15

GENERATIVE CONVERGENCES

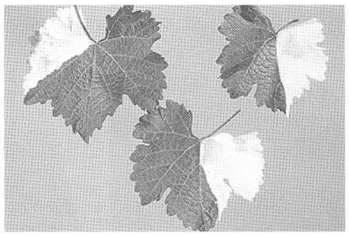
What do corporate mergers, the new Boeing 888 and infomercials have in common? All are artificial constructs of the late twentieth century. All are products of a network of effects precipitated by forces of global dissipation and aggregation. And each of the above constitutes a new composite entity, forged from elements of already existing entities. In the case of the merger, these elements are the former companies and their array of holdings, their respective managerial structures, their logistical organizations, their physical accommodations and more. In the Boeing's case, they are parts of the bodies of two Boeing 999 fuselages, including seating, storage and mechanical components. And in the case of the infomercial, as the term itself indicates, the composite is formed by crossing an informational television program with a commercial one. The elements here are defined by the conventions and protocols of each program.

These random samples are chosen from the realm of business, technology and popular culture as a way of introducing the notion of *chimera* through an everyday context. Our culture, at present, encourages the formation of such organic hybridity in many different arenas. In fact, organic hybridity is one of the defining productions of late twentieth century culture; a development due to the "structure-generating processes" – a term borrowed from DeLanda – of network techno-logic coupled with bio-logic. While the chimera attains its hybridity through the effects of network logic as seen in the deaggregation and reaggregation of previously sedimented institutional hierarchies, programmatic entities and so-called types, it acquires its organicity through the effects of bio-logic which enable these reaggregations to operate as polyvalent but unified systems.

In his essay *Cooperation and Chimera*, Robert Rosen argues that natural chimera formation – "in which a new individual, or a new identity, arises out of other, initially independent individuals – is a kind of inverse process to *differentiation* – in which a single initial individual spawns many diverse individuals, or in which one part of a single individual becomes different from other parts."[1] According to Rosen, chimera formation is triggered by environmental change and is, therefore, a system's adaptive response when its survival is at stake. This response is based on modes of cooperative behavior in a diverse and competitive environment. The diagrams underlying chimerization processes are not limited to nature, however. Similar adaptive responses between "graft" and "host" cultures have been noted in recent post-colonial studies, for example, whereby "creolization" and "pidginization" are but two distinct forms of hybridization of language and cultural practices through which a new cultural identity is forged. And while the underlying impetus for the creation of the Boeing 888 might be of a different order, one can see how an argument can be made that corporate mergers and infomercials are forms of adaptive response to changes in the economic and cultural environment.

Architecture is competing in the cultural and commercial fields with the enhanced powers of themed environments, branded products, advertising, the Internet, and the music and film industries (figure 15.1). As we can see, it does not fare very well in competition. It has been argued that under current pressures it will become obsolete eventually or that it is already obsolete. I would like to propose a different scenario, whereby architecture would adapt itself to the new paradigms by adopting a cooperative mode at all possible scales to the extent of forming selective, precise and tactical chimerical systems with the categories listed above (figure 15.2). I believe the conditions for such mergers exist not only in the general flow of contemporary "structure generating processes," but also specifically in the close context of architectural tools and activities.

After a brief discussion of chimera, its definitions, behaviors and formative techniques, this chapter will therefore attempt to show here some of the chimerical potential of CAD/CAM software and engineered materials as well as building programs.



15.4.
Plant chimera consisting of two or more genetically different tissues – variegation chimera on grape leaves.

WHAT IS A CHIMERA?

The *ur-chimera* is first heard of rearing its multiple heads during Antiquity. Greek mythology registers her as a fifth generation offspring of the Pontus and Gaia union. Said to be of female gender, the *Chimaíra* is represented in the form of a three-headed, fire-spewing, fearsome beast, a monstrous configuration of parts of a lion, a goat and a serpent (figure 15.3). She was the mother of beastly monstrosity, as it were, even by the standards of the Ancient Greeks, who were not timid about conjuring hybrid progeny. Present day references list two of the subsequent meanings that have evolved over time as "incongruous union" and "figment of the imagination." In other words, chimera came to mean a composite so incongruous as to be only existent in the realm of the mind.

In her essay entitled *The Chimera Herself*, Ginevra Bompiani notes: "Although she was unique, her proper name has always been preceded in translations by the definite article, making it a common noun, a multiple entity. Her destiny is embodied in that article: the single character in a single story has become the prototype of every possible composite, every hybrid (including contemporary hybrids of genetic engineering)."[2] In a different passage she continues, "Chimera is a composite but an unstable composite...[that] ...tends to decompose and recompose in a thousand different ways." And again elsewhere, she writes, it is the *Chimera's* fate to "never acquire a definite shape or identity" but to oscillate between the unique and an "infinite variety of forms."[3]

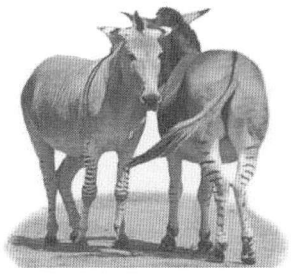
Taken together, these passages seem to suggest that the impossibility of ever unambiguously defining the *Chimera* is, in fact, a productive problem because what is at stake here is less the proper and finite categorization of a composite mythic monster but more – and more interestingly – the question of "compositeness" itself.

The compositeness in question possesses two qualifiers among others: organic and non-serial. The Chimera is animal and multi-cephalic, of course. The term organic will be used in a broader sense here, however, namely to denote a systemic connection and coordination of parts in a whole. Such an organic model of the composite would represent "a functional *and* structural unity in which the parts exist for *and by means of* one another."[4] The combined presence of functional interdependence and structural oneness between the heterogeneous components in the organic model of the hybrid markedly differs from that of a mechanical one that is based on "a functional unity in which the parts exist for one another in the performance of a particular function."[5] For the latter system to hold together, transitions between the individual components must generally occur through the introduction of intermediary pieces that afford connections and adjustments within the system overall and locally between the parts. In the former, on the other hand, transitions generally take place by way of transformation of, and between, the components.

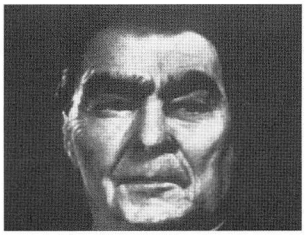
CHIMERA AND CONTIGENT OR MOMENTARY NORMALITY

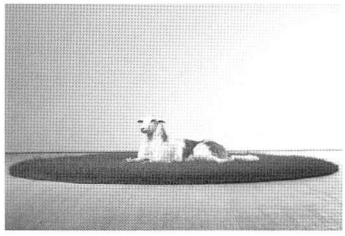
A biological chimera constitutes an artificially produced but, occasionally, also spontaneously occurring condition in which individuals are composed of diverse genetic parts (figures 15.4-6). The purpose for this line of experimentation generally falls into two interconnected categories: one, the generation of new identities more viable under certain circumstances than their predecessors, and two, the advancement of knowledge pertaining to normative types through the study of pathological forms. As we have seen above, spontaneous chimera formations in nature are almost always a result of an adaptive response to environmental change.

Let us discuss here, briefly, the terms normative and pathological in connection with chimera. As a hybrid, chimera falls into the category of pathologies. Canguilhem, however, in his book *The Normal and The Pathological*, makes some significant and helpful distinctions when he writes:



15.6.
"Zedonk," naturally occurring animal chimera between a zebra and a donkey.





15.8.
St. Bernhard (Misfit), taxidermic animal chimera, artist Thomas Grunfeld.

> No fact termed normal, because expressed as such, can usurp the prestige of the norm of which it is the expression, starting from the moment when the conditions in which it has been referred to the norm are no longer given. There is no fact which is normal or pathological in itself. An anomaly or mutation is not in itself pathological. These two express other possible norms of life. If these norms are inferior to specific earlier norms in terms of stability, variability of life, they will be called pathological. If these norms in the same environment should turn out to be equivalent, or in another environment, superior, they will be called normal. Their normality will come to them from their normativity. The pathological is not the absence of biological norm: it is another norm but one which is, comparatively speaking, pushed aside by life.[6]

According to Canguilhem then, whether a chimera is considered pathological or normal depends entirely on its capability to perform in a particular environment. He goes on to state: "In biology the normal is not so much the old as the new form, if it finds conditions of existence in which it will appear normative, that is, displacing all withered, obsolete and perhaps soon to be extinct forms."[7]

By chimerizing, one system "normalizes" in relation to another stronger one.

CHIMERICAL FORMS AND BEHAVIORS

Composite Figures

Warhead I (figure 15.7), a digital work by the artist Nancy Burson produced in 1982, is described thus by Fred Ritchin: "Weighting her image to the number of nuclear warheads deployable by each country, the artist made a composite figure which is 55% Reagan, 45% Brezhnev, and less than 1% each Deng, Mitterand and Thatcher."[8] Multiple identities seamlessly and inextricably merging into a new singular identity; neither the digital structure nor the representational function of the image betray any lack of unity. The heterogeneous components that brought forth a non-serial reproduction of variants of the head in the mythological chimera are smoothly blended here.

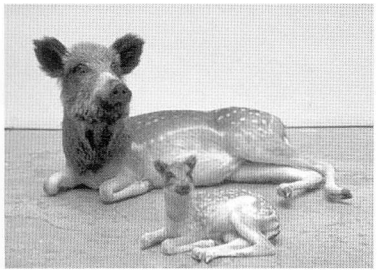
The startling effect of this image arises at first from a sense of vague recognition, and then, upon learning about its making, from the surprise over its "secret" content, both in terms of the "other" information that is indirectly represented through the weighting, as well as in the discovery of the presence of figures that are barely there due to weighting, such as Thatcher, for instance.

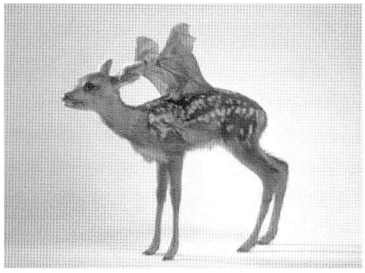
"Wolf in Sheepskin"

Is the artist Thomas Grunfeld's taxidermic *Misfit (St Bernhard)* a highly evolved version of the "wolf in sheepskin" (figures 15.8–15.10)? This is an insidiously monstrous hybrid, both in the meticulous, dare I say loving, execution of the taxidermy, as well as in the cunning matching of the initial components. Thus, at first sight, this hybrid is so subtle as to appear perfectly familiar. The triangle of interrelations between wolf, dog and sheep, which seems to be hinted at here, is full of ambiguity. The wolf and dog share a common genealogy, although in relation to the sheep their roles are antagonistic. The sheep are the wolf's prey and the dog's herd. The *Misfit* is rendered in a restful pose and with a docile look, as if belying its appellation, and the conflict between its initial identities. How will this animal behave? Will the sheep heed its inner dog? Will the herd roam around in packs?

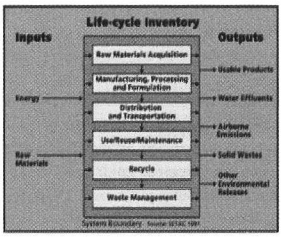
Fantastic Unity

> This time the object has a fantastic unity as it appears before the viewer: it reposes on pebbles, neither with the pressure of a foot nor that of a boot, but with a weight all its own, suggesting uncanny functions which cannot be associated with any known ones. The container (the boot) and the thing contained (the foot) have achieved an entirely new reality as a new object.[9]





15.10.
Untitled (Misfit), taxidermic animal chimera, artist Thomas Grunfeld.



15.12.
Industrial Ecology Diagram.

The object thus described is the subject of a painting by René Magritte entitled *Le Modèle Rouge I* (figure 15.11). Actually, he did a series of paintings on the same subject with the same title. It is possible that he did so because he was interested in formulating problems through his paintings, specifically, problems concerning the commonly accepted "normality" of things, like "the problem of shoes." Considered in this way, these paintings might be seen as variable speculations on the relationship between shoe and foot, inextricably fused, as it were, through a logic of elective affinities that appears throughout Magritte's work.

What we see in the painting is an exterior view of the front of a pair of feet *invisibly transforming* into the heels and ankles of a pair of boots. The precision and literalness of the detailing, particularly in the general areas of transition, provoke a host of speculative questions, of which I would like to pose a few here while taking the image at face value. First, if this foot/boot-object existed, what would be the implications and conditions of its existence? Judging from what we see, the object is held together by the structural unity between skin and hide, that is, between live and dead skin. When this kind of fusion is produced biologically, between two live host and donor skins, it is achieved through a technique called *grafting*. Over a certain period of time, the two skins grow into a singular one and operate as a continuous structure with qualities of both. If we imbue the visual blending in *Le Modèle Rouge* with the operational qualities of grafting, how would the skin/hide register the effects of time, wear and tear, aging? Would the "footness" of it allow the "bootness" of it to heal its cracks?

What we do not see is the interior of the foot/boot-object, which poses questions of even greater mystery. At least, on the exterior we can see the transformation, but what a section might show we must conjecture, as the painting denies us the assumption of "normal" interrelations of inside/outside, full/empty, space/skin, thick/thin, heavy/light.

It is important to note that the boot/foot object is not a problem of generic container/contained relations but a very specific one in which the container and contained do not only share a "material" similarity, but in which the boot is made to fit around the foot as a second skin, in which the sole of the boot duplicates the sole of the foot, and so on. Far from being a chance encounter, this incongruous coupling was carefully engineered by Magritte based on affinities between an object and a human body part.

But What Does It Have To Do With Architecture?

I have tried to show above how the chimera's significance stems from its provocation of speculations on (organic and non-serial) compositeness on the one hand, and its putting into question of the normative through pathological or experimental form on the other. The introduction of this notion into the field of architecture can be productive as an analytical means, provided the contemporary city is a culture conducive to chimera, and as a methodological tool if the computer is an instrument with a special capability for chimerization.

CHIMERIZATION IN ARCHITECTURE

On a macro-scale, a chimerical logic binds architecture into a cultural, commercial and industrial ecology (figure 15.12). It considers architecture in terms of product-systems and related processes. Viewed in this way architecture is but one system organically interconnected with many others, such as man-made object-systems and infrastructures as well as natural eco-systems.

One of the benefits of considering architecture as a product-system embedded within a world of other systems is the possibility of a so-called "cradle-to-grave" evaluation. Such long-term lifecycle assessment reveals opportunities for convergence between different systems at various stages. The field of industrial ecology thrives on such convergence. Its operating mode, simply put, is based on the assumption that machinic and biological processes both involve the transformation of matter and energy, and that, therefore, industrial

15.14.
Mercedes-Benz Vario Research Car (VRC). "Four Car Concepts in One. Imagine the following scenario: You and your family go on vacation driving a luggage-packed stationwagon. Once you arrive at your destination, you drive to a Mercedes-Service-Station. While you are having a cup of coffee, your stationwagon mutates into a convertible. For the trip back home, the car is re-equipped as a stationwagon." (From mercedes-benz.com)

manufacturing processes can perform like – and together with – natural eco-systems. Some of the goals of this line of thinking include a more effective use of natural resources and energy as well as the elimination of waste. Thus, co-production, combined waste treatment and recycling, in which waste from one product system is used as a secondary resource in another system, are some of the most frequent methods of merging initially separate processes belonging to distinct product-systems into chimerical meta-systems (figure 15.13).

Many times these systemic hybrids engender chimerical forms in the product itself as well. Let us examine *cross-platforming*, an increasingly popular kind of co-production. The *Mercedes Benz Vario Research Car* (figure 15.14) is an interesting case in point. Following the question "what do a sportscar, a sedan and a minivan have in common?" the designers proposed what they call a "universal chassis" as a platform from which to launch a whole "family" of interchangeable vehicle bodies. As a result, the *Vario* can transform over the course of an adult life, metamorphosing in response to the periodic needs and desires of the owner while conserving materials. I would argue that their chassis is chimerical rather than universal. It is not so generalized that any and every car body can be mounted on it. Rather, it is multiply indexed in relation to the specific body types it seeks to accommodate.

Cross-platforming as a form of production is inherently chimerical insofar as it operates on the basis of finding and exploiting affinities between diverse systems. The multiple identities of the *Vario* are variations within the same product-category but cross-platforming is not confined to product-categories. In fact, one of the big Japanese auto-companies is currently cross-platforming between the manufacture of their cars and their prefabricated houses.

An example of this type of ecology between architecture and film occurred in the making of the movie *Con Air*. It was more a matter of creative recycling than co-production, when the interests of the film producers and the owners of the *Dunes Hotel and Casino* in Las Vegas, who were in the process of replacing the building, coincided. The *Dunes* was taken down in the movie's final crash scene (figure 15.15). It was a win-win all around, with the hotel crew saving on demolition and the film crew saving on the construction of costly temporary scenery. The convergence here goes beyond mere economic calculus and into the socio-psychology of human fascination with the spectacle of demolition or demolition as spectacle. To the extent that every mundane demolition is a potential cinematographic event, there is a latent systemic connection when it comes to parallel cradle-to-grave assessments between architecture and film. (Sadly, none of us could help but notice that an enormously more complex and twisted version of this connection has been borne out in the recent World Trade Center attack.)

HOW ARE CHIMERA FORMED?

Becoming

In choosing to work with software specifically created for industrial design and for film animation rather than for architectural design, our studio explicitly engages the issue of cross-categorical pollination by problematizing it in the design process itself. In this way, the architectural design process is affected by what I call a "productive inadequacy." The design tool is not entirely but somewhat inadequate in that it has not been made to address the conventions of architectural design but rather those of another kind of design. It is, as it were, like having to write with a knife. One has to rethink "writing" through the logic of "cutting" to arrive at "carving." The idea of inadequacy as a trigger for inventive and continual categorical transformation is intriguingly presented in Deleuze' description of Vladimir Slepian's *Man-becoming-Dog* problem. In order to become a dog without resorting to imitation or analogy, the man uses a pair of shoes to trigger a series of responses toward a desired goal of becoming a dog:

> If I wear shoes on my hands, then their elements will enter into a new relation, resulting in the affect of becoming I seek. But how will I be able to tie the shoe on my second hand, once the first is already occupied? With my mouth, which in turn receives an investment in the assemblage, becoming a dog muzzle, insofar as a dog muzzle is now used to tie shoes. At each stage of the problem, what needs to be done is not to compare two organs but to place elements or materials in a relation that uproots the organ from its specificity, making it become 'with' the other organ...[10]

In a similar sense, addressing architectural problems through non-architectural software "uproots" the specified rules of the design process. New rules have to be invented. Insofar as the use of a dog muzzle to tie a shoe produces a complex chimerical system of man-dog categories, the use of simulated effects – to name but one tool of the software – in order to create a building envelop or structure, yields a complex chimerical system of architecture-film-product categories.

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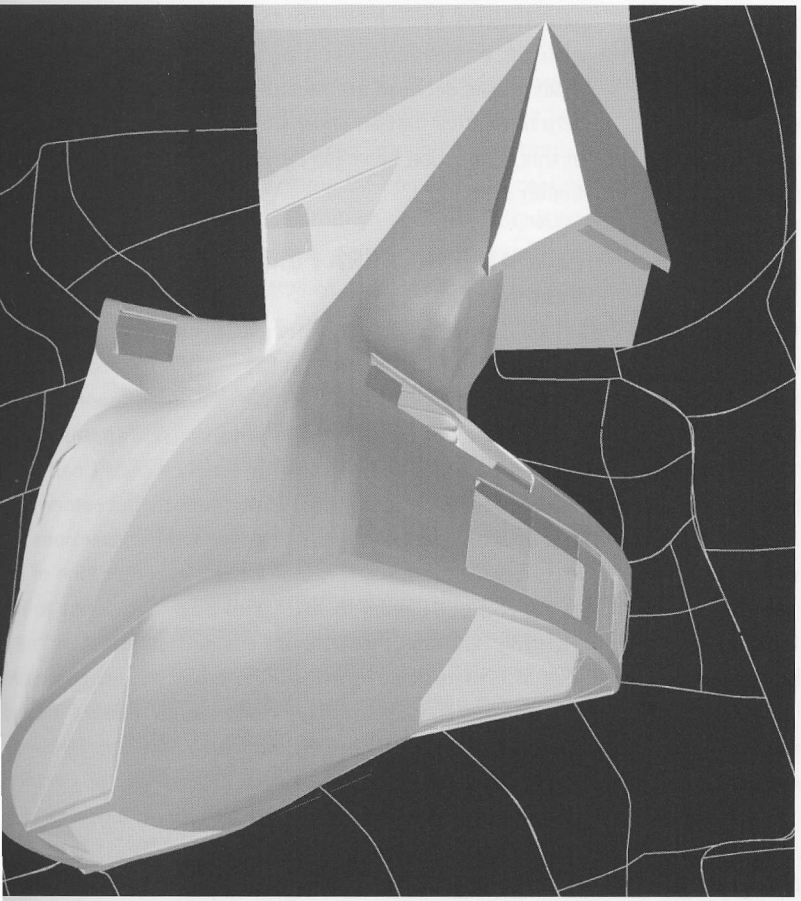
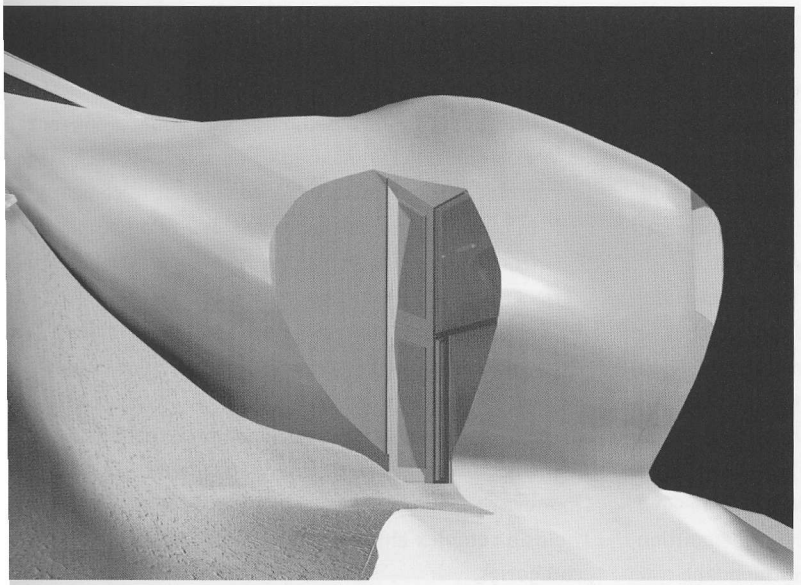




This connection between categorical cross-transformation and the categorical transposition of tools again became evident to us during the *Raybould House* project (figure 15.16). The project, a house addition, had been designed by combining parameters derived from the existing house and its landscape. To our delight, the contractor informed us that the construction of the monocoque shell involves the cutting of foam used in the sandwich by a person walking across the house's surface with a kind of lawnmower. Thus, the house is made like a landscape. Not metaphorically, but literally, both in its conceptual generation and in the actual construction process. The quasi-lawnmower operates like the dog-muzzle.

Lumping

The logic of lumping, of bringing together different – sometimes disparate – elements, is one of lateral operations. "Cross-" and "inter-" are its prefixes, as in cross-breeding and interdependence, cross-section and interface, cross-country and interstice, cross-platforming and interdisciplinary. Lumping proliferates horizontally, by blending between already matured systems across different categories. It is clear that lumping as used here is different from an everyday understanding of the term, in that it is not haphazard but significant. Significant lumping affords productive leaps, it has rules. Lumpers are motivated by horizontal or lateral becoming in which *already* complex identities merge into a single body and system.

Co-citation

As noted earlier, a successful chimerization, in which the parts bind together to operate in newly productive ways, requires the precise identification of affinities and similarities between multiple systems. How then are affinities mapped in a heterogeneous environment? Co-citation indexes and maps have been developed in response to this question (figures 15.17 and 15.18). Simply put, co-citation maps are spatial representations of networks of texts related in content. They are used to establish precedent between individual cases in law. They are also used to track cross-categorical connections in scholarly research, as between the humanities and science, for example. These maps have provided a helpful model for us in constructing similarity maps of a different kind. Our "citations" include morphological, performative, scalar, programmatic and process-based attributes. Digital media, with its capacity for similarity-scanning and "sorting" based on attributes, plays a significant role in this process.

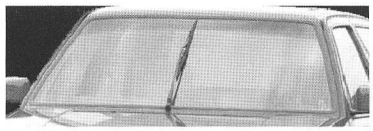
Tuning

This method of weighting, or tuning, emerges as a significant one in the making of the chimera. Owing to the aforementioned organic quality, the proportion of the ingredient identities in any chimerical construct can be fine-tuned across a theoretically infinite range of hybrid variants (figure 15.19). The potential for (lateral) non-seriality is therefore always given, even if not pursued in each case.

Range

I have defined the chimera as a system of organic, non-serial, unstable composite identities possessing an infinite as well as infinitesimal range. We are particularly interested in working with the notion of process as a kind of "sliding scale," capable of being advanced or reversed along a range of difference, or tuned into a precise instance of variation (figure 15.20).

The eventual actualization of one or more instances of this process does not significantly change this definition. The individual instance or the actualized product is always linked to the "range" provided by the generative system whether actualized or not, thereby shifting the emphasis from the "unique object" to the system and its capacity to produce significant variation. The latter are instances of variance with a new identity in at least one or more of the attribute categories mentioned above.



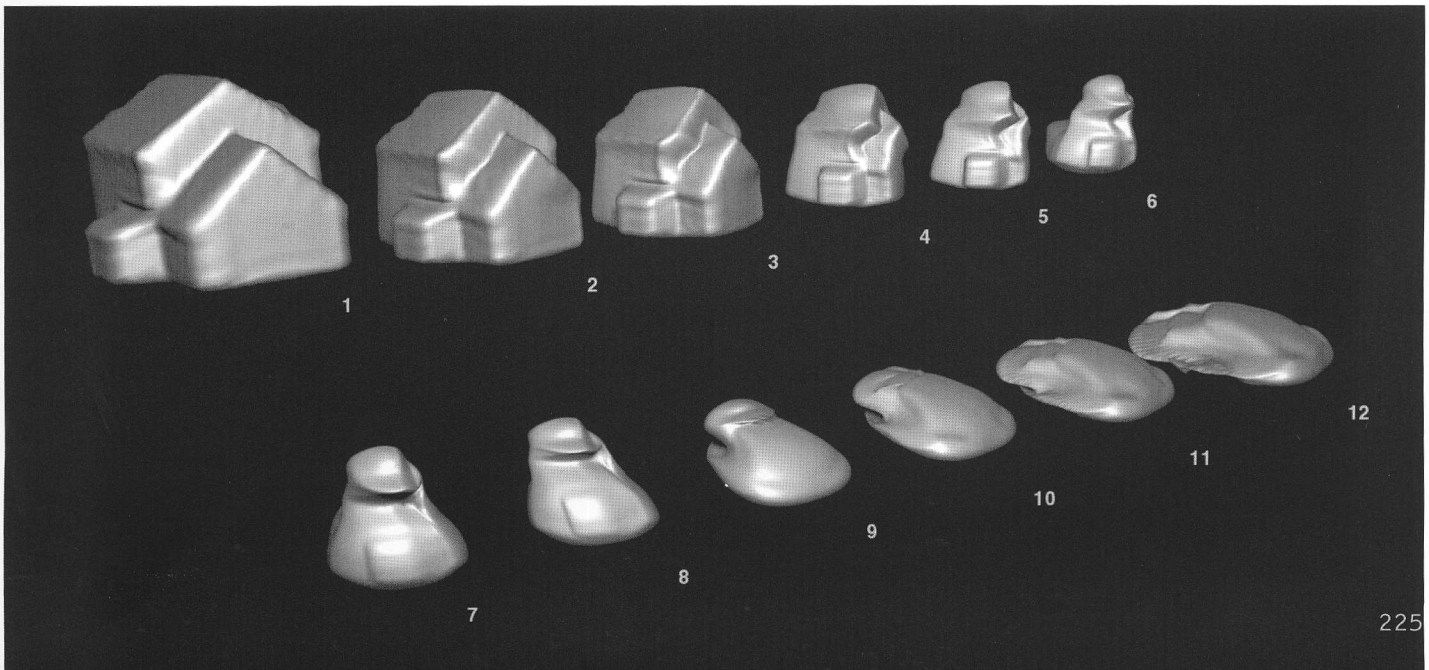
15.19.
The "tuned" VW Golf with single windshield wiper.

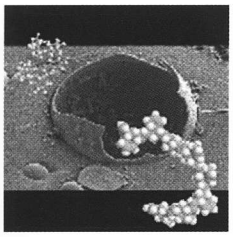
CHIMERICITY IN ADVANCED MATERIALS

In the realm of materials, a shift from found to engineered qualities is transposing functionality from between the parts of a machine to within the material and its molecular make-up. That is to say, the material itself performs the functions of a machine (figure 15.21). Furthermore, what makes these materials "smart," i.e. what enables them to not only react to environmental stimuli which dumb materials do to some degree as well, but also to learn from their cumulative "experiences," is their composite nature.

A chimerical hybrid is neither produced by an act of balancing, nor one of averaging between the parts. The following passage on the dynamic behavior of ferrofluids (figure 15.22) illuminates the intricate workings of one chimera, and the precise tunings necessary to coax chimerical behavior:

> Pity the gryphon, the mermaid, the silkie, the chimera: creatures assembled of incompatible parts, with uncertain allegiances and troubled identities. When nature calls, which nature is it? When instinct beckons, approach or flee? A ferrofluid is a gryphon in the world of materials: part liquid, part magnet. It is prepared by grinding magnetite – the magnetic lodestone – in an oil. The grinding must be "just enough." If the particles of magnetite are too large, they remember who and what they were and behave like fine magnetic powder, clumping and settling rapidly from the oil. If





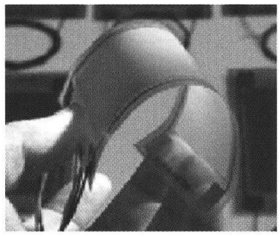
15.21.
Graphic image manipulated from a scanning electron microscopic image. The ruptured capsule is red; the fracture plane is light blue. The chemical structure appearing to emerge from the capsule is the polymerized healing agent.

they are too small, they no longer show any of the wonderful cooperation between groups of atoms that is required for magnetism. If they are just the right size – if they are small enough that they are not so different in size and character from molecules of liquid, small enough that they have begun to lose their magnetic heritage, but still large enough that they again become fully magnetic when placed in a magnetic field they develop a useful schizophrenia. Outside a magnetic field, they are non-magnetic liquids; inside a magnetic field, they become magnetic.[11]

In the case of the ferrofluid there is a finely drawn threshold at which the embedded behaviors of the fluid and the magnetite begin to act in a way that is more than their sum. This useful schizophrenia allows the ferrofluid to do things it was not capable of doing as magnetic dust or as fluid. In order to reach this threshold of useful schizophrenia, the size of the shavings has to approximate the size of the molecules of the liquid. It seems the productive dynamics is triggered when the two components engage at a point of similarity (figure 15.23).

In sociological or post-colonial terminology, this kind of behavior is referred to as "practicing situational identity," changing identification as the context shifts.

Another interesting case of unstable identity produced by composite materials is *Mothra*, a model plane developed by aerospace engineers at Auburn University (figure 15.24), and lovingly named after Godzilla's flying friend. Using a reverse piezoelectric effect, whereby applying an electrical field to the material induces a mechanical distortion, the researchers were able to maneuver a plane in flight by twisting and shape-shifting its wings, thus eliminating the gears, the hinges, and the bearings.



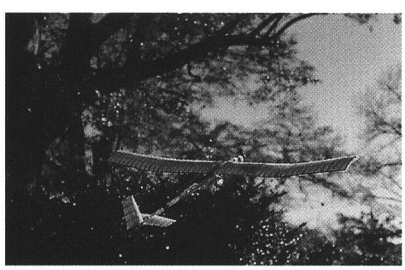
15.23.
This thin, flexible film contains a piezoelectric material that responds to the bend by producing a voltage that is detected by the electrodes seen at the bottom left of the image.

PROGRAM CHIMERA

Perhaps one of the fastest changing areas in response to external socio-cultural and economic pressure is program. The current dynamics is that of a reactivated sedimentation, as it were, of institutional hierarchies and program-types. These now mobile program components are in the process of deaggregating and reaggregating into new configurations and identities. However, the new identities are chimerical not only due to their compositeness. They are less fixed more tentative configurations that remain in a flux contingent on external and internal stimuli.

A design studio I ran a couple of years ago first drew my attention to this phenomenon. The students and I were visiting the New York Police Department headquarters in Manhattan, where we discovered that the 911 operations – which were, until then, integral to the police department program – had become very large and were therefore going to be moved to another borough where real estate prices were lower. Since this component of the police department was operating more like an office, and since it did not need a physical adjacency to the other functions, it could physically deaggregate from the department and reaggregate with other programs with which it shared its office-like operations and logistics. Furthermore, it was linked to a translation service located in New Mexico. The office-like structure in this case plays the role of the particle size in the ferrofluid to the degree that it provides the mechanism of linkage between two foreign systems.

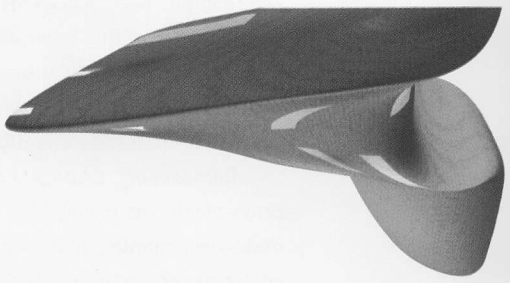
Similarly, we saw a Starbucks/Cosmo chimera emerge before the premature demise of the latter company last year. Starbucks is a ubiquitous network of cappuccino franchises. Cosmo was an internet-based video rental company. The deal was that they would deliver your video within an hour to anywhere within the city, and you would later drop it off at any Starbucks location, and perhaps pick up your cappuccino in the process. If economics was the force driving the chimerization above, convenience was the force behind it here.

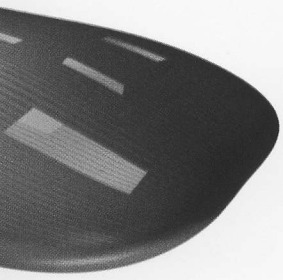


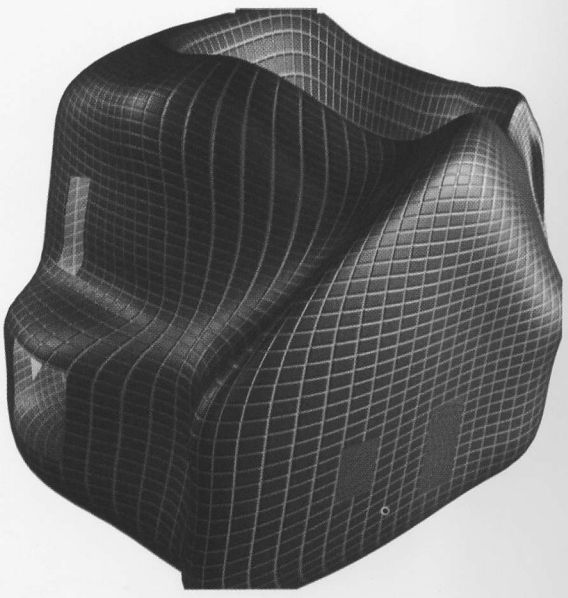
15.24.
Mothra, the first plane to fly with "smart control surfaces."

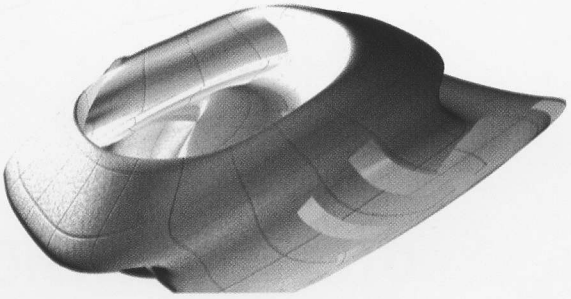
HOUSINGS

Housings constitutes the initial portion of a long-term project that focuses on experimental designs for mass-customized prefabricated housing (figure 15.25. shows a set of six houses). These six houses were selected from a series of digitally-designed variants. All variants originate from the same "genetic pool." Information for the "genetic pool" was generated from a normative three bedroom, two and a half colonial house plan as "base," and a range of object-products as "targets." Subsequent digital blending operations between "base" and a varying number of "targets" in turn produced a large range of chimerical houses.









Housings sets out to explore the question of non-serial and organic compositeness in architectural design on three parallel tracks. One, in relation to digital processes with their capacity for variable iterations, organic transformation, and cross-referencing. Two, in regards to issues of viability – can a hybrid outperform existing normative types in a particular social, cultural, economic, ecological, geological and climatic life-context? And three, vis-à-vis an emerging generation of composite materials and digital production technologies.

Remarkably, CAD/CAM software now constitutes, in effect, cross-platforms from which such diverse products as coffee machines, running shoes, cars, films, virtual and physical environments, and architecture are being launched. In other words, the tools for making, the processes of mental and material creation, can no longer be assumed to differ fundamentally between product categories of the man-made. Contemporary theory and practice has no choice but to concern itself with this "generative convergence" and its consequences. The established terms of classification of so-called "second nature" must be reevaluated.

NOTES

1 Robert Rosen. "Cooperation and Chimera" in J. Casti and A. Karlqvist (eds), *Cooperation and Conflict in General Evolutionary Processes*. New York: John Wiley and Sons, 1995, pp. 343–358.

2 Ginevra Bompiani. "The Chimera Herself" in M. Feher, R. Nadaff and N. Tazi (eds), *Fragments of the Human Body Part One*. New York: Urzone, 1989, pp. 365-409.

3 *Ibid.*

4 *Ibid.*

5 *Ibid.*

6 George Canguilhem. "The Normal and the Pathological," translated by C. R. Fawcett. New York: Zone Books, 1991, p. 144.

7 *Ibid.*

8 Fred Ritchin. *In Our Own Image: The Coming Revolution in Photography: How Computer Technology is Changing our View of the World*. New York: Aperture, 1990, pp. 136–137.

9 Anna Balakian. *Surrealism: The Road to the Absolute*. Chicago and London: University of Chicago Press, 1986, p. 205.

10 Gilles Deleuze and Felix Guattari. *A Thousand Plateaus*, translated by Brian Massumi. Minneapolis: University of Minnesota Press, 1988. pp. 258–259.

11 Felice Frankel and George M. Whitesides. *On the Surface of Things: Images of the Extraordinary in Science*. San Francisco: Chronicle Books, 1997, p. 57.