

# Art as material culture

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## Abstract

With questions concerning the physical basis and the material substructure of works of art as topic, the article surveys a number of related problem areas. These include the objecthood of art, art products as physical remnants, the situatedness and reproduction of art, materials expertise and the iconology of materials. The untenability of materialism features implicitly as an underlying theme.

## Opsomming

Met die fisiese basis en materiële substruktuur van kunswerke as vraagstuk stel die artikel 'n aantal verbandhoudende probleemvelde aan die orde, ondermeer die objekstatus van kunswerke as fisiese reste, die gesitueerdheid en die reproduksie van kuns, die materiaalspesialis en materiaalikonologie. Die onhoudbaarheid van die materialisme tree deurlopend op as 'n implisiete tema.

Due among others to the Marxist legacy's considerable impact on the tradition of materialist thought since classical antiquity, diverse recent approaches with a materialist bias have gained recognition in the study of the visual arts. This is noticeable especially among the many voices pleading the cause of cultural studies and the study of art in the context of visual and material culture. I subscribe to neither materialism nor idealism.<sup>1</sup> Rather than a philosophical critique of materialism and its inherent reductive tendencies, my objective is to probe the material dimension of art in order to outline certain avenues of exploration brought to light by considering works of art in terms of material culture. The production and the reception of these clearly transcend basic material conditions. Nonetheless, these conditions occupy a crucial position in our experience and in our study of art.

As a rule products and works of art exist as material things, whether durable or fragile. Production as well as destruction, creation as well as annihilation of art thus have to involve real physical processes (cf. Gilson 1951). Though classified in museums as *objets d'art*, they are inventoried primarily as unique units of universal physical conditions (cf. Summers 1991). From a curatorial point of view works of art are material aggregates with certain dimensions, relative mass, durability and chronological age — often dilapidated by the wear and tear of human hands. When on exhibition, they are exposed to regulated and controlled changes in temperature, humidity and illumination; in collections they occupy storage space where certain chemical reactions may take place due to exposure to the atmosphere or physical contact with other bodies. All that finally remain of lost and destroyed works and of ephemeral events or actions like installations, happenings or performances are traces in documentary reports, publicity material, archival records, copies, photographs or digital images.

Art products as material configurations have the status of "objective things" (cf. Arnheim 1987) and thus are part of the "system of objects" (cf. Baudrillard 1996). Such physical bodies are usually called "objects" rather than "subjects". This is no accident or merely a question of conventional terminology. The "modern scientific view of the world" had the effect of gradually intensifying earlier negative assessments of material as "basic cosmic stuff" (*hyle* in Greek, *materia* in Latin), evaluating it in contrast with the forms rendered in

materials, whether the formation is conceived as having divine or human origins. Galileo, Newton and Descartes, the founders of modern natural science, deliberately subjectivized so-called "secondary" qualities like colour and smell while objectivizing "primary" qualities like measurable size, shape, movement and space (cf. Brill 1986: 228-237). The theoretical certainty of such scientific explanations of things in ordinary experience was eventually also applied to the "objects" in art collections. Beneath the apparently durable and reliable surfaces of concrete things in sensory experience, the material habitat is progressively dissolving into the natural sciences' strange and volatile, macro and micro worlds of cosmic and sub-atomic phenomena, the immaterial worlds of the electronic and information revolutions (cf. Gumbrecht & Pfeiffer 1994).

"Thinglike" conceptions of art have a powerful and inherent reductive tendency. It is countered only by the insight that processes and events as such are indeed part of the domain of individual entities, though naturally different in kind from physical bodies and places. Due to human participation in art, the involvement of makers and spectators, the material base of artworks is encapsulated with complex networks of subject-object configurations. The texture of human interactions with art should not be reduced to the mass, extended surfaces, assorted textures and geometrical shapes of physical bodies — shaped carriers, marked surfaces, layered pigments, sculpted shapes or built enclosures.

The inherently reductive force of "thingly" conceptions of art is the topic of Martin Heidegger's radical critique of Western matter-form categories of substance in his famous essay on the work category, "Der Ursprung des Kunstwerkes", first published in 1950 in *Holzwege* (Heidegger 1964: 653-668). Culminating in the celebrated meditation on Van Gogh's painting of two peasant shoes, his critique progresses from the notions of the work as thing, to

the work as equipment and finally to the work as an event:

If there occurs in the work a disclosure of a particular being, disclosing what and how it is, then there is here an occurring, a happening of truth at work. [...] In the work of art the truth of an entity has set itself to work [...] The nature of art would then be this: the truth of beings setting itself to work.

The physical demarcation or boundaries of any material configuration guides us in determining at a glance what belongs "inside" or "outside" a work — the framed painting, the mounted jewelry, the sculpted piece on a pedestal, or the edifice in the built environment. However, as proposed in Jacques Derrida's (1987) critique of Heidegger and in his questioning of *parergon* categories, the complex relations between "external" contexts and "internal" aesthetic coherences do not coincide with physical carriers, frames, boundaries or barriers of art works (cf. Bryson 1994, Duro 1996). Functional networks of subject-object relations enacted between artworks and human participants embrace many additional and non-material dimensions of experience, including such fields as imaging and desire, production and use, transactions of meaning, bodies of knowledge and discourse, acts of evaluation and care — each of them subject to the distortive powers of ideology. Actions in these fields evidently transcend and displace apparently clear demarcations on the basis of the boundaries of sites, material surfaces or containing and contained bodies in the physical domain (cf. Carter 1990: 56-65).

In the following sections I briefly explore a number of issues flowing from the status of art as material cultural products.

### 1. *Art in situ*

Distinct from the multitude of natural things and natural processes, art products and works of art belong to the bountiful domain of material culture,

the domain of goods or commodities typically found in built environments historically inhabited by people with diverse life-worlds. Fisher (1983) refers to the paradigmatic cases of "pins, a table, works of art" to illustrate basic types of material culture — with pins, tables and works of art respectively referring to mass-produced consumer goods, handmade utilitarian articles and imaginative products of aesthetic culture. As samples of material culture works of art always exist *in situ* — situated within unique contexts, ecologically encapsulated within specific and changing cultural environments. One might compare this notion of "material situations" with the distinction in jurisprudence between formal and material rights, particularly as critics since the rise of modern art criticism in the eighteenth century aspired to fulfil the judicial function of *Kunstrichter* in educating the ordinary art public's *Laienurteil*.

More promising are the distinctions Braudel (1977) draws between the common "material life" of humanity, the constant and collective structural foundation for the historical development of market economies and industrial production which, in turn, saw the evolution of modern ideologies like capitalism and socialism.<sup>2</sup> Art production also has its roots in "material life", yet its history appears to follow a different trajectory. Applied to art history, Braudel's model would suggest that the common human life of the imagination and ordinary human image-making<sup>3</sup> constitutes the basis for the historical development of special fine art genres and diverse formats of visual communication, the latter in turn providing the background for the historical trajectories of avant-garde ideologies.<sup>4</sup>

One should bear in mind that material life's foundational status has been invaded and is still being eroded by the rising intensity and global expansion of technological and industrial transformation of this common human dimension. Thus the industrial production, reproduction, transmission, dissemination and

consumption of visual material in the mass media have arrogated communicative functions formerly performed by the arts (cf. Gowans 1981). Exploitative cultural interactions between industrial and pre-industrial societies have had particularly destructive consequences for traditional practises rooted in the material life of indigenous societies. Thus typically materialist discourses prevailing in the study of popular and mass culture in industrial and class societies have to be applied only with great caution in the material life domain. Confined neither to basic or raw materials, nor to industrial processes of mass production, the notion of art as material culture signifies the concrete existence of works of art with their variegated functioning in unique localities, especially the ordinary situations and events of daily human life (cf. Pounds 1989).

For the immediate experience of art the recipients have to be *in situ* — placed together with the work of art, situated bodily in its presence — gradually approaching and directly interacting with it, thus becoming part of the immediate context of situation of its display.<sup>5</sup> Spectators have to be in physical contact in order to touch and to be touched by art. Every aspect of human intercourse with art is based on this approximate and direct haptic contact with works. This involves subject-subject relations of a physical kind, in other words, where the person and the work of art bodily occupy the same space and where both are subjected to energy effects like the force of gravity or electromagnetic radiation like ambient light or heat. The physical substances and the material contexts of works of art jointly sustain and present additional dimensions of historical meaning, embedded in yet opening up and reaching beyond the physical domain. Such structural openness and situational involvement are vital for any successful actualization of art's complexities and partialities. The aesthetic configuration of material artworks project imaginary worlds into new human contexts or into alien

historical positions, ever susceptible to ideological engagement, affirmation and resistance.

The direct physical engagement of the recipient's bodily presence in shared environments is a structural speciality of sculpture. Concrete physical presence is one of sculpture's most distinctive features (cf. Martin 1982), explaining the power of the anecdotal definition "a piece of sculpture is the body you collide with in a gallery while retreating to admire a painting." Physical phenomena comparable with sculpture's bodily presence include the frames, carriers, brush strokes and formats of painting on display in exhibition spaces, the environmental setting, orientation and accessibility of buildings, the live performance of music or theatre productions.

The "musealization" of art is marked by typical situational transpositions, territorial displacements or temporal shifts — exchange of works in the art trade, acquisition for museum collections or distribution in the imaginary museum of art reproductions. One may well describe *musealia* as the relics of earlier or of contemporary material cultures, resembling "sacred" objects in their association with extraordinary persons, places or occasions (cf. Hasenmueller 1989). The physical exchange, transport and transfer of works often result in a life-destroying loss of functional historical contexts. Thus museums readily degenerate into "cemeteries of art" or "collections of defunct products" (cf. Greenblatt 1990). Yet curatorial actions may also create a new life, a "second" historical existence for works of art (cf. Fisher 1975). One aim of recent emphases on the material dimension of artworks (propagated for instance by various authors in Rees & Borzello 1986) is to level elite objects with representative exemplars from contemporary mass culture (cf. Krieger 1981). The outcome may be resonate displays of art, exhibitions that reveal the ideological entanglement of art along with other kinds of material culture. More

often the consequences may be negative — particularly when the investment of human commitments is ignored and the physical configuration alone is retained as durable base, stripped of various dimensions of imaginary meaning which are reduced to epiphenomenes of conventional classifications, meanings and values. Novel ideological contents may then be added at will, projected on the material remains of former art objects.

## 2. Reproductions

Any reproduction is an attempted substitute for the original<sup>6</sup> — though the intentions<sup>7</sup> for reproducing artworks and the technical procedure<sup>8</sup> followed in replacing an image's initial physical base may differ. A legitimate function of reproductions is to mediate preliminary experiences of art, either in anticipation of future contacts or to aid the memory in recalling past contacts with a work of art. Such material substitutes never succeed in replacing altogether direct contact with an artwork's affective presence. Reproduction always entails the loss of unique situational features, among others the physical scale, dimensions, textures and lighting, the transport and the display in special places or on special occasions, the interaction between art and environmental factors like ambient light. In the modern and postmodern eras the art experience of most people is nonetheless based predominantly on the stock of images available in contemporary systems of mass reproduction and distribution.

Carlo Ginzburg (1989: 107) rightly drew to attention the loss of the non-reproducible features of writing — the material "embodiment" or enscripturation of texts — following the development of the printing press. This factor proved to be vital in the formation of modern notions of textuality and of discursive information. The resulting "dematerialized" concept of text as a reproducible semantic whole brought with it historical changes which hugely expanded the field of relevance of textual categories, in the visual domain

as well. Nevertheless, the abiding if indeterminate presence of non-reproducible qualities remains a stubborn obstacle to recent advances in the application of textual categories and reading processes in the visual arts (cf. Bryson 1988). Thus the aim of the investigations of James Elkins (1998 & 1999) is to highlight various non-semiotic barriers to the successful application of semiotic categories of textuality in the domain of the image. His explorations typically encounter materiality and visuality as irreducible obstacles to semiotic readings.

The scholarly analysis of art commences with everyday experiences of physical conditions that determine the material access to and the intercourse with artworks. As a consequence of positivist methodologies' reductive motives, such investigations are often confined to this basic level. Formalist and idealist speculations about "aesthetic presence", on the other hand, strongly emphasize the context-free or autonomous "objecthood" of artworks.<sup>9</sup> Though idealistically high-minded, such notions of "presence" are nonetheless based on the physical forms of presentation of art within contexts of display. Some late-modernists even sought to reduce artworks in minimalist terms to quasi-sculptural thing-qualities (cf. Nodelman 1967). Walter Benjamin's (1969) notion of the loss of *Aura* as a result of the technical reproducibility of artworks confounds such reduction.

### 3. Physical remnants

Works of art are fragile, delicate and easily damaged entities demanding custodian care. Physical remnants typically constitute the objects of art historical investigation.<sup>10</sup> This illustrates the fact that degeneration starts at the moment of an art product's completion. Like our bodies they are subject to natural aging processes as a result of the entropic effects of natural elements in the physical environment. In most cases, however, the truly significant damage to works of art comes a result of decisions and actions by human

agents — violence,<sup>11</sup> exploitation,<sup>12</sup> anthropogenic modifications<sup>13</sup> or, in general, the degeneration of overexposed popular items or the neglect of unappreciated items of cultural heritage.

The aim of conservation measures and restoration programmes is to stem the physical decay of works of art and also to protect them from damage as a result of careless use. In some cases the damage may be repairable. As a rule, however, physical processes are irreversible. Historians usually compare at least two physical states in the genetic duration of works of art — the first or original state of the work and the latest or current state of conservation. Every work has a "material biography" telling a tale of fragility. The physical base of art thus exposes as metaphysical speculation the vaunted "timelessness" of art in the contemplative aesthetic approach. Similarly, though modern artists may lay claim to the status of "creators", the agents who make artworks in actual fact will always be labourers in material media (cf. Wolterstorff 1980).

Archeology and anthropology are notable historical disciplines who specialize in the study of material culture, art being one of the many classes of physical remains of the material culture of former societies. "Archeological monuments" are physical remnants on whose witness we base our historical reconstruction and remembrance of bygone life-worlds and foreign ways of living. Art historians resort to archeological hermeneutics for the contextual interpretation of physical remnants of the past as cultural "monuments" (cf. Robert 1919). Archeological hermeneutics typically employs various methods of material authentication to secure the physical traces of past human actions. Thus Willibald Sauerländer's conclusion: "In a certain sense the art historian is also an accertainer of traces."<sup>14</sup>

Where archeological monuments are the sole surviving sources of a culture, these are usually considered to be "prehistorical" cultures or, in the

more recent anthropological parlance, as oral, rural, traditional or archaic societies. In the case of the so-called "historical" cultures, the historian's task is to collate the archeological record of monuments with the archival record of documentary sources in order to reconstruct a historical image of the past. Thus epigraphy's primary sources are the inscriptions on and the writings about particular monuments. Secondary archival sources are also explored to situate works of art as goods of material culture within encompassing cultural discourses.

The frame for the examination of cultural remnants — in particular the difficulty of distinguishing the physical traces of human usage from the effects of natural deterioration<sup>15</sup> — derives from archeological hermeneutics. The procedures of identifying, reading and interpreting human traces are akin to forensic detective work's investigative inspection *in loco*, at the scene of an event, in order to reconstruct criminal acts or to determine the causes of natural disasters ("acts of God"). The assumption is that human acts will always deposit physical traces (like footmarks or fingerprints) in the *Tatort* or crime scene. The aim is to read such indices as *clues* that may provide material for the reconstruction of events. As physical evidence clues may eventually support forensic conjectures with regard to a suspect's acts, motives and *modus operandi*. In prosecution this material may be used as forensic evidence concerning the accused party's opportunity, criminal intent, liability and accountability before the law.<sup>16</sup> The typical conduct of art historians combines a detective's forensic suspicion, investigative skills and reconstructive fantasy with argumentation on the grounds of evidence to establish the historical identity of the agents accountable in each particular case.

#### 4. Materials expertise<sup>17</sup>

The aesthetic identity of a work of art is founded in, yet distinct from the unique physical condition of its

medium. Thus conjectures regarding the historical reconstruction of the identity of a work of art should always be controlled by direct and repeatable empirical contact with the work. In this regard a veritable arsenal of natural-science laboratory methods and techniques has been evolved for the physical-chemical analysis of works with the aim of dating and authenticating works, testing for forgery and planning measures for conservation or restoration — compare the descriptive German term for securing findings regarding art products as material bodies: *materielle Befund-sicherung* (cf. Sauerländer 1985).

Materials experts typically investigate the physical-chemical properties of the various materials wrought into artworks. They use sophisticated instruments, including photography, microscopy, Röntgen-, infrared- or ultraviolet-analyses, slanted lighting, chromatography, dendro-chronology and carbon<sup>14</sup> dating. Common assumptions undergird these procedures: The material work of art is considered as a homogeneous physical aggregate functioning in constant fields of dynamic energy. The results of the analysis of any one part — selected points, sections or surfaces — may be extrapolated for the whole. Genetically, works are aggregates of the material remains of the traces of irreversible processes of physical deterioration and alteration by human workmanship, sedimented layer upon layer, subsequent traces covering earlier ones.

On a still larger scale, paleontological and archeological researchers hold related assumptions about physical constants and variables. The spatial distribution of sites of diggings and findings is mapped and analysed in topographic and topological terms; each excavation site is uncovered layer by layer to gauge the sequence of levels and the distribution of the material remnants deposited in each level.<sup>18</sup> Subsequently, the chronology of the archeological record, represented in the layered structure of

sites, is correlated with the findings of different sites and with the reconstructions of material cultures proposed by different disciplines.

The chronological measurement of physical age presuppose the existence of kinematic standards of constant recurrence (for instance the regular astrophysical rotation on the earth's axis or the earth around the sun or geophysical sedimentation) or irregular and cataclysmic events with established dates (volcanic eruptions, earthquakes, floods, droughts for instance). However, historical age-value or *Alterswert* (cf. Riegl 1982) belongs to a different non-material order than physical age or the archeological record. Historical dating uses astrophysical chronology as approximate points of reference in mapping the actions of cultural powers and responsible human agents.

The materials expert's mentality of suspicion reinforces the association with forensic investigation and medical diagnostics. They gauge physical traces as *symptoms* of non-physical causes with material effects. Thus great reserve and tentativeness characterize any inference, conjecture and hypothesis that might be ventured regarding the exact dating of traces and their attribution to the actions of specific agents. Such conjectures are only advanced on the basis of extensive knowledge about the materials available in certain localities or time frames, and the culturally available technical possibilities for the working of materials. These experts investigate the material conditions of cultural life but have little to contribute to our knowledge of historical motivations and individual human choices.

Laboratory analyses aimed at the authentication and attribution of works of art originated with the nineteenth-century positivist notion of art expertise — *connoisseurs* or *Kunstkenner*s who were specialists in determining the *provenance* of works of art. Giovanni Morelli, the first to substitute a scientific *Kunst-*

*kennerschaft* for the former amateuristic connoisseurship, in fact had a scientific training as a doctor of medicine.<sup>19</sup> The nineteenth-century convergence of the medical diagnosis of pathological symptoms, the forensic investigation of clues, the characterological analysis of handwriting and phrenology is based on a joint understanding of material traces or clues as involuntary signs, indices of unconscious desires, or natural expressions of innate giftedness (cf. Ginzburg 1989). Umberto Eco (1976: 7) defined semiotic signs as anything that can be used in order to lie. Positivists, on the other hand, took traces and clues to present the indisputable, objective ground ("proven physical contacts") on which to base their supposedly scientific inferences.

Traces, clues and symptoms betray the presence of conditions and the consequences of factors beyond individual human control, typically factors like descent, race or gender. Recent instances of trace analysis highlight unconscious motivations, irrational social powers, systemic pathological distortions of life-worlds and ideological powers that affect individual decisions or subjective choice. This is the focus, for instance, of the "hermeneutics of suspicion" of Paul Ricoeur (1970) and the "emancipatory ideology-critique" of Jürgen Habermas (1978). Following these shifts, the profound knowledge of materials, methods and working procedures available to art *connoisseurs* or *Kunstkenner*s who determine the provenance of works of art, has to open into historiographical insights and critical judgments.

Always secured to material substances or physical carriers, the works and contexts of art should nevertheless not be reduced to this material substratum. Documentary evidence of contact between agents and material determination should not be the sole base for the establishment of historical relationships or influences. Thus Gottfried Semper (1977, 1979) was the leading nineteenth-century

exponent of the positivist and materialist determination of historical art styles through factors of material and technique (cf. Piel 1963; Bandmann 1971). The most influential exponents of a materialist approach in twentieth-century art-historiography belong to the Marxist school<sup>20</sup> yet the development of materialist worldviews is part of a venerable tradition founded by the Greek philosopher, Democritus.

### 5. An iconology of materials

The category of "material" acquired many and differing contents from influential philosophical conceptions, yet holding one theme in common for art theory: the tendency to recognize only the raw, inert, natural materials as the truly basic "givens" or "data" for the work of original and creative artists. On the one hand this reduces natural products to the status of the merely inert, passive and pliable receivers of human formation, materials merely resisting but ultimately compliant and plastic, utterly subject to human domination in the historical construction of social worlds — the so-called "second nature" created in human culture. Any normative "givens" in the various societal domains of human culture, including the institution of the arts, on the other hand, is devalued to changeable local conventions.

Reacting against the motive of human domination of nature, the neo-Marxist philosopher, Theodor Adorno (1984: 300-308) propagates an expansion of the concept of artistic material.<sup>21</sup> In his view regarding the material history of the various artistic disciplines, the materials formed in the work of artists should be seen as "sedimented spirit", thus encompassing more than the mere natural materiality of physical substances. One need not follow Adorno in his somatic subjectivising of the material artwork as "wounded body". Yet he did succeed in expanding the material category to cover the totality of sociohistoric conditions that may be considered as the "givens" for artistic actions.

During the past decades several calls were made for the development of a new art-historical discipline called the "iconology of materials", with Heinrich Lützel (1975: 1102-17), Günther Bandmann (1969 & 1971) and Thomas Raff (1994) as significant advocates. Its speciality is the study of aesthetic meaning generated by historical relations between the material substratum of artworks and the aesthetic potential of dated material contexts. Raff's book *Die Sprache der Materialien* (1994) is the best summary of the results achieved by the iconology of materials as art-historiographic subdiscipline. Expanding iconology into the material domain has wide ramifications and links the study of visual arts with similar associations of thematic material, motives and symbols in the literary field (cf. Frenzel 1970 & 1992).

Like Adorno, Sparshott (1982: 27) argues that anything about which artists make decisions can be considered as artistic material:

Our definition [...] does not require us to equate 'matter' with material in the sense of stuff to be manipulated. The word is to be taken more generally: whenever anything is done or made, there is always something that the agent or artisan accepts at the beginning of his work as that to which, or with which, or about which, something has to be done, whether this something be a lump of rock, a fictional theme, or an awkward situation.

Sparshott (1982: 513) elaborates the valid distinctions L.A. Reid makes between

primary subject matter, conceived as unqualified by aesthetic interest, though such as to arouse that interest, secondary subject matter that is already qualified by aesthetic interest, and tertiary subject matter, which is the content of a formed work and intrinsic to that work.

Aesthetic potential — the *inscape* of material entities, the *Gestimmtheit*, fittingness or appropriateness of various material substances, and the particular reasons for their

incorporation in works of art — is no neutral form of materiality or brute givenness an artist has to face in isolation. Like any concrete entity with a degree of plasticity, artistic materials are substances with many possible and changing contextual functions. The aesthetic nuances of physical properties of materials objectified in artworks incorporate complex and variegated functions any work as material aggregate may perform in material contexts. Thus materials have particular sensory-perceptible properties and appropriate ways of technical working. Their values in historical cultures change according to each material's degree of availability, durability, exploitability, usefulness, reliability, disposability, expensiveness and accessibility. In a particular culture certain meanings, reputations, even the status of legendary nobility, preciousness and healing effects may be associated with certain materials:

there is no pure potentiality, no endlessly malleable, infinitely passive stuff out of which human imagination forms things everywhere at all times in essentially the same way. To think of this issue historically it is rather necessary to recognize that art is always made of specific natural and artificial materials, each with its own meanings and values, that come to hand for culturally specific uses, to be shaped to culturally specific spaces (Summers 1993: 266).

Evidently, any investigation of artistic materials and particular selections of material will eventually return the historian to questions regarding primary categories concerning the world and its aesthetic potential — ideological questions inevitably imposed and resolved in terms of worldview frames.

#### 6. Epochal changes in art materials

Since materials have variable, culture-specific, historical identities, artists' material choices presuppose the existence of frameworks of customs, techniques, opinions, theories, traditions, beliefs and ways of living. In

so-called "archaic" art, for example, the significance of "found objects" or accidentally discovered, naturally formed material shapes has to be viewed in the light of the *numen* or *tabu* value of fragments of the massive world of nature as *bezauberte Welt* beyond human control. Nomadic hunter-gatherer cultures are bound to local materials available in the immediate *habitat*. The mining, quarrying, transport and trade in certain materials indicate a departure from nomadic existence. Distinct phases in the working of materials arose during developed stages of the so-called "classical" urban cultures, for example, between the tasks of quarry workers, stonemasons and sculptors.

A typical feature common to many cultures of antiquity is the selection and arduous working of extremely massive, durable and difficult to shape blocks of stone for the building and sculptural decoration of sanctuaries, burial sites, temples and palaces. The artists here have the status of skilled technicians in urban societies exploiting slave labour. Their products celebrate the eternal order and sacred power of cultural institutions. The domestication of fire and the casting of bronze and iron also served as demonstrations of exceptional cultural power. Due to the scarcity of metals and the legendary or secret knowledge required for the casting and working of metal, implements and sculptural pieces in bronze were highly valued items. In the early history of technology societies based on slave labour abhorred the arduous labour and body deforming effort demanded for the working of materials.

In the Middle Ages the value of art products was determined primarily by the costliness of precious materials and by the social prestige of the technical knowledge required to work these materials. Artists were incorporated into various artisan guilds according to the kinds of materials used (typically gold, stone, minerals and velum) as well as the kinds of technical procedure that had to be mastered for wrought materials. As a rule commissions specified

or prescribed the materials to be used. Medieval colour symbolism is based on a material hierarchy, ranging from the base materiality of earthly elements to the elevated sacredness of precious stones (*lapis lazuli* for instance) and the noble or rare metals like silver or gold, considered as light sources rather than shining surfaces which reflect light (cf. Schöne 1954).

Since antiquity artisanal workshops had to perform the manual task of processing raw natural materials (for instance, the grinding of pigments, mixing of binders, preparation of painting surfaces, the making and repairing of implements like brushes or chisels). Prefabricated materials only gradually made their appearance with the rise of the modern era. In the Renaissance the ideological justification of artists' intellectual and creative work deliberately suppressed the manual workshop labour involved in working materials. Mastery was no longer synonymous with technical skill in the manual working of physical materials. Early modern artistry was closely associated with spiritual conception, divorced from material considerations and elevated above artisanal control of material — hence the aphorism *ars aura prior* (art is of greater value than gold). The emphasis shifted from respect for the natural properties of materials and for traditional ways of working materials to their manipulative and plastic subservience to artist's spiritual visions.

Till the nineteenth century the labour and the time of artists were spent for the greater part in the preparation and working of natural materials. Towards the close of the nineteenth century industrial technology began to supply prefabricated materials like prepared panels and standardized, natural and synthetic pigments in tubes. Professional technicians cast, enlarged, multiplied and finished sculptural works in industrial foundries, at times under the supervision of the sculptor. The modern era saw the industrial development of new materials like iron, steel, reinforced concrete, aluminium and new artificial resins and synthetic plas-

tics. Their technological utility for industrial production is of greater significance than their physical differences with the traditional materials. Modern building industry in fact merely assembles prefabricated and standardized units/materials. Similarly the mass-industrial control of material is progressively invading the media of the visual arts. Concepts from industrial archeology are replacing the artisanal material paradigm of classical archeology (cf. Slotta 1982: 174-194).

The decline in artisanal respect for the quality of workmanship in wrought materials, increasing commercialization, standardization and industrialization of prefabricated and synthetic materials are epochal changes that invite diverse reactions. Technological optimists opt for the artistic exploration of new synthetic materials and production procedures developed in the world of industrial design. Thus new media like acrylic pigments, air-brush, photographic procedures, neon lighting, video and digitized computer imaging are replacing traditional artistic materials.

Artists critical of technology, on the other hand, began exploring the expendable refuse, waste products, rejects, debris, and rubbish of consumer societies for *objets trouvés*, ready-mades, object art, anti-gallery and ecological land art (cf. Thompson 1979, Culler 1988: 168-182). They select and work materials on the basis of unexpected combinations, damaged products and polluted environments. Technological conservatives opt for a revival of antiquated artisanal ideals where artists deliberately select natural materials, struggle with raw natural products, make their own paper, grind and mix their own pigments, or cast their own sculptural pieces. Due to the advanced nature of industrial technology's synthesising processes, even the selection of natural materials or the use of traditional techniques may have a synthetic effect, despite the incorporation of artisanal conditions.

The material conditions for the existence of art products and works of art

discussed in the introductory remarks hold despite the material effects of these historical transformations. As fragile items of material culture, often mere reproductions of “musealized” physical remnants from the past, art objects have to be experienced *in situ* if they are to find lasting provenance in the human world. The materials expertise available to curators and art historians need to be opened into an iconology of materials for the detection and interpretation of the traces of ideological powers in material culture.

### Notes

- 1 I add this explicit statement in order to reassure an anonymous “cognitive-structuralist” reviewer that my position should not be construed as that of an “extreme materialist”.
- 2 These categories generally coincide with Braudel’s notion of historiographical levels or horizons — basic structures of long duration as foundation for the conjunctural changes of medium duration and for the short-term history of events.
- 3 Hans Belting (1994 & 1987) offers a historical corollary of this level with his notion of a “history of the image before the era of art” and his notion of an “end of the history of art”. Cf. also the contributions in Nelson (ed) 2000.
- 4 Otto Bätschmann (1997) offers a historical corollary for this level with his notion of exhibition artists and various strategies of material presentation of art in the modern art system.
- 5 Proposing a topology of context, Boris Groys (2000) argues that Walter Benjamin’s notion of *Verlust der Aura* is based on the “displacement” or “deterritorialising” of original works. Restoration of aura presupposes a movement in which the spectator approaches the work in its historical situation, rather than an opposing movement that draws the work into the ambit and control of spectators. The latter destroys the aura or, amounting to the same thing, creates a reproductive copy.
- 6 Cf. Wurtzenberger 1970, Waetzoldt & Schmied 1979, Dutton 1983, Jones 1990, Radnóti 1999.
- 7 For instance the intention to produce copies, replicas, parodies, citations, pastiches or forgeries.
- 8 For instance engraved and printed, photographed or digitalized reproductions.

- 9 Michael Fried’s (1961) statement “presence is grace” may be rooted in the formalist belief in aesthetic presence, though the themes of objecthood and spectatorhood in subsequent publications reflect a phenomenological struggle with the conceptual ramifications of “imaginary presence”.
- 10 Typically such objects include potsherds or *ostraka*, palimpsest parchments, pigment *craquelure*, discoloured or stained paper, sculptural fragments like torsos and the foundations and ruins of ravaged built environments
- 11 For instance, war damage, iconoclasm and vandalism.
- 12 For instance, spoilation, smuggle trade, forgery, or the utilization of the remains of earlier works in new works of art.
- 13 For instance, the reframing or reformatting of paintings, the resealing of surfaces or additions to older buildings.
- 14 “Auch der Kunsthistoriker ist in gewissem Sinne ein Spurensicherer” (Sauerländer 1985: 47).
- 15 E.g., encrustation, rusting, staining, discolouring, bleaching, scratching, cracking or breakage.
- 16 Cf. the classical study by Ginzburg 1989.
- 17 English does not have an exact parallel for the German term *Materialkunde*.
- 18 Harris diagrams are used to transfer this archaeological procedure to the analysis of painted images, cf. Loubser 1997 on the use of Harris diagrams in recording, conserving and interpreting rock paintings.
- 19 Cf. Wind 1969: 35-51; Kleinbauer 1971: 45-51; Wollheim 1973: 177-201.
- 20 Cf. Raphael 1968, Klingender 1968 & 1975, Hauser 1962, Hadjinicolaou 1978a & 1978b.
- 21 Cf. Zuidervaart 1981: 33-6; Snyman 1985: 281-9.

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