Embodiments of Human Identity:

Detecting and Interpreting Hidden Narratives in Twentieth-Century Design History

The article argues that the practice and influence of design history can benefit from new forms of visual and chronological analysis. To this end, a unique phenomenon, the "historical visual narrative," is identified and discussed. Special instances of this phenomenon in twentieth-century design and visual culture, which are tied to the theme of the embodiment of human identity, are examined in depth.

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Visible Language, 29.1 Jack Williamson, 36-71

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Providence Rhode Island 02903 A persistent theme within twentieth-century society, politics and culture concerns the nature and development of human identity, especially in terms of the relationship between individual autonomy and freedom on the one hand, and social participation and responsibility on the other. The actualization of human identity — both within the single individual and society at large — is in many ways determined by the process of its embodiment in the individual human organism. It is significant that, during the course of our century, it is possible to detect a unique relationship between the embodiment of human identity in the physical body on the one hand, and the physical and visual embodiment of some key artifacts in art, design and visual culture on the other. For these artifacts, the body, as an expression of human identity, itself operates as a model. Study of this phenomenon can provide insight about the relationship between visual culture and historical process, and can help suggest some new directions for the practice of design history.

Before examining how certain well-known artifacts reflect the twentieth-century drama of human identity and its embodiment, one must first understand how personal identity becomes manifest in and through the human physical organism during its initial development and subsequent maturity. According to the educational philosophy of the early twentieth-century educator and polymath, Rudolf Steiner (1861-1925), human growth and development from birth through adolescence consists of three major stages during which the faculties of willing, feeling and thinking are successively established. These faculties find expression in the accompanying diagram of the physical body (figure 1).2 Steiner maintained that thinking, as focused, wide-awake, rational cognition, was physically expressed in the human head, with its similarly focused clustering of the major senses (sight, hearing, smell, taste). The head is where the world, as sense data and as food, is taken into the body. At the lower extreme of the physical organism a complimentary activity occurs which is linked with the unconscious will. Here, the main gesture is expansion outwards, as in the excremental function, and is of an unconscious nature, as in our digestive and metabolic processes.

- The three-fold model of human development informs a large body of educational literature produced by Steiner (usually in the form of printed collections of lectures), or by his followers, which is part of the worldwide Waldorf/Rudolf Steiner school movement. Although Steiner's insights about the three faculties of thinking, feeling and willing are often unique, the recognition of this triad as basic dates back to Aristotle and is consistent with most current psychological and educational discussion of the fundamental categories of human cognition and experience.
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 Both the diagram and the accompanying discussion on the correlation between thinking, feeling and willing and human physiognomy were presented in a lecture the author attended given by Dr. Otto Wolff at a seminar to medical students at the University of Michigan Medical School in Ann Arbor in the mid-1970s.

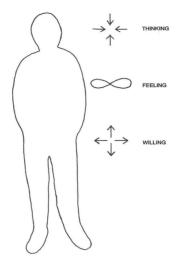


Figure 1
The three-fold human organism and its correlative faculties.

Whereas head-centered cognition is self-conscious and selforiented, lower body will activity - such as ritualistic movement, dancing or sexual intercourse — is communal and non-self-oriented. Between the spheres of the head and lower body is the middle region of the physical organism which expresses — in the rhythmic contractions and expansions of the heart and lungs — traits of both of its neighbors, thus mediating between them. Appropriately, this middle sphere is characterized by an intermediate state of cognition in the form of emotions and feelings. These are neither as crystalline as abstract thinking nor as formless and unconscious as willing. Upon reflection, it should be evident that the healthy and unhindered development of these three faculties would result in an adult fully capable of independent critical thought and a strong sense of self, yet equally able to actively participate in social life beyond the self, and possessed of a vivid and balanced emotional life. However, when human development has been one-sided, uneven or thwarted in some way, the three spheres do not operate in an integrated and harmonious fashion. Because these three faculties are so thoroughly interrelated in their actual operation, insufficiencies in one can engender problems in the functioning of the other two, thus thwarting the actualization of the identity which expresses itself through thinking, feeling, willing and their interaction.

In the twentieth century, disturbances to harmonious threefold development are in great evidence. Two such disturbances, which are historical in nature, have disrupted the relationship between thinking and willing. First, according to a theory of history first postulated by Steiner and later promulgated by Owen Barfield, the history of western civilization reveals a threefold evolution of consciousness, passing from ancient will culture, where man fully participates in nature and the group, to a devotional feeling culture during the Middle Ages, on to our modern scientific thinking culture in which the experience of head-centered critical self-consciousness eclipses the former experience of a participated oneness with nature.3 Modern man, according to Barfield, is characterized by a critical "onlooker consciousness" in which a strong thinking pole is typically accompanied by a relatively passive and disengaged will, so that mediated experience, often specifically packaged for the head (e.g. television), substitutes for directly participated or "lived" experience. This situation is exacerbated by the second historical disturbance alluded to above, the Industrial Revolution. By the twentieth century, the widespread industrialization of virtually all societies and of virtually all levels of society, with the near universal human dependence upon machines, has significantly displaced both the physical and the psychological exercise of the human will.4 A host of individual and social problems have arisen in consequence of the resulting imbalance. The German social philosopher, Karl Marx (1818-83), who lived most of his adult life in England, identified a number of disturbances of the will caused by industrialization. For example, Marx decried the worker's loss of skills and expertise (deskilling) with the division of labor in mechanized factories and the demotion of skilled crafts people to machine operators. Marx also spoke of the worker's experience of powerlessness and alienation because of the narrowing of the worker's conscious grasp of the meaningful totality of the work process to the awareness of only the worker's single production step.⁵ These arguments about the dehumanizing nature of industrial work helped fuel the English design reform movement of the third and fourth quarters of the nineteenth century. Leading members of the Arts

An excellent introduction to the evolution-of-consciousness theory of history is Owen Barfield's, 1957. Saving the Appearances: A Study in Idolatry, New York: Harper. Bruce & World. For an application of this approach to the history of art and design, see the author's article, "The Historical Antecedents and Iconology of the Fixed Visual Field" in Coming of Age: The First Symposium on the History of Graphic Design, Rochester Institute of Technology, 1983, 48-53.

In fact, the two "disturbances" are different sides of the same historical phenomenon. With the growing dominance of head-centered rationality, rationality is able to bolster its independence by rationalizing production (the Industrial Revolution) thereby disengaging itself from the will.

5 Westrum, Ron, 1991. Technologies and Society: The Shaping of People and Things. Belmont, California: Wadsworth Publishing , 31, 32, 38.

and Crafts movement were as much social theorists as design reformers, and they sought to redeem the experience of both the worker and the consumer through quality handcrafted production. Therefore, with the rise of industrial culture in the nineteenth century, there was an attendant recognition that the displacement of the human will by the machine was inhibiting the actualization of human identity.

Before finally considering the impact of such "disturbances" on the theme of human embodiment as expressed in twentieth century art and design, a brief presentation of this study's methodology is first necessary. In the modern disciplines of art and design history there has been a particular reluctance, even inability, to deal effectively with the process and meaning of the physical and visual embodiment of historical artifacts. This failure is due largely to the factors discussed above: namely, that the twentieth century intensification of focused, critical cognition, has been accompanied by a corresponding disengagement of the will,6 so that despite gains in the clear analytical processing of data, the breadth and depth of interpretation has suffered through a failure to deeply engage and participate the visual and historical phenomena studied. This is evident, for example, in the way that art history and design history consider the issue of "visual style." Design historians, in particular, are often critical of the traditional art historical method of characterizing art historical periods on the basis of common visual stylistic traits without correlative explanations of the role of social, economic and technological factors which design historians are used to treating.7 And yet, instead of developing their own methods for understanding and explaining the visual embodiment of design artifacts, design historians have generally avoided visual analysis altogether.8 It is important to realize that "style," as the description of artist-specific or periodspecific visual characteristics, was originally developed by professional art connoisseurs as a method of visually categorizing artworks for the purpose of attributing, authenticating and dating these artworks for the museums and collectors who were their clients. The method was strictly one of describing, categorizing and cross-referencing external visual traits, not of explaining or interpreting the deeper origin and significance of The disengagement of the will has two typical and contrasting manifestations in the twentieth century, recognizable in both the behavior of individuals and in the operations of society at large. Either the will is diminished and passive, or - because it is disengaged from the natural constraints placed upon it by its partnership with thinking and feeling - it becomes unruly, excessive, overbearing, compulsive and obsessive.

Of particular difficulty for design historians has been the traditional art historical treatment of visual stylistic succession as a seemingly isolated, self-perpetuating progression leading from one artistic school or movement to another, with no apparent connection to the society and culture of which these schools are part.

As British design historian Clive Dilnot expresses it, "In design history...Form is a wholly neglected area of study. When not reduced to formalism (as in American art criticism of the 1950s and 1960s) it is generally ignored." Dilnot, Clive. 1989. "The State of Design History Part II: Problems and Possibilities" in Design Discourse: History, Theory, Criticism, Victor Margolin, editor. Chicago and London: University of Chicago Press. 249, n. 97 (originally published in 1984 in Design Issues).

visual stylistic phenomena. Due to dissatisfaction with the perceived limitations of the traditional art historical concepts of style and stylistic periods, there has recently been the tendency in the academic design community to undervalue both visual style and chronological succession in favor of an ahistorical focus on design issues. 10 However, as I intend to demonstrate, attention to visual form and chronological succession in design history can have great value. Chronology helps design students recognize that different historical periods face different design tasks. For the design historian, study of chronological development continually reveals new patterns of causal influence and meaning. One such "new pattern," which attention to chronological visual stylistic development has revealed to this historian, is a unique type of visual construct which evolves over time which I call a "historical visual narrative." In the course of the following discussion I will describe several instances of these visual narratives which help to enrich not only our understanding of design process, but also of historical process as well.11

Visual Narratives of Embodiment

The impact of the polarity between thinking and willing upon the human bodily image is evident in the works of cubism, surrealism, futurism, soviet cubo-futurism and constructivism which will be reviewed in the first part of this article. The tension between thinking and willing is frequently represented as a tension between self and non-self. This is expressed, often visually so, as an opposition between the forces of contraction (as a picture of the collected, thinking self, inwardly focused and withdrawn into the head) and the forces of expansion (as a picture of will which dilates and disperses — sometimes with ferocious, explosive and fragmenting force — outward towards the world beyond the bodily self). Both extremes operate, for example, in Pablo Picasso's 1910 cubist portrait of Kahnweiler (figure 2). The painting challenged conventions in traditional portraiture by ignoring the sitter and focusing on the viewer: the selfconscious act of looking, the viewer's multiple vantages, etc.

In the field of art history. there was the attempt to overcome this shortcoming of stylistic analysis through an investigation of deeper relationships between artworks and their cultural settings and roots called "iconology." Iconology, however, never became realized as a coherent methodology. For an introduction to iconology, see "Iconography and Iconology: An Introduction to the Study of Renaissance Art." in Panofsky, Erwin. 1955. Meaning in the Visual Arts. Garden City, New York: Doubleday, 26-54. For an introduction to art historical stylistic analysis, see the pioneering 1915 work by Heinrich Wolfflin, Principles of Art History: The Problem of the Development of Style in Later Art. New York: Dover, 1950, or, for an overview which incorporates major advances in stylistic theory over the following six decades, see Finch, Margaret. 1974. Style in Art History: An Introduction to Theories of Style and Sequence. Metuchen, New Jersey: Scarecrow Press. For an introduction to alternative approaches in more recent art history, see Rees, A.L. and Borcello, Frances, editors. 1988. The New Art History. Atlantic Highlands, New Jersey: Humanities Press International.

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Because I have taught a graduate seminar in design issues on an on-going basis since 1989, I am convinced of the value of design issues as a separate domain within the larger field of design studies. Although I believe it is difficult, if not impossible, to

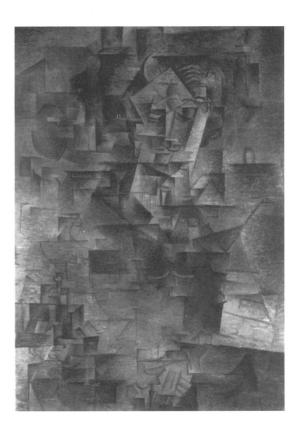


Figure 2
Pablo Picasso, *Daniel-Henry Kahnweiler*, oil on canvas, 1910, 100.6 x 72.8 cm. The Art Institute of Chicago, gift of Mrs. Gilbert W. Chapman 1948.361 (photograph ©1994, The Art Institute of Chicago, All Rights Reserved).

Traditional interest in the sitter's identity and the depiction of character through careful observation of facial detail and gestural nuance was abandoned. Here, as the viewer self-consciously withdraws into him/herself, the picture space follows this retreat and progressively flattens towards the viewer and the two-dimensional field of the picture plane. Thus as the viewer increased in value, the sitter Kahnweiler decreases, and suffers a loss of recognizable identity as his countenance dissolves into a series of generalized shards. The de-individuation of Kahnweiler's image via its dispersion throughout the flat field of the picture mimics the death process in nature, where the expiration of the vital organizing being results in the body's decomposition into its constituent chemical components and the return of these to the larger surrounding environment.

productively discuss design issues without some recognition of the role played by historical context, to do so should in no way be considered a form of design history or as a substitute for design history. A serious problem with treating design issues outside of their historical frame is that to do so automatically privileges present (and equally historically rooted) interests which, when projected onto earlier historical periods, severely distorts the nature of the phenomena studied.

If design history is to take its place as an autonomous disci-



Figure 3
Pablo Picasso, *Les Demoiselles d'Avignon*. (June-July 1907). Oil on canvas, 8' x 7'8". The Museum of Modern Art, New York. Acquired through the Lillie P. Bliss Bequest.

This theme of the eclipse of identity as a process of progressive bodily decomposition and death finds an even more literal depiction in Picasso's 1907 painting, Les Demoiselles d'Avignon (figure 3). The work presents a row of prostitutes in a brothel, most of whom face the viewer and confront his gaze. When their faces are read from left to right, a progressive transformation occurs (hinted at in the face of the first figure at far left), and we pass from faces with the stamp of distinctive individual personalities to, at far right, faces "cubistically" decomposed and rendered as African death masks. These final faces are spread out and flattened, transformed and distributed by the eruption of a primitive sexual will which has completely displaced any trace of the personal self.¹³ Appropriately, the final figure squats down, a savagely distorted face transposed over the genital region of the figure behind, thereby underlining the normal distinction between the head (as representative of thought and self) and the lower will (which can overpower and supplant that self).

The cubist visual strategy of eclipsing a person's or a thing's visual identity by decomposing its recognizable form was employed soon after its initial fine arts development for

pline among other forms of history (e.g., art, architectural, cultural, economic, institutional, intellectual, political, scientific, social and technological history, among others). it must not only establish a more complete factual narrative of design and its historical development, but also must reveal those things which are truly unique about historical design phenomena, and thus make a contribution to the understanding of history as well. Clive Dilnot has voiced a similar concern: "Is it [design history]...merely a minor, if useful, subsection of economic, social and technological history? Or might it be a more significant contribution, a different way of reading or comprehending history?" He continues. "Little has thus far been done on the relationship between history in general and the history of design..." (Dilnot, Clive. "The State of Design History II,"

purposes of military concealment during the First World War. "Camouflage" (from the French verb camoufler, meaning to disguise), was the art of military deception, necessitated by the introduction of the airplane into military combat and reconnaissance, to protect installations, activities and equipment from enemy observation. The Cubist mechanism for subordinating identity by fragmenting form into centers of fixation (Cubism's multiple vantage areas) is also operative in some types of visual pornography. As in American painter Richard Lindner's 1967 work, Marilyn was here (figure 4), reference is made to fetishistic garments which employ straps and pieces of clothing alternating with regions of exposed skin to zone the body into areas for visual fixation, allowing the viewer to

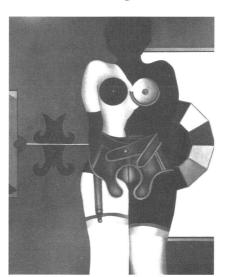


Figure 4 Richard Lindner, *Marilyn was here*, 1967. ©1995, Artists Rights Society (ARS), New York/ADAGP, Paris.

concentrate upon the depersonalized part without acknowledging the identity of the entire person. Visual pornography, used as a substitute for real sexual intimacy and communion, is an extreme example of modern "onlooker consciousness;" it is voyeuristic, it both depends upon and reinforces an imprisoned self and a will which is disengaged (thus obsessive) and incapable of real participation. Because real sexual intimacy is the most personal form of communication, ¹⁴ and because it is a communion of wills, the vehicle of the communication — the physical body — disappears and one truly participates in the

238 and N. 33). For those interested in investigating design history's potential contribution to the understanding of history, I would recommend starting with Dilnot's previously cited twopart article (note 8) on the current status and potential scope of design history, followed by as thorough a familiarization as possible with the nature, aims and methods of other types of historical practice. The aim of this course of study would be to gain - through these various lenses - an intimate understanding of historical phenomena in its rich complexity. By better understanding the nature of history itself, a unique understanding of its relationship to design can result. Useful overviews of a diverse number of historical approaches can be found in: Beringer, Richard. 1978. Historical Analysis: Contemporary Approaches to Clio's Craft. New York: John Wiley & Sons; Stern, Fritz, editor. 1973. The Varieties of History: From Voltaire to the Present. New York: Vintage Books: and Fischer, David Hackett. 1970. Historian's Fallacies: Toward a Logic of Historical Thought. New York: Harper & Row.

12 See also Picasso's similar treatment of the sitter in Portrait of Ambroise Vollard, 1909-10, Pushkin Museum, Moscow.

Again, as in the Kahnweiler portrait, the focus is the viewer, whose self-interest distorts the latter faces. Implicated as the customer who surveys the line of prostitutes, the viewer, whose own

other, the beloved, the non-self. Only when the self cannot be transcended, only when the communication cannot be completed, does the vehicle of communication — the body become a barrier instead of a channel, the goal and not the means. This is the experience of the "body as limit" (as expressed in the straps and garments which tightly bind the body), 15 or the body as dysfunctional "language." And when one becomes disconnected from the object of communication, she or he withdraws and fixates on what was formerly the means, turning it into an end.16 An important goal of sexual intimacy is to participate in the identity of the loved one, but because the voyeur must fixate on the limits of self, the facial identity of the other is either shunned or actually obscured (figure 4). The combination of voyeuristic fixation, focal body parts and subordinated identity is again evident in Jasper Johns two sculptures of 1955, Target with Four Faces and Target with Plaster Casts. Both works rivet viewer attention on a target with bull's-eye, above which are displayed, in a row of small boxes, either four anonymous lower faces, or, alternately, body parts (including, among others, a female mouth, a breast and male genitals). Johns, in a quite conscious fashion, and with calculated insight, presents to us the basic visual and psychopathological mechanism whereby the modern voveuristic "onlooker" fixates by means of the obsessive will on the object of desire, yet with no possibility of meaningful participation with that object's (or person's) real and full identity.

John's alienated viewer and his use of fragments of literally depicted objects ties him to earlier dadaist art which grew up as a satiric and nihilistic response to the inhumanity of the First World War and the experience of human helplessness, and which also treated the theme of alienation through the representation of uncanny object juxtapositions. To Surrealism also dealt with the theme of helplessness and alienation, but in terms of an oppressive, often libidinal, Freudian unconscious which could overwhelm conscious identity and personal will. Surrealist painting typically featured an "estranged object," disconcertingly wrenched from its normal context and abandoned on a plain of vast empty space. The theme of

libidinal desire (part of the unconscious will) grows as his gaze proceeds to the right, increasingly sees only the primitive sexual side of the final figures, their countenances disfigured by the customer's own prurient stare. By contrasting decidedly French faces with African masks, emphasis is given to the difference between intellectual European culture (which prizes the individual self) and will-oriented, ritualistic tribal culture (which prizes the group).

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The irony of visual pornography is that it is the "private made public," which automatically falsifies its promise of intimate communion with the other. Sexual communion can only be experienced by the lovers themselves. At no point is the communication ever public because it only occurs within the lovers. At the moment visual pornography makes the "language medium" of sexual communication (i.e., the body) public, it ceases to be "language" (i.e. capable of the communication transfer).

Psychiatrist Wilhelm Reich, the pupil of Freud who focused on sexual dysfunction, said that his sexually neurotic patients (especially the masochistic ones) were excessively conscious of their bodily periphery, and experienced their skin as a tightly constricted boundary, keeping them from realizing themselves. On this basis, the straps and binding apparel of Lindner's figures express the frustration of identity by both mimicking the neurotic experience of the constricted bodily periphery, and by visually fragmenting the body so that viewer recognition of the



Figure 5 Salvador Dali, *Giraffe on Fire*, 1935. ©1995 Demart Pro Art, Geneva / Artists Rights Society (ARS), New York.

the alienated, powerless self, is portrayed in Salvador Dali's 1935 painting, *Giraffe on Fire (figure 5)*. The painting features a vast dusky plain, in the foreground of which is the limp form of a woman, bodily appendages propped up by crutches, struggling blindly forward. In the distance stands a phallic, burning giraffe. In the face of an irresistible sexual will, she has lost all vestiges of self: gone are her personal will (hence the crutches), her personal feelings (the drawers pulled from the middle sphere of her body are empty) and her individual identity (she is without a face). She gropes aimlessly forward, trancelike, a picture of witless, mechanical longing in the absence of an exiled self.

person infusing the whole is thwarted. This visual zoning of the body also suggests that the occupant's experience of self has lost cohesion and has suffered a fragmentary distribution into, and conscious preoccupation with, disparate bodily centers where consciousness has become internally and externally fixated.

It might be suggested that, as a symptom of the increasing withdrawal of the late twenti-

It was with futurism, however, which arose in pre-war Italy, that the subordination of centrifugal rational consciousness and identity is coupled with the dynamic centripetal forces of the will. Furthermore, this will comes to be identified with that which is non-human and mechanical. Futurism's founding manifesto, written by the Italian poet Filippo Marinetti, evinces an intoxication with both the unleashed power of the machine and the destruction of life by "recounting" a reckless nighttime automobile joyride through the streets of Milan, and the sadistic act of running over a dog on someone's porch. The possession of self by a larger force which seizes and propels it blindly forward (not unlike the female in Dali's painting), is presented again and again in futurist artworks. Called "universal dynamism" (suggestive of its de-individuating action), this force was first depicted as the collective madness of a mob in Umberto Boccioni's 1909 painting, Brawl in the Milan Galleria, in which a single great current flows through all the figures of a street riot. It is then identified with brute animal will, as in Boccioni's 1910 painting, The City Rises, where the bristling dynamism of horses courses through both the picture space and the human figures occupying it. In the artist's 1911 painting, Forces of a Street, universal dynamism is represented as "lines of force" which come to be identified, first in the work of the futurist painter Luigi Russolo, with lightning and electricity. Electrical force and explosive mechanical force (internal combustion engine) become the most perfect embodiment of the principle of universal dynamism. In the 1914 cityscape drawings of the futurist architect Antonio Sant' Elia, for example, electrical generating centers were the most important architectural form. But of all these works, the subject of the replacement of human will by electrical-mechanical force and of human bodily identity by mechanomorphic form was nowhere better expressed than in Boccioni's 1913 sculpture, Unique Forms of Continuity in Space (figure 6). The work visualized Marinetti's speculations about the future evolution of man when "the mechanical kingdom" supplanted "the animal kingdom," and a new being, capable of great speed, would be "mechanized...

eth-century human into his or her critical consciousness, the resulting separation from his or her former sources of meaning has likewise caused him or her to become suddenly aware of language (itself suddenly opaque and dysfunctional), and to fixate upon it as the culprit, much as the sexual voveur fixates upon the body as limit. This might help to explain the current voque of critical language theory which invariably treats the "materiality" of language, and regards language as limit, not as communion.

Jasper John's work is heir to the more intellectual side of dada, as represented in the work of Marcel Duchamp. But dada also celebrated the theme of the disengaged mind, exalting irrationality and the eruption of the enraged, destructive will.

with replaceable parts." In the streamlined form of this figure, all marks of differentiated individuality and human character are absent, and only the most generalized (i.e., universalized) forms remain. This body, shaped aerodynamically and entirely in regard to externals, expresses no reference to an internal occupant, having the appearance of a hard encapsulating shell, hollow within. This theme of

18 Martin, Marianne. 1968. Futurist Art and Theory 1909-1915. Oxford: Clarendon Press, 130.



Figure 6
Umberto Boccioni, *Unique Forms of Continuity in Space*, 1913. Bronze (cast 1931) 43 7/8" x 34 7/8" x 15 3/4."
Museum of Modern Art, New York. Acquired through the Lillie P. Bliss Bequest.

externality is present as well in Marinetti's futurist orthography, in which letterforms were exploited for their optical impact. Just as the figure's rational identity was subordinated to the irrational will in *Les Demoiselles d'Avignon* and *Giraffe on Fire*, so did Marinetti's graphic compositions set letters free from words and their rational meanings. Earlier we discussed the pornographic representation of the body, and how, when the vehicle of communication becomes detached from the transfer of meaning, the vehicle itself becomes opaque and

self-referential. For the same reasons, Marinetti's graphics represent the hollow rind or carcass of language, all externality, like the empty shell of Boccioni's futurist man.

Throughout its formative years, futurism exercised a powerful influence in Russia, in the aftermath of the Revolution of 1905 and leading up to the Revolution of 1917. Marinetti conducted a lecture tour there in 1910, and futurist ideas of rapid change, based on a destruction of past societal forms, was eagerly embraced, and well complemented Marx's dialectical concept of historical change through revolutionary opposition of new forms against old. Also, the futurist opposition of thinking and willing, with the latter overcoming the former, was fundamental to the revolutionary principle at work in Russia at this time. Marxist social theory posited the opposition and irreconcilability of management (the head, thinking) and workers (the will), and proposed the inevitability of a violent worker's revolution (the victory of willing over thinking). Consistent with this was the de-emphasis of the individual in favor of the collective will of the group, which was basic to the communist project. The visual expression of these attitudes is first manifest in the cubo-futurist peasant paintings of Kasimir Malevich of 1911 and 1912. Focusing on the rural peasant-laborer, a perfect anti-bourgeois subject and the archetypal picture of collective-group culture and the communal will that binds it, Malevich's figures are composed of stacked, metallic-looking cylinders and curved planes. The hollowness and sheen of these surfaces remind one of the metallic shell of Boccioni's sculpture of futurist man. 19 Hollowness again typifies Malevich's slightly later representations of human figures of 1913 in his book cover design for The Three and a costume design for the Russian futurist opera by Kruchenykh and Matyushin, "Victory Over the Sun" (figure 7).20 But here, hollowness is merely a prerequisite for a collapsing-inward of the middle part of the form (even the prismatically constructed letters of The Three's book title seem to cave-in at their midpoints). Reminiscent of the hollow middle feeling sphere of the self-estranged female figure in Dali's Giraffe on Fire, the "absent middle" was, in fact, a salient feature of Marxian

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Malevich's figures also share much in common with the painted figures composed of compound metallic cylinders of Fernand Leger being done at the same time in France, and which anticipate Leger's later 1925 painting, The Breakfast, in which three human figures appear to consist of standardized sets of perfectly machined, hollow metal parts.

Appropriately, the opera, like Italian futurism before it. idolized the new sources of mechanical and electrical power. Kruchenykh, in reference to the opera's theme. says: "The sun, expressing the old energy of the earth, is ripped out of the heavens by modern man, who creates his own sources of energy, through the power of his technical mastery." Rowland, Kurt. 1973. The History of the Modern Movement: Art, Architecture, Design. New York: Van Nostrand Reinhold, 185.

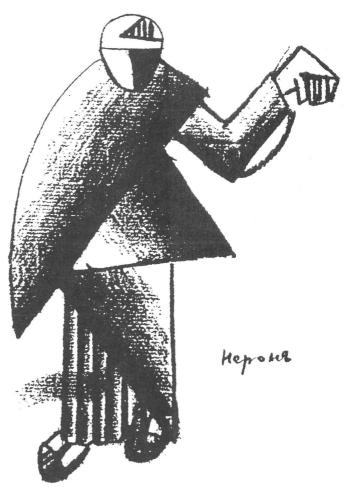


Figure 7 Kasimir Malevich, *Costume for the Opera "Victory Over the Sun,"* 1913.

dialectics, in which only polaric extremes existed and inevitably clashed, with no possibility of resolution through a middle mediating factor. Indeed, in our own socialist-inspired labor unions, democratic work arrangements and workplace participation have often been opposed due to fear that they might lead to workers' collaboration and integration with management, ²¹ thus destroying the bi-polar dichotomy fundamental to Marxian principles. The dialectic bi-polar opposition (with no middle term) was visually expressed in the immediately proximate but never physically convergent axes and planes of constructivist composition, as in El Lissitzky's 1923 *PROUN*

Westrum, Ron. *Technologies* and *Society*, 38.

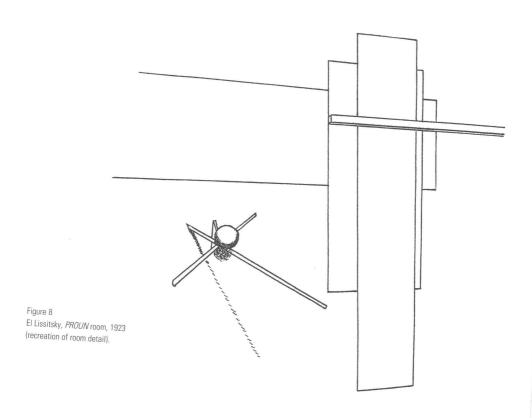




Figure 9 Alexander Rodchenko, *Ad for Pacifiers*, 1923. © 1994 Estate of Alexander Rodchenko/VAGA, New York

room (figure 8). A similar polaric tension is present in the mirrored formats popular with Alexander Rodchenko, where the left and right halves of his graphic compositions repeat one another in whole or in part (figure 9).²²

But to return to the concept of the "absent middle," and its connection to the hollowness of cubo-futurist forms in general and Malevich's collapsing figures in particular, the theme of lost or displaced identity — so far encountered in cubism, dada, surrealism and futurism — becomes apparent once again. Architectural historian Kestutis Zygas has identified a formal principle operative in much of early Soviet architecture in which distinctly different forms invade the same building. Zygas calls this phenomenon "compaction," a term which effectively indicates the tense lack of resolution which exists between these distinct forms, as in V. Petrov's 1921 cubo-futurist Forge Project (figure 10) or Ilya Golosov's Worker's Club Building of 1926. This phenomenon is similar to the

22
Rodchenko's use of "kiss registration," in which his large display letters would be divided at their vertical midpoint with top and bottom halves each printed a different color (either red or black), uses the same dialectic of polaric confrontation. (Figure 9 also uses this approach.)

23 Zygas, Kestutis Paul. 1981. Form Follows Form: Source Imagery of Constructivist Architecture, 1917-1925. Ann Arbor, Michigan: UMI Research Press.

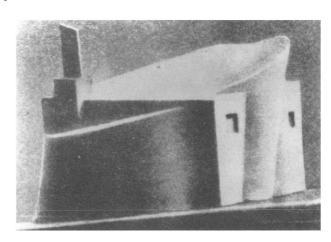


Figure 10 V. Petrov, *Forge Project*, 1921

previously discussed constructivist axes (apparent in El Lissitzky's work in particular) which retain their identity by never merging. But it is also similar to Malevich's collapsing hollow forms, for compaction may also be read — to use a psycho-pathological analogy — as the sense of being overwhelmed by externals which the person with diminished ego-strength (i.e., sense of self) experiences.²⁴ Compaction can

24
When the ego or self is threatened, as in schizophrenia, this experience of being overcome by externals can manifest visually as a flattening of the person's spatial field, and a lack of depth.
Aaronson, Bernard. 1967.
"Mystic and Schizophreniform

be further read as the invasion of one form by another, of one identity forcibly intruding upon the autonomy of another identity. Both of these interpretations — of identity collapsing in upon itself and of one identity being invaded by another have also been tied to early constructivist architecture, and to more recent "deconstructivist" architecture (which is said to derive from early constructivism), by authors who quite literally treat these buildings as representing human psychological states and as pictures of human identity in crisis.²⁵ Compaction, as either the unresolved dialectical tension between two separate entities, or as the failure to maintain the integrity of one identity against incursion, is tellingly translated into human terms in Lissitzky's 1929 poster (figure 11) which tries to force together two physical heads, one male and one female, creating a freakish androgene which is neither a consistent, unitary self, nor a harmonious union where individuals achieve a higher order of non-physical integration (e.g., spiritual communion, community, fellowship, love).

States and the Experience of Depth," Journal for the Scientific Study of Religion, 6:2, 246-252. The decreased strength or continuity of the ego, the "subject-pole," can no longer maintain a clear subject-object relationship, and the phenomena, or "object-pole," become nonhieratic, confused and overwhelming.

25 See Wigley, Mark. 1988. Deconstructivist Architecture. New York: Museum of Modern Art, and Jencks, Charles, 1988, "Peter Eisenman: An Architectural Design Interview by Charles Jencks," Architectural Design, 58 (314).



Figure 11 El Lissitzky. USSR Russische Austellung Russian Exhibition, 1929. Gravure, printed in color, 49" x 35 1/4." The Museum of Modern Art. New York. Gift of Philip Johnson, Jan Tschichold Collection.

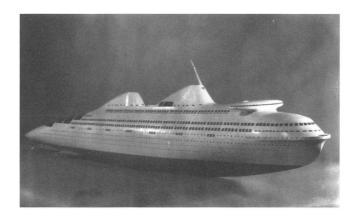


Figure 12
Norman Bel Geddes, *Ocean Liner: Bow,* 1932.
Norman Bel Geddes Collection, Harry Ransom Humanities Research Center, The University of Texas at Austin, by permission of executrix Edith Bel Geddes.

In 1929, the year Lissitzky did his poster for the Zurich exhibition, Stalin banished Trotsky and dictatorial repression of the individual and of individual expression (including progressive art and design) began in Soviet Russia. The same year, in America, the collapse of the New York Stock Market occurred, signaling the beginning of the Great Depression and long-term nationwide unemployment. In America, as in Russia at this time, one can detect the motif of the reduction and displacement of the individual human will, but in America the phenomenon is not the result of political authoritarianism, but of the growing authority granted machine technology as the economic selfsufficiency and self-esteem of individuals decreases. Interestingly, the influence which futurist ideas and forms exercised in revolutionary Russia was repeated — more in spirit than as a direct influence — in Depression-era America. This spirit is evident in the focus on a romanticized technological vision of the future, the denial of and escape from the past, an idolization of mechanized speed and the development of a visual language of streamlined, hollow metal forms (reminiscent of Boccioni's 1913 sculpture), as in Norman Bel Geddes ocean liner design of 1932 (figure 12). To understand how these interests relate to the displacement of the human will, three cultural-historical phenomena — which manifest visually as well as sociologically — must be examined. These include the progressive phenomena of withdrawal, the suspension of the will and the replacement of human will power by machine power.

The theme of withdrawal in the Depression era is evident both in human behavior and visual form. The hard realities of mass unemployment caused people to retreat inward, both because of the humiliation of being jobless, and also because of the need to insulate oneself from a hostile and unpredictable environment. Insulation against the unforeseen shocks of the outer world is a theme of Buckminster Fuller's 1927-30 Dymaxion House, a low-cost, mass-producible kit-of-parts dwelling consisting of a single donut-shaped living unit suspended by wires around the top of a central spindle-mast, and promoted as earthquake- and flood-proof. The idea of withdrawal is also quite literally depicted in the modernistic interior design of the period in which fixtures and sometimes furniture pull back and become recessed into the wall of the room. In transportation design, all external protuberances also retreat into one major streamlined form, as in Geddes' ocean liner (figure 12) in which the top engine stack is incorporated into the contoured body of the ship, or in the individual lifeboats lining the sides which are suspended on retracting booms and become invisible when not in use. The very process of withdrawal goes hand-in-hand with the concept of the armored, detached surface. The hard, protective shells of so many streamlined forms in transportation design — the spate of thin metal bullet-shaped shrouds designed for locomotives during this period — express the ideal of the impervious facade. The cinematic expression of this ideal was the hard-skinned "tough-guy" character, played by both male and female actors, in many movies of the thirties. Furthermore, the implicit concept here of the "detached surface," operating in the surface styling (and re-styling) of thirties products, had also, by this decade, become an ideal for people too as "popular image" came to displace "character" in personal advice manuals.26

The theme of the suspended or detached will, tied to the loss of personal control over external events and one's own destiny, was evident in the enormous increase in various forms of gambling in the thirties, and even President Roosevelt's 1933 economic recovery plan, the "New Deal," used a poker metaphor which pointed to the elements of luck and chance.²⁷

Cultural historian Warren Susman has documented how, until the turn of the century, "character" was the defining element of the person in hundreds of books, pamphlets and manuals, but this gradually changed in the first decades of the twentieth century to a focus on personal image and surface behavior. See chapter fourteen, "Personality and the Making of Twentieth Century Culture" in Susman, Warren, 1983. Culture as History: The Transformation of American Society in the Twentieth Century. New York: Pantheon Books.

Susman, Warren. *Culture as History*, 161, 162.

The frustrated will also was evident in the notion of "boundaries" which dominated the period. The hard streamlined shell of thirties transportation vehicles provides one concrete example of this. In early thirties book illustration (e.g., the children's books drawn by Lois Lensky and others) we often find featured a thick black contour line around all the human figures in the story.²⁸ But another quite rampant type of thirties iconography, horizontal banding, also stresses the period's fixation on boundaries and limits. Consisting of exposed steel stripes or continuous dark graphic bars, these bands could be found wrapped around products, 29 recessed into or applied on top of interior and exterior wall surfaces³⁰ or encircling desks, cars and locomotives.31 This horizontal banding, as I will seek to demonstrate presently, is an expression of widespread thirties consciousness of social and economic boundaries, of the economic "haves and have nots." Numerous movies of the period concern the divisions between classes, between the insulated rich versus the destitute jobless, and do so from perspectives both serious and humorous. A near universal plot device in these movies is that rich and poor (or working class) trade places, usually only temporarily (so that boundaries, though briefly bridged, are ultimately inviolable).32 Inasmuch as such boundaries were, in actuality, unbridgeable, a frustration and fatalistic acceptance of economic limitations meant that a sense of hopelessness — that is, a withdrawal and suspension of one's will — was very much part of the experience of boundaries in this period.

How, we may ask, were the phenomena of drawing within oneself, and the suspension of human will, related to the replacement of human will by mechanical power? During the depths of the Depression, when it appeared that even the cornerstones of the American identity — ingenuity and determination — had proved inadequate, the search for saviors fastened on the machine, for where human will failed, machine will would succeed.³³ This belief in the machine was coupled with a mechanistic and deterministic notion of historical progress made over in the machine's image. The "machine age" of the thirties would take us, with deterministic certainty and mechanistic inevitability, out of the poverty of the present

28
The heavy black bounding lines which zone all areas of the game board and property cards in Monopoly.™ the 1936 Depression era theme game about chance, luck and loss, is another such example. The illustrations of Rockwell Kent are another.

29 Such as Henry Dreyfuss' 1933 Sears "Toperator" Washer or Walter Dorwin Teague's 1936 Kodak "Bantam Special" Camera.

30
As in Raymond Loewy's 1934
Industrial Designer's Office
Interior for the Modern
Museum of Art, Teague's
1934 Texaco Station fascia
detailing or Frank Lloyd
Wright's 1939 Johnson Wax
Headquarters.

31 Examples of which include Donald Deskey's 1931 Sideboard, Carl Breer's 1934 Chrysler Airflow automobile or Loewy's 1939 S-1 Locomotive

32
Examples include Charlie
Chaplin's City Lights (1931),
Frank Capra's It Happened
One Night, (1934) and You
Can't Take It With You (1938)
and especially Amazing
Adventure (1937) starring Cary
Grant, among many others.

33
A belief deeply rooted in the American psyche, as seen in folk-heroes like Paul Bunyan or John Henry who epitomize American will and determination which is nonetheless (as in their tree-cutting or rail-laying contests against machines) no match for technology.

to a future technological utopia of plenty. The Chicago and New York World's Fairs of 1933 and 1939 promised as much, as did movies like Things to Come (1936), visually accountered with streamforms, horizontal bands and — the third element of the thirties major iconographic triumvirate — stepforms. Stepform was evident in symbols of progress, especially skyscrapers,34 but was transferred to the profiles of bookcases or radios, often in reference to skyscrapers.35 The idea of incremental, forward, stepwise progress, was represented in the numerous formal evolution charts prepared by industrial designer Raymond Loewy for products like phones, women's attire or cars. In all such charts, it is interesting to note that a gradual loss of identity — that is, of differentiating features is shown as products become increasingly streamlined, sometimes beyond recognition. In Walter Dorwin Teaque's design for the 1939 World's Fair's enormous "Ford Cycle of Production" display (figure 13), a circular stepform exhibit with moving figurines at different tiers indicates the many steps of mechanized production necessary to transform the raw material shown below into the finished cars above. Here, the stepform clearly presents, in terms anyone could understand, how progress towards a better life was realizable by virtue of the modern machine. Interestingly, this deterministic process, made possible by machines and not inconstant humans, might even allow one to climb the socio-economic ladder. When we visually merge two of the major pieces of thirties iconography — horizontal bands and the stepform (figure 14) — we see how the concept of upward progress combines with the picture of different economic strata to yield an image of upward socio-economic mobility. As a representation of historical process, however, it offers a general picture of societal progress towards a more secure and materialistically bountiful future. With this, it becomes apparent that streamform and stepform, though unlike visually, arose as typeforms in support of much the same idea: technological escape. Streamform, associated most closely with travel and leisure luxury ocean liners, planes, trains and cars — was also associated with speed and insulation, that is, escape from the deprivations of the jobless life. Ironically, the life of leisure (the idle rich so

34
One possible source for the stepform in skyscrapers was the 1916 New York zoning code which required tall buildings to be set back so as to provide sun and fresh air to pedestrians. Pilgrim, Diane. 1986. "Design for the Machine," The Machine Age in America 1918-1941. New York: Harry Abrams, 284.



Figure 13
Walter Dorwin Teague,
"Ford Cycle of Production" exhibit, 1939
New York World's Fair.
From the collections of Henry Ford
Museum & Greenfield Village.

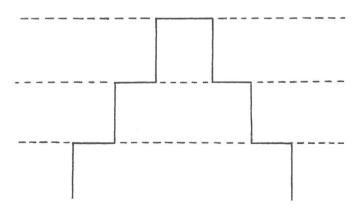


Figure 14 Transposition of two 1930s iconographies: horizontal bands and stepform.

dominant in thirties films), and the life of the future (characterized by the robots and labor-saving machines of the World's Fairs) were also jobless, but now the life of the disengaged will was socially acceptable, a mandated perk. Ironically, streamform is the result of the process of involution, and yet it arose as an expression of forward technological progress, or evolution. This apparent disparity is resolved when we remind ourselves that streamform can be read as a picture of the withdrawal of the personal will, and that "technological progress" meant the replacement of human will by machine will. Therefore, technological progress really meant "progress in the absence of human will," which is precisely what streamform (as an image of mechanical escape into the future) represented. 37

There is a special instance of streamlined design — the 1934 Chrysler Airflow automobile designed by Carl Breer and his associates — which will help us to better understand the relation of streamform to the will and its embodiment in the human organism. At the beginning of this article, the will's connection with the lower part of the human anatomy was explained (figure 1). Now we will see, using the Chrysler Airflow as our focus, that the will is also expressed in the anatomy of the human head. The streamlined appearance of the Chrysler Airflow, America's first streamlined production car (produced between 1934 and 1937), was achieved through a process of formal involution (as with Geddes' ocean liner, discussed earlier) in which, heretofore, external automotive elements like headlamps and fenders were "drawn into" a single sleekly curvaceous form (figure 15). A revolutionary design in both form and engineering, the Airflow's consolidated form was a radical departure from conventional autos which placed one box (for the engine) behind another box (for the passengers) (figure 16). In examining the Airflow's connection to the human head, we can begin by noting the use of an Airflow look-alike as the head of the mother ape in Pablo Picasso's 1951 sculpture, Baboon and Young (figure 17).38 The fact that the car is fairly convincing as a head should perhaps not surprise us, once we remember that both streamform and the head represent the process of formal

35
Such as the mid-1920s
Skyscraper Bookcases done
by Austrian émigré Paul
Frankl, who was identified
with the New York branch of
the Wiener Werkstatte

36 Arguably the most memorable cinematic image in thirties films is of King Kong's ascent to the summit of the Empire State Building where he is fired on and killed by warplanes (RKO's King Kong, 1933). On one level, the film is a critique of modern scientific-rational civilization (i.e. thinking) which has, in its one-sidedness, released the uncontrollable forces of the will and, having failed to tame these, extinguishes them. It is thus a picture of how our technological progress - represented not only by the skyscraper itself as modern marvel, but also by the ape's move up the stepform (itself an image of the Darwinian concept of human evolutionary progress) - has robbed man of his will.

In Norman Bel Gedes three restaurant proposals for the 1933 Chicago World's Fair, the themes of technological progress and of escape into an insular fantasy world find their most imaginative articulation prior to the technological fantasy escapes of Disney. Geddes' Island Dance Restaurant, Aquarium Restaurant (glassed and underneath a waterfall), and spindle-top Revolving Restaurant, all radically distance visitor's from their known world to maximize the experience of the fantastic.



Figure 15 Carl Breer and associates, Chrysler Airflow automobile, 1934

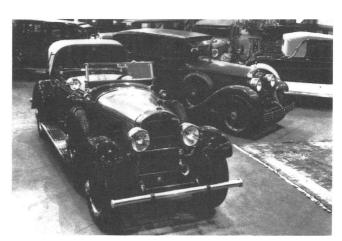


Figure 16 Conventional pre-1934 automotive form.

consolidation and focusing inward (figure 1).³⁹ One contemporary critic of the Airflow wrote that it resembled "...a human face covered with a stocking,"⁴⁰ an impression no doubt influenced by the fact that its uniquely innovative one-piece body frame resembled a skull.⁴¹ It is, perhaps, not insignificant that Picasso's ape is female, for the Airflow is distinctly female in its formal vocabulary. Whereas conventional autos were angular and featured radiator grilles which strongly resembled coats of arms (family crests),⁴² symbols of male lineage, the Airflow was a radically curvaceous form (especially in 1934) in which all

38
After the Airflow was introduced a number of other auto manufacturers copied the design. Most notable was the 1936 Volkswagen, a scaled-down version of the Airflow designed and manufactured by Ferdinand Porsche who had been immediately impressed by the Airflow's sophisticated engineering logic. Irwin, Howard. 1977. "The History of the Airflow



Figure 17
Pablo Picasso, *Baboon and Young*. Vallauris, 1951. Bronze (cast 1955), after found objects, 21" x 13 1/4" x 20 3/4." The Museum of Modern Art, New York, Mrs. Simon Guggenheim Fund.

square forms had been softened into rounded ones. But it is in the formal involution of the headlights that the femaleness of the form is most pronounced. Physician and writer Dr. Karl Konig has pointed out how the principle of formal involution is operative in the female anatomy whereas the opposite is the case in male anatomy. In a work on embryology which compares the analogous paired reproductive organs of the female (ovaries) and the male (testes) (figure 18), Konig observes that whereas the ovaries remain in a state of suspension within the body, the testes descend outside the body coming under the influence of gravity. Based on this description, if we return to the forms encountered in the Airflow and its contemporary (figures 15, 16), we might observe that the externalized headlamps of the "male" car, correspond to the similarly externalized male testes, but when these headlamps

Car," Scientific American, 237, (August), 103. Picasso's car probably either literally uses, or is inspired by, an Airflow derivative.

39
Breer did intentionally model one aspect of the Airflow on human form and behavior. In his interest to provide a smooth ride, Breer had found that the least tiring stride for humans was 80 to 100 steps per minute, and then limited the flexing of the Airflow's front wheel springs to between 80 and 100 cycles per minute. Irwin, Howard. "The History of the Airflow Car," 101, 98.

are drawn into the body of the Airflow, they correspond to the female ovaries. Interestingly, these differences are detectable within the formal composition of the human head. The eves correspond to both the paired reproductive organs of the lower anatomy in both sexes; to the female ovaries and the male testes.44 Whereas the relationship between the eyes and mouth roughly corresponds to that between the ovaries and vaginal opening,45 the relationship between the eyes and nose corresponds to that between the testes and penis (figure 18). This latter relationship not only helps to explain the long history of phallic references to the male nose,46 but clearly reveals the meaning of the Kilrov figure, a piece of veiled pornographic graffito commonly found in men's restrooms (figure 19). Named "Kilroy" (from the phrase "Kilroy was here," which often accompanies the image), the figure appears to be a large-eyed, large-nosed cartoon character who peers at

Irwin, Howard. "The History of the Airflow Car," 101.

41
See the bodyframe drawing on page 102 in Irwin, Howard.
"The History of the Airflow Car."

The use of the radiator for its symbolic potential, owing to its visual prominence, is not implausible. The radiator of the Rolls Royce is a perfect replica of a classical temple front, right down to the winged figure which crowned the peak of the arch, which became the radiator cap ornament.

Figure 18
Comparative diagram of the relative positions of the female ovaries and vaginal opening, and the male testes and penis.

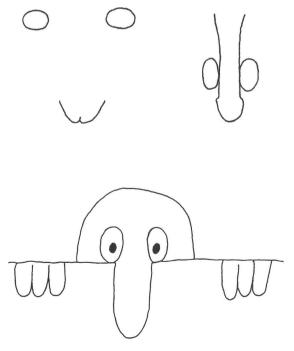


Figure 19 Kilroy figure. the viewer over a high wall. In actuality, Kilroy is an image of the male genitalia; the large eyes are the testes, and the nose between them is the penis. His presence on the walls of bathroom stalls, peeking at the occupant from behind his wall, helps us recognize that he is simultaneously voyeur, and object of voyeuristic fixation in one image. It is thus now possible to understand why, as a form ultimately deriving from the human body, the Chrysler Airflow takes as its typeform the female body. Finally, in regards to our earlier discussion of streamform as an image of the withdrawal of the human will, it should be pointed out that, in terms of physiognomic expression, the lower male anatomy expresses the outward expansion of the unconscious will (figure 1) quite literally in the erect male organ, whereas the female anatomy literally expresses the middle sphere of the emotions in the projection of the breasts (and their role in creating the emotional bond between mother and nursing child). Therefore, the streamform, as a picture of the withdrawn or inwardly focused will, can be appropriately considered a female form.⁴⁷ However, if we consider the later evolution of the American automobile, we will find a startling example of the expression — not of the inwardly focused, "feminine" head — but of the lower anatomy and male will.

The themes of speed and escape which streamform vehicles of the thirties expressed was carried into the sculptural forms of American automobiles in the forties and fifties. 48 These themes were at the heart of the phenomenon of the "drag race," and the various forms it took in the post-World War II era of the 1950s. "Dragging" referred to a short acceleration and speed contest between two cars from a standing start to, ostensibly, determine which car was fastest. In actuality, it was a ritualistic contest of courage and will ("guts") between two males, as well as a thinly veiled display of male sexual potency (again, an aspect of will) to the young women in attendance.⁴⁹ The cars used in this early form of drag racing were often customized cars with rebuilt "souped up" engines, commonly known as "hot rods," a term with fairly obvious phallic overtones. Drag racing was later formalized as an audience sport in the 1960s and was run on a straight quarter mile track (along one side of

43
Konig, Karl. 1968-9.
Embryology and World
Evolution. No publisher given
(reprinted in The British
Homeopathic Journal, 57, (1-4) and 58 (1-2) from lectures
given 1965-6), 10.

A4 Note also that the eyes are similar in size to the ovaries and testes

45
This correlation of vaginal opening to mouth might help explain why red lipstick carries an erotic suggestion, for the red lips of the mouth would thus mimic the engorged lips of the vagina during sexual excitation.

Selected examples include the large nose of Cyrano de Bergerac (from Edmund Rostand's 1897 play), whose nose was the only tip-off of his otherwise concealed amorousness: the extendible nose of Pinocchio, which only grew when he lied (i.e., went against his higher nature); the long noses of caricatures in general, which seek to emphasize the "lower" or appetitive nature of its victims; and the popular use of elephants as father-figures in children's books, often with whales serving as motherfigures.

47
Historically, the will has been visually de-emphasized in regards to women. The most obvious example is the long dress which conceals the legs, for merely in walking the legs are the archetypal picture of human will in action. The legs are unmistakable expressions of the

which ran stands for spectators), between two radically redesigned cars, now called "dragsters." The stripped-down form of the dragster, having evolved into a picture of pure function, consisted of huge wide tires in the rear called "slicks" (to provide maximum traction), between which the driver was located, and a long, thin and bare structural chassis which carried an enormous engine, supported at the lightweight front end by a set of small, inconspicuous bicycle-like wheels. Due to advances in clutch technology, the driver could "rev the engine" and then "pop the clutch" to instantly transfer the engine's high rpm's directly to the stationary rear wheels, allowing for very quick starts. A crowd-pleasing aspect of these quick starts was the "wheelie" in which the instantaneous release of explosive power to the rear slicks would momentarily cause the front end of the dragster to jump up and hang in the air (figure 20). The origin of the dragster in male potency displays and the "hot rod" is born out by the fact that formally, it resembles the male genitalia. The large slicks correspond to the testes (both representing the principle

human will in excessive cases like the Nazi "goose-step" or the karate kick. The restriction of female mobility represented in the Chinese ritual of foot binding is a similar manifestation. I want to thank the editor for bringing this latter example to my attention.

In the forties and especially the fifties, sculptural automobile styling entered an exaggerated baroque phase. where the typically consolidated streamform was differentiated (although sculpturally so) into bulbous protuberant forms (usually expressed in front and rear bumpers and lights) and tail fins (in reference to the jets and especially rockets of our "space race" with Russia, and indicative of immense speed and "escape velocity").

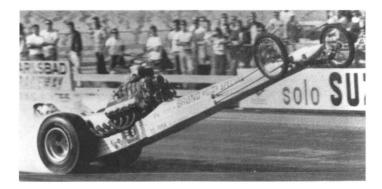


Figure 20 Dragster doing a "wheelie."

of generative power), and the long tapering chassis resembles the extended penis. The comparison becomes complete when we realize that the "wheelie" is a simulation of the male erection. Thus, in the Airflow and the dragster, we have two examples of design which express human faculties (inward-oriented thinking and outward exploding willing) and their manner of formal embodiment in the physical organism (upper head and lower physical phallus). Also, as in our earlier exami-

49
Ritualistic variations of dragging focused on courage, as in "chicken," where two cars would drive towards each other until one driver, the "chicken" swerved. The midnight auto race in the 1955 James Dean film, Rebel Without a Cause, combined the motifs of the drag race

nations of futurist, Soviet and American design of the thirties, machine will again substitutes for human will.⁵¹ Our final design artifact, to be discussed presently, also expresses this theme of human will displaced by machine will.

So far, this article has attempted to provide a survey of selected instances of the ways in which twentieth-century culture has visualized the process of the embodiment of human identity. Because the examples cited have all in some way indicated impediments to this process, the article could have been entitled "disembodiments of human identity." Because I believe in the fundamental impulse of human identity to physically and visually embody itself, even under (and sometimes because of) adverse circumstances, the more positive view and title were selected. However, it remains true that machine technology, by its very nature, disembodies, externalizes, and re-embodies human capabilities and faculties previously internal to the human being,⁵² often replacing the original human function and/or contributing to an atrophy of that displaced function or faculty. It is, however, interesting how the appropriated faculty — even in its re-embodiment — often seeks a form similar to that which it would normally take (if left unhindered) in the human body. Such is the case with the desk-top computer which became popular in the mid-1970s and represents the physical embodiment of modernist rationality (thinking) now in its own self-contained and self-perpetuating system (i.e., it perpetuates its already re-embodied rationality in and through the mental operations of its human users). This is why, also in the mid-1970s, post-modern design arose as a distinct and recognizable phenomena. That is, modernism having assured itself a kind of perpetuity via physical embodiment (no longer merely a cultural thought-form, but now a fully incarnated thought-form), design was freed to explore seemingly arational values (e.g., the ornamental, ambiguous, irrational and eccentric). The computer thus represents the disembodiment and re-embodiment of human thinking.⁵³ Appropriately, it has taken the form of the human portrait bust: the keyboard corresponds to the shoulders, with an incredibly large head on top of (in some models) a skinny

and "chicken" as two cars race towards a cliff, with (as the story turns out) the winner getting the girl.

50

The picture of spectators cheering excitedly as two "erections" roar down the track suggests a link between modern drag racing and the pagan spectacles of ancient Rome, for example, which were similarly visceral.

5

In the case of drag racing as a spectator sport, our earlier discussion of the disengaged will of the "onlooker" seems relevant, inasmuch as the actual content of drag racing makes spectators voyeurs rather than participants. In addition, the dragster as a machine image of the sexual will can be tied to earlier literary and artistic comparisons of the two, for example, historian Henry Adams comparison of the virgin to the dynamo he saw at the 1900 Paris Exposition (The Education of Henry Adams. 1906), or the works of Marcel Duchamp like The Bride and the Large Glass.

5

The "machines" referred to here thus differ from what are sometimes called "simple machines" or hand tools (e.g., saws, hammers, scythes) in that the latter assist the exercise of will rather than replacing or inhibiting it.

53

There are ethical issues that can arise when human faculties are disembodied outside of the human organism. For example, human thinking occuring within the body is permeated with feeling (i.e.,

neck. The will element is also present in the form of electricity (as with the Italian futurists), which enables the computer to process data at dazzling speed. The computer is thus a reembodiment and even image of the human being, but of one missing the middle, affective sphere. We have encountered this image of the absent middle sphere earlier, for example, in surrealism, Soviet art and design, and American design of the thirties. It is a chronically recurring image in our century and ultimately relates to the larger phenomenon of how the three spheres of the modern human being, having experienced a fragmention for reasons already discussed, are seeking reintegration.

Conclusion

I would like to conclude this article by commenting on some of the forms of evidence presented here and the implications of these for the practice of design history. First, the notion of "period style"— which would, for example, include thirties streamform, stepform and horizontal banding — has been shown capable of carrying significant meaning, rather than being a merely arbitrary visual construct. Second, that visual chronology is important. Both factors, visual form and chronology, in fact, came together in the underlying historical visual narratives which were identified and discussed. Although the article as a whole attempted to explicate the larger narrative concerning the embodiment of human identity which underlies so much of modern culture, two segments of that larger narrative — the development of streamform and stepform, and the formal evolution of the car ("boxform" to dragster) — could be called underlying (or hidden) historical visual narratives in their own right. The historical visual narrative can be tentatively defined as the visual revelation of underlying meaning over time, and exists as an identifiable and unique phenomenal historical construct. "Visual" is used broadly in this definition and would include, in the dragster narrative, for example, not only the vehicle's visual resemblance to the male genitalia, but also to the complete narrative scenario which includes its erection in the "wheelie." This narrative, as a unique species of historical phenomena, is not

the polarity of sympathy and antipathy which is connected to moral discrimination) and will (experiences, memories and the understanding of the consequences of ideas and actions). When thinking is disembodied and not so permeated — and consequently "disencumbered" and "speeded up." as it is in computers - there is the tendency (if not the necessity) for human operators to run at the speed of thinking alone, not at speeds typical of thinking in concert with feeling and willing. For a discussion of the interaction of thinking, feeling and willing in ethical problem-solving, see the author's article, "Three Major Streams in Twentieth Century Design History and Their Ethical Implications for Current Teaching and Practice," in Ethics and Values in Graphic Design Education. Graphic Design Education Association Conference, Raleigh: North Carolina State University, forthcoming.

only independent of the historical researcher (and thus, presumably, discoverable by other historians), but also is to some extent independent from the designer as well. In the case of the dragster, many separate incremental developments (powerful engines, clutch and tire technology, etc.), and the creative acts of countless individuals were necessary before the dragster was articulated in its "final" form. And it is doubtful (and, in the case of the dragster, virtually impossible) that Carl Breer, or the designers developing the dragster, were conscious of or in any way sought to embed human anatomical references into their artifacts. Rather, an underlying typeform seems to have worked through a succession of creative human acts to finally embody itself. This has implications, at the very least, for our understanding of creativity, creative influence, the nature of inspiration and the nature of historic causation, subjects which cannot be more than mentioned here. Certainly, the historical visual narrative indicates that form is an evolutionary phenomenon not necessarily explainable by, or reducible to, single-factor explanations.⁵⁴ Also, the narratives made clear that the visual is not an arbitrary dimension of an artifact's total reality.55 Far from being arbitrary, the narratives discussed in this article show that visual form is a revelation of inner identity, and that — as is true of human identity — identity reveals itself over time. 56 In the discussion of the contemporaneous visual expressions of streamform and stepform, for example, a related set of underlying themes (generally concerned with technological escape into the future) was expressing itself through these quite different visual manifestations. Form changed but the underlying "identity" remained constant (though certain aspects of this identity were more effectively embodied in one form than in the other, which may help to explain their equal necessity). In the narrative leading from the early automobile to the dragster, the theme of the human will was revealed over time through an extraordinary variety of changing forms. Thus there is a close and important relationship between time (chronological succession) and identity (in terms of its development and embodiment), which it is important for the historian concerned with the meaning of artifacts to recognize.⁵⁷

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It has been proposed that thirties streamform was influenced, and perhaps even attributable to, the fact that metal stamping technology at that time was only capable of producing large-radius convex curves. As my discussion of streamform and the Chrysler Airflow sought to demonstrate, there were other reasons as well. Although people have a preference for seeking single causes for seemingly single events (perhaps because, in individual decision-making, the final decision is often the most conscious one, and we deemphasize the many reasons and purposes leading up to and served by that final decision), there are always multiple causes, and often very different historical agendas are satisfied in a single event. Historical phenomena are organic, and different developmental streams are continually evolving and interacting ("events" thus represent the "crossing points" of these streams). To identify a single event in time, which we do continually as humans, is, in truth, to artificially extract a part of that historical organism (reality) for conscious inspection, and we often forget that that event or fact is part of the larger, ever evolving, organic continuum. To return to my example, there can thus be many different and yet equally valid reasons for streamform.

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In addition to earlier reasons for the belief that the visual dimension of artifacts is arbitrary (i.e., the art historical concept of style as limited), the long-standing complaint of functionalist designers that

The historical visual narrative also helps to reveal design in its role as an "historical artifact," and not only as a sociological, economic or technological phenomenon. This suggests that, as a form of history, design history can make a unique contribution to the understanding of history itself, and is not merely a subset of other forms of historical practice. Thus, the historical information carried by visual artifacts can provide confirming or even new information useful to other types of historians. Furthermore, design artifacts may in fact carry more of a period's meaning (or at least more of certain types of meaning) than other artifacts because design artifacts typically represent the confluence of broad social, economic, technological and cultural forces (filtered through clients, audiences, the realities of production technology, distribution, competition, pricing and so forth). Providing insight into visual culture can be an important domain of design history, which includes what the visual can tell us about non-visual historical phenomena.

Finally, the historical visual narrative, as a historical phenomenon, is a unique form of information which requires the use of a "participated" methodological approach for its detection. This participated methodology is directly related to one of the article's recurring topics: the passive "onlooker mode" of modern consciousness. Because unaided analytical methodologies often separate the researcher from the phenomena studied, the phenomena are not fully plumbed. This is very often the case in contemporary visual studies (e.g., art, architecture and design history), where the visual is often prematurely dismissed. Certainly, if a stronger element of will is brought into thinking — and the visual analytical faculty in particular — it is possible for the researcher to more deeply connect with and participate the phenomena studied. It is not merely a matter of a longer, more sustained span of observation, attention and consideration (although this is certainly important). It is also a matter of the quality of attention. This quality of attention arises ultimately through "balanced cognition," where thinking, feeling and willing — each with its special role — interact in a manner consonant with the dictates of the phenomenon being studied. In the case of the historical visual

"design is (or should be) more than surface styling," coupled with the fact that many design problems are solved in large part by non-visual means (e.g., problem redefinition, etc.), has buttressed the notion that the visual is a detachable design element.

For example, in viewing the human facial physiognomy at different life stages we see that "human development" can be defined as "a change in form without loss of identity." Said differently, not only is the same identity and character recognizable in all stages, but a fuller expression and embodiment of that character is detectable in the latter stage. The same principle seems to apply in the narratives discussed in this

Time is the medium in which human identity exists. This is why memory, which protects the continuity of self over time, is so fundamental to a healthy identity. Thus identity disorders, such as schizophrenia, are characterized by the experience of being locked in the present moment.

article

narrative, formal transformations over time (along with the non-visual phenomena with which these are connected) are investigated to understand the causes of the formal change, the nature and direction of that change, and the possible significance of the change. This usually begins with a study of historical periods, and involves an understanding of how the issues and concerns of the period are reflected in, and addressed by, the design artifacts themselves. A "horizontal inventory" can be conducted to learn of the presence of the "theme" in contemporaneous phenomena beyond design, with special attention to how any visual embodiments may differ. Thus, the design historian needs to be cognizant of historical developments across design fields as well as in the different areas of visual culture as a whole. A "vertical inventory" may also be conducted to learn if the "theme"— or variants of it — is evident in different, perhaps contiguous, periods. Special attention in the vertical inventory is given to the possible relationship of different visual forms that may indeed constitute different chronological stages in the same narrative sequence. The actual recognition of an underlying narrative can be gradual, remaining quite tentative until subsequent investigation either explodes the possibility of its existence or brings its distinctive historical pattern and outlines into higher relief.

Ultimately, if design history can become more successful in revealing the inherent logic of the visual dimension of historical phenomena, especially to the lay public, our designed environment will seem less opaque and "mute," history will become more meaningful and design will become much more interesting.

