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**The Hidden Appeal.
Anthropomorphic, Biomorphonic and
Narrative Aspects of Visual Perception
in Spatial Arts, Architecture & Design**

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The Hidden Appeal.
Anthropomorphic, Biomorphic and Narrative Aspects of Visual Perception in Spatial Arts, Architecture & Design

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Abstract

Our visual perception is an evolutionary gift, created to select and construct what we call reality – out of a universe of infinite complexity. Shaped in jungle, savanna or forest, our perception was most successful when it was essential to find out if the behaviour of living creatures was good or bad for us. We extracted live-saving information from the slightest shades of movement, attitude, composure, facial expression and figure of every creature we encountered.

We interpreted intuitively every appearance crossing our way, trying to read their aims, intentions, needs, skills and powers. All these tiny elements of subconscious perception we integrated immediately into versions of mental film sequences; we chose the most realistic one and reacted upon it with attraction or repulsion, with greed or fear, with lust or escape. And all these progresses we withdrew within split seconds.

The evolvement from perception to reaction was so successful that – until today – models of interpretation gained from the constant confrontation with living creatures and natural processes of growth, transformation and decay are instinctively transferred to artefacts of any kind, operating as mostly hidden narrative extrapolations and conclusions.

As modern and rational as we think we are, these patterns of interpretation still regulate our decisions and aesthetic preferences behind the wings of our daily consciousness. From this point of view, every house has got a face, every chair has got an attitude.

Every design attempt that reflects these archetypal motifs is necessarily a more holistic approach, and perhaps a more effective one. Design education finally has to draw consequences from behavioural and Gestalt psychology.

Keywords: perception, aesthetics, anthropomorphism, narrative design

Introduction

Long ago, most of us were fond of books and cartoons where animals and objects - like houses or cars – were able to talk. Moreover, they had a personality, intentions, goals, perhaps a past that we could read from their appearance with childlike curiosity. Then at night, in the moonlight illuminating the nursery, even pillows and garments transformed into dwarves, fairies, sometimes in monsters (see *Figures 1,2*).

Figure 1. *Nachtmahr* (Johann Heinrich Füssli, 1802)



© Frankfurter Goethe-Haus

Figure 2. *Monsters under the Bed* (Terry Wolfinger 2008)



Once we are grown up, the world is clearly 'reasonable': animals, houses and cars are just what they are – objects that we like or dislike, sometimes without knowing why. Nevertheless, objects, architecture, designed spaces and natural sceneries can have properties of expression that we spontaneously tend to equate unconsciously with human, animal or biological manifestations. In that case we subtly transfer the idea of human or animal sensitivities, behavior potentials and intentions to our perceptions of the outside world, even to objects that obviously aren't animated at all. Such operations are known as anthropomorphism and, more general, biomorphism, or animism (Definition: see Tylor 1871; Piaget interpretation see Gebhard 2009, p.53; greek *anthropos* = man; *morphe* = shape; *bios* = life). In aesthetic philosophy, anthropology and psychology, such projections have always drawn attention; concerning architecture and design development, they often were involved deliberately into concept design (see *Figures 3,4*).

Figure 3. *Palazzo Zuccari, Rome (Federico Zuccari, 1592)*



© Andrea Dorliguzzo

Figure 4. *Upper Belvedere, Vienna (Johann Lucas von Hildebrandt, 1723)*



Something similar occurs when we draw conclusions – based on instinctive knowledge and acquired experience – from the appearance of objects or scenes to their probable physical interaction: We could call these interpretations a *dynamization of object representation* or, more shortly, *dynamikomorph* (greek *dynamiko* = potential; greek *dynami* = force).

Such projections are *narrative* insofar as they integrate perceptions into the idea of a temporal process (cf. Husserl 1926, p.171f.). The imagination creates fragmentary film-like sequences that try to reconstruct past developments or try to anticipate future plausibilities. Our response depends on which of these 'stories' we intuitively select as the most probable one. As with anthropomorphism, we experience this attribution not necessarily as our own activity, but regard them usually as an inherent property of the external world of things: objects seem to 'tell' us how they have become what we see or what could happen to them in the future (see *Figures 5,6,7*).

Figure 5. *Spider*



Figure 6. *Ruin Capriccio (Charles-Louis Clérissseau, ca. 1760)*



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Figure 7. *Apartment Building Liesing Brewery, Vienna (Coop Himmelblau, 2011)*



Over the past four centuries, many disciplines have contributed theories (e.g. familiarity thesis, comfort thesis, control thesis, see Guthrie, 1997; theory

of empathy, see Lipps 1912) and explanations to our understanding of the phenomenon: philosophy, aesthetics, anthropology, art and architectural history, psychology, proxemics, semiotics and behavioral biology. However, an awareness of the great importance of these transfers for the everyday perception seems to need some more support in the mainstream of spatial design practice and training: The multiplication of technical possibilities absorbs a lion's share of energy for their understanding and adequate use, and this bias again favors a pragmatic and rational view of the world and a rather functionalist conception of man. From this point of view, the discussed peculiarities of human perception – hard enough to systematize – tend to strand as a luxurious, but ultimately expendable icing of design development.

I therefore would like to work out the former existential relevance of the discussed topics and their strong connection of meaning with general modes of visual perception. I propose a creative and serious, more conscious use, and systematic practical handling of the mentioned phenomena within all design disciplines, explicitly within the spatial arts. Complementing each description of the main aspects of the vast and interdisciplinary theme, I therefore concisely provide suggestions of design applicability and introduce examples of architecture and spatial design.

Whereas many treatments of the topic put their emphasis on direct mimetic applications of anthropomorphic and biomorphic patterns and figures (as does Feuerstein 2002) , I would like to direct our attention also to more discrete biomorphic analogies emerging in almost every design context, such as self-similarities or the zoning of objects (cf. Wölfflin 1886, p.34).

Evolutionary Significance of Anthropomorphic, Biomorphic and Dynamikomprphic Attributions

When we are born, we initially find ourselves in a visual universe of incredible complexity. To rearrange this chaos of disparate sensory irritations into a world of sorted meanings, our perception at first has to subdivide and group the continuum of stimuli into objects or subsystems. In doing so, real physical limits are reduced, analogized, interpreted and supplemented.

This subdivision sure is a very practical matter – to turn it into an evolutionary success we must be able to attribute meaning to these things (including other living beings) with regard to our existential interests. We have to be capable of checking in fractions of a second their threats or opportunities and select the correct response immediately, namely a behavior that enables us to meet our current needs most likely or benefits an existential advantage to us or our horde.

In the jungle or on the savannah, at each encounter with a fellow creature, our ancestors had to detect and distinguish the finest differences of physical potential, movement, posture, outline or facial expressions to successfully compete and survive. They had to be able to read objectives, intentions, needs,

abilities and powers directly from the appearance of living beings, and, if possible, with a small head start (see *Figures 8,9*).

Figure 8. *Leopard, Kenia*



Figure 9. *Abandoned Cat, Montmartre, Paris*



© Nikolaus Reich 2011

Anthropomorphic, biomorphic and dynamikomorphic transfers are interpretation models instantaneously disposable. They enable rapid identification and unrivalled predictability of scenarios of animate and inanimate nature. As they can cover innumerable situations of existential threat and crucial probabilities (see Guthrie 1997, p.56), for us humans they constitute evolutionary essentials. If they sometimes come to nothing, because they prove to be completely inappropriate, they are still not in vain: they serve at least as a practice maneuver, keeping the psycho-physical reaction chain of the next case of emergency in good working order.

When concerned objects and properties reach us beyond the threshold of conscious perception, they are generating feelings that we can neither define nor locate; sensations that condense concertedly inside us into a vague, but intense mood blend (see *Figures 10,11*).

Figure 10. *The City of the Dead, Horror Film (Hammer Studios, GB, 1960)*



Figure 11. *Snow White, Concept Art (Walt Disney, Hollywood 1937)*



This network of mood colors we interpret – again unconsciously – as a diffuse feature of space itself, and we call it *atmosphere* (see also Böhme 1995, p.309).

An *atmosphere* puts us in a certain expectation and a preparatory state of mind, long in advance of individual stimuli claiming individual reactions. The sense of atmosphere thus supports the goal-orientation, adequacy and speed of our interaction with the environment; it is far from a superfluous squeamishness, but highly functional.

Interpretation and Application History of Anthropomorphic, Biomorph and Dynamikomorph Attributions

Since the discussed topics are basic processings of human perception, we find evidence of them in all human cultures and at all times. These attributions are particularly apparent when unfamiliar aspects of the world are interpreted as living entities for the sake of turning their 'mood' benevolent with the means of human communication. Mythologies and religions use allegories and deities to give a human face to complex and often unpredictable forces of nature.

Since the ancient world, architecture and design cross-link themselves by all kinds of semiotic enrichment and the use of biomorph and dynamomorph analogies and properties with the network of analogies and mythological narratives (see *Figures 12,13,14*).

Similarly, the Catholic Church uses - in the Gothic period of the Middle Ages, but also in the Counter-Reformation and beyond - art and architecture as

a projection of anthropo-, zoo- and biomorphic analogies and narrative structures (see *Figures 15,16,17*).

Since the Renaissance, the human urge to anthropomorphization becomes a subject of speculative philosophy, anthropology and architectural aesthetics, the latter making efforts to develop corresponding formal grammars (see *Figures 18,19,20*).

Figure 12. *Erechteion, Caryatid Porch. Akropolis, Athen (ca. 410 B.C.)*



Figure 13. *Zeus/Poseidon, Greece (ca. 460 B.C.)*



Figure 14. *Parthenon, Biomorphic Entasis of Doric Columns, Akropolis, Athen (ca. 410 B.C.)*



Figure 15. *Holy Cross Minster, Schwäbisch Gmünd (Peter Parler, 1380)*



Figure 16. *The Lord/Creation of Adam, Rome, Sixtina (Michelangelo Buonarroti, 1510)*



Figure 17. *Symbolic Sketch, St. Peter, Rome (Gianlorenzo Bernini, 1657)*



Figure 18. *Trattato di Architettura: Entablature (Francesco di Giorgio Martini, 1490)*

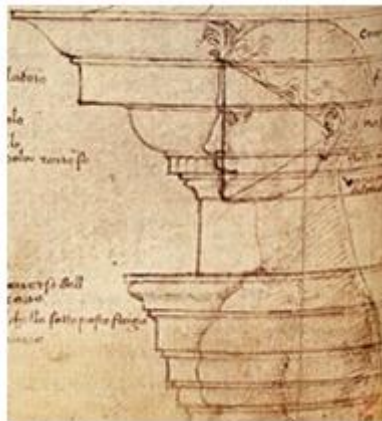


Figure 19. *Trattato di Architettura: Church Plan* (Francesco di Giorgio Martini, 1490)

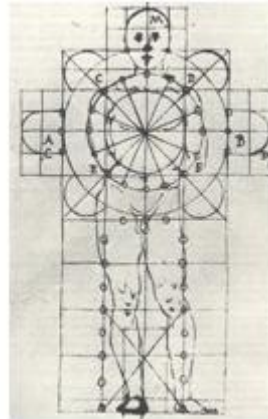


Figure 20. *The First and Chiefe Groundes of Architecture: Ionic Order* (John Shute, 1563)



With the blossoming of a scientific, analytical perspective in the wake of humanism, the rational thinking of Cartesian dualism and Enlightenment increasingly dissociates itself from many applied forms of non-rational world experience, for example biomorphism.

The scientific bias increases during the 19th century, and it is the anti-rationalist movement of Romanticism - domain of the arts and a holistic, passionate and associative access to the world - which takes the role of a sanctuary for natural analogies, e.g. for the forest metaphor (see *Figures 21,22*). Until the end of *Jugendstil* (see *Figure 23*), Nature holds its ground as projection screen not only for beauty, but also for the "sublime" (see Burke 1757), for expression, soulfulness and sentiment, a place of refuge at the edge of the overwhelming industrialization and social upheavals.

Figure 21. *St. Nikolai, Leipzig (Carl Friedrich Dauthe, 1797)*



Figure 22. *Mausoleum for Queen Louise (Karl Friedrich Schinkel, 1810)*



Figure 23. *Sagrada Família Cathedral, Barcelona (Antoni Gaudí, 1882-)*



Expressionism and early Bauhaus feature a bridge from constructivism to nature analogies with the cave metaphor (see *Figure 24*) or the crystal metaphor (as in Bruno Taut and Rudolf Jahns; see Szymczak 2006, p.214; see *Figure 25*). But the leading analogy of the coming decades will be the epitome of speed, ratio, modernity, purity and efficiency: the machine. As a non-human mold, it generates an utopian technophile and hygienic metaphor of man (see Drake 2008, S. 91-130), stripped of any infantile (cf. Gebhard 2009) or animistic atavisms of a primitive creatural past.

Since the Sixties, Globalization and digitalization increasingly mix cultural patterns in Western societies; Postmodernism opens up the architectural and design scene for semiotic and symbolic aspects of spatial communication. Anyway, beyond the academically dominating neo-modernism, in everyday industrial design production, the discussed analogies are used more and more, at least since the 50ies – simply because they have proved effective and reliable as a marketing and selling instrument (e.g. in car design; cf. DiSalvo 2008; cf. Miesler 2011). The comic culture owes much to these processes, if not its emergence.

Figure 24. *Great Schauspielhaus, Berlin (Hans Poelzig, 1919)*



© Architekturmuseum TU Berlin

Figure 25. *Glass Pavilion, Werkbund-Exhibition, Cologne (Bruno Taut, 1914)*



Many architects, interior and product designers take a great interest in a new justifiability of design, beyond technology addiction, arbitrary aesthetic lifestyle trends or cemented remains of an outdated Bauhaus ideology (see Krufft 1991, p. 461; see *Figure 26, 27*). In this context, dynamomorphic approaches have gained widespread popularity via flagship projects of deconstructivistic architects like Gehry, Libeskind, Hadid (see *Figure 28*) or Coop Himmelblau. The spirit of aesthetic experiment is, however, clouded in the lowlands of everyday architecture by the challenge of energy efficiency and its economic necessities.

Figure 26. Allen Lambert Galleria, Toronto (Santiago Calatrava, 1992)



Figure 27. Stuttgart Airport, Terminal 3, Stuttgart (Meinhard von Gerkan, 2004)



Figure 28. Museo Betile, Cagliari (Zaha Hadid, 2006)



Modes of Visual Perception

To understand how the discussed analogies – transfers of form-encoded meaning – are established, we first have to recollect: Our world of structured meanings does not exist from the outset; we ourselves construct our inner spiritual world using our perception and our classifications, out of the incessant

flood of sensory stimuli that are the messengers of the unknown outside world. What instruments exactly do we use?

Form-giving Processes: The Emergence of «Gestalten»

To turn the chaos of sensory information into entities with meaning and relevance, our perception has to carry out many parallel performances: Numerous properties of various visual categories (brightness, contrast, color,...) must be registered, correlated and reduced to manageable units: Clearly defined shapes on a specific background; figures that maintain their stable independence in the field of perception.

We need those figures on the one hand to simplify the infinite universal complexity, on the other hand to attribute meanings following individual qualities. Making figures ('Gestalten') empowers us to record these hierarchies and to make them communicable and memorizable. Gestalt psychology (e.g. Ehrenfels, Wertheimer, Köhler, Koffka etc.) has worked out such preferences and tendencies of perception systematically as "Gestalt laws" (see Metzger 2008).

Usually we'll find multiple proposals for 'Gestalten' at the same time in our field of perception, and it's the context that determines our selection and reduction activities. We have a strong preference for spatial interpretations and relationships of figure and ground, refined by a completion system that reconstructs fragmented forms or jagged figures with flowing 'logical' line extensions, aligning forms to projected abstract basic figures.

Relevance for Anthropomorphic, Biomorphic And Dynamikomorph Design

Involving the form factors ("Gestalt Laws") in our design work, we can analyze or directly control

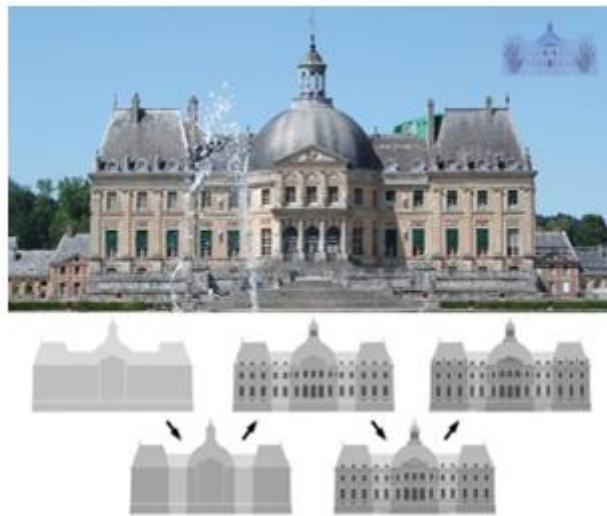
- how objects and spaces are divided up by our perception;
- how strong they separate within an environment or
- how fluently they integrate into their environment;
- how objects and spaces are given rhythm by composing elements, inducing similarities or suggesting virtual lines;
- how attention is focussed by agglomerations;
- how the plasticity of the appearance is enforced by contrasts, rhythms, contours or overlappings;
- how strongly the observer performs his own completion of suggestive fragments
- the emergence of movement illusions;
- the emergence of different contours and figures at different approaching distances at the same object (see Figure 30);
- the emergence of associations and analogies by providing appropriate key arrays;
- the level of self-similarity at different structural levels of the object hierarchy, creating unity in diversity, a strong biomorph property (see Arnheim 1978, p. 63; see Figure 29).

Applied purposeful, these instruments can increase the attractiveness of design concepts enormously.

Figure 29. *The Gherkin, London (Norman Foster, 2003)*



Figure 30. *Vaux-le-Vicomte, Melun (Louis Le Brun, 1661)*



Analogy

How does the manageable number of object-like structures with equally object-like subdivisions now convert into a meaningful object? Unless we are newborn, facing a certain context we usually have had some similar perceptual experiences in our lives so far. We have stored them in our memory as four-dimensional entities of experiences. By comparison of perceived qualities with these basic motives, we equip the formal accordances with the inherent meaning connected with them. The memorized entities of experience are so vivid that they allow virtually infinite variants of individual properties, and

they even apply to minimal traces of familiarity. By chains of associations, individual entities not only connect with each other to form larger categories, but also link with related, adjacent experience structures as comprehensive knowledge matrixes.

The repertoire built up by acquired form and process experiences is primed by instinctive interpretation patterns (such as the "Kindchenschema", see Konrad Lorenz; simple face schemes, cf. Miesler 2011) and serves as a constant comparison and verification framework for new perceptions which, in turn, differentiate the existing archive contents simultaneously. Speed and flexibility of analogical thinking is an integral part of intelligence and creativity tests and corresponds to the central importance of analogy for the increase of knowledge (cf. Hofstatter, Sander 2014).

Not least, our pool of analogies includes our most fundamental experience: our own corporeality and aliveness in their interaction with the physical forces of nature, with biographical and temporal rhythms. It allows us to 'know' or 'sympathize' how objects (remember the jungle scenario: chances are that objects are living beings!) are conditioned internally or how they might interact with gravity, air resistance, heat or cold. Thus we find basic vital and physical forces of our own experience – e.g. our sense of balance – reflected everywhere in our environment. We identify the slightest visual key signals of attentiveness, growth, expansion, torpor, aggression, fear, lust, greed, brood care, exhaustion, regeneration etc., compare them intuitively with our own inner experiences and thus gain a rapid empathic access to the probable potentials and motives we encounter (see Vischer 1927, p.27; see Ruskin 1857, p.120).

Usually we interpret these universal patterns of physical conditionality, connected with our attributions, as 'expression' of an object or being.

Relevance for Anthropomorphic, Biomorphie and Dynamikomorphie Design

Analogy is a fundamental, very strong process of assigning and classifying units of meaning, and it makes use of all conceivable form-giving processes. Partly dependent on cultural conditioning, analogies can be applied at different levels of abstraction: they can appear either directly mimetic, highly fragmented or stylized, or eventually encoded as a semantic sign or symbol.

Playing with anthropomorphic and biomorphic analogies is (e.g. 'Kindchenschema' or as sexual allusion) a highly popular method to draw positive attention in the fields of advertising, fashion, automotive and product design, pop music and comic culture, but also - as religious or mythological allegory - ancient part of human cultural activity. Analogies may relate to color, shape, orientation or materiality: Convexity (outward bulging roundness), for example, can strongly suggest the inner, stretching tension of a soft elastic tissue (see Soergel 1921, Seyler 2003). The sheer verticality of an object may include an analogy of growth or the human uprightness. Symmetry, on the other hand, is a salient feature of living organisms and therefore a powerful analogy carrier.

It stands to reason that our sensitivity for the ratio of supports and weights could be linked closely to various analogies. By analogy, we draw conclusions from the surface structure of an object or volume on its consistence and weight. We see a concrete surface and 'know' the hardness of the object. We see a huge volume on thin brittle supports and distrust its stability, even against better knowledge.

Intended biomorphic and anthropomorphic analogies can be widely found within works of contemporary architects, for example with Calatrava (see Figure 26). Deconstructivist architecture (e.g. by Libeskind or Hadid), however, shows fragmentation, deformation, explosion and growth processes as a sculptural snapshot, 'telling' physical transformations of stereometric basic arrays (see below: Narratives). The invitation effect (affordance: objects suggest their applicability or usability) may also be partly caused by analogy.

Anthropomorphic, biomorphic and dynamomorphic and other analogies can be provoked by numerous visual key stimuli:

- faces and facial expressions (particularly strong effect, see Figure 31-34)
- zoning, silhouettes and body schemes (see Figure 35)
- posture and gesture expressions
- materiality and weight assertions, e.g. Convexity (see Figure 35)
- patterns of hierarchy (symmetries, rhythms, self-similarity)
- indicators of motion, transformation, deformation, compaction, growth or decay (see Figure 35)
- affordances concerning interaction (e.g. exploratory arrays, see Figure 35)
- situation and arrangement analogies (see Figure 35)

Figure 31. *Court Pavilion Hietzing, Metropolitan Railway, Vienna (Otto Wagner, 1899)*



Figure 32. *Court Pavilion Hietzing: Schematic Face*



Figure 33. *Villa Savoye, Poissy (Le Corbusier, 1931)*



Figure 34. *Villa Savoye: Schematic Face; right: Comic Title (Andrew Bloor, 2008)*



Figure 35. *Set Design «Der Zauberberg», Magdeburg Theatre (Michael Heinrich, 2004): Analogies to Glacier, Snow Drift, Hotel Lobby (Skylight, Window), Heart/Organs, Skin, Wound*



Visual Exploration of Space

We all are spatial beings; all our life we move within external and internal spaces. Space in itself is hard to imagine; to be perceivable, space demands physical expansions that structure it with different consistencies and qualities; it demands objects and their boundaries; and an observer.

Our gaze - as a non-material substitute of our physical talent for exploration - scans the surrounding space and collects information that helps our perception to identify and define materialities and thing-qualities (see also Klopfer 1919, p.150). Subsequently, we take physical possession of space via corporeal movement and interaction, following the suggestions of our senses, and make it a physically experienced part of our inner map. Langage reveals to

what extent we use our eyes as virtual extensions of our body: The gaze can 'sweep', 'wander', 'ramble' or 'lose itself in the clouds'. Eyes can be 'flashing', 'piercing' or 'warming'. Like our sense of touch, the quasi-haptic exploratory eye induces immediate emotional reactions enabling us to come to decisions on our interaction behavior.

Relevance for Anthropomorphic, Biomorph and Dynamikomorph Design

With the deliberately designed visual guidance of this tentative look (e.g. by rhythmic, linear or depth parameters), we can inscribe in a room or object system a narrative dramaturgy of reading, and we can thus support and control the quasi-physical quality of seeing: We can:

- generate dynamisms of direction and synaesthetic sensations of explorative motion (see Figure 37);
- produce growing, streaming or pacing analogies (see Figure 36);
- strengthen or weaken the impression of plasticity;
- determine the sequence of space experiences.

Seeing is therefore an activity that creates preforms of physical exploration: The visual perception is a holistic experience, representing our entire physique.

Figure 36. *Racing Car «Survolt» (Citroen, 2010)*



Figure 37. *Set Design «Hamlet», State Theatre Meiningen (Michael Heinrich, 2000)*



Construction of Dynamikomorphic Narratives

To estimate – at least rudimentary – what could happen to us in our interaction with other beings and with our environment, we need to draw conclusions from the current appearance of a person or situation to its past development and its future conduct (cf. Husserl 1926, pp.171f). These animated scenarios of processes are probabilities, cast in little stories. We equip these narrative particles with the wealth of similar experiences and analogies we have already accumulated.

The particular narrative, where most of the perceptions fit into place, and the most appropriate analogy will suggest how we should respond best to the current stimuli and settings.

As soon as there is slight evidence for transformation, we therefore tend to extend our interpretation of static phenomena: We conceive them as possible snapshots of dynamic processes. Based on cues and indicators, in a constant flow, we let evolve tiny story fragments about ourselves and our environment to make our predictions more likely and our behavior more appropriate. The domain of the arts was a long time – and still is – driven by the ambition to inspire narrative imagination by means of static, but telling representations; to develop the narrative potential of snapshots (cf. Weber 1976, p.212ff).

Relevance for Anthropomorphic, Biomorph and Dynamikomorphic Design

Independent of our input, each spatial structure will tell stories and generate analogies (not only in terms of a "Narrative Architecture", Coates 2012). Designing in its full meaning therefore means to consider the possibilities for such stories and analogies, and to apply or avoid them intentionally. Whether we call, for example, a table or chair elegant or clumsy, will depend on the intensity of animated agility we add to its appearance. In other words, the furniture tells our subconscious perception which process-like interactions it would be capable to perform, if animated. (see Figures 38,39).

Figure 38. *Dynamikomorphic Gestalt Profile: Clumsy – Heavy – Slow Armchair «Plump», F.LLI.Boffi (Nigel Coates, 2008); Hippo, Oregon Zoo, Portland*



Figure 39. *Dynamikomorphie Gestalt Profile: Agile – Light – Swift Biedermeier Chair, Southern Germany (around 1825); Springbok, Namibia*



Again, it is the language that incessantly reveals such projections: we call a building 'inviting', 'repellent' or even 'overwhelming'; windows can 'stare' at us, towers 'greet' us from afar. The tavern 'rests' in a valley, next to it 'rises' a chapel. We furnish the object with a projection of activity extending in time and involving us as observer. The mere static appearance of an object seems thus to allow conclusions about its probable vitality, mobility or mood - and about its future interaction behavior: A car can seem 'spirited', a facade 'cheerful', 'cozy', 'proud' or 'cold'. How we evaluate such impressions in each case is dependent on our current expectations or needs.

To proceed from an intended appearance to the actual form and design, it is therefore quite useful to search for anthropomorphic, biomorphic and dynamikomorphie correlates or analogies.

When we design, for example, a building with tiny openings, it will be hardly taken as 'friendly' – for a friendly face is 'open'. If we provide a huge room with a low ceiling, but little walls or supporting elements (for instance in a parking garage), we unwillingly evoke collapse scenarios.

Expectation and Need Orientation; Contextualization

The result of the discussed functions of perception is a world of form and meaning, made of an infinitely complex network of stimuli. But still we need some criteria to reduce this multitude to few dominating themes motivating our targeted activity. Our unconscious now selects those impressions that will suit best our current needs or situational expectations, in other words, potentials of evolvment, discovery, interaction and existential protection. Impressions filtered out as irrelevant are automatically faded out of conscious attention.

The unconscious portions of the visual field of perception, on the other hand, constitute a situational context and expectation frame that influences the interpretation of conscious perceptions ('atmosphere', see above). Expectation

frames can be so strong that unexpected, though striking features are simply airbrushed out of attention (cf. Simons 1999).

The degree of stress on the visual perception is a matter of situational, individual need. Like any other physical function, the perceptual apparatus requires, on the one hand, exercise, stimulation and active effort, on the other hand periods of rest and relaxation by reduced stimulus input.

Relevance for Anthropomorphic, Biomorphie and Dynamikomorphie Design

"Form follows function" (Louis Sullivan 1896): By the functionalist opinion leaders of the twenties until today, this dictum has been interpreted quite simplistically: The term 'function' was unquestionably equated with 'utilitarian function' or 'use function' and thus reduced to a strongly biased interpretation. The basic assumption, a pure ideal rational form as the ultimate aim in design should be approached by reduction, abstraction and authenticity, discredited the knowledge on the wealth of subjective and atmospheric association ("ornament is crime", Adolf Loos 1908). From today's point of view, a differentiated, atmospherically sophisticated appearance with a range of appropriate association options represents an essential communicational function even preceding the purpose function. The level of such differentiation has always been dependent of the perceptual needs and ambitions of the concerned users (see Figures 40,41).

Figure 40. *Church of Light, Ibaraki (Tadao Ando, 1989). Profile of Needs: to meditate – to congregate – to come to rest – Sincerity, Inwardness*



Photo: Seibold, Gunther © Kirchbau.de

Figure 41. *Vierzehnheiligen Basilica (Balthasar Neumann, 1753). Profile of Needs: to marvel – to explore – to rejoice – to be moved – Cheerfulness, Attentiveness*



Photo, ©: Bujdosó, Attila (2005)

Conclusion

Anthropomorphic and biomorphic analogies and dynamikomorph narratives are basic functions of our perception and an integral part of our creative intelligence. As such, they can contribute significantly to the success and acceptance of design interventions and strongly support a holistic reference to human needs.

Many related questions remain to scientific investigation. How does e.g. the abstraction tendency of our potential to create simplified *Gestalten* correlate with the oppositional tendency of analogy to differentiate perceived figures making them match an already experienced context of meaning? Referred to the fine arts: How can we explain the affinity to more and more sophisticated mimesis in relation to abstraction tendencies in primitive and modern art? Speculative answers are sometimes wise and sound (see Worringer 1907, Arnheim 1978), but quantitative and qualitative evidence is still a challenge for psychology and design research.

In the creative practice of spatial arts, awareness of the discussed relationships of form and perception is pronounced differently. In many trendsetting architectural, scenographic and communicational contexts, an ambitious avant-garde of interdisciplinary designers have long been involving conceptual, structural or ornamental biomorphics and dynamikomorphics, supported by increasingly powerful CAD systems, to create spectacular solitaires (see *Figure 42*). The everyday architecture of industrial, commercial and residential buildings, however, follows to a great extent one-dimensional economic urges, at most garnished with some trend features (see *Figure 43*).

Despite an extensive aesthetic diversity within a heterogeneous society we need a constant discussion on conceptual aesthetic core qualities of public

space. Corresponding reflection and research, including the discussed matters of perception, must take up an appropriate position in methodical design education and training. There are excellent approaches - for instance "A Pattern Language" (Alexander 1977) -, but the aesthetic and functional fragmentation of public space illustrates: There is still a great need for interdisciplinary awareness.

Figure 42. *TownTown Office Tower Erdberg, Vienna (Coop Himmelblau, 2010)*



Figure 43. «*Form Follows Function*»



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