The role of cognitive competence in the art museum experience

L. Kesner

Cultropa, s.r.o., Pod novým lesem 34, 16200 Praha 6, Czech Republic

Received 3 June 2005; received in revised form 28 July 2005; accepted 29 September 2005

Abstract

The gap between the potential for works of art in museums to offer unique experiences, and the actual outcomes of visitor encounters, highlights the importance of the cultural competence of museum visitors. However, when applied to museum visiting, cultural competence should be primarily treated as perceptual and cognitive—one needs to exercise the perceptual activities that works of art require in order for a museum visit to register as some form of satisfying experience. The main part of the paper is devoted to discussion of some aspects of the perceptual basis of cultural competence required for perception of works of art—the problem of attention, the misplaced dichotomy of ‘museum viewing’ versus ‘everyday perception’, and the problem of defining the current cognitive style. It is argued that one of the greatest challenges to the museological profession is the problem of how to engage the complex issues of perception, vision and subjective experience more properly in the museological discourse, so that they can be reflected in theories of presentation and interpretation.

Keywords: Perception; Vision; Cognition; Experience; Cultural competence

1. Cultural competence in art museum

Despite the accumulating body of empirical data, the assessment of the quality of visitor experiences in museums remains notoriously difficult and any generalizations are risky, as one is confronted with contradictory statistics and observations. Recently, there has been a growing unease with the kind of cultural-theory diagnostics which treats the museum as a place of mass spectacle and distracted entertainment, refusing to acknowledge that the audience is not a homogeneous mass, and that any contemporary museum legitimately accommodates different

1 Tel.: +420 23334 0436.
E-mail address: lkesner@cultropa.cz

0260-4779/$ - see front matter © 2006 Published by Elsevier Ltd.
doi:10.1016/j.musmancur.2005.09.007
patterns of use and experience (Prior, 2003). At the same time, the enormous gap between the potential of artworks in museums to offer deep and enduring experiences, and the actual outcomes of visitor encounters with these works, remains an everyday reality and a major concern for many museum professionals. Ironically, such a gap seems to be sustained by the very nature of ‘success’ that the art museum has been enjoying. Under the pressure of marketing and economic priorities, contemporary museums have increasingly been offering their visitors opportunities to enjoy complex museum experiences, which integrate a whole range of activities, but where the experience of an object often becomes marginalized. The director of the Metropolitan museum of art summarized this accurately some time ago, observing that: “When people say ‘let’s go to the museum’, they increasingly mean something other than ‘let’s go to look at works of art’” (Montebello, 1997; see also various contributions in Cuno, 2004). Among several factors that keep the gap between possibilities and real outcomes wide, and prevent the object (aesthetic) experience to become a core of the total museum experience, the cultural competence of visitors is of primary significance.

The possession of a competence has long been recognized as an essential prerequisite for culture consumption such as museum visiting; one which determines other factors—the amount of free time, status motivation or the disposable income. Pierre Bourdieu, in particular, in his classical study of museum visitation and subsequent analysis of social capital, laid the groundwork for the concept of cultural competence that museums require of their audiences (Bourdieu, 1984; 1993; Bourdieu & Darbel, 1980). According to Bourdieu, the readability of a work of art for a particular individual varies according to “the divergence between the more or less complex and subtle code required by the work and the competence of the individual” (Bourdieu, 1993, p. 227). More recent research, focusing on the behavioral and psychological aspects of culture consumption, and avoiding Bourdieu’s Marxism-inspired notion of the class origins of such inequality, highlighted the importance of cognitive abilities in museum visiting.1

All other things being equal, people invest their resources into free-time activities where they feel they obtain real benefits (Kelly & Freisinger, 2000). Many psychological and educational theories conceive the art experience as constructive deployment of skill. The history of previous engagements and early exposure to such activities builds the cultural competence of the individual and thus significantly determines the actual outcome and quality of his/her experience vis-à-vis the works of art in the museum or gallery (Cunnel & Prentice, 2000; McLean, 1997; Walker, Scott-Melnyk, & Sherwood, 2002). Individual variations in such competence significantly determine the different levels of engagement, ranging from repeated and skilled users to casual consumers, who tend to disperse the object (art) experiences within a broad range of other recreational experiences that the museum has to offer.

However, when applied to museum visiting, the concept of cultural competence should be primarily considered as perceptual and cognitive competence, anchored in the dynamics of visual encounters with art (or, more broadly, museum object, and the entire image-text of the exhibition); occasionally augmented by other perceptual modalities. On such an account, to possess a cultural competence is to be able to exercise the perceptual activities that art works require in order for a museum visit to register as a form of satisfying experience. Such museum-specific cultural competence may be seen as a specific form of visual literacy. The current, dynamically evolving, understanding of visual perception and consciousness renders many

1 Ganzeboom (1987) noted that ‘Cultural diffusion is no more to be expected in the future, unless inequality in cognitive abilities can be diminished’. 
traditionally established notions of perception, cognition and experience obsolete, and calls for a sustained reflection on its possible impact on the agenda of presenting art in museum spaces to contemporary audiences. It is my aim in this paper to discuss some aspects of the perceptual and cognitive dimensions of the cultural competence required of visitor encounters with works of art, as an essential prerequisite for the practical interventions concerned with narrowing the above-mentioned gap between the potential experiences offered by works of art and the actual outcomes of these encounters. Given the scope of the issues, my focus here will be on outlining some theoretical and conceptual aspects, while the detailed implications for museum practice will have to wait for another occasion.

2. Experience

It will be useful to start such an examination by at least a brief reflection on the very concept of experience and its use in museological discourse. Lately, experience became to be widely accepted as the outcome, or the ‘product’ of the museum (Cunnel & Prentice, 2000; Kotler & Kotler, 1998; McLean, 1997), and has become the cornerstone of museological rhetoric. While experience is indeed indispensable as an analytical concept, its semantic flexibility and history of use at the same time make it a real obstacle to any discussion about encounters with works of art. It can be seen as a topos, where different kinds of expertise and disciplinary traditions related to the museum and the interpretation of art intersect, and which helps to sustain the dividing line between art historians/curators versus educators and marketing specialists in the museum.

Sociological and marketing approaches, which explore museum visiting as a leisure time phenomenon and a form of consumption within the realm of the mass economy, contributed to the understanding of some dimensions of museum visiting that have been neglected or insufficiently accounted for by the study of aesthetics and art history. Yet, in the world of the ‘experience economy’ (Pine & Gilmore, 1999), far from remaining a value-free analytical concept, experience has assumed something of a mantra-like status in the culture industry. Once museums have been legitimately situated within the leisure-time destinations, they could be logically branded as ‘constructions to facilitate experience’ (Doering, 1999). The museum experience has been turned into a commodity which museums and heritage sites are expected to package and deliver, and which the desiring consumer can attain with some help and concentration. Influential voices from within the museum establishment assert that museums are essentially experience businesses, and ‘experience design’ is a key to museum success. ‘Production’, ‘facilitation’, ‘designation’ and ‘delivery’ of experience have become the concern of many museums, as well as a staple of the museological rhetoric, and have a continuing impact on museum practice (e.g. Cunnel & Prentice, 2000; Kotler & Kotler, 2000; Prentice, 2001; Roberts, 2001; Skramstad, 1999, pp. 122–23). In a narrower sense, ‘experience’ often stands for active engagement (supposedly sought by the majority of museum and culture heritage visitors), as opposed to mere ‘deferential passive viewing’ (Prentice, 2001, p. 8). While it is true that the focus on experience thus understood is more vigorously applied to the historical, technical museums, and heritage or science centres, the art museums (where ‘mere passive seeing’ is still somewhat more tolerated) are certainly not exempt from this rhetoric.

At the same time, research continues to proliferate, both on the ‘experiential paradigm’ in culture consumption (Bourageon-Renault, 2000; Cunnel & Prentice, 2000) and on attempts to ‘get inside’ the museum experience. Taking clues from consumer research, educational and learning theories, and empirical findings, a number of attempts were made to conceptualize and analytically dissect the museum experience and create its typologies. Thus, Graburn (1977)
identified three experiential needs that museum can fill: reverential, associational and educational. Falk and Dierking (1992, 2000) proposed a framework for the museum experience as a continually shifting interaction among personal, social and physical contexts. Using extensive empirical research based on interviewing visitors about their visit, Doering and colleagues from the Smithsonian Institution have recently developed a list of ‘satisfying experiences’ in museums, on the basis of which four clusters of museum experience were identified: object experiences, cognitive experiences, introspective experiences, social experiences (Doering, 1999; Pekarik, Doering, & Karns, 1999). Writing from a marketing perspective, Kotler lists the ‘range of recreational experiences’ in museums in four categories (excitement, playfulness, contemplation, and learning), arrayed on a scale from visceral through emotional to cognitive (Kotler, 1999). Elsewhere, he elaborates this range of museum experiences to include aesthetic (visual and sensory), recreational, sociable, learning, celebratory and enchanting experiences (Kotler & Kotler, 2000).

These methods of conceptualizing museum experience can perhaps prove useful for some kinds of marketing and educational activities in the museum. However, even a cursory consideration of a viewer facing a work of art proves the methods to be of limited use for capturing and analyzing the core component of the museum visit—the experience of the museum (art) object. Such ways of dissecting encounters with works of art—i.e. subsuming aesthetic experience together with musing, reverie and pondering under ‘contemplation’, while putting observation together with ‘pattern discernment’ and four other experiences under the ‘learning’ (Kotler, 1999, p. 33), are meaningless from the point of contemporary research on perception and cognition and the way it can be utilized to study how people relate to works of art. Clearly, any substantial encounter with painting or sculpture in an art museum—that is ‘seeing’, ‘perceiving’, ‘understanding’ or simply ‘experiencing’ work of art—involves perceptual, cognitive and affective components, which cannot be neatly packaged into distinct subcategories, not even for analytical purposes.2 To mainstream art history, traditionally intent on bypassing the problems of the subjective experience of a viewer (“to beat a retreat from a shaky ground of sensory and aesthetic perception”, as Otto Pächt put it 50 years ago—(Pächt, 1990, p. 73)), such a trivialization of complex issues of experience and perception adds another reason to continue avoiding the issues of the subjective experience of viewers.3

3. Lack of attention

Aesthetic experience (or, more broadly, the experience of museum objects) is always embedded in the perceptual activity of the viewer. While some attempts have been made to evaluate the cognitive gains of exhibition visits (Cunnell & Prentice, 2000), and while

2 In a somewhat different context, Martin Kemp observed on the highly problematic nature of categorization, which “whether it comes from psychology, aesthetics, or linguistics, produces a false separation of the mental processes as if they functioned in the creative process as real entities—as a series of separately discernible procedures in a production line of perception, interpretation, imagination, invention and execution… We should remain continually aware that there is interdependence, interpretation and simultaneity in the faculties involved in perception”. Kemp writes about creating art, but his warning is equally pertinent for our present concerns (Kemp, 1984, p. 242).

3 See Hennes (2002, esp. 109–11) for related critique and dangers of the unreflected use of popular notions of experience in context of museums. A comprehensive discussion of experience and its various uses is well beyond the scope of this article, as ramifications of the concept in its different contexts in the humanities continue to be explored (e.g. Scott, 1991; McKnight & Sechrest, 2003).
the effectiveness and efficiency of some low-level perceptual tasks can be empirically measured, there is no standard or yardstick to assess the merits and outcomes of any individual perception in a museum. At best, individual recollections of deep and enduring encounters of works of art can be juxtaposed with empirical observations of visitors who demonstrably fail to sustain more than a pertunctory contact with the object, or who voice dissatisfaction with the outcome of their visit during the interview. Critics and art historians themselves sometimes propagate the ideal of ‘good viewing’, ‘full understanding’, or ‘adequate experience’ of a work of art, and may therefore, negatively condition some viewer’s expectations and mental framing in apprehending art. Obviously, there is nothing like a perfect, or canonical, viewing that works of art require; no pristine state of an ideal aesthetic vision to which people should aspire, and no ideal format or structure of the object experience. While the failure to attain a deep, enduring experience of a work of art can be empirically demonstrated (if only by pointing out people who fail to engage in more than a fleeting encounter with a museum object), it is impossible to articulate the opposite—to define comprehensively, let alone in empirically measurable terms, the satisfactory perceptual activity vis-à-vis a museum object.

There is no doubt that attentive viewing (in the general sense of the term, which shall be elaborated upon presently) is a sine qua non of aesthetic experience, and that inattention to works of art is essentially a barrier standing in a way of a more adequate experience. The ideal of ‘good viewing’, as viewing grounded in attention, has been elaborated repeatedly in different cultural contexts—by medieval observers, Chinese painters and theorists since the Song dynasty, by respected connoisseurs and viewers like John Ruskin or Bernard Berenson. These sentiments resonate with modern psychological research. In what remains the most comprehensive empirical study on the aesthetic experience in a museum, Mihaly Csikszentmihalyi and his collaborators have persuasively identified attention (or lack of thereof) as the single most important determinant of aesthetic experience (Csikszentmihalyi & Robinson, 1991, pp. 118–24, 158, 178). Based on observations and interviews with museum professionals, they go as far as to assert that the contemporary viewer is simply not interested and attentive enough to face the challenges presented by the art object. Csikszentmihalyi’s pragmatic approach to attention can be usefully corroborated by other empirically observable patterns of visitor behaviour, where the amount of time allocated to the object (and the refusal to spend time on an object) is taken as a measure of the quality of the encounter or experience (Serrell, 1997). In this sense, inattention logically emerges as the antithesis of attentive seeing, and is indeed a fundamental obstacle to the development of any deep and enduring object experience.

However, in their efforts to combat the lack of attention of many visitors, museums should consider some theoretical and conceptual aspects of the problem. Some authors have emphasized that attention, as an ideal state, is not transhistorical, but is historically contingent. Michael Fried wrote on modern dialectics of absorption and distraction, contending that enlightenment produces a form of absorption that is inseparable from distraction (Fried, 1980). More recently, Jonathan Crary extensively examined the dichotomy of attention and inattention, and showed that the modernity created sustained attention, together with the conditions for the dismantling of it. Crary usefully exposes how the modern imperatives of attentiveness, and

---

4 I have discussed specific examples of such assertions elsewhere (Kesner, 1994, 2000).
5 Csikszentmihalyi defines aesthetic experience as “an intense involvement of attention in response to a visuals stimulus, for no other reason than to sustain the interaction” (p. 178). He identifies several ‘attentional dimensions’ (object directedness, limitation of stimulus field and loss of ego) as the central aspects of the aesthetic experience (pp. 124–25).
the rhetoric of the pathology of attention, tend to subsume creative and intense states of deep absorption and dissociation within the negative states of inattentiveness (Crary, 1999).

4. General inattention versus dispersed, immersive vision

Art history has traditionally emphasized the importance of focused attention as a necessary requirement for the closest possible observation. Attentive viewing of an object or image should lead to a close reading of a work of art, in the sense of a detailed scrutiny, capable of growing differentiation, of taking in and appreciating all details. As James Elkins who studied some memorable instances of close reading rightly concludes, this in itself it has no absolute measure (Elkins, 1997, pp. 61–102). Such seeing can be primarily motivated by the need to obtain specific information in the visual configuration, or to adjust one’s perceptual capacities to the visual order of the given object. This kind of investigative looking, attempting to decipher the inner structure of the work, has been elaborated upon by generations of German art historians, including Sedlmayer’s ‘configured seeing’ to Otto Pächt, who writes of the “decisive act of perception—the triggering of vision that unlocks the formal structure” (Pächt, 1999, pp. 67–69). It is a necessary prerequisite of the art historian’s or connoisseur’s activity, forming the very basis of the competences of these professions. It can equally provide a basis for inquisitive looking motivated by curiosity, or aimed at pure ocular pleasure.

Such investigative looking and close reading based on the deployment of focused attention can be applied to any museum object or work of art, but it will often differ from the way a given image was perceived in its original viewing conditions. Many objects in museums can be linked to the functional contexts in which they were approached and handled by their audiences, and which allow also some approximation of the viewing or perceptual situation that characterised the original encounters with such images. Even leaving aside those cases where objects and images were perceived in a state of artificially induced hallucinations, perception of objects in ritual and liturgical settings was predetermined by the total environment and would often resemble the state of reverie, trance, or other mild forms of altered states of consciousness. That is, it would be far removed from strictures of the focused attentiveness which are attributed to the modernist ideal of ‘good viewing’.

The dialectics of attentive looking, in the sense of close reading versus unfocused contemplation, can be applied to almost any work of art in a museum. Exercising visual skills for some practical output, such as obtaining information, making critical judgments, evaluating artistic merits, or studying some particular aspect of the object as a work of art, can collapse or revert into a more holistic, immersive experience which does not take the image as an artifice, but rather as what it ostensibly depicts. Unfortunately, both in Western and Far Eastern aesthetic traditions, the surrender to the fictional world of art has often been castigated as a sign of vulgar taste. The experience of a sophisticated, experienced and cultured person, it was reasoned, should be dominated more by the awareness and appreciation of the depiction as an artifice, a work of art. Such arguments were proliferated by contemporary culture and the rapid expansion of new entertainment technologies, which offer various kinds of immersive experiences—from TV soap operas to computer games and advanced simulations. Critics of mass culture castigated it on moral grounds for producing docile viewers who gladly accept the illusion of the virtual world, giving up their critical judgments. But one of the functions and pleasures of art objects in

---

6 Carroll (1998) provides a useful overview of such critiques of mass and postmodern culture.
museums is to provide the very same experience of immersion in their fictive worlds.\(^7\) The accumulated thrust of modernist criticism may have in fact succeeded in instigating in the minds of many visitors, who have no problems immersing themselves in a fictional world created by moving images on a screen, that the same kind of escape in a museum would be inappropriate, that their aesthetic experience should be that of silent admiration and appreciation—and not succumbing to the virtual reality offered by a work of art.

The notion of insufficient attention should, therefore, be reconsidered: ‘inattentive’ vision, in the sense of unfocused, dispersed seeing, not momentarily concerned with the conscious processing of the details of the visual configuration, is a legitimate and important mode of the perceptual encounter of a museum visitor. It must be distinguished from the general inattentiveness, in the sense of a viewer failing to allocate time to a work of art and to acknowledge it, which indeed is a basic obstacle to any deeper and enduring experience. What works of art in a museum essentially require is the ability to selectively attend to them, rather than to other perceptual stimuli. Such openness to the possibilities afforded by the painting or sculpture is well summarised in Alois Riegl’s concept of attentiveness as a form of respect toward the art object.\(^8\) As the viewing unfolds, the openness to the object or a work of art can lead to a whole spectrum of perceptual engagements, ranging from an intensely detailed scrutiny, to absorbed immersion, to a trance-like altered state of consciousness,\(^9\) which would be inconvenient or even pathological in everyday visual activities.

Ideally, viewers are aware that inattentive viewing is not only a productive complement to attentive perception, as Michael Baxandall has perceptibly noted (Baxandall, 1995, p. 145), but that it may also be a necessary complement to the focused vision for some aspects of the aesthetic experience to occur at all. Many works of art simultaneously offer the opportunity for all kinds of experiences; for switching between moments of heightened appreciation of artifice of representation, which at any moment can collapse into itself and immerse the viewer in a deep trance-like absorption. It may be argued that the perceptual-cognitive competence required for viewing works of art starts here—in the viewer’s ability to sustain attention and to switch between a variety of modes of attention, depending on what the work and the situation require. The challenge for all those who are involved with the presentation and interpretation of works of art is how to point to, and stimulate, the possibility of such plasticity in the experience.

5. Misplaced dichotomy of ‘looking in the museum’ versus ‘everyday perception’

Attention is both a prerequisite and one aspect of perception and the preceding consideration thus raises some important questions: what kind of seeing/looking is required by works of art in museums for them to ‘work’? Are viewers’ everyday visual skills and their immersion in contemporary visual culture compatible with looking at visual arts in the museum? Do works of art and museum objects require distinct patterns of visual skills and experiences from their viewers, different from those that people engage in everyday situations outside the museum? Some of these issues have been sporadically addressed in the museological literature and, more frequently, in the context of museum education and programs of visual literacy. There seems to be a broad consensus that museum viewing indeed is different from everyday visual activities. Typically,

---

7 Cf. Walton (1990) for a comprehensive philosophical treatment of works of art as presenting fictional worlds.
8 See Olin (1992) for discussion of Riegl’s concept of attentiveness.
9 Deep aesthetic experience has been characterized as one of many forms of altered state of consciousness, but it is not yet clear whether all such varying forms share a common neurobiological basis.
authors of the paper on ‘gazing in museums’ distinguish between ‘everyday (functional) looking’ and ‘looking in the museum’. Museum objects are different from objects which people encounter in normal situations and, “as the nature of the object changes, it changes the nature of the look we assign it” (O’Neill & Dufresne-Tassé, 1997, pp. 134-35). The authors propose that, unlike in daily life, where we observe the surroundings in a functional way, “our looking in the museum goes further than simple observation, as such standard of observation alone could not justify the effort required in the first place to go to the museum, as it is a non-functional and even artificial place which displays objects grouped in an unpredictable way”. They further surmise that museum viewing takes place on two levels: observation and interpretation (O’Neill & Dufresne-Tassé, 1997, p. 139). It has also been argued that museum visitors should be educated to look in a contemplative, rather than in a narrowly task-oriented or goal-directed manner (Rice, 1992).

Again, such conceptualisations of perception in relation to museums should be questioned in the light of the recent progress in vision and cognitive research. This is not an easy proposition, as the notion of the distinction between the ‘normal’ visual perception and the perception of works of art (and by extension of the relationship between ordinary experience and aesthetic experience) is, in one form or another, firmly embedded in many accounts of vision and aesthetic experience. According to some philosophers and theorists, works of art automatically require a different kind of viewing. To mention but a few examples: in Konrad Fiedler’s influential work On Judging Work of Visual Arts, the contrast is made between what he labelled as the pure, free, artistic vision (der reinen Sichtbarkeit) and the non-artistic perception (Fiedler, 1949). A somewhat different conception based on this fundamental dichotomy is presented in Adolf Hildebrandt’s famous Das problem der Form (Hildebrandt, 1901). Similarly, Roger Fry distinguishes between the practical perception related to everyday interests and the contemplative aesthetic vision (Fry, 1920). In contemporary philosophy, the distinction has been most staunchly defended in Arthur Danto’s ontology of art: “What the painting says…. ” is totally different from what the scene itself contains… Pictorial perception activates the same mechanisms that perception itself does. Artistic perception is of another order altogether. With artistic perception, we enter the domain of Spirit, as Hegel said, and the visible is transformed into something of another order, as the Word is when made flesh (Danto, 1991, p. 214; also Danto, 1992).

Other recent accounts concur with Danto that works of art offer unique kinds of visual experiences, and the ontological status of an image as ‘art’ determines the nature of the perceptual activity of the viewers (Arikha, 2002; Bullot, 2003). While the comprehensive discussion of this topic is well beyond the scope of this paper, there are at least two sets of objections against uncritical acceptance of the distinction between the utilitarian (ordinary) and the aesthetic (museum) seeing. These have a direct bearing on our imminent concerns and should be at least briefly addressed.

First, there is a need for much rigorous examination of the inter-linkage of visual routines and perceptual patterns in the so-called ‘ordinary’ and ‘aesthetic’ perception. As even a very brief reflexion will confirm, everyday visual activity outside of the museum consists both of functional, ‘utilitarian’ visual skills covering a broad range of tasks, in which vision serves its genetically primary function to assure the biological and social survival of the subject, as well as the consumption of different kinds of images. Conversely, in the space of a museum or a gallery, the totality of visual activity includes aspects of ordinary functional perception, along with ideally sustained visual encounters with objects and images, or the entire ‘text’ of the exhibition. Separating these two aspects is impossible, even on the analytical level. As one moves along the corridor of a museum, perceptual activity may be totally geared to the demands of momentary, real-time situation (navigating in the museum environment, searching for signs pointing to
public conveniences, or scanning the crowd for the face of a companion), while the brain is busily processing the after-images of works just seen. Higher-level understanding of these works, while not immediately perceptual and already transferred into various forms of neural and mental representations, continues in the higher cortical areas. On the other hand, the act of confronting a painting or a sculpture in the gallery, the very moment of the aesthetic or object encounter, inextricably involves aspects of ‘utilitarian vision’—positioning one’s body in space, orienting towards the object of the gaze, other people, source of light, etc. The character and outcome of the museum object perception (‘aesthetic seeing’) will, in fact, be to a large extent determined and shaped by perception related to bodily postures and movements—especially if one takes into account some recent models of the so-called enacted vision (Noë, 2004; Noë & O’Regan, 2002), embodied cognition (Gallagher, 2005), or embodied imagination (Joy & Sherry, 2003).

Current research points to the fact that engagement with works of plastic art depends largely on the deployment of the same cognitive capacities and perceptual skills that humans use in everyday situations (Lopes, 2003, p. 645; Rollins, 2003). In looking at works of art in museums (or ordinary objects ‘aesthetically’), both the objects of perception and the nature of the encounter simultaneously provide an opportunity to escape from the rigid, evolution-determined pattern of reacting to stimuli which humans are very efficient in using in the interest of their biological and social survival (Mesulam, 1998, p. 1014). They are good for activating the mechanism of seeing as/seeing in, which is an essential component of the perception of works of art. In addition to sharing some of the very same cognitive routines and capacities as ordinary objects/scenes, works of art and museum objects can also engage additional cognitive capacities, providing the viewer with the opportunity to postpone immediate recognition/identification and to deploy an active force of imaginative projection instead. It should be emphatically stressed, however, that the conceptual boundary between the veridical, utilitarian seeing (usually geared to imminent action), and the vision focused on aesthetic objects, is diffused, permeable and unclear. In common parlance, there may be some practical merit in describing the latter as instances of ‘imaginative’ or ‘aesthetic’ viewing, and those on the other side of the scale as utilitarian ‘everyday’ vision, but these are obviously only provisional designations. Cognitive neuroscience does not supply any facts that could substantiate the sharp divide between the ‘normal’ and the aesthetic perception. Instead of the time-honoured notion of the mutual, parallel existence of the ‘normal’ utilitarian vision, and the imaginative/aesthetic vision (‘museum viewing’), one could much more productively conceptualize the situation in terms of continually unfolding micro-changes in the character of visual activity on a scale of minutes and even seconds. These consist of a more or less extensive activation of the mechanism of seeing as/in, and other perceptual routines, depending not only on the character of the observed scene or image and the nature of the context, but also on the momentary motivation and psychosomatic state of the observer.

6. Cognitive styles and modes of seeing

There is the second objection, namely that the notion of distinct ‘museum seeing’ implies a stable category of art (or a museum object). Indeed, museum space itself, as has been repeatedly observed,

---

10 For an important distinction between recognition and identification from a cognitive psychology’s point of view, cf. Kosslyn (1994, p. 72).
functions as a machine for treating culturally specific objects as ‘art’ and for instigating a mode of looking at them as ‘museum objects’. Art museums, in particular, by insisting on a single correct way of appreciating art as artifice and discerning quality and beauty, tend to suppress other aspects of the reaction and response to works of art, thus predetermining the nature of experience of their visitors. Recent historical studies have demonstrated how, since the late 19th century, museums expend enormous energy on educating people to behave ‘properly’, and how they inculcated certain parameters of visitor behaviour in the museum. Codices and rules of museum behaviour adopted in museums during their formative period explicitly asked people to observe proper behaviour, and forbade such activities as pointing with fingers at works of art, being noisy or ‘disrupting orderly behaviour’ (see, Sherman, 1989). Such measures and regulations created a model of proper behaviour, whereby the required and expected decorum codified the nature of the encounter with a work of art, turning it into an orderly, controlled experience. Restraining any overt expressions, silent admiration and contemplation were the only acceptable expressions of appreciation and enjoyment of art. The very prerogative to conform one’s physical behaviour and gestures to the prescribed etiquette directly constrains the nature and structure of the aesthetic experience of looking by subduing and suppressing some of its bodily dynamism.

Clearly, the transhistorical category of ‘art’, and the associated responses required of its visitors, conceal the real distinctions between the modalities of visual activities which works of art of different cultures and periods embody. All the different objects offered to the visitor in a veritable museum encyclopaedia, such as the Metropolitan Museum of Art, are legitimately considered ‘art’ and, taken as such, they all demand the kind of willingness to look—the general attentiveness elaborated upon in the preceding section. They also present themselves for a closer investigative and modernist looking. But all such images and artefacts are also cultural objects, whose perception by original audiences was embedded in the cognitive style of the respective culture. In his recently published book, David Summers persuasively demonstrates that art objects come from very specific spatio-temporal circumstances, and that they were the objects of handling. Both the creation and the specific history of works of art are thus inseparable from the specific historical circumstances in which they were made and used—their real spatial circumstances (Summers, 2003, esp. 50–60). These ‘deep reservoirs of real spatial experience and habits’ connected to the use of artefacts and symbolic systems naturally involved perceptual activities. This perception-in-action formed a cognitive skeleton of skills and competences required to handle such objects in religious, ritual and other social contexts (Kesner, in press).

So what do museum objects, as repositories of culturally specific modes of viewing and perception geared to handling and action, demand of their contemporary viewers? Surely something akin to the specific perception-as-action skills and habits. There is of course no hope of ever fully achieving such perceptual skills, of getting the ‘period eye’ of the original audiences and users who shared their space with these art works, or of the culture in which these works were embedded. Looking at art is a true excursion into alien sensibilities, as Michael Baxandall reminds us.11 The main means of obtaining some approximation of these skills, of course, are the real encounters with objects and images in a museum setting, aided by pertinent contextual information. In this respect, looking at works of art in a museum should not be strongly divorced from the way we exercise our perceptual capabilities in everyday instances, where the subject does not perceive the barrier of standing in front of a work of art. It should

---

11 Concept of period eye was introduced by Michael Baxandall (Baxandall, 1972); for definitions of cognitive style see, e.g. Goldstein and Blackman (1978).
include some of the spontaneity and immediacy with which people react and respond to images (within the rules admitted in the public space of a museum). Ideally, these experiences will involve the whole spectrum of reaction, from silent contemplation to visceral reaction. It is impossible to qualitatively formulate the range of visual activities inside a museum, in the language of current vision science, for obvious reasons: most experiments such as brain imaging techniques cannot be performed on museum visitors. At the same time, a qualitative description of the processes of vision on complex symbolic systems, such as art objects, lies as yet mostly beyond the limits of contemporary sciences.\footnote{The experiments in vision which involved perception of works of art were so far mostly related to highlighting the neurobiology of processing various types of visual stimuli—e.g. static color images versus monochromatic moving image (cf., e.g. Zeki, 1999).}

The conditions of perceptual competencies, as prerequisites for a deep and enduring experience, cannot be quantified in objectively measurable terms and parameters. But the ubiquitous and unproblematic notion that art (or other objects for that matter) in a museum requires a wholly different mode of seeing from that exercised in everyday activities cannot be sustained. ‘Museum seeing’—understood simply as an umbrella term for a range of visual activities inside a museum—might be special only in that it offers opportunities for the engagement of a broader range of perceptual routines and strategies, both at the conscious and the sub-conscious level. Many of these are related to the demands of various culturally-specific objects and images, and require a sufficient deployment of selective attention to the objects on display. At the same time, such ‘museum seeing’ incorporates many aspects of utilitarian perception and should also include some immediacy and spontaneity, not filtered by the ingrained and inculcated expectations and demands of the social consumption of art.

7. Current cognitive style and neural plasticity

The notion of historically specific cognitive styles and modes of perception brings us to considering the influence of the current ‘period eye’ upon perception and experience in the museum. We live in a culture of accelerated perception, of the rapid spread of many powerful technologies of moving images, of the increasing prevalence of attention deficit disorder, with more and more people unable to focus their attention and to exercise perceptual competencies of the kind we have been discussing here. Rather than making claims \textit{a fortiori} against the negative influences of everyday visual culture and patterns of perception on the possibilities of adequate seeing in museum (in the venerable tradition of criticising the modern mass culture), it seems more productive to cautiously formulate questions and issues, and see whether some of them could be perhaps verified with the use of experimental methods. Would it be possible, as well as practical, to identify the various cognitive styles among museum visitors in contemporary society, and to conceptualize the various perceptual skills characteristic of different groups of viewers? Are museums faced with a definable cognitive style of the generation of new media users, whose perceptual skills have been altered and modified by the exposure to the new media and visual technologies to the extent of making art inaccessible for them? If that is the case, what are the practical possibilities for the strategies of presentation of works and their interpretation in museums—to facilitate access to art for such an audience?

Such questions relate to important areas of contemporary research in neuroscience, specifically on synaptic neuronal plasticity. It is well established that the anatomy of the...
human brain on the micro-level (and hence the outcome of the brain’s operation) depends on the specific patterns of connections among neurons and the strength of their synapses. The structural details of synaptic connections are determined both genetically and through experience. There are still unresolved questions as to which factor is more important, how much of the neural circuitry is ‘hard-wired’, and how much is modified by the nature of the perceptual activities of any given subject. New findings suggest that even in adulthood, fundamental properties of the architecture of neural circuitry are subject to alteration and modification by experience.\textsuperscript{13} Admittedly, this research is experimental in nature and no simple consequence for the perception of art can be plotted so far. Nevertheless, it substantiates the hypothesis that the prevailing nature of many people’s visual experience of various forms of moving images leads to structural changes in the architecture of their neuronal synapses, which significantly influences and predetermines their perceptual competence for the experience of static museum objects.

Most moving images require their viewers to understand the relationship \textit{between} images, rather than relationships \textit{within} one static image. It is well-established that formal features of many tele-visual formats—such as edits, cuts, zooms, pans and rapid intercutting of sequences—activate mechanisms of instinctual reaction to visual and audio stimuli, especially those of movement detection (Kubey & Csikszentmihalyi, 2004). In computer or video games, the success of one’s interaction with the medium depends even more on the ability of instant reaction, frequently based on intuitive identification and recognition. One can perhaps hypothesize that users of these media in the course of their free-time perceptual activities over stimulate their dorsal (magnocellular) processing stream (‘vision-for-action channel’), while the ventral (parvocellular) processing stream (‘vision-for-perception channel’) is not sufficiently tuned by experience.\textsuperscript{14} Thousands and millions of pictorial micro-interactions with moving images, often accumulated since early childhood, where the cortex is especially plastic, probably result in micro structural modifications of neuronal synapses which affect the mechanisms of attention modulation, saccadic eye movements, recognition routines and other visual-cognitive procedures, which make perception of the static ‘art’ image difficult, or uninteresting. A person accustomed to repeated and prolonged exposure to moving images in the media (often in the order of thousands of user-hours) will literally not have a chance to learn that there can be satisfying and rewarding experiences of static images based on detailed prolonged observation and interrogation, and that static images can be interactive—albeit by engaging the body and the mind and various perception routines, rather than a joystick. However, it is not so much a matter of not having a ‘taste’ for art, or sufficient education for high culture. Rather, such a person may be lacking the cultural competence required by works of art on a neurophysiological basis.

8. Conclusion

What are the implications of such considerations for museum practice? Particularly, how can museums go about building the cultural-perceptual competence of their viewers in the process of their encounters with works of art? I believe that, on the conceptual level, the issue can be usefully structured into several components:

\textsuperscript{13} Gilbert (1995); Purves and Andrews (1997); for a complex overview of synaptic plasticity cf. Huttenlocher (2003).
\textsuperscript{14} The segregation between these two cortico-cortical pathways is now commonly accepted by neuroscientists. The distinctions are elaborated, e.g. in Milner and Goodale (1995); Jacob and Jeannerod (2003).
1. How to increase/support general attentiveness, namely selective attention towards objects on display?
2. How can museums help visitors engage the whole range of perceptual-cognitive modes, skills and routines, such as intense focused-looking versus immersive vision; seeing as/on versus a more imminent response?)
3. How can a visitor attain some of the specific conditions of seeing and visual skills connected to artefacts in their original contexts?

A better understanding of processes of vision and visual cognition does not translate into simple, straightforward interventions. Some of the well-known, seemingly trivial measures—such as ‘more seats, more toilets and more coffee’, as one seasoned museum director recently suggested to combat the lack of attention (Walsh, 2004, p. 95)—could be as effective as many costly and sophisticated interventions. Experimenting with forms of display, which aim at creating a certain visual metaphor of the original viewing situation, could subtly activate a broader range of visual routines and skills in the informed and motivated museum visitor, powerfully enhancing their potential vis-à-vis works of art. More generally, the notion of perception as an embodied activity needs to be translated into creating gallery spaces, modes of display and cognitive infrastructure which suggest to the visitor that coming to terms with the work of art is not merely a matter of intellectual understanding, but that such understanding only unfolds in the process of viewing, and ultimately enhancing the activity of seeing as a true body-mind interaction in the space of the gallery. It is beyond the scope of this article to elaborate more comprehensively on the implications of new research and conceptualisations of vision and perception to strategies of presentation, or of various models of art education, as this would require much more space than is available here.

The first problem seems to be how to engage such complex issues of perception, vision and subjective experience more properly in the museological discourse, so that they can be reflected in all levels of museum practice, especially in thinking about the presentation and interpretation. In other words, the challenge stems from the causal link that I tried to highlight in this article—the outcome of the museum visit (and thus further demand for art in museums) is predicated above all by cultural competence—that is, the perceptual-cognitive competence of the visitor to transfer the looking at an art object into some form of meaningful experience. The questions of ‘looking’ and experience lead straight into some of the most complex issues of contemporary brain and mind sciences, as well as to the possibilities of their intersections with the museum—it being the very place where objects endowed with cultural values are collected and displayed to offer unique experiences.

Acknowledgements

This article is part of the ongoing research which was greatly facilitated during my stay as a visiting scholar at The Getty Research Center in 2002. I am very grateful to the staff of the Getty Research Center for all their cooperation.

15 An example of such innovative museum practice is recently published Explore Painting in Depth experiment conducted in Art Gallery of Ontario (Clarkson & Worts, 2005).
16 The situation underscores the gap between theory and practice, recently mentioned by Daniele Rice, who noted that “most museum practice continues to be too deeply rooted in the politics of competing interests to respond to the structural issues discussed in theoretical literature” and underscores the need for trying to find a “a useful middle ground between theory and practice” (Rice, 2003, pp. 77–79).
References

Arikha, Avigdor. (2002). *Pictorial language*, online at www.interdisciplines.org/artcog/papers/1


Ladislav Kesner was curator of Chinese art, head of Asian Art Department and deputy general director of the National Gallery in Prague. He is currently Managing Director of Cultropa, a museum planning and consulting company. He also teaches at the Charles University, Prague.