garde origins in Paris to its destiny on the Moon, expressed by the expansion and contraction ("oscillating density") of mercury and the eternal return to the female principle. This return is also emphasized in the cabalistic JOD (male)—HE (female)—VAU (joining)—HE (FEMALE). Such a shift is always the result of over-culturalization and signifies the abandonment of harmful cultural illusions. Analogously the art myth ends when non-objective paintings appear to be simply paint-covered canvases tacked to wooden stretchers.

What does such a complicated array of numbers and symbols mean to the structural anthropologist? Much of it comes under what has been called the resolution of the binary and unary principles. Simply stated, we strive to ignore the limitations of categories, assuming that the sum of all categories makes up the whole environment. Yet even the most comprehensive categories in natural languages omit and distort many entities. A category implies that things are both *p* and *not-p*; items are either in a category or outside of it. Things which are not named become taboo. Not referring to them is just one means of dealing with their ambiguous status as nonobjects. In Edmund Leach's words, "If . . . we are only able to perceive the environment as composed of separate things by suppressing our recognition of the nonthings which fill the interstices, then of course what is suppressed becomes especially interesting."⁹ It seems evident that taboos always involve entities falling into more than one category, and these categories are invariably irreconcilable. For instance, works of art are simply physical constructions; but we respond to them as if they embodied feelings and ideas transcending the limits of materiality.

Leach provides us with examples of two taboo areas. The first are substances which on occasion become detached from the human body—in particular, spittle, pus, hair clippings, semen, menstrual blood, urine, feces, and mother's milk. These substances defy the boundaries of self; they are both personal and nonpersonal. Their anomalous character makes them excellent ingredients for magical rites. Secondly, men demand the existence of superhuman and immortal gods; but knowing that these creations have no material form, they fabricate an intermediate category of half humans/half gods. These include gods on earth, virgin mothers, prophets receiving the word of god, animal-like men and other doubtful creatures. Such beings have a foot in both

worlds. Life is full and falsehood, life it is the function opposites by const are separable and the other. Similar tions that make s While this is ge I should point ou aware of art's me ritual for material relationships. One 1914 reads:

Arrhe is to art
arrhe
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grammatical:
l'arrhe of the paint

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worlds. Life is full of contrasting dualities; truth and falsehood, life and death, day and night. So it is the function of religion to mediate these opposites by constructing a world where they are separable and one is seen to triumph over the other. Similarly, art employs social conventions that make spirit triumph over matter. While this is getting ahead of the explanation, I should point out that Duchamp was perfectly aware of art's mediating function as a kind of ritual for materials incorporated into linguistic relationships. One of his notes in *The Box of 1914* reads:

Arrhe is to art what merdre is to merde.
 arrhe = merdre
 art = merde
 grammatical:
 l'arrhe of the painting is of the feminine gender.¹¹

In this case Duchamp is making a number of assertions, but for our purposes I will just point out several. He is stating, in terms of sign functions, the formal relationships found in all works of art. Using the Saussurian convention he divides words into a fractional term: *signifier* or sound-image over *signified* or the concept of the word, thus *arrhe/art*. He also does the same thing for the word *merde*, dividing its common French pronunciation from its meaning. Yet he is saying much more than "art equals shit." Duchamp is stating that the relationships between the parts of an idea (art) are equal to the relationships between the parts of a material substance (shit). He is also stating that both art and shit are anomalous and taboo categories, categories where we construct certain linguistic conventions to mediate overlapping associations. But most importantly he is demonstrating that art is the result of structuring analogical relationships between ideas and phenomena. And as Claude Lévi-Strauss has specified in his studies of myth, Duchamp also observes that signifiers are of feminine origin. Thus what we see or hear of an undifferentiated nature—unattached to meaning—relates to the source of creation: the female principle and nature.

All mythic structures, including art, are for appearance's sake presented as a unity, yet they operate according to binary principles of opposition and contrast. For the time being I will represent this by setting down some of the values that Edmund Leach uses in his essay, *Genesis As Myth*.¹² The reader, though, should keep in mind that we perceive the story of Genesis (written and spoken) as a whole; but conceptually and in terms of structural principles we analyze it through binary associations.

By segregating the Biblical text of Genesis, Edmund Leach attempts to prove—as Lévi-Strauss has done with a much broader range of ethnographic materials—that the narrative or story line of such myths mediates irresolvable problems. Whether it is in kinship, ruling rights, foods, or ontologies of culture, these problems seem to be asking the same basic question: namely *how*

Perfect and Ideal Categories	Confused Anomalous Categories (sacred)	Imperfect and Real Categories
HEAVEN Things by themselves Light, Darkness, Dusk, Day, Night Life by itself Immortality Good by itself Things whose seed is in themselves Cereals, Fruit, Grass	FIRMAMENT Sky Death Evil Creeping Things ADAM EVE brother sister SERPENT incest (knowledge)	EARTH Things in pairs Day + Sun Night + Moon Life and Death Mortality Good and Evil Things with two sexes Cattle Beasts
WEST	EXPULSION FROM PARADISE	EAST Beginning of real life, marriage, and sexual procreation in the real world

we make one out of two? Thus myths become *metamessages* or information which does not at all seem to be related to the story conveyed. In the case of Leach's Genesis categories, things that are confused, anomalous and sacred make up what we would call the content of "art"—that is they hide their relations to binary and unary categories.

Within the past ten years "cognitive anthropology" has been formulated for the purpose of defining culture in terms of linguistically connected conventions. Taxonomies, or conceptual categories, relate groups of things both hierarchically and by contrast. In effect all languages are based on taxonomies or contrast sets which in turn help to define other taxonomies.¹³ What is important in a particular environment not only defines a taxonomy for a given language, it also influences all connected taxonomies and thus the general consistency of semantic relationships. In essence this means that words in a language have value-functions and not truth-functions. As Jerrold Katz states in *The Philosophy of Language*¹⁴, the reason logical empiricists failed in their analysis of natural language is that they mistook the rules of formal logic derived from metamathematics for the syntax of grammatical forms in ordinary language. However the difference is fundamental and critical. Without embarking upon a lengthy explanation, all forms of algebra and mathematical logic are semiotics with a *single level of articulation*. This means that a symbol in algebra can be assigned a single fixed meaning for all contexts. On the other hand, the "signs" of natural language, which are composed of words and/or morphemes, are connected by a double system of oppositions (syntagmatic and paradigmatic on the planes of content and expression) so that they possess a *double articulation*. Stated another way, the taxonomic principle of language allows for shifts in the meaning in words according to contextual changes which are accommodated phonetically and through the subtle logic of ordinary grammar. Double articulated semiotic systems, while potentially more flexible and efficient than singly articulated systems, are also

more imprecise. Consequently we can make art from language-based systems but not from communication or logic systems singly articulated.

Doubtlessly no other principle has caused more confusion and misapplication by art critics, estheticians, and historians. The reason is fairly evident. All forms of art analysis (iconology, historical determinism, psychology, and formalism) deal with symbol interpretation or simple mappings of logic principles applied to works of art and their circumstances. Any real analysis of art, however, demands the use of linguistic techniques that take into consideration the peculiar idiosyncrasies of doubly articulated systems. The implications this raises for Western epistemology have been brilliantly developed by Michel Foucault in his book *Les mots et les choses*.¹⁵ The substance of his thesis is that we have traditionally structured our social systems (economics, art, speech, natural history, etc.) according to linguistic principles, while we have sought Cartesian precision in the singly articulated methods of analysis found in the hard sciences.

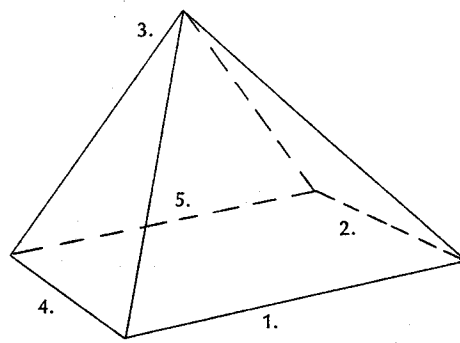
It is patent that these three notions—*mathesis*, *taxnomia*, *genesis*—designate not so much separate domains as a solid grid of kinships that defines the general configuration of knowledge in the Classical age. *Taxnomia* is not in opposition to *mathesis*: it resides within it and is distinguished from it; for it too is a science of order—a qualitative *mathesis*. But understood in the strict sense *mathesis* is a science of equalities, and therefore of attributions and judgements; it is the science of *truth*. *Taxnomia*, on the other hand, treats of identities and differences; it is the science of articulations and classifications; it is the knowledge of *beings*. In the same way, *genesis* is contained within *taxnomia*, or at least finds in it its primary possibility. But *taxnomia* establishes the table of visible differences; *genesis* presupposes a progressive series; the first treats of signs in their spatial simultaneity, as a syntax; the second divides them up into an analogon of time, as a chronology.¹⁶

Part of the deception is due to the fact that art analyses are based on taxonomic associations which are largely homogenous to the works they describe.

It is hoped that the reader will forgive this long digression into linguistic principles. But it is absolutely necessary for an understanding of Marcel Duchamp's contribution to art. Duchamp's discovery was simple yet fundamental: he gradually perceived in the spring and summer of 1912 that Saussurian semiotics (those methods of analyzing language through sign functions) are consistent with the secrets of transcendental magic and alchemy. In my recent book, *The Structure of Art* (1970)¹⁷, I have dealt with the meaning of the semiotic triangle in terms of Lévi-Strauss's diagram of food preparation; variant triangles also appear in his analysis of kinship structures and other mediation functions.¹⁸ In alchemical terms the basic triangle may

be conceived as the union of Sulphur (male-body), Mercury (female-soul), and Salt (androgyny-spirit). Semiotically, this reads as *Referent* (or entity signified), *Signifier*, and *Signified*—the three values needed to define the existence of a sign.

The semiotic triangle that Lévi-Strauss alludes to in food preparation, and sometimes in sexual relations, is of a different order. This is connected to ways of *doing things*, for instance: 1) Smoked food 2) Boiled food and 3) Roasted food—or 1) Monogamy 2) Promiscuity and 3) Celibacy. In my book the triangle unites 1) Mimetic art 2) Non-objective art and 3) the Ready-made. Surveying my own semiological analyses of various art works and Lévi-Strauss's variety of human habits, it seemed that this construction did not adequately represent the complete semiotic. But by adapting the Great Pyramid of Alchemy, and employing the qualities signified by the Four Elements, one arrives at a more complete semiotic configuration.



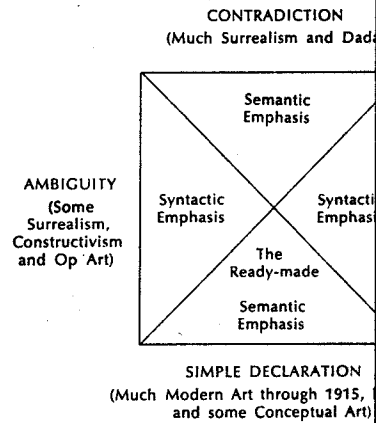
Translation of the Pyramid for food preparation and sexual relations produces these values:

1) Smoked food 2) Boiled food 3) Roasted food 4) Foods mixed and baked and 5) Naturally poisonous foods prepared for edibility; 1) Monogamy 2) Promiscuity 3) Celibacy 4) Polygamy and 5) Incest. For art the following types may be defined: 1) Mimetic art 2) Non-objective art 3) the Ready-made 4) Ambiguous art and 5) Contradictory or illogical art. Superficially these categories appear to have little to do with one another. It must be reiterated that each alchemical function is duplicated by several symbols, all having overlapping association. Quite normally, meanings are obscured in esoteric writings by mixing symbols in different sets.

The four essential materials possess characteristics that seem obvious enough on the surface, but these are more exclusive when viewed in relation to each other: for instance EARTH joins falsehood, evil, materiality and impenetrability; WATER relates to creativity, emotionalism, intuition, death and eventual rest; AIR signifies what is good, spiritual, essential and intellectually vital; while FIRE defines the formative principle, impulsiveness, life, motion and instability.

In *The Structure of Art*, I attempt to use the Glossamatics techniques of the Danish linguist Louis Hjelmslev. Not only do these serve as a

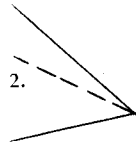
test in establishing compatible tent and planes of expression for they suggest that works of art share the same deep-structure conceptualizable for the construction of ordinary language. Also there is a resonance in Duchamp's writings that leads to the same conclusion. As a result I find sentence structures for the Great Pyramid (Simple sentences 2) "Elliptical sentences with an implied subject that is understood contextually 3) "Phatic" phrases so idiomatic that they lose their force if a single word is altered 4) Sentences which are complex or compound or both 5) Sentences which are compound in deep structure but simple in surface structure 6) Sentences possessing surface structure but not deep structure 7) Ungrammatical sentences, "rhetorical" sentences, and false analytical sentences 8) Sentence categories cover all concisions and correspond to the properties of the elements 9) Sentences which are otically these sentences may also be classified according to their sign properties 10) Sentences have a single signifier and a single signified 11) Simple sentences possess a signifier but no signified 12) Phatic expressions use a signified but no signifier 13) Complex, compound, and ambiguous sentences have more than one signifier and more than one signified; sentences in semantics are made to "agree" by phonological means but in surface disagreement between signified and signifier.



Fundamentally this defines the relationship between the signifier and the signified by Marcel Duchamp during the winter of 1912 and through the summer of 1913. This period mirrors the response to an enormous awakening (i.e., "... of feeling re-awakened, possession is consummated. Q.E.D. there is the painting *Young Man and Old Woman* completed in Neuilly during the summer of 1913. Arturo Schwarz's analysis of the painting is quite revealing. The pair represents a sister relationship with both fig-

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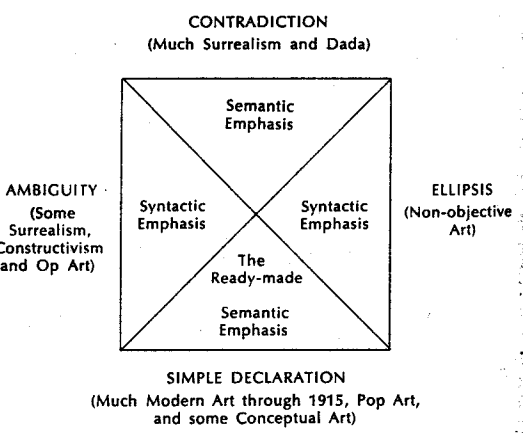
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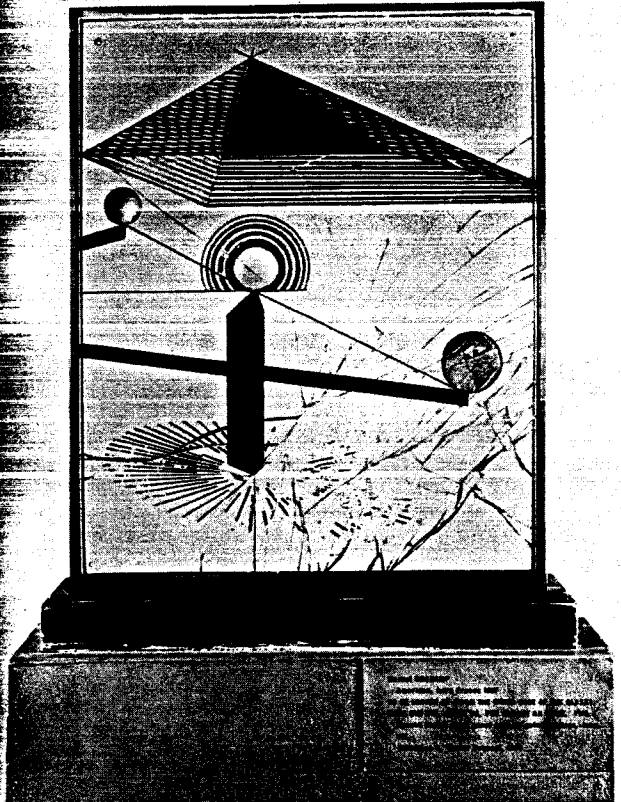
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2) WATER 3) ETHER 4) FIRE and 5) EARTH. Semi-
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have more than one signifier and/or more than
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made to "agree" by phonological manipulation
(as in the case of poetry) but in any case show
surface disagreement between signifier and sig-
nified.



Fundamentally this defines the discovery made
by Marcel Duchamp during the winter of 1911-
1912 and through the summer of 1912. His paint-
ing during this period mirrors the artist's emo-
tional response to an enormous intellectual
awakening (i.e., "... of feeling regret as soon as
possession is consummated. Q.E.D."). For instance
there is the painting *Young Man and Girl in Spring*
completed in Neuilly during the spring of 1911.
Arturo Schwarz's analysis of the iconography is
quite revealing. The pair represent a brother-
sister relationship with both figures stretching



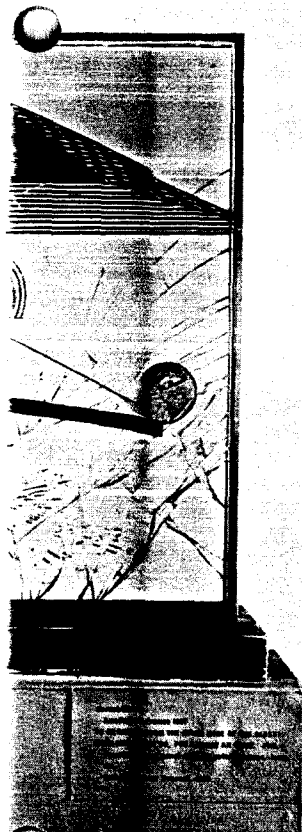
Marcel Duchamp, *To Be Looked At (From the Other Side of the Glass) With One Eye Close To, For Almost an Hour*, framed double glass panel with oil paint, blade, lens, etc. 20 1/2 x 16 1/2", 1918. (Museum of Modern Art, N.Y.)

their arms towards an overhead tree. If we look
back to Leach's diagram of the Genesis myth we
find that in their original state Adam and Eve
are siblings who, because Eve partakes of the
Tree of Knowledge, suffer expulsion and go on
to live in the real world as man and wife, i.e.,
they undergo the transition from myth to reality.
Duchamp's peculiar inscription on the back of
the painting to his sister, moreover, supports this
interpretation. Just as important is the centrally
positioned figure of Mercury or Hermes impris-
oned in a glass, alchemical vessel, signifying
Mercury's potential power to unite opposites
and spread knowledge. In this case the Sun
(King) and the Moon (Queen) are about to be
joined as a function of the Great Work. (See also
the author's notes for Paradise (1910) in Arturo
Schwarz's *The Complete Work of Marcel
Duchamp*).

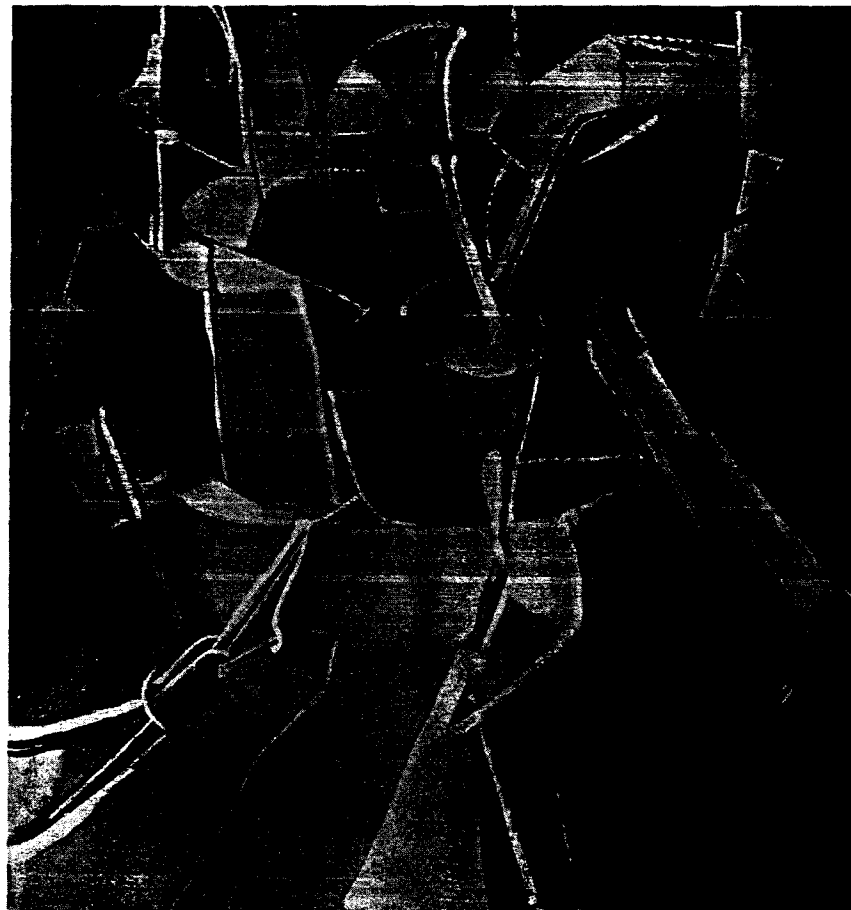
A caption on the back of a painting finished
toward the end of the same year—"Marcel Du-
champ nu (esquisse) Jeune homme triste dans un
train"—explains clearly enough that the artist
himself is the "sad young man." In alchemical
terms sadness or melancholia represent the tran-
sition (premonition) from worldly attitudes to
enlightenment. The train signifies the mechanical
means towards such understanding.

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Other Side of the Glass) With One Eye, Close to, for Almost an Hour. (Museum of Modern Art, N.Y.)



Marcel Duchamp, *The Passage from Virgin to Bride*, o/c, 23 3/8 x 21 3/4", 1912. (Museum of Modern Art, N.Y.)

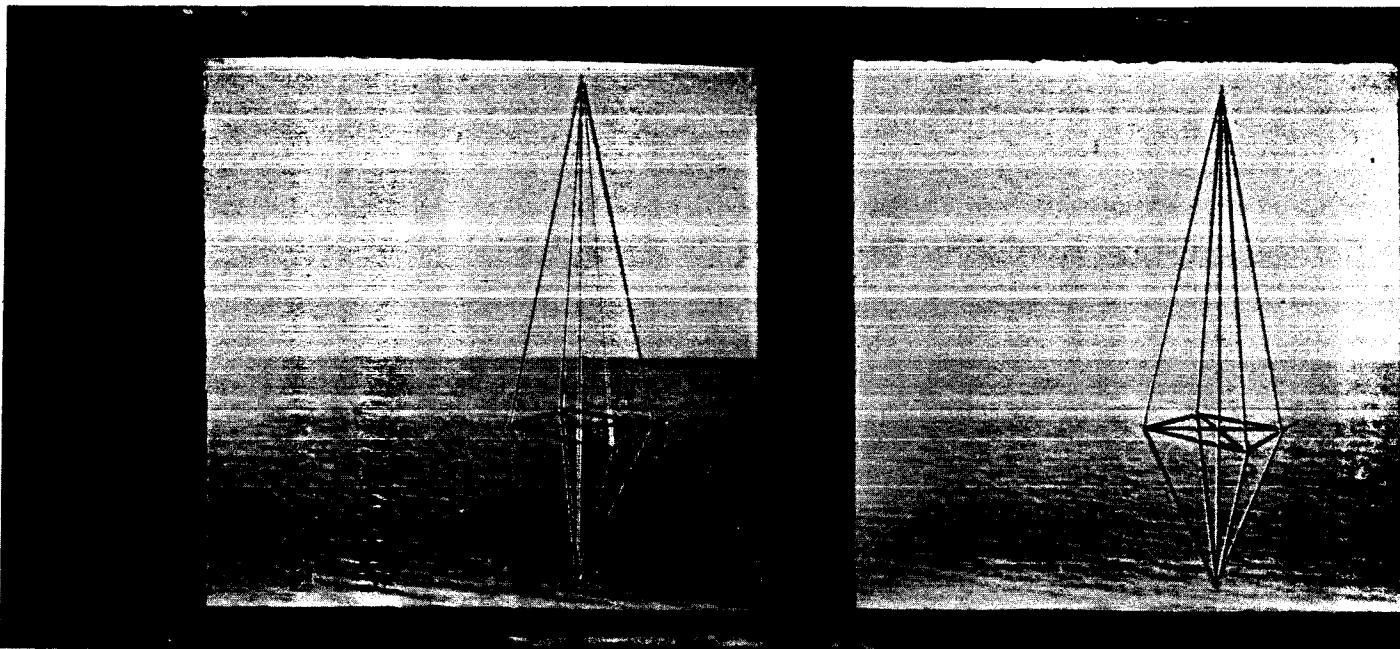
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The ideal world of happiness as typified by Adam and Eve in Paradise was transformed in 1912 to the theme of the King and Queen. In May of 1912 Duchamp painted *The King and Queen Surrounded by Swift Nudes*. The "Swift Nudes" are perhaps the "Sons of Hermes," those forces let loose to inform us of the secrets of the hermetic arts. Here it becomes increasingly apparent that the paintings of this period are a didactic attempt to biographically illustrate the artist's intellectual progress in unraveling the alchemical secrets of art. Eventually Mercury symbolizes for Duchamp the combined forces of AIR and WATER in the transition from mimetic to progressively denuded non-objective art.

One might well make a case that the pivot-point in Duchamp's career occurred in the summer of 1912 during his visit to Munich. According to Marcel Jean, "he traveled to Germany third-class by local trains, so that the journey should last longer."¹⁸ This visit, or the artist's reluctance, has never been adequately explained, particularly since the stay in Munich produced his technically most accomplished paintings plus the first notes and drawings for *The Bride Stripped Bare by Her Bachelors, Even*. My hypothesis for this visit is unsubstantiated, but a theory nevertheless that dovetails with the art-

ist's earlier and later iconography. Duchamp in his reading had come close to the alchemical origins of art, close enough perhaps to know that very few books on the subject reveal the real secrets of esoteric science. Possibly Duchamp found that a certain necessary text or manuscript on alchemy existed in Munich. This would account for any possible remorse or trepidation. Going there he would believe in art, returning he would know art. This also explains the studies for the Virgin in July 1912; the painting *The Passage from the Virgin to the Bride* in July and August; and finally, *The Bride* in August. Since art is mythic, and therefore female, Duchamp's discovery would lead to a sudden change in her sexual status, one where his conquest of the Virgin would not be comprehended for nearly sixty years.

Duchamp's use of the iconography of "the machine with 5 hearts" is rare. In 1918 as a study for *The Large Glass* he produced *To Be Looked at (from the Other Side of the Glass) with One Eye, Close to, for Almost an Hour*. Here a central lens is balanced on the point of an obelisk and aligned under the apex of a distorted pyramid. In reality one of the "Oculist Witnesses" located underneath is a Masonic symbol for omniscience. The distorted obelisk



Marcel Duchamp, *Handmade Stereopticon Slides*, pencil on stereopticon slide, 2¼ x 2¼", ca. 1929. (Museum of Modern Art, N.Y.)

is a "reading" for a projected life, while the pyramid is, of course, the symbol for all the possibilities in mediating life's activities. The corner of the pyramid between AIR and FIRE touches the right side of the *Glass*, thus informing us that this historically represents the beginnings of art. The pyramid extends off the left side of the *Glass*, signifying that in 1918 art still had a future before the stripping of the Bride was complete. Significantly, the corner missing unites EARTH and WATER, or that art defining the last formal transitions of non-objective art. In the notes for the *Boxing Match* in *The Large Glass*, Duchamp indirectly specified that the last stages of non-objective art will appear "realistic" to those viewing it. One sure clue that the subject of this glass is the de-evolution of non-objective art is in the work's title. Grammatically the title is an indirect command using the infinitive construction. In esoteric literature the infinitive represents the infinite, while a very rough interpretation of the deep-structure of this title would yield: [You] look at [it]. All in all this title has at least four kernel sentences in its deep-structure. The *Glass* itself contains four types of optical ambiguity, thus mixing FIRE and AIR, or ambiguous art with non-objective art. Duchamp intimates that historically such art ends when it is phonetically (formally) exhausted, thus completing the corner edge of the Great Pyramid.

A work such as *To be looked at . . .* illuminates the underlying meaning of Barnett Newman's *Broken Obelisk* of 1967. The obelisk, and its inversion over the pyramid, recognizes the fulfillment of Duchamp's earlier prophecy. In Masonic symbology the two forms represent the conjoin-

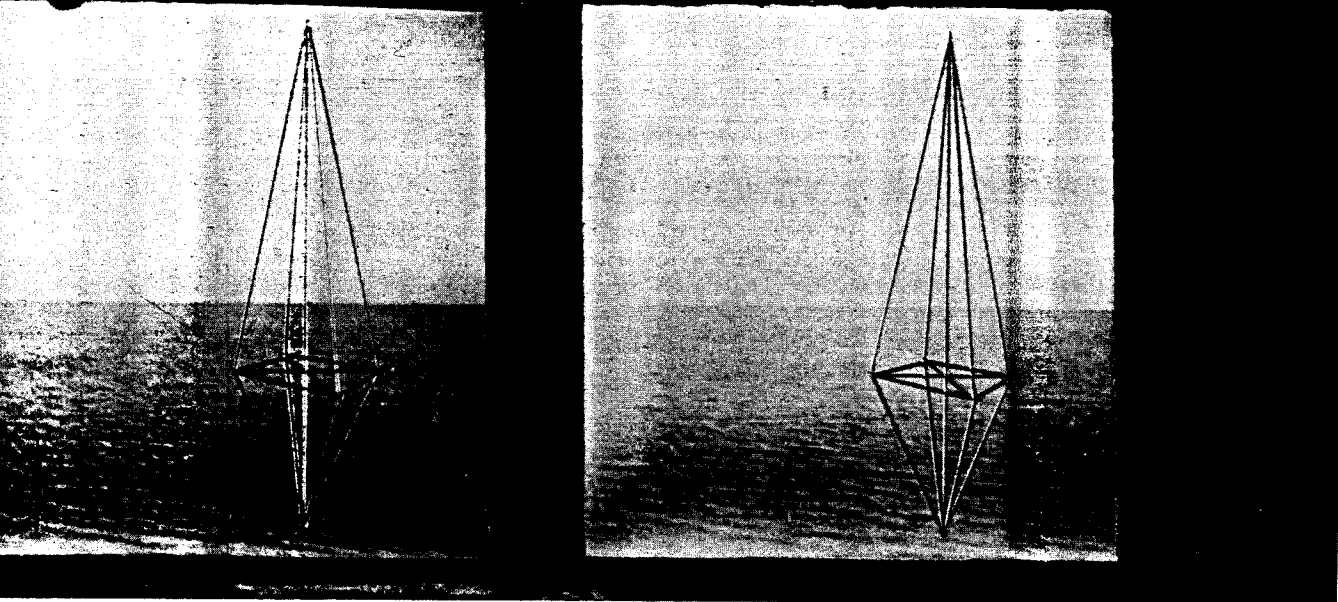
ing of human intellect with the secrets of the Great Pyramid, in this case the completion of modern art through its comprehension.

Pyramids again appear in *Handmade Stereopticon Slides* (1918-19). But now they are reflected with double opposing forms both below and above. This octahedron with its elongated superstructure has a different meaning. It represents the values of the Great Pyramid, culminating in domination by the Ready-made, but inverted to show their completion. The upper point of the polygon represents the same commanding intelligence as its lower counterpart. Moreover it signifies a higher degree of wisdom and understanding: recognition that involvement in art is no longer necessary. The vanishing points of the octahedron extend to the horizon. Marcel Jean quotes Duchamp as labeling this superimposed exercise in perspective a "collage in space."¹⁹ As a rule collages function by juxtaposing materials with different sign values although they have the same surface meaning. In this case it is the surface meaning which is obscure and the underlying meaning which is the same. In both mythic and esoteric terms the sea represents the caldron of life, good and evil, change in all of its manifestations: the dense ether. The air is cold ether. Yet the air in the higher firmament is touched by the sun's rays. At a very high altitude the sky transforms into the ideal and absolute realm of heaven, a state where concern with mundane matters is irrelevant.²⁰ ■

1. Marcel Duchamp, *A l'infinitive* (1912-1920) New York: Cordier & Ekstrom, Inc., 1966, p. 5.
2. Michel Foucault, *The Order of Things (Les mots et les choses)* (1966) New York: Pantheon Books, 1970, pp. 3-16.

3. Pierre Cabanne, *Entretiens avec les mathématiciens* Pierre Belfond, 1967.
4. Marcel Duchamp, *Marchand du sel*, Paris: Le Terrain Vague, 1958, p. 3.
5. Marcel Duchamp, *The Bride Stripped Bare* (typography by Richard Hamilton, George Heard Hamilton), New York: George Heard Hamilton, (no page number).
6. Eliphas Levi, *Transcendental Magic* (Arthur Edward Waite), New York: Dover, p. 180.
7. Duchamp, *Marchand du sel*.
8. John Read, *Prelude to Chemistry* The M.I.T. Press, 1966, pp. 208-209.
9. Duchamp, *The Bride Stripped Bare*.
10. Edmund Leach, "Animal Categories and New Directions in the Study of Man" (H. Lenneberg), Cambridge, Mass., p. 37.
11. Duchamp, *Marchand du sel*, p. 33.
12. Edmund Leach, *Genesis as Myth*, 1969, p. 20.
13. Stephen A. Tyler, *Cognitive Anthropology* (ed. J. New York: Holt, Rinehart, and Winston, 1970), pp. 1-23.
14. Jerrold Katz, *The Philosophy of Language* (ed. J. New York: Basic Books, 1966), pp. 15-68.
15. Foucault, *op. cit.*
16. *Ibid.*, p. 74.
17. Jack Burnham, *The Structure of Anticipation* (ed. J. New York: Pantheon Books, 1970), pp. 58-61.
18. Marcel Jean, *The History of Surrealism* (ed. J. New York: Pantheon Books, 1970), p. 99.
19. Jean, *The History of Surrealist Painting*.
20. For many readers the correspondence of the sides of the Great Pyramid will seem nothing less than incredible. It represents an eminently logical system on the mathematics of structural analysis in the Theory of Structural Analysis of Structural Strain" by Peter Abbe, pp. 389-409. Using some theorems defining patterns of strain and tension, he demonstrates that the theorems realize their use into a series of independent entities, manifesting relationships. The reader is encouraged to referent, signified, and significant, and then work out the semantics of the five types of sentences—this corresponds to the theorems by these sentence types.

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Opticon Slides, pencil on stereopticon slide, Modern Art, N.Y.)

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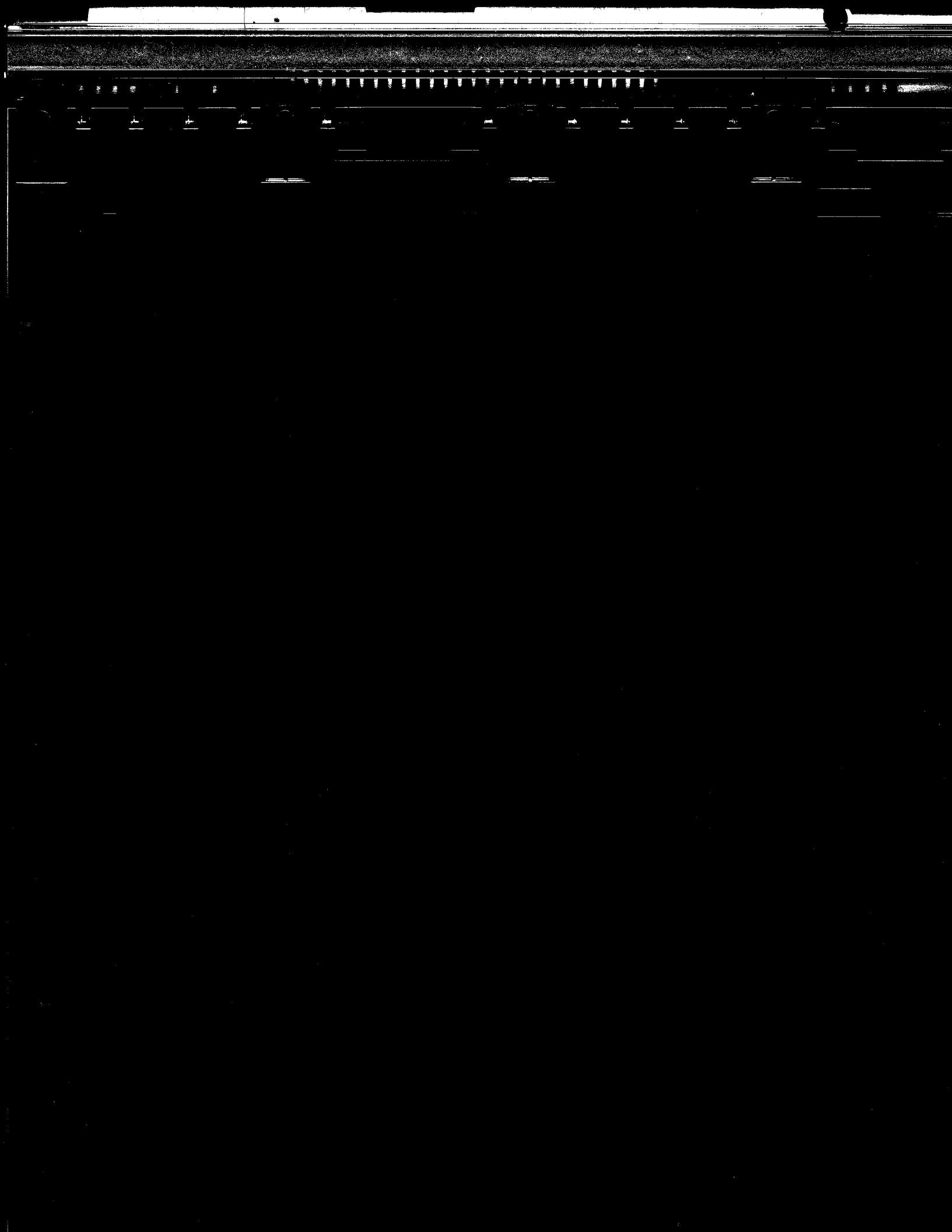
3. Pierre Cabanne, *Entiens avec Marcel Duchamp*, Paris: Editions Pierre Belfond, 1967.
4. Marcel Duchamp, *Marchand du sel*, (Michel Sanouillet ed. Paris: Le Terrain Vague, 1958, p. 31.
5. Marcel Duchamp, *The Bride Stripped Bare by Her Bachelors, Even* (typography by Richard Hamilton and translation by George Heard Hamilton), New York: George Wittenborn, Inc. (no page number).
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9. Duchamp, *The Bride Stripped Bare* . . . (no page number).
10. Edmund Leach, "Minimal Categories and Verbal Abuse" in *New Directions in the Study of Language* (edited by Eric H. Lenneberg), Cambridge, Mass.: The M.I.T. Press, (1964), p. 37.
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12. Edmund Leach, *Games as Myth*, London: Jonathan Cape Ltd., 1969, p. 20.
13. Stephen A. Tyler, *Cognitive Anthropology*, (Stephen A. Tyler ed.) New York: Holt, Rinehart, and Winston, Inc., 1969, pp. 1-23.
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15. Foucault, *op. cit.*
16. *Ibid.*, p. 74.
17. Jack Burnham, *The Structure of Art*, New York: George Braziller Inc., 1970, pp. 50-61.
18. Marcel Jean, *The History of Surrealist Painting*, (1959, translated by Simon Watson Taylor), New York: Grove Press, 1966, p. 99.
19. Jean, *The History of Surrealist Painting*, p. 101.
20. For many readers the correspondence between the symbol of the sides of the Great Pyramid and sentence structure will seem nothing less than incredible. The fact that they represent an eminently logical system is shown in an essay on the mathematics of structuralism, entitled "Some Problems in the Theory of Structural Balance: Towards a Theory of Structural Strain" by Peter Abell in *Introduction to Structuralism*, edited by Michael Lane, New York: Basic Books, 1970, pp. 389-409. Using game theorems developed in sociology for defining patterns of strain and tension-maintenance, Abell generalizes their use into a series of balance theory axioms. These are demonstrated particularly for structures with three independent entities manifesting stable and unstable relationships. The result is encouraged to substitute the values of referent, signified and signifier in these 3-cycle relationships and then work out the stability of these according to the semiotics of the five types of sentence structure. Mathematically they find that all sentences are stable except for compound-amphibious types and so-called elliptical sentences—this corresponds to the nature of the art generated by these sentence types.



Robert Duran, untitled

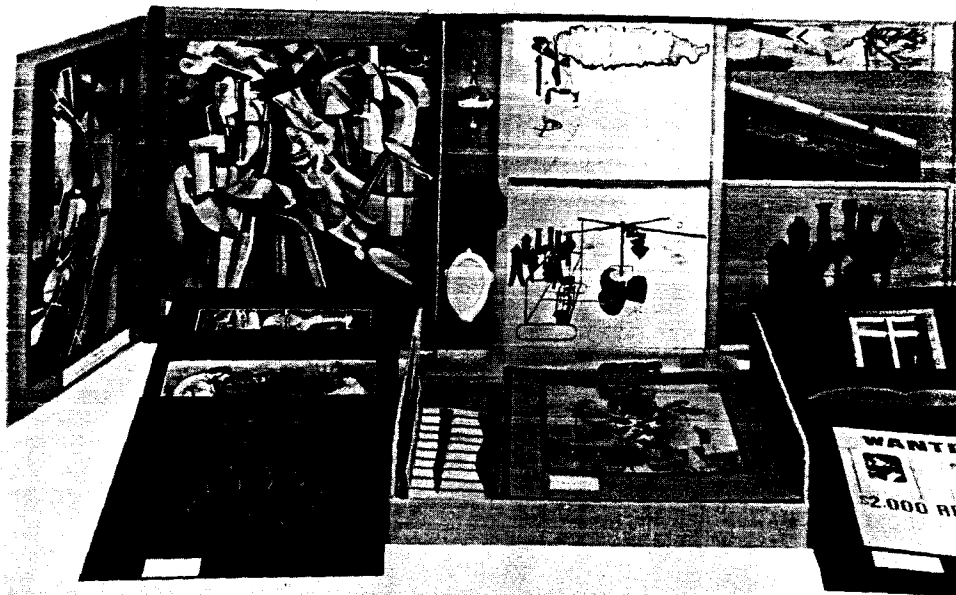


Alan Cote, untitled, a



UNVEILING THE CONSORT

PART II



JACK BURNHAM

In 1912 Marcel Duchamp discovered that all works of art conform to five types of sentence structure: A) Simple sentences B) Compound, complex and ambiguous sentences C) "Ready-made utterances" D) Elliptical sentences and E) Sentences with some disagreement between subject and predicate. He realized that as art these sentence structures have a particular diachronic relationship to each other, thereby defining the historical trajectory that modern art was to follow for the next six decades.

If, as Claude Lévi-Strauss maintains, myths function phonetically at the lowest level of articulation, syntactically and semantically at the next level, and through unconscious cultural discourse at a third level of articulation, then quite probably the same is true of art. There are, however, fundamental differences between the communication modes. Any writing or string of spoken words subjected to linguistic analysis is considered to be an ordered and finite text. The stories recounted to anthropologists in ethnological research, sometimes second or third hand, are only partially ordered and provisionally fixed texts, since verbal myths undergo constant vari-

ation. Linguistically, works of art are considered unordered and finite texts. From a semiotic standpoint these resist segregation by the usual means.

If this is true, then the phenomenon of art must function on a level beyond the normal analogical resources of poetry. Octavio Paz, the Mexican poet and essayist, alludes to this in his study of Lévi-Strauss's techniques:

The poetic function (I am citing Jakobson again) transfers the principle of equivalence from the axis of selection to the axis of combination. The formulation of every verbal message comprises two operations: selection and combination . . . Selection is carried out "on the basis of similarity or dissimilarity, synonymy or antonymy, while combination, the construction of the sequence, rests on contiguity." Poetry turns this order around and "promotes equivalence to the rank of a constituent process of the sequence." Equivalence works on all levels of the poem: sound (rhyme, meter, accents, alliterations, etc.), and the semantic (metaphors and metonymies).¹

According to Paz, poetry and mythic tales operate according to parallel categories of equivalency. But he misses the point which Lévi-Strauss seems to have mastered; namely that the mechanisms of poetry do not constitute all the levels

of analogy to be found in a work. One plane usually provide the basis for another. Many of Lévi-Strauss's equations are nothing more than to sentence structure—although there will be no real indication that he is aware of the fact that a number of sentences are possible. Moreover formal analogies are sometimes apparent in art, but normally these function within a framework of semiotic analogy.

One of the linguists responsible for the discovery was Louis Hjelmslev. His book, *A Theory of Language* attempts to apply the theories of Ferdinand de Saussure. "Algebra of signs" is feasible. While formal techniques have limitations, for ordinary linguists, their real value lies in their economy, elegance, and simplicity. The separation of sentence components is a necessary step. This approach recognizes that language is a system of content (semantics and syntax) which is analyzed (phonological analysis) which are related to each other through commutation relationships and limitations).

It would seem that the double



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of analogy to be found in a work. Analogies on one plane usually provide the basis for those on another. Many of Lévi-Strauss's four-part equations are nothing more than myth reduced to sentence structure—although there seems to be no real indication that he is aware of this, or the fact that a number of sentence structures are possible. Moreover formal and verbal equivalencies are sometimes apparent in art works, but normally these function within a broader context of semiotic analogy.

One of the linguists responsible for this discovery was Louis Hjelmslev. His *Prolegomena to a Theory of Language* attempts to extend the theories of Ferdinand de Saussure so that an "algebra of signs" is feasible. While his Glossomatic techniques have limitations for contemporary linguists, their real value lies in a symmetry, elegance, and simplicity that reveals the separation of sentence components on all levels. This approach recognizes that languages consist of *content* (semantics and syntax) and *expression* (phonological analysis) which are connected to each other through commutation (i.e., reciprocal relationships and limitations).

It would seem that the double articulation in-

herent to both language and art is quite similar: hence formalism is to art what phonology is to language. Both analyze or account for the organization of phenomena at the sensory or physiological level. What must be considered the equivalents of semantics and syntax in art (content) can only be ordered through the agency of principles of formal organization—but these are not necessarily visual. Moreover, it is apparent that no coherent theory of art semantics can be based on formalism alone. Note that in some art forms (Dada, Surrealism, Pop art, and some Conceptualism) formal organization acts as a substratum of content, yet this plays a negligible part in defining the art's Plane of Expression. In most such instances the Plane of Expression is defined by the particular nature of the making process and the lexical attributes of the items depicted by the work of art.

There is no one-to-one relationship between content and expression even when both planes are broken into smaller components. What is important to linguistic structure is the algebraic relation between the signifieds and signifiers of the planes of content and expression. In Hjelmslev's words, "It turns out that the two sides (the planes) of a language have completely analogous categorical structure, a discovery that seems to us of far-reaching significance for an understanding of the structural principle of all language or in general of the 'essence' of a semiotic."² He goes on to say that it appears that such an analysis does not yield up "a syntax or science of the parts of speech," meaning, as we shall see, that such divisions do not make complete distinctions between syntactical, semantic, and phonological components, but that these extend to both planes.

It is this "analogous categorical structure" of language relationships which subsumes all types of purely poetic analogy. For a sentence or a work of art these relationships assume the following form:

SIGNIFIERS	SIGNIFIEDS	
SURFACE STRUCTURE (the form taken by an art work's content)	DEEP STRUCTURE (the meaning and intention behind a work of art)	PLANE OF CONTENT
PHONETIC ANALYSIS (description of the art making process)	SIGNIFICANT PARADIGMATIC FEATURE (best articulated through principles of set theory)	PLANE OF EXPRESSION

Syllogistically this takes the form: Content Signifier is to Content Signified as Expression Signifier is to Expression Signified, or, reproducing Duchamp's equation:

$$\frac{\text{arthe}}{\text{art}} = \frac{\text{merdre}}{\text{merde}}$$

In *The Structure of Art*³ I describe procedures for defining the parts of this equation. These direc-

tions, however, in terms of diagrammatical possibilities of art. At fully appreciate the sky's theory of the implications of the standing sentences of Chomsky, how theories for understanding structures (e.g., with than one kernel). Also I have made a how neutralization digmatic and syntactic illusion of change.

Until the advent of Noam Chomsky in 1957, linguists and the conventional is known as content. The main point was to be understood through. Supported by many, I realized that all sentences are one or more kernels. A sentence is a basic kernel no more than a and a predicate (including an object). Distinctions of categories are carded by Chomsky's word markers and indicating directions for sentences (surface and deep structure). The information is intrinsically considerable revision.

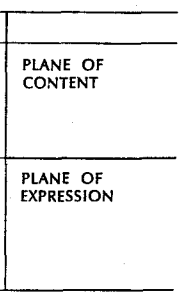
Chomsky's assessment of the kernel sentence is a natural studies. It is a sentence have a logical or mathematical subject and predicate by means of double one of the pioneers in search, supports sentence. In a context making the statement reasoning, hence statements, is all design processes. Piaget also seems matter of the "different conclusion deep structure and tactical mechanism ("equilibration") tical functions in temporal format temporal interconnection.

One of the best subject-predicate Michel Foucault and verb forms

art is quite similar: at phonology is to count for the organ-sensory or physio- considered the s in art (con-ough the agency of ion—but these are ver, it is apparent t semiotics can be te that in some art, and some Con- exists as a sub-plays a negligible e of Expression. In e of Expression is ure of the making es of the items de-

tion between con- n both planes are ts. What is impor- the algebraic rela- d signifiers of the ion. In Hjelmslev's e two sides (the mpletely analogous ery that stands to or an understand- of a language or in emiotic." He goes such an analysis or science of the we shall see, that e distinctions at phonological extend to both

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tions, however, leave something to be desired in terms of diagramming all the linguistic possibilities of art. At the time I was writing I did not fully appreciate the importance of Noam Chomsky's theory of transformational grammar, nor the implications of "deep structure" for understanding sentence construction. Mention is made of Chomsky, however, and the significance of his theories for understanding art with ambiguous structures (e.g., when a sentence possesses more than one kernel sentence in its deep structure). Also I have made a very incomplete explanation of how *neutralization* and *concord* define the paradigmatic and syntagmatic features providing the illusion of change in modern art.

Until the advent of Zellig S. Harris's research and Noam Chomsky's *Syntactic Structures* in 1957, linguists analyzed sentences according to the conventional categories of grammar or what is known as constituent structure. Chomsky's main point was that many sentences cannot be understood through existing methods of parsing. Supported by mathematical proofs, he hypothesized that all sentence forms can be reduced to one or more kernel sentences. The kernel sentence is a basic linguistic structure consisting of no more than a *subject* (determiner and noun) and a *predicate* (the present tense of any verb, including an object if the verb is transitive). Many distinctions of conventional grammar are discarded by Chomsky's theory. In their place are word markers and transformational rules providing directions for the reconstruction of normal sentences (surface structure) from the underlying deep structure. The theory behind these transformations is intricate and still undergoing considerable revision.

Chomsky's assertion of the primacy of the kernel sentence is an important issue for all structural studies. It appears that simple declarative sentences have much the same consistency as logical or mathematical propositions—a unity of subject and predicate through the *copula*—but by means of double articulation. Herbert Simon, one of the pioneers in artificial intelligence research, supports the essentiality of the kernel sentence. In a conclusion to a paper on decision making he states, "...ordinary mathematical reasoning, hence the ordinary logic of declarative statements, is all that is required for a theory of design processes."⁴ The child psychologist Jean Piaget also seems to side with Chomsky on the matter of the "formative kernel," but with different conclusions as to its meaning. He sees deep structure not as the result of innate syntactical mechanisms, but as a biological dialectic ("equilibration") which fuses the brain's practical functions into a mechanism for transforming *temporal formation* (experience) into *non-temporal interconnection* (sentence formation).⁵

One of the better semiotic explications of the subject-predicate relationship is in the work of Michel Foucault. He points out that all verbs and verb forms begin with the copula, the verb

to be: "So that the essential function of the verb to be is to relate all language to the representation that it designates."⁶ Foucault also assures us that it is the generality of naming words, particularly nouns, that allows us to designate attributes for it in the form of propositions. In other words, the multiple possibilities afforded by limited taxonomies make general (and ambiguous) propositions in natural language possible.

One of the problems encountered in Duchamp's titling and iconography is that of treating the subject and predicate as if they were the same as the planes of content and expression. In Foucault's terminology all language manifestations, including speech, texts, and art objects are subsumed under the heading of *representation*. He insists that it is the *conjoining* of subject and predicate (*i.e.*, the proposition itself) that results in the representation, and not the parts (of speech) themselves: "The relations between the elements of the proposition are identical with those of representation; but this identity is not carefully arranged point by point, so that every substance is designated by a substantive and every accident by an adjective. The identity here is total and a matter of nature . . ." Thus the analysis of a sentence or a work of art by glossamaticians is carried out holistically, and not according to constituent structure. Each signified and signifier results from segregating specific relations found in an entire proposition.

At this stage, it might be well to outline the semiotic relations of the various sentence types as they correspond to works of art. Needless to say, Duchamp gives us more or less specific notions of these in his writings. And considering the state of linguistics at the time he was writing, he can hardly be blamed for their incompleteness. Duchamp's real verification of art's linguistic nature are the ready-mades themselves.

Simple sentences possess signifieds and signifiers for the planes of Content and Expression. Complex and ambiguous sentences need two equations or more with multiple sets of signifieds or multiple sets of signifiers and signifieds, depending on whether the ambiguities in question are visual or conceptual.

$$\frac{Sr}{Sd_1} = \frac{Sr}{Sd_1} \quad \text{and} \quad \frac{Sr}{Sd_2} = \frac{Sr}{Sd_2}$$

Ready-mades function with a Plane of Content but no Plane of Expression in what Roland Barthes terms the "Real System" or the basic equation describing the art itself. A Plane of Expression is constructed for ready-mades by shifting analysis to the Connotative System at a higher level. All nonobjective art reverses this procedure by recovering the Plane of Content on the higher Metalanguage level.⁸ So-called contradictory or illogical sentences possess the same structure as declarative sentences, but where signifieds in the Plane of Content point to the nonsensical nature of art, this lack of meaning is always "rectified" by explanation of hidden rela-

tionships (usually in terms of set theory) in the signified of the Plane of Expression. Examples of such art include Louis ~~Carroll's~~ nonsense poetry and Joseph Cornell's constructions. Here is what Paz means when he writes that equivalence is shifted from selection (according to meaning) to combination (according to sound or lexical association) in the creation of poetry.

In nonobjective art color, line, form, and format comprise the basic phonological structure. For any work in this category, semantic content is totally absent. Rather meaning becomes about phonological or formal relationships, and so passes into Metalanguage. This tendency expresses the strongest diatonic force in modern art. All nonobjective avant-garde art is predicated on the unconscious assumption that innovation means reducing prevailing phonological (formal) relationships. The last five years have seen a conclusion to this. As we shall see with the ready-mades, combinations of valence types are also possible, and these have undoubtedly increased the life span of the avant-garde. It was stated in Part I of this essay that the idea of the copula in sentence construction is equivalent to sexual copulation. When Duchamp declared that "I want to grasp things with the mind the way the penis is grasped by the vagina," he was graphically making the point that both propositions and works of art demand symmetrical union of two components. Such a unity of being, in either sexuality or language, automatically joins the two levels of articulation into a propositional form, thus signifying the nexus of culture.

In the Box of 1914 Duchamp placed two notes that clearly indicate his use of semiotic concepts. The first is the "Algebraic Comparison" covered in *The Structure of Art*. The second is a description of the semiotic diagram (presented earlier in this essay) for a specific historical occurrence. He begins by stating:

The right and the left are obtained by letting trail behind you tinge of persistence in the situation. This symmetrical fashioning of the situation distributed on each side of the vertical axis is of practical value (as right different from left) only as a residue of experiences on fixed exterior points.¹³

In this case the right and the left refer to the sign for the Plane of Content and the sign for the Plane of Expression. The word "tinge" in the translation is *teinture* in the original; *teinture* also refers to "tincture" or "dye" which is the alchemical symbol for art. What follows indirectly states that the left and right sides of the semiotic are essentially equal or equivalent. And as a work of art is analyzed and segregated ("situation distributed"), its different references point to an entity outside the signs themselves, namely the art object.

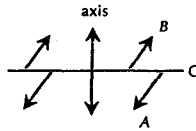
Signifier = Signifier
Signified = Signified

Duchamp proceeds to explain a certain fundamental conclusion of the semiotic which occurs in nonobjective art.

And on the other hand: the vertical axis considered separately turning on itself, a generating line at a right

angle e.g. a circle will always determine in the 2 cases 1st turning

in the direction A, 2nd direction B.—



Thus, if it were still possible; in the case of the vertical axis at rest, to consider 2 contrary directions for the generating line G., the figured engendered (whatever it may be.) can no longer be called left or right of the axis—As there is gradually less differentiation from axis to axis, i.e., as all the axes gradually disappear in a fading verticality the front and back, the reverse and the obverse acquire a circular significance; the right and the left which are the 4 arms of the front and back melt along the verticals.

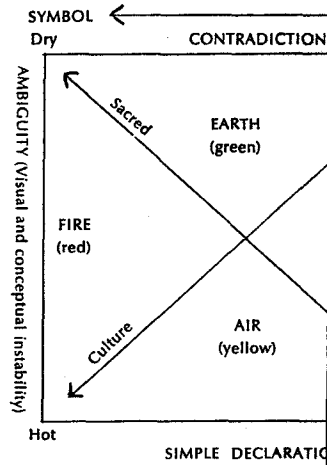
This obscure statement is the crux of Duchamp's historical semiotic. He begins by describing the disappearance of the signifier and signified which occurs as there is a merger of the ready-made and nonobjective art. The first six lines are clarified by another note in the Box of 1914:

The game of barrel (roll, horizontal spin) is a very beautiful "sculpture" of cleverness (skill) . . .¹⁴

The "sculpture" in question consists of transforming a ready-made into non-objective art or vice versa. (How this is accomplished will be explained later in the essay.) But then Duchamp amends the conditions by stipulating that such a figure, if allowed to roll in either direction, will lose all orientation vis-à-vis right and left. This means that the Plane of Content of a work (left side) and its Plane of Expression (right side) collapse into a single sign. At this point the double articulation of the semiotic ceases to function: "— As there is gradually less differentiation from axis to axis, i.e., as all the axes gradually disappear in a fading verticality . . ." The "fading verticality" represents a predilection in all nonobjective art to gravitate towards the appearance of a ready-made, i.e., ascend the apex of the Great Pyramid. As the formal relationships of the art drop away one by one, the final two define the Plane of Expression itself: these consist of the making process and the concept of set. At this point the work seems to be a ready-made without really being one.

Considering the fundamental dichotomy be-

tween Nature and Culture in Logologies, his values for the Coevolution from myth to reality. Edmund Leach's analyses, a characteristics for the Great Pyramid. Far, we discover a somewhat of language-based systems. Once are understood, the singular diagram for comprehending an estimated. For Duchamp the "ference" exists in knowing that ter of logical selection rather



What remains for art history prime importance, is a complete study of Medieval and Renaissance presents an area of study which symbol to sign is crucial in Visual culture symbols are anomalous mean one thing to the public different things for the initiated. sten notes, originally the sign of recognition, one with than personal origins.¹³ Since signs they possess no validity esthetics stems from the great visual syntax and symbolic space—as Duchamp has implied of unfixed relationships where secular events is integrated representations. *The Hunt of the Unicorn* century tapestry in the Cloister recently illustrates my point. In morphic symbol of Christ is down by a contemporary painter.

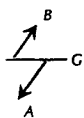
The only instance where Duchamp's lesson in art history is found in the *Boxing Match* (1913). Along with *Man, Juggler of Gravity*, and *Pi* now, this diagram completes the "ping Mechanism" of *The Large Glass* may follow my interpretation of the diagram in the Hamilton notes of the *Green Box* notes.¹⁴ The series of historical highlights:

explain a certain fundamental semiotic which occurs

Separately turning on right

will always determine the 2 cases 1st turning

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the vertical axis at rest, directions for the generated engendered (what longer be called left or right) is gradually less differentiated, i.e., as all the in a fading verticality reverse and the obverse and reverse of the front and arms.

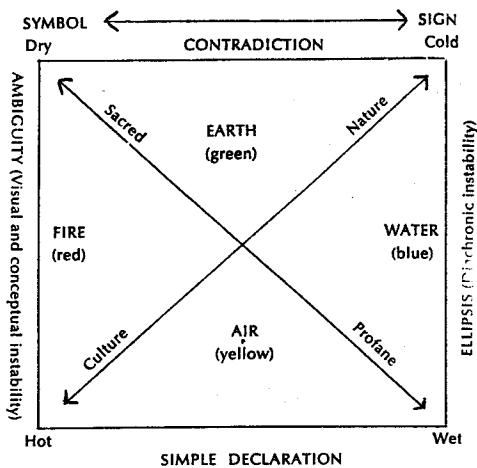
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mental dichotomy be-

tween Nature and Culture in Lévi-Strauss's mythologies, his values for the Cooking Triangle,¹² the evolution from myth to reality as specified in Edmund Leach's analyses, and the linguistic characteristics for the Great Pyramid outlined so far, we discover a somewhat clearer diagram for language-based systems. Once its implications are understood, the singular importance of this diagram for comprehending art cannot be underestimated. For Duchamp the "beauty of indifference" exists in knowing that esthetics is a matter of logical selection rather than blind choice.



What remains for art historians, and a task of prime importance, is a comprehensive semiotic study of Medieval and Renaissance art. This represents an area of study where the shift from symbol to sign is crucial in Western art. By nature symbols are anomalous and sacred; they mean one thing to the public, but at least two different things for the initiated. As Peter Fingerstein notes, originally the symbol was a secret sign of recognition, one with collective rather than personal origins.¹³ Since symbols are fixed signs they possess no validity as esthetic forms. Esthetics stems from the gradual admixture of visual syntax and symbolic meaning. Renaissance space—as Duchamp has implied—provides a series of unfixed relationships where the semiotic of secular events is integrated with symbolic representations. *The Hunt of the Unicorn*, a late 15th century tapestry in the Cloisters Collection, emphatically illustrates my point. In this scene a zoomorphic symbol of Christ is about to be run down by a contemporary party of hunters.

The only instance where Duchamp imparts a lesson in art history is found in his drawing for the *Boxing Match* (1913). Along with the *Toboggan*, *Juggler of Gravity*, and *Picture of Cast Shadows*, this diagram completes the omitted "Stripping Mechanism" of *The Large Glass*. (The reader may follow my interpretation by referring to the diagram in the Hamilton and Hamilton version of the *Green Box* notes.¹⁴) The notes begin with a series of historical highlights:

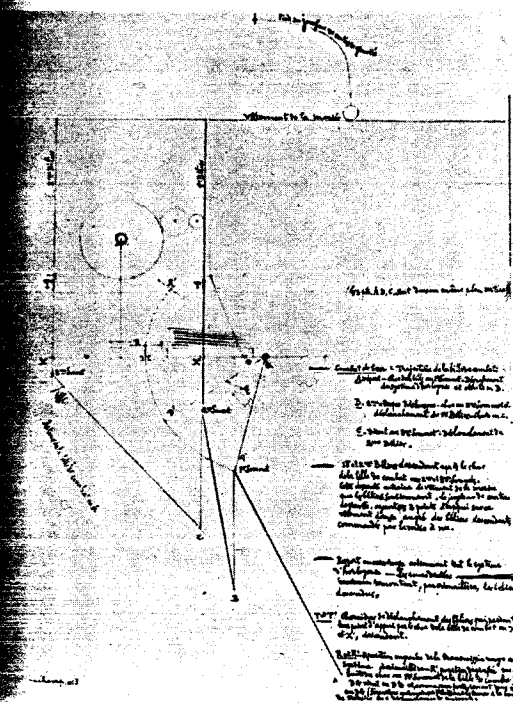
Boxing Match = Trajectory of the combat marble:

- A. Departure — Contact of the marble at the 1st Summit — Unfastening of the clockwork and fall to B.
- B. 2nd very sharp attack — contact at the 2nd Summit and release of the 1st Ram — Fall to C.
- C. Direct to the 3rd Summit—Release of the 2nd Ram.

Point A represents the prehistoric beginnings of sign and symbol systems. The 1st Summit most probably represents Renaissance art, which is both the culmination of mimetic conventions and the beginning of the end of art based upon symbols. The "2nd very sharp attack" brings the "combat marble" or semiotic to the 2nd Summit. This summit appears to be the introduction of nonobjective art between 1908 and 1912. The 1st ram with part of the Garment of the Bride falls at this point. The Bride's Garment is, in fact, the art myth itself; in this case the 1st Ram refers to all semantic and syntactical signs, so that C represents the beginning of art which functions phonetically (formally) or purely on a Metalanguage basis. The 3rd Summit is reached (about 1968), precipitating the exhaustion of the 2nd Ram or all possible formal signifiers. At this stage the Combat Marble returns to A—meaning in effect that the historical myth of avant-garde art is completed.

The 1st and 2nd Rams descending after the contact of the combat marble to the 2nd and 3rd Summits. This descent carries with it the garment of the Bride which the Rams Support. The juggler of centers of gravity, having his 3 points of support on this garment, dances to the will of the descending rams controlling the stripping.

The juggler of centers of gravity (Tarot) refers



Boxing Match, drawing, 1913.

to the semiotic signifier. Each convention of recovery of semiotic.

A spring in work — the fallen ra

As in alchemical baser instincts physical instincts blind mechanical of art without is responsible

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to the semiotic triangle: *referent, signified, and signifier*. Each subtraction of a signifying (formal) convention precipitates a kind of juggling act or recovery of balance between the parts of the semiotic.

A spring in red steel actuating the whole clockwork — the cog wheels by means of a rack, push the fallen rams up again.

As in alchemy, the color red is used to signify baser instincts: sexual lust, male power, and physical instincts unreformed by wisdom. This blind mechanism allows us to sense the presence of art without comprehending it. The red spring is responsible for holding the Garments aloft.

T and T' release hinges of the rams which losing their support by the contact of the combat marble at X and X', fall down.

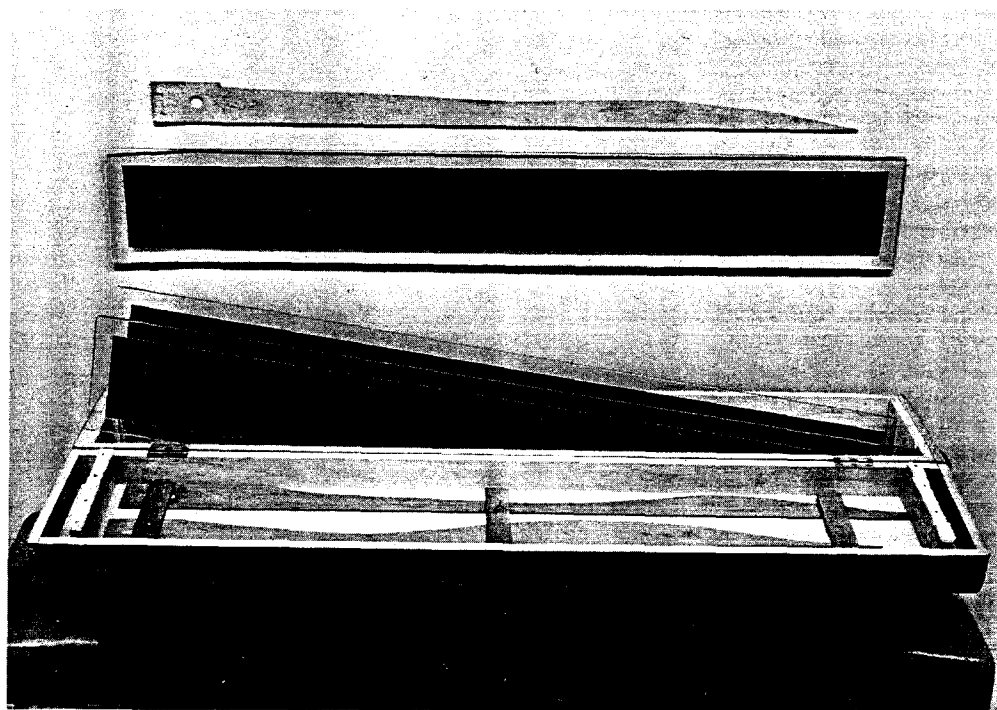
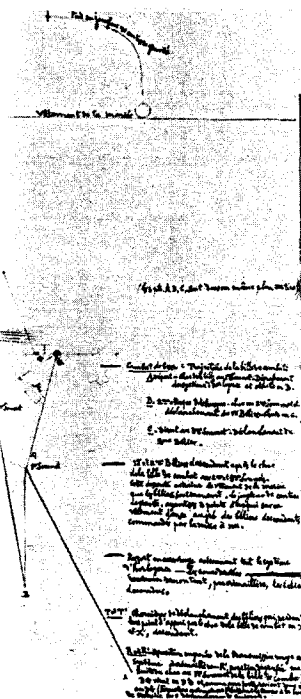
R and R' — R engaged position of the red transmission with the rack System — R' unfastened position in consequence of the contact at the 1st Summit of the combat marble; DG moves to D'G and like a door gently returns to DG (Automatic closure F) leaving time for the marble to produce the 2 following releases.

The latching mechanism at G, D, and D' is important. Culturally, the engagement of the lever at R represents the Classical impulse in action. When this is engaged, the gears—by means of a rack and pinion system—keep the Bride's Garment aloft, thus holding the veils of the art myth before our eyes. Duchamp specifies, though, that disengagement of this mechanism is not final since the mechanism works on the principle of an automatic door close. A return to DG implies a return to the classic principles of equilibrium and self-knowledge. Comprehen-

sion of this obscure but important historical mechanism demands a very elementary understanding of mechanical principles: "*Mécanisme de la pudeur/Pudeur mécanique*" or "Modesty's mechanism is to be mechanically modest."

Marcel Duchamp in an interview with James Johnson Sweeney: "... art is produced by a succession of individuals expressing themselves; it is not a question of progress. Progress is merely an enormous pretension on our part. There was no progress for example in Carot over Phidias. And "abstract" or "naturalistic" is merely a fashionable form of talking — today. It is no problem: an abstract painting may not look at all abstract in 50 years."¹⁵

Duchamp specifies in his introduction to the notes in the *Green Box* that "This headlight child could, graphically, be a comet, which would have its tail in front..."¹⁶ The "comet" (Duchamp) was to create all possible variations and combinations of art necessary to outline the semiotic between 1913 and 1926, thus anticipating every type of art to be produced for the next fifty-five years. For the most part this was achieved with standardized objects, since these are sufficient to articulate semiotic relationships. In many instances Duchamp's constructions are not true readymades, but rather are the principles of ambiguity, ellipsis, declaration, and contradiction integrated into assortments of found objects. As we shall see, the titling of works of art plays an essential role in defining a work's position semiologically; frequently, in fact, a work's esthetic validity depends upon a title; in other cases titles serve as linguistic explications. Yet some of Duchamp's canniness is due to the fact that he constantly shifted the purposes of his titles; on the surface



Three Standard Stoppages, 1913-14. (Museum of Modern Art, N.Y.)

they display no perceivable pattern.

The *3 Standard Stoppages* is obviously a commentary on non-objective art, and as such its descriptive title acts as a Metalanguage signified, specifying the artist's intention since the piece has no perceivable content. Originally Duchamp dropped three one-meter threads, held one meter high, on to three stretched canvases painted Prussian blue (notice the use of Prussian blue corresponding to WATER and putrefaction). These were glued down, the canvases trimmed and glued to glass plates, and the results then boxed with a corresponding set of templates. The objective here is a comparison of doubly and singly articulated semiotic systems. The piece is merely a box with certain objects in it; nevertheless Duchamp is saying that *all non-objective works of art* are simply objects devoid of any meaningful content. Consequently in a Metalanguage system the signifier replacing a signifier in the normal Plane of Content is a physical description of the art object. He clarifies this in one of his notes for the *Green Box*.

To lose the possibility of recognizing (identifying) 2 similar objects—

2 colors, 2 laces
2 hats, 2 forms whatsoever
to reach the Impossibility of
sufficient visual memory
to transfer
from one
like object to another
the memory imprint
—Same possibility
with sounds; with brain facts¹⁷

The idea of a "memory imprint" corresponds to what happens when we consider nonobjective art as a generic form derived from mimetic conventions. Duchamp is posing a question: namely, how far does nonobjective art proceed in the process of dropping formal signifiers before we are unable to recognize an object as art? It would seem that the validity of the nonobjective impulse depends absolutely upon its historical derivation from art with content.

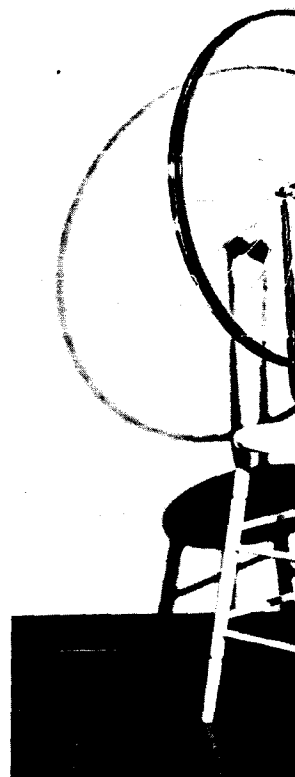
The one-meter threads become something other than the meter unit codified by a National Bureau of Standards, just as—as in the case of all articulated systems—the letter a will always mean the same quantity or entity as long as it remains in an algebraic equation; but as soon as it is talked about with language, it becomes distorted (and transformed) by various descriptive elaborations. Michel Foucault suggests the same difference in his discussion of logical and linguistic comparison:

After being analyzed according to a given unit and the relations of equality or inequality, the like is analyzed according to its evident identity and differences: differences that can be thought in the order of inferences. However, this order or generalized form of comparison can be established only according to its position in the body of our acquired knowledge; the absolute character we recognize in what is simple concerns not the being of things but rather the manner in which they can be known.¹⁸

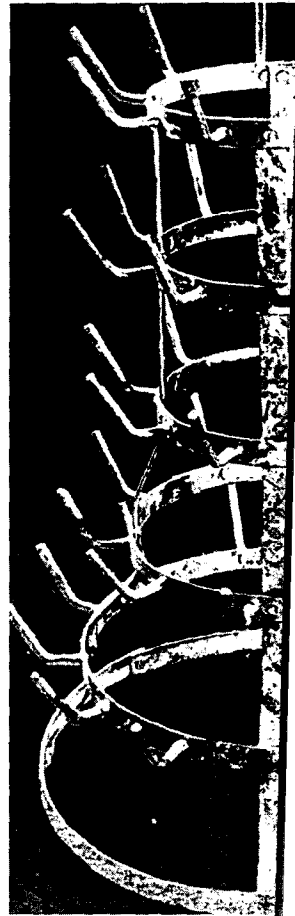
So in effect, the "standard stoppages" are no longer standard but deviate from a norm, displaying somewhat the same consistency as Process Art. The thread and templates are merely materials—as Pollock stressed paint was in his paintings—materials explicitly defined by a making process given over to gravity and chance. Duchamp has nearly succeeded in erasing the "memory imprint" which is also necessary to Pollock's art. So here in the *Stoppages* "l'idée de la Fabrication" is all that remains.

Bicycle Wheel is the deceptive title of the first ready-made. A 1951 version was eventually signed and dated in green ink, intimating that it deals with subject-predicate contradiction and therefore qualifies as an "assisted ready-made." In conversations with Arturo Schwarz, Duchamp emphasized its chance aspect—and this is purposefully misleading. Although the work is seemingly meaningless and could be given any number of interpretations, such is not the case. In philosophy, one encounters "analytic" and "synthetic" propositions. Roughly described, synthetic sentences are statements whose truth is contingent on facts or conditions external to the sentence itself. Analytic sentences are true by virtue of their own internal consistency, both semantic and syntactic. In the statement *All bachelors are married men*, for example, the two terms *bachelors* and *married men* are mutually exclusive; therefore the sentence is inherently false. In the same sense *Bicycle Wheel* is functionally contradictory. By definition a kitchen stool is something to sit on, while a bicycle wheel moves along the ground supporting the weight of a rider. In this instance both functions are nullified through deliberate juxtaposition which transforms their status into a false analytical proposition.

The *Bottle Dryer* of 1914 is Duchamp's first true ready-made. Actually since it has also been entitled a *Bottle Drainer*, *Bottle Rack*, and *Hedgehog*, the title is not particularly important—although "hedgehog" does imply something beyond the superficial resemblance that the restaurant appliance has for the animal. In an essay by Isaiah Berlin, the philosopher comments on a line written by the Greek poet Archilochus, "... 'mark one of the deepest differences which divides writers and thinkers, and, it may be, human beings in general.' The one type, 'the fox,' consists of men who live by ideas scattered and often unrelated to one another. But the man of the other type, the 'hedgehog,' relates 'everything to a central vision, one system more or less coherent or articulate... a single, universal, organizing principle...'"¹⁹ And so an artist who knows how to choose a ready-made also has the same synoptic vision in terms of all art. All the effective ready-mades are standard manufactured objects, neither precious nor worthless, but possessing some intermediate value. Their most important quality is their inherent contact with both Nature and Culture; therefore ready-mades are in some way affected by or function with the



Bicycle Wheel, 1913.

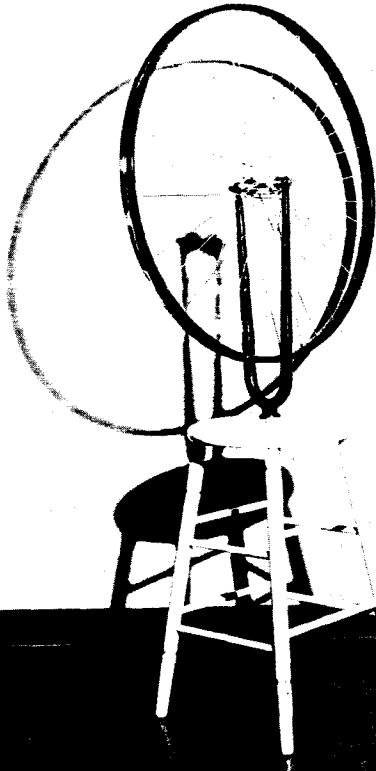


Bottle Dryer, 1914.

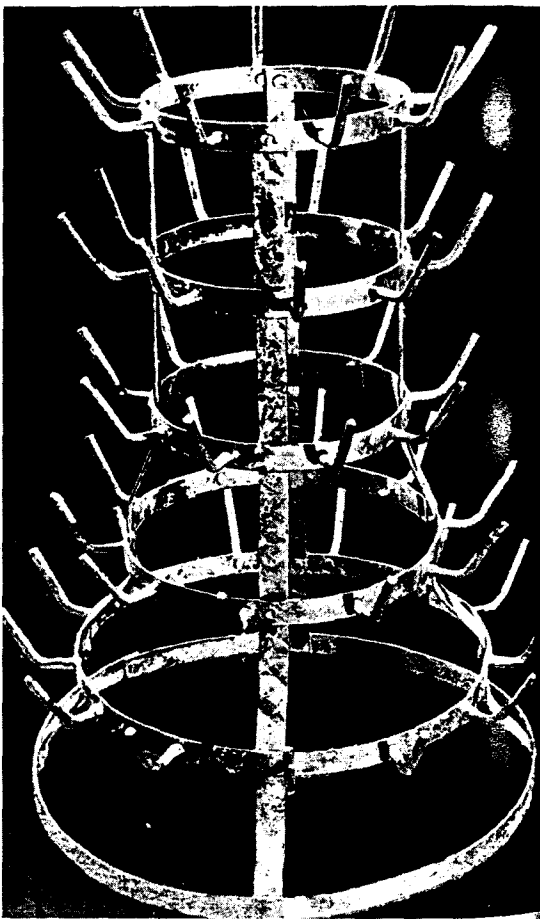
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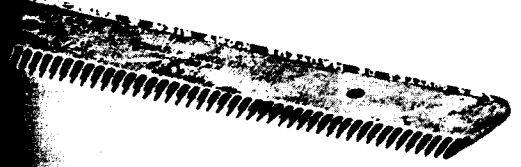
Bicycle Wheel, 1913.



Bottle Dryer, 1914.



With Hidden Noise, 1916.



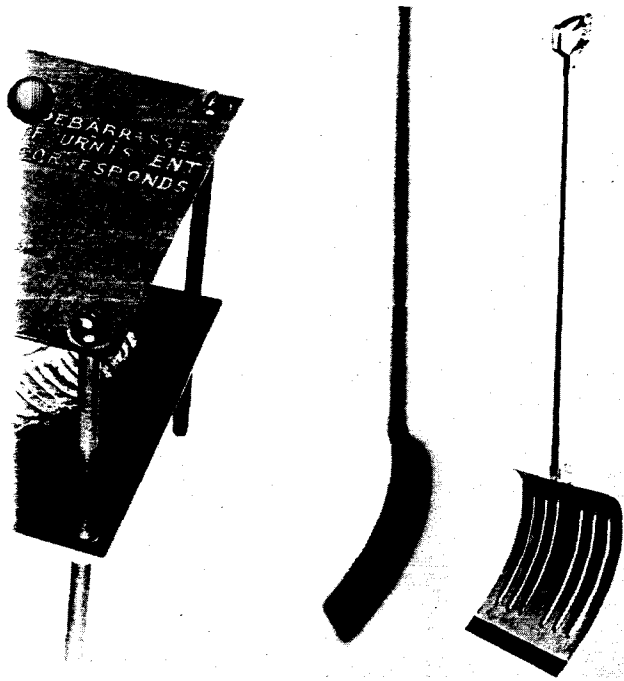
Comb, 1916.

help of the natural elements. The *Bottle Dryer* assists in the evaporation of water. A subsequently lost ready-made of 1915 is entitled *Tiré à quatre épingles*, an idiomatic expression which means "well groomed" or literally, in English, *Pulled at 4 Pins*. The object was an unpainted, galvanized, sheet steel chimney ventilator, the kind placed on chimney copings. These turn in the wind, protecting flues from violent down-drafts. More than likely this object mediates the four prime Elements: it protects the FIRE against wind (AIR), dust (EARTH), and rain (WATER) and turns to the four points of the compass.

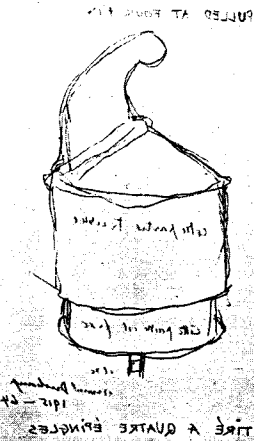
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In Advance of a Broken Arm, 1915.



Tiré à quatre épingles, 1915.

ements. The *Bottle Dryer* of water. A subsequent work of 1915 is entitled *Tiré à quatre épingles*, a diomatic expression which means "pulled out by the roots" or literally, in English, "pulled out by the roots." The object was an unpainted, cast-iron chimney ventilator, the kind of chimney copings. These turn in flues from violent downpours. In this object mediates the elements: it protects the FIRE from the rain (EARTH), and rain from the sun.

A more enigmatic piece of the same year is the suspended snow shovel, *In Advance of a Broken Arm*. When Duchamp was questioned about the hanging of various ready-mades from the ceiling, his usual answer was an excuse that he was tired of seeing sculptures always situated on pedestals. But this had nothing to do with his reasoning; his purposes are semantic and syntactical. A snow shovel suspended out of reach is merely an object deprived of its use and functional meaning (nonobjective art, hence WATER). But Duchamp reassigns this object's meaning in a very curious way. The phrase "in advance of a broken arm" is nonsensical and an incomplete

sentence, thus related to both EARTH and WATER. So the shovel is an omen of the corner of the Great Pyramid represented by frozen water (Cold), and signifying the final stages of nonobjective art. The "broken arm" comes when art is no longer served by the process of fabrication.

The ready-made *Comb*, chosen and inscribed in 1916, is an ordinary steel comb with the words lettered on its back edge: "3 OU 4 GOUTTES DE HAUTEUR N'ONT RIEN A FAIRE AVEC LA SAUVAGERIE" (3 or 4 drops of loftiness have nothing to do with savagery). Any interpretation of the *Comb* is open to dispute, so my analysis is by no means definitive. The *Comb* appears to be, and probably is, an assisted ready-made because its contact with a natural element is questionable. Duchamp's inscription implies that WATER has nothing to do with (it) savagery. Looking back at the semiotic diagram, we observe again that WATER refers to nonobjective art in which the final stages reduce art to pure materials, hence Nature or savagery. We also know that there is a considerable amount of lofty intellectualism attached to nonobjective art. Is he saying that the WATER that comes in contact with the *Comb*, namely the intellectual justifications which validate nonobjective art, have nothing to do with the naturalizing tendencies behind the art itself? Possibly. There is also Duchamp's note in the *Green Box* of September 1915 which refers to a comb as a kind of space divider; this is done under the heading of *Rattle*. The comb, he states, exerts "proportional control" over the hair by means of the number of teeth it has, its broken teeth, and its curvature. Is it possible that Duchamp is looking at the comb as a kind of taxonomic structure, one that would define a natural continuum (head of hair) into a given set of terms (or in this case, spaces)? A famous linguistic example of this may be found in the relativity of terms used in naming the color spectrum. A comparison of terms used in different languages shows that each language makes its own unique divisions of the spectrum; there is never a one-to-one correspondence between terms in various languages.

The comb relates to an assisted ready-made, Duchamp's piece for Walter Arensberg entitled *With Hidden Noise*. It is a ball of twine sealed at both ends by brass plates screwed together. Arensberg placed a secret object inside the ball so that only the noise of this rattle was known. This corresponds to the "content" of nonobjective paintings which seems to be "there" but really is not; only its "bouquet" or "memory" is present.

Duchamp insisted on a different interpretation for *Comb*. A remote possibility is the fact that the upper point of the alchemist's Pentagram represents the same values as the Apex of the Great Pyramid, uniting the spirit, intellect, and the head of the body. Thus the comb's relation to the head associates it with the seat of the intellect

consequently the ready-made. Still, there is more plausible interpretation. The teeth of comb form a set within finite boundaries— Carl Andre's floor units define sets. This comb's enigmatic prescription turn it towards the quadrant of EARTH on the Great Pyramid.

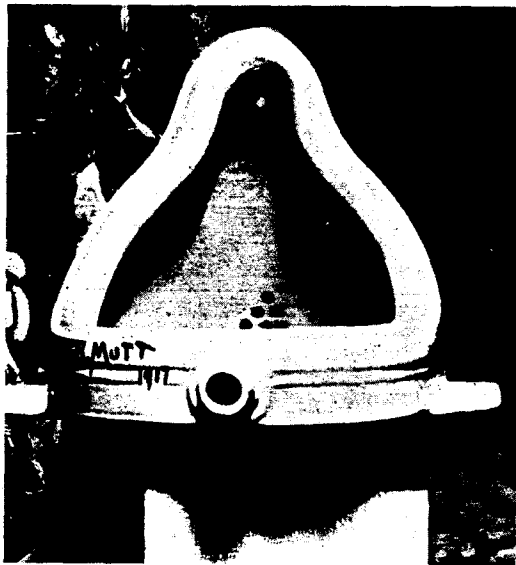
The famous Urinal is an "Assisted ready-made" according to Arturo Schwarz; Duchamp turned it on its back and given it the title *Fountain*. The physical displacement makes it instantly less recognizable and the title intimates that the piece is a legitimate variety of sculpture regardless to say, abstract sculpture. Both transmutations overlap, shifting the urinal towards the category of nonobjective art (i.e., "R. Mutt"). While in Buenos Aires in 1919, Duchamp sent instructions to his sister Suzanne for the preparation of an assisted ready-made entitled *Unhappy Ready-made*. The project consisted of opening a geometry book out a window for a number of days and nights, exposing it to all kinds of weather. In this instance Duchamp chose the quadrant AIR of the Great Pyramid. This means that the work represents a simple declarative proposition, e.g., an art object with content "naturalized" due to some directional activity of the artist. This act provides the "unhappy" (unhappy) for the Plane of Expression. The work is simply the choice of some subject matter and its exposition through appropriate directions for fabrication.

In Duchamp's present to Walter Arensberg of *Paris Air*, a 50 cc. glass ampoule of air fabricated in Paris, he again chose to work with the qualities of AIR. In this case his desire is to make "content" for an art work. Encapsulating air completes the making process. A printed label on the glass reading "Serum Physiologique" is a statement of the essentiality of the alchemist's AIR. This corresponds to another note in *Green Box* which reads:

Establish a society in which the individual has to pay for the air he breathes (air meters); imprisonment and rarefied air, in case of non-payment simple asphyxiation if necessary (cut off air)²⁰

AIR, of course, remains the archsymbol of linguistic communication and ritual. He seems to be saying that we take these things too much for granted because they have the same commonness as does air. Duchamp may also be suggesting; that nonobjective art represents a kind of rarefied air, if not a vacuum.

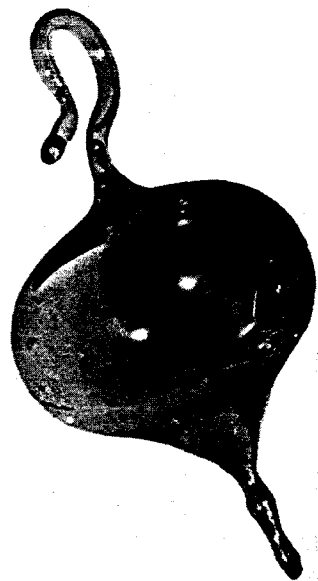
Fresh Widow, a semi-ready-made of 1920, consists of a miniature French window, painted not green, with sheets of black leather covering window panes. Except for the wordplay between "Fresh Widow" and "French window," the piece precipitates almost no comprehension; however its green paint indicates that the window is concerned with the element EARTH.



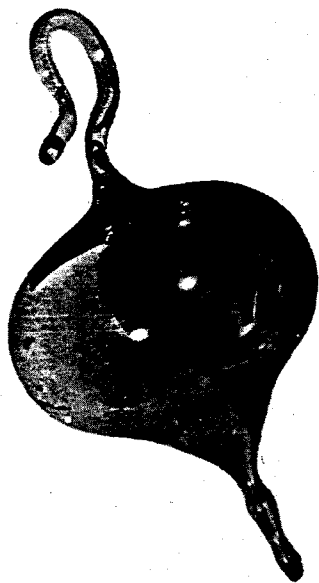
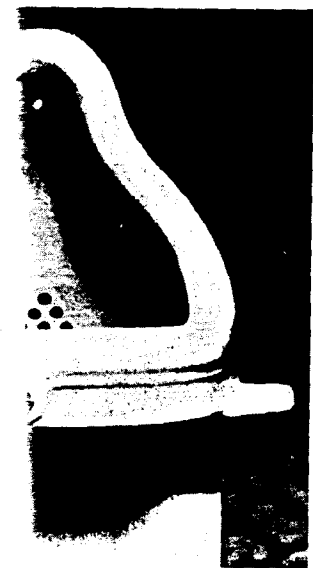
Fountain, 1917.



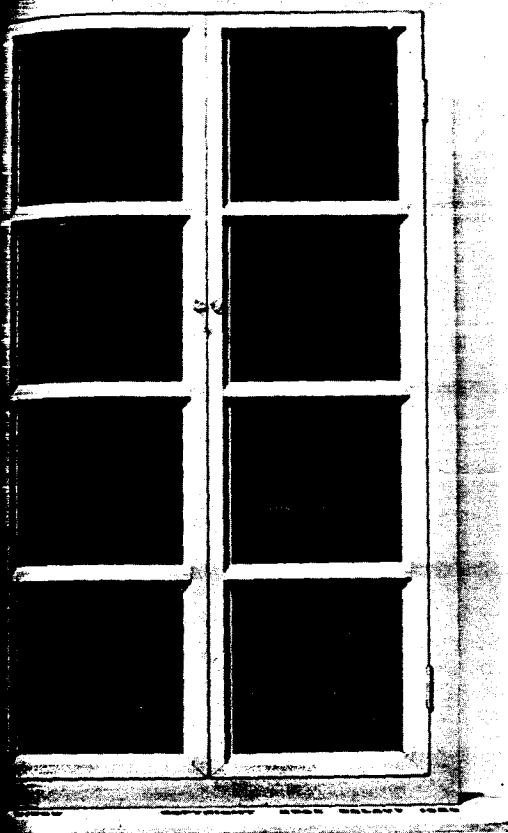
Unhappy Ready-made, 1919.



Paris Air, 1919.



Paris Air, 1919.

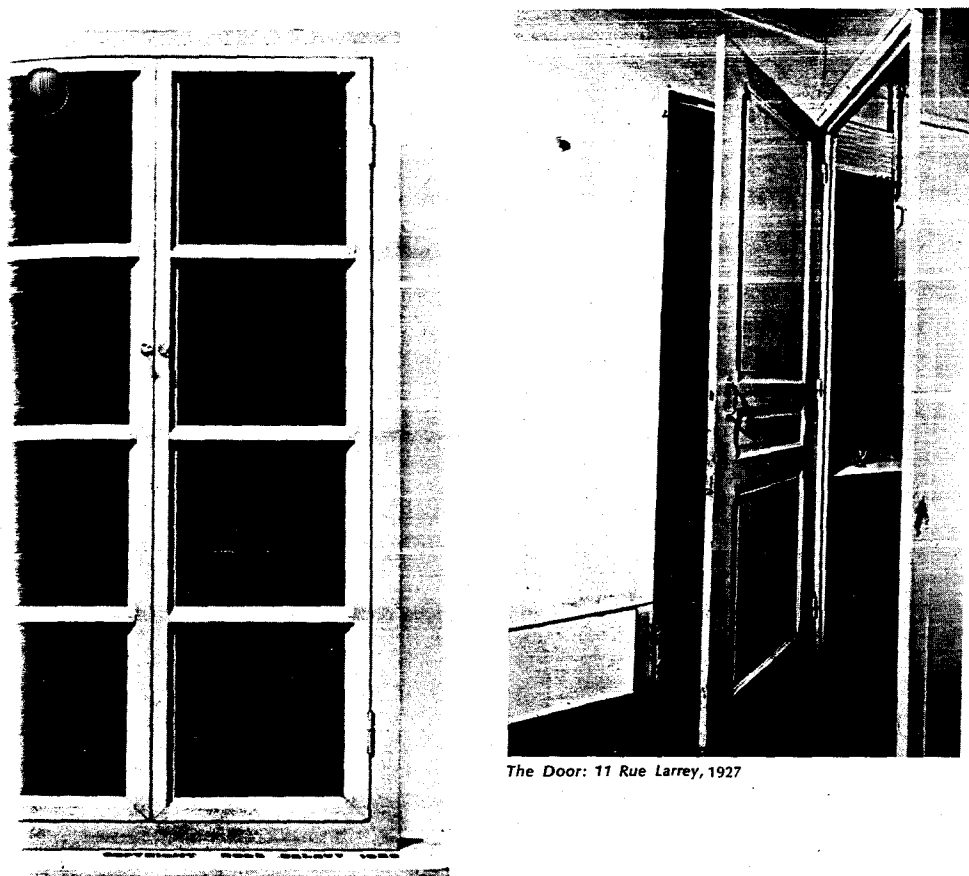


1920.

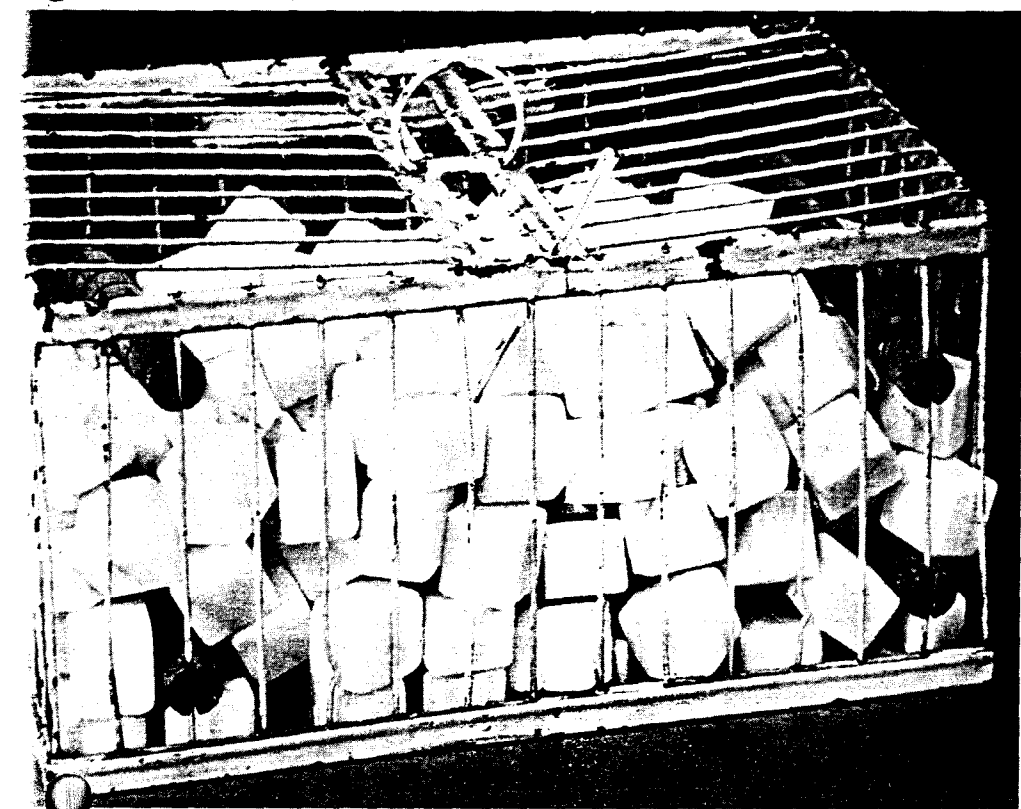
The Door: 11 F



Sneeze/Rose Sélavy?, 1921.



The Door: 11 Rue Larrey, 1927



Séavy?, 1921.

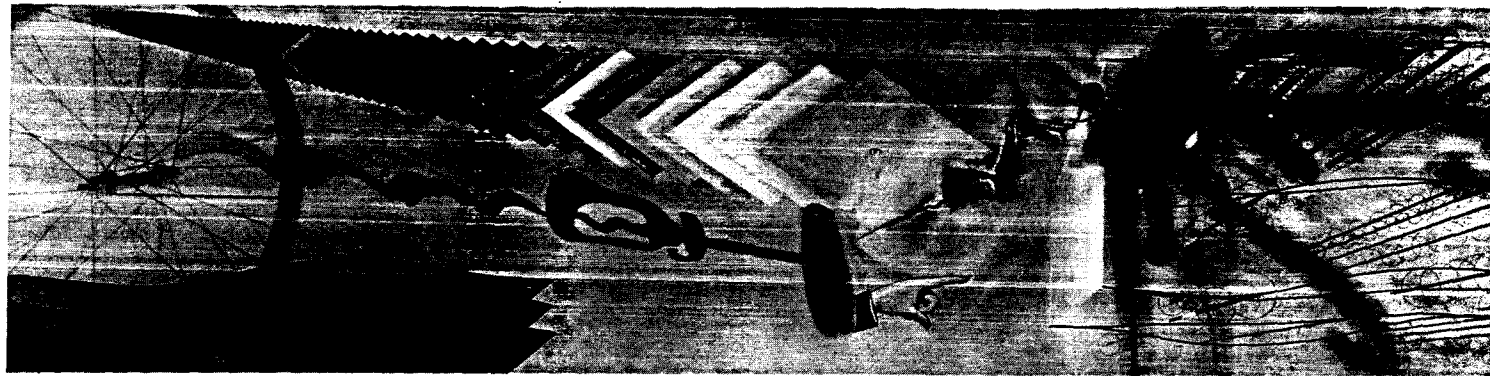
Moreover some of Arturo Schwarz's observations on the ready-made appear apt. For instance he notes the female sexual symbology implied in a window opening and the French colloquial term for gulline: "widow." In this respect, the space behind the window appears to be pitch dark, but upon opening the window we see otherwise. There are, moreover, strong sexual taboos against relations with widows in many societies, just as there are taboos against incestuous dealing, remembering that EARTH and incest are conjoined. So in essence what Duchamp may be saying is that the delights of having intercourse with youngish widows have to be weighed against sexual guilt (consequently castration) accompanying such pleasures.

The Door: 11 rue Larrey is in accord with the principle of *RE* or syntactical ambiguity. Such ambiguity depends upon a perceiver experiencing split second shifts between various interpretations of a phenomenon. Duchamp had a door made which is hinged to open and shut on two door frames. Consequently the door is open when it is closed and closed when open. So the ambiguity in question is not expressly perceptual nor physical but conceptual.

By far one of the most sophisticated semi-ready-mades is *Why Not Sneeze Rose Séavy?* Its title announces that the work joins two quadrants of the Great Pyramid, EARTH and WATER. The work takes the form of a question with an implicit subject. If we transform this into a kernel sentence the result is the command "[Rose Séavy] sneeze." But at the same time, since sneezing is usually involuntary, the title combines partial ellipsis with nonsense. The ready-made consists of elements that simulate nonobjective art but are combined with other components to form a hidden set based on analogical properties, hence suggesting nonsense art.

Much has been made of the fact that the bird cage contains sugar cubes which are not sugar. The artist had fabricated 152 marble cubes which exactly resemble sugar cubes. This again is the essence of nonobjective art: "To lose the possibility of recognizing/identifying 2 similar objects."²¹ Duchamp has also stressed the differences between the weights and heat coefficients of sugar and marble. These are important clues, but they should not be taken in Duchamp's sense. The false sugar cubes in the bird cage are absurd by themselves. But the cage contains two other items: a French rectal thermometer and a cuttlebone. All of the objects together form a set and they function by virtue of the cage's excluded occupant.

It becomes necessary to know that a cuttlebone is a kind of mineral supplement which is placed in a cage to balance a bird's diet. On preliminary examination the four objects — cage, sugar or marble cubes, thermometer, and cuttlebone — seem to compose an empty class or a set of items which have no attributes in com-



Tu m', o/c, with long brush attached, 27½ x 122¾", 1918.
(Yale University Art Gallery.)

mon. Yet if we complete the natural opposition expressed by the bird cage, the result is a different set: (bird), cubes, thermometer, and cuttlebone. Now various intersections between classes become apparent. The cuttlebone is composed of minerals — just as the marble cubes are mainly limestone. Yet the cuttlebone is food for a displaced bird just as the sugar cubes are *not* really food but displace the bird. Such a set relationship is "interconnected" since it is not only transitive, but reflexive and symmetric. On the other hand, the rectal thermometer — in spite of Duchamp's suggestion — does not measure the heat of sugar and marble, since these are both approximately room temperature, but rather measures the body heat of the missing bird *in relation* to the "cold" marble. This coldness, which Duchamp refers to in his conversation with Arturo Schwarz, is really the corner between EARTH and WATER of the Great Pyramid. Thus the thermometer's relation to the set of objects is "connected" or simply transitive. But it was included by Duchamp to emphasize the linguistic area dominating this semi-ready-made.

In conclusion, I will touch upon Duchamp's mural of 1918, *Tu m'*, a complex and rather atypical effort. The subject is the illusions that historically define the course of nonobjective art. This is a theme that Duchamp returns to again and again, representing virtually an obsession. A hint to his feelings may be gained from Arturo Schwarz's thoughts on the title: "Although the pronoun *m'* in the title could be followed by any verb at all so long as its first letter is a vowel, the phrase is really a polite contraction for the French colloquialism *tu m'emmerdes* (you bore me), a feeling which could perhaps be referred both to the tedium involved in making the work and the person who commissioned it."²² Duchamp's boredom stemmed from both of these, but more than likely also from the subject of the painting. In effect he is saying that artists and the art world are going to make an enormous fuss in the years to come over the vitality and importance of nonobjective art; but he understands the linguistic mechanisms that will control their attention; he has anticipated

all of them, so that the entire business is boring.

The elongation of *Tu m'* and the sequential organization of its parts intimate that the painting deals with time, particularly the chronology of an idea. The right is dominated by objects or ideas which signify eternal principles or truisms. The bicycle wheel without a kitchen stool may be taken as a karmic symbol, representing the cyclical nature of time. The templates from the *3 Standard Stoppages* represent, most likely, the arbitrariness of linguistic relationships. Above these, and extending into infinity, is an unending series of paint samples, fastened by a real bolt. Just as it is phonetically possible to articulate an infinite number of noises (but not for doubly articulated systems), the painter can extend the range of painted surfaces almost indefinitely. As long as the artist is working with a singly articulated system, he can innovate superficially by always supplying unusual paint combinations or surfaces; significant innovation demands that the artist subtract some formal convention from the work itself.

Duchamp has chosen to pencil in three objects — a bicycle wheel, a corkscrew, and a hat rack — as shadows. In alchemy the shadow of an object stands for its spirit or intellectual essence. In a letter to Arturo Schwarz, Duchamp insisted that the corkscrew itself is not a ready-made (which it is not by any interpretation), but rather its *shadow* is a ready-made.²³ Consequently it appears that the nature-culture mediation is achieved through the agency of light or as that source emanating from the apex of the Great Pyramid, spiritual illumination. The corkscrew refers to the "uncorking process" in *The Large Glass*. This allows us to capture the bouquet of a wine without sampling it. Analogously we read content into nonobjective art even though it is only there by implication. This latent content, a reminder of earlier art, is the "uncorking." In *Tu m'* the corkscrew extends far outside its normal length, becoming a kind of curling layer of gas reaching out of the past.

Juxtaposed to the corkscrew is a sign painter's pointing hand, as if to say: the symbols to the right equal what is to the left. This sign painter's

convention also anticipates the time no longer necessary for formalist their own canvases. Still there is reason for it. The pointing hand *Klang*, which means when translated, *(a) sound*. Duchamp is insistent that the content of all nonobjective art is "unlearned" or defined in terms of verbal emanating from outside the art itself. The stance on the Metalanguage Plane of stances this is supplied not by a critic or art historian sympathetic to the artist's work.

Concerning a painted diagonal line through the center of the painting, Arturo Schwarz writes: "Right in its center, the *l'oeil* tear in the canvas is mended by safety pins. From a hole in the brush, securely fastened to the stretcher toward the spectator. The symbol's tail is clear — it is a transparent coitus, while the three safety pins may refer to a clumsy attempt to understand the consequences of the sexual act." Schwarz's remark about coition is since it depicts the "coming together" of a work of art. But Duchamp is interested in something more germane: the tear in the picture plane as a device supporting the notion of coitus. The safety pins reveal the truth of what it is: an object. In much of the work of painters (such as Rauschenberg) who exploit the inherent syntactical-ford between what is placed on and what is presented in the picture plane.

A dirty tannish color and drab background colors for *Tu m'*. In shades signify intellectual obtuseness of spiritual development. The top of the sample pile is a bright yellow representing the highest degree of illumination.

Below the bottle brush is a glass bottle. More than likely this is the picture plane of Duchamp refers to on occasion as "dow(s)." Projected from the four



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convention also anticipates the time when it is no longer necessary for formalist artists to paint their own canvases. There is an even better reason for it. The painting hand is signed, A. Klang, which means then translated from German, (a) sound. Duchamp is insisting that the content of all nonobjective art must be "borrowed" or defined in terms of verbal expression emanating from outside the art itself, and therefore on the Metalanguage Plane. In many instances this is supplied not by the artist, but by a critic or art historian sympathetic to the artist's work.

Concerning a painted diagonal tear running through the center of the painting, Arturo Schwarz writes: "Right in its center a *trompe l'oeil* tear in the canvas is mended by three real safety pins. From a hole in the tear a bottle brush, securely fastened to the stretcher, projects toward the spectator. The symbolism of this detail is clear — it is a transparent allusion to coitus, while the three safety pins that repair the tear may refer to a clumsy attempt to cancel out the consequences of the sexual intercourse."²⁴ Schwarz's remark about coition is not unfounded since it depicts the "coming together" producing a work of art. But Duchamp is implying something more germane: the tear announces destruction of the picture plane as an illusionary device supporting the motion of content in painting. The safety pins reveal the painting for what it is: an object. In much the same way painters (such as Rachenberg and Johns) will exploit the inherent tactical-formal ambiguity between what is placed on and what is represented in the picture plane.

A dirty tannish color and drab yellow are the background colors in *Tu m'*. In alchemy these shades signify intellectual obtuseness and a lack of spiritual development. The top color swatch on the sample pile is a bright lemon yellow, representing the highest degree of intellectual illumination.

Below the bottle brush is a glass pane. More than likely this is the picture plane which Duchamp refers to on occasion as a "shop window(s)." Projected from the four corners of the

glass pane are four sets of black and red lines generated from the templates of the *Standard Stoppages*. Red, as I have specified before, signifies sexual lust and unrefined character, a passion to conquer without understanding. Black, on the other hand, implies many things, yet in this case it may be a sign of termination or encompassment. Extended at right angles from these lines are a series of colored ribbons. These appear to be ordered in sequences, and quite possibly relate to the esoteric color groups found in the Tarot. Surrounding the multicolored strips is a concentric series of circles most likely representing infinity. Duchamp appears to be saying that many thousands of artists will continue to make abstract paintings by juxtaposing color relationships, and there is no reason why this activity cannot go on indefinitely — as semantically meaningless as it is.

This last interpretation is reinforced by the shadow of a hanging hat rack, a reference to an assisted ready-made prepared by Duchamp in 1917. The *Hat Rack* is rendered nonfunctional by being hung almost upside down. In such a position it becomes simply an object without reference to any context — just as a nonobjective painting is strictly an object assigned a context. On a Metalanguage level Duchamp restores meaning to the hat rack by simply titling it *Hat Rack*. In a note in the *Green Box* the artist describes the psychological mechanism by which colors are awarded significance in the mythic context of nonobjective art. For the *Breeding of Colors*:

Mixture of flowers of color i.e. each color still in its optical state:
Perfumes (?) of reds, of blues of greens or of grays heightened towards yellow blue red or of weaker maroons. (the whole in scales). These perfumes with physiological rebound can be neglected and extracted in an imprisonment for the fruit.

Only, the fruit still has to avoid being eaten. It's this dryness of "nuts and raisins" that you get in the ripe imputrescent colors. (rarefied colors).²⁵

On one level this may refer to the significance of different color scales as they are used in transcendental magic. The heightening towards the primaries and maroon indicates some relation to the four Elements. More specific, though, are the artist's allusions to the myriad color combinations that may be used to promote a sense of uniqueness — a most necessary feature in modernist art. Each, so to speak, generates its particular perfumed essence, the result of a cognitive mechanism at work. This mechanism may be the sophisticated memory of the art lover, a kind of totemic system that allows each viewer to make free associations with countless past recollections. Duchamp implies that this is perfectly acceptable as long as the art lover avoids eating the fruit, that is, rationally

understanding the entire correspondences which of art. Mythically the f knowledge, just as the raisins'" refers to those in the Garden of Eden art's oneness and rela WATER. "Ripe imput stronger reminders of ar sent the phonological leveled semiotic.

In summing up the i forth in this article, I brevity of the argumen tion of alchemy and the cessary to understand would take at least sev These findings do, how new approach to semio they tend to demonstra tence structure as a lin the contention in lingu versals do exist. The not on the theory that un determine kernel senter guages. Consequently th phonetics, and semanti human beings. To date this stems from the ph covered by Roman Jakoi ng the last ten years th with the mathematical a rules of transformationa vergent languages. To r little progress has been of syntax completely t upon semantic feature assertions, there is mo generation of unique s of mutually dependent rules of syntactical and If it can be proved th guistic social semiotics in the organizational structure, this would ge tablishing the presence purpose neural mechar

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understanding the entire system of conceptual correspondences which is the mythic structure of art. Mythically the fruit represents forbidden knowledge, just as the "dryness of 'nuts and raisins'" refers to those unisexual plants grown in the Garden of Eden that give the illusion of art's oneness and relate to the quadrant of WATER. "Ripe imputrescent colors" become stronger reminders of art since they alone represent the phonological articulation of a single-levelled semiotic.

In summing up the ideas that have been put forth in this article, I must apologize for the brevity of the arguments. An adequate summation of alchemy and the linguistic principles necessary to understand the analyses put forth would take at least several chapters of a book. These findings do, however, suggest a radical new approach to semiotic studies. For instance, they tend to demonstrate the centrality of sentence structure as a linguistic unit, supporting the contention in linguistics that language universals do exist. The notion of universals is based on the theory that underlying cognitive rules determine kernel sentence structure for all languages. Consequently the foundations of syntax, phonetics, and semantics are the same for all human beings. To date most of the evidence for this stems from the phonological universals discovered by Roman Jakobson in the 1920s. During the last ten years there have been advances with the mathematical application of some of the rules of transformational grammar to widely divergent languages. To my knowledge, however, little progress has been shown in defining rules of syntax completely free from dependencies upon semantic features. In spite of Chomsky's assertions, there is mounting evidence that the generation of unique sentences exists because of mutually dependent ("deep-deep structure") rules of syntactical and semantic manipulation. If it can be proved that a number of extra-linguistic social semiotics also have their origins in the organizational properties of sentence structure, this would go some way towards establishing the presence of universals as multi-purpose neural mechanisms.

Above all, the discoveries of Duchamp and Lévi-Strauss undeniably relate the origins of religion and magic to art. It gradually becomes apparent that within the wide latitudes of the Natural and Cultural, the Sacred and Profane, various strategies direct the rites of mediation. It is always the act of mediation (the semiotic unification of the conceptual and the physical) that gives psychological value to any object or subject matter. Sixty years ago Emile Durkheim realized the truth of this in his study of sacred objects:

The churinga are preserved in a sort of temple, upon whose threshold all noises from the profane life must cease; it is the domain of sacred things. On the contrary, the totemic animals and plants live in the profane world and are mixed up with the common everyday life. Since the number and importance of the interdictions

which isolate a sacred thing, and keep it apart, correspond to the degree of sacredness with which it is invested, we arrive at the remarkable conclusion that the images of totemic beings are more sacred than the beings themselves.²⁶

Durkheim was one of the first sociologists to sense that the sacred character of objects emanates from relations outside the objects themselves. Hence the world of art, like that of religion, encompasses a complete construct of cognitive relationships denying material importance. The associations connected to an object, and not the object itself, define its religious or esthetic value.

... when a sacred thing is subdivided, each of its parts remains equal to the thing itself. In other words, as far as religious thought is concerned, the part is equal to the whole; it has the same powers, the same efficacy.²⁷

In closing we must remember that Duchamp would have gained scant attention and no credit if he had proposed his theories in 1912; at most he might have succeeded in diverting art from its predestined course. Instead Duchamp established his case by selecting a great many trivial objects — "the junk of life" — and transforming these into some of the most seductive and enigmatic art of the 20th century. In the end we comprehend the quintessence of language-based illusions through the agency of revelation and the limitations of logic. ■

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2. Louis Hjelmslev, *Prolegomena to a Theory of Language* (1943) (translated by Francis J. Whitfield) Madison, Milwaukee, and London: The University of Wisconsin Press, 1969, p. 101.
3. Jack Burnham, *The Structure of Art*, New York: George Braziller, 1970, pp. 43-57.
4. Herbert A. Simon, "The Logic of Heuristic Decision Making" in *The Logic of Decision and Action*, (edited by Nicholas Rescher) Pittsburgh: The University of Pittsburgh Press, 1967, p. 20.
5. Jean Piaget, *Structuralism*, (1968) (translated and edited by Chaninah Maschler) New York: Basic Books, 1970, pp. 106-119.
6. Michel Foucault, *The Order of Things (Les mots et les choses)* (1966) New York: Pantheon Books, 1970, p. 95.
7. *Ibid.*, pp. 98-99.
8. Burnham, *op. cit.*
9. Arturo Schwarz, *The Complete Works of Marcel Duchamp*, New York: Harry N. Abrams, Inc., 1969, p. 114.
10. Marcel Duchamp, *The Bride Stripped Bare by Her Bachelors, Even* (typography by Richard Hamilton and translation by George Heard Hamilton), New York: George Wittenborn, Inc., 1960, (no page numbers).
11. Marcel Duchamp, *Marchand du sel*, (Michel Sanouillet ed.), Paris: Le Terrain Vague, 1958, p. 32.
12. Burnham, *op. cit.*, pp. 58-61.
13. Peter Fingesten, *The Eclipse of Symbolism*, Columbia: University of South Carolina Press, 1970, pp. 129-130.
14. Duchamp, *The Bride Stripped Bare* . . . (no page number).
15. Duchamp, *Marchand du sel*, *op. cit.*, p. 109.
16. Duchamp, *The Bride Stripped Bare* . . . *op. cit.*, (no page number).
17. *Ibid.*, (no page number).
18. Foucault, *op. cit.*, p. 54.
19. Robert Redfield, "Thinker and Intellectual in Primitive Society" in *Primitive Views of the World* (1960) (edited by Stanley Diamond), New York and London: Columbia University Press, 1969, pp. 34-35.
20. Duchamp, *The Bride Stripped Bare* . . . *op. cit.*, (no page number).
21. *Ibid.* (no page number).
22. Schwarz, *op. cit.*, p. 471.
23. *Ibid.*, p. 470.
24. *Ibid.*, p. 471.
25. Duchamp, *The Bride Stripped Bare* . . . , *op. cit.*, (no page number).
26. Emile Durkheim, *The Elementary Forms of Religious Life* (1915) (translated by Joseph Ward Swain), New York: The Free Press, sixth printing, February 1969, pp. 155-156.
27. Durkheim, *op. cit.*, p. 261.