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Artification in Natural History Museums

Kaisa Mäki-Petäjä

Abstract

Natural history exhibitions have changed considerably over recent decades concurring with a rise of a general movement of aestheticization in the Western culture. This usually results from an attempt to make the exhibitions more appealing to provide the public numerous ways of enjoying themselves, but they are also used to communicate information, especially of an ethical and affective kind.

In this paper I will consider the effects of a particular kind of aestheticization, namely artification, of these kinds of exhibitions. Artification, *i.e.*, the process of regarding non-art objects as art, appears to be in conflict with the science-based purposes of these exhibitions. Is this truly so? Does science and the viewer's understanding of scientific knowledge change when science is presented and experienced as art or as art-like or as something aesthetic? I will approach this question phenomenologically by pondering my own experience in the Natural History Museum in Helsinki and the relation of aesthetics, science and art on that basis. Instead of trying to define how art-like the exhibit in question as a whole is, I will concentrate on certain characters the exhibit has that are perhaps more readily associated with artistic: uniqueness and presence, and how through these concepts we may gain a look into the interrelation between art and science.

Key Words

artification, natural history exhibits, presence, science, uniqueness

1. Introduction

Natural history and science are not generally seen as having much to do with the aesthetic or art. However, if aestheticization is nevertheless present in a non-art museum, such as a natural history museum, are there also instances where non-art gets presented and viewed as if it were art? In other words, is there artification in natural history museums? How does that happen? Does it happen unintentionally? Perhaps more importantly, what happens when one experiences non-art as art? When being experienced and approached as art, how does this change the visitor's comprehension of that non-art object? Specifically, do science and viewers' understanding of scientific knowledge change when it is presented and experienced as art or as art-like or as something aesthetic?

I do not claim to be able to answer these questions conclusively for their heavy dependence on the individual visitor present in the situation and the particulars of that situation (*e.g.* the subject matter, the manner of the display, the company present). In order to unlock the conundrum, it is necessary to try to unravel the experience a visitor has upon encountering an exhibit of this kind. A section of the Marine Biodiversity exhibit in the Natural History Museum in Helsinki, or The Wall of Sea Life (hereafter referred as The Wall) offered me such an opportunity. In this paper I will explore artification phenomenologically by analyzing a visitor's experience, in this occasion my own, as I do not have records of any other encounters.

I should point out that the objective here is to theorize on the possible ramifications of artifying a natural history exhibit. Also I feel reasonably

safe to assume that my train of thought, in particular the confusion I felt when I first encountered The Wall, is familiar to other visitors as well. I had entered the exhibit with the full awareness of the context of natural history as the premise of my experience. Most likely as other visitors had, I set out to interpret whatever I might encounter according to the paradigm of natural history exhibitions by focusing on active interpretation and information-gathering. Artification of an exhibit would instead advocate an aesthetic approach, a mode emphasizing the immediate sensory experience and engagement where the presence of the object is material, a mode familiar to art museum exhibitions.

2. The exhibit and the experience



The Marine Biodiversity exhibit (illus. 1) is the opening room of a larger diorama form of exhibition called the Wildlife of the World. Its space is fairly long, high and narrow, so it is rather difficult to view the whole of the exhibit at once. This gives the Marine Biodiversity exhibit an impression of an installation, as a visitor is compelled to share the space with the exhibit in order to make sense of it. Here the exhibit already utilizes a method common to certain art works. For instance, some public sculptures require and encourage the active bodily participation of the viewers without which the art work does not fully manifest itself.

The right-hand-side of the exhibit is strikingly plain, with an unassuming map of the world, a few lines of light-colored writing, and two stuffed fish and a porpoise placed high above the map. The arrangement is so modest that I needed to check the photographs I had taken on a previous visit to see if my recollection of the stuffed creatures was accurate. On the left-hand side is The Wall, with its surface painted dark and filled with a multitude of sea creatures on clear plexiglass shelves: seashells, coral, fish, all kinds of dry and wet specimens from floor to ceiling – a swarm of creatures that is almost overwhelming. They are all lit by a mysterious light that seems to come from nowhere in particular yet leaves every specimen lighted for the viewer's convenience. From the ceiling hangs a further set of stuffed sea creatures, while at the end of the hallway is a habitat diorama with a polar bear reaching deep through a hole in the ice to grab an escaping seal, a very dramatic and life-like arrangement.

When I first saw this exhibit I practically dismissed all other parts except The Wall. I glanced at the map, noted that there is stuff hanging from the ceiling, and was sucked in the moment I saw The Wall. It was as if the multitude of creatures had surged to meet me. I almost immediately began to pay attention and study the individual specimens' contours, colors, and their very materiality. Other specimens formed arrangements that emerged as objects of interest, as aesthetic compositions, or even still lifes, and it was these sea shell arrangements that thrust me out of the aesthetic bliss I had sunk into. I became aware that even if all the creatures on the wall have an air of being thoughtfully organized, the plan is not clear. I suddenly expected there to be a scientific reason behind it. There are the mollusks and the starfish ordered nicely together, but why are they placed as they are? Is it according to the class or phylum? Is the order of placing within a group relevant at all? I had begun with the presumption that I was examining a scientific exhibit, but something seemed to be amiss. The Wall was oddly mute. It looked like an old-fashioned natural history exhibit and yet was not. Instead of scientific information, it offered me something much more ephemeral.

Despite my presumption, I had begun to examine The Wall with an aesthetic view, and the confusion had arisen when I changed my approach from aesthetic to scientific. As quickly as I dismissed the right-hand wall, I had engaged^[1] with the left-hand one. That engagement was decidedly aesthetic in a sensuous, formalistic sense, at least at first. I was drawn to study the contours, colors, and arrangement of the specimens in a particularly appreciative manner essential to aesthetic appreciation. I focused on each specimen as an individual, beautiful (or terrifying) and worthy of appreciation in itself. I did not examine every specimen present but with a quick glance selected those that caught my eye by their appearance before turning to see the whole. But as I turned to take in that bigger picture, I did not tune in to see the whole Wall as an art work, as I asked, "So what is this all about?" What I meant was, "What's the science in this?"

Especially in museums of cultural history, it is common today to find works of art that do not belong to the actual collections but yet are an active part of the exhibitions as an independent commentary.^[2] Therefore, perhaps it should not be so surprising to encounter a work of art in a natural history museum, but yet, should The Wall be interpreted and approached as art? The works of art in cultural history exhibitions are quite clearly presented as independent objects of art, though reasons concerning copyright and artist's intellectual ownership may play some part in this, but this is not the case with The Wall. It is not readily identified as a work of art by the museum but is presented within the context of natural history museum. Yet I approached it as if it was art, often held to be the opposite and even antithetical to science.

Therefore, it is not an insignificant choice that a visitor encounters here, for both choices, whether to see it as a piece of art or as science, may transform not only the visitor's point of view but also the meaning of the actual contents of the display. By now museum visitors in general have grown rather accustomed to increasingly elaborate exhibitions, and it is no longer surprising in itself that aestheticization has reached natural history museums and has become a regular part of the museum experience, but *The Wall* takes one step further. Depending on one's views, it is not simply fancy or an engaging way of teaching science to enthusiastic visitors, but something containing art-like qualities both in presentation and in interpretation. I will return to this issue later on.

3. Aesthetics, natural history and science

Aesthetics in one form or another has always been a part of natural philosophy and its descendant, the life sciences, but, as Wolfgang Iser claims, aesthetics is an ambiguous word referring sometimes to sensuous perception, sometimes to art perception, the fictional or poetic, for example.^[3] First, as Neil Campbell proclaims in his textbook, *Biology*, "[b]iology is a visual science, and many of our students are visual learners."^[4] Biology, medicine, botany, microbiology, etc. and their progenitor, natural philosophy, are profoundly descriptive exercises and their subject matter is uniquely visual, as Stephen T. Asma notes.^[5] They all began as a study of forms of life and though the Enlightenment placed imagery as secondary to text and mathematics, images and other forms of visual data and the act of looking have remained at the core of the life sciences. Modern medical diagnostic processes, for example, are not only visual but rely considerably on aesthetic perception as a means of collecting information on the situation. This, of course, is aesthetics in the meaning given in contemporary aesthetics as relating to perception through senses, but it does also include the act of analyzing by distinguishing patterns and sequences in that sensory information.

Second, it is precisely this analysis by sequencing and searching for emerging patterns that is at the heart of the birth of science. Though the collection of wondrous objects began long before, the purpose of the original natural history collections was to create a complete Chain of Being, with all its constituent species in their proper order.^[6] This was thought to be an essentially uncomplicated structure of ascension, from the most primitive species to the most, not evolved as we are now tempted to say, but complex or sophisticated ones.^[7] The natural order was perceived as a rather straightforward case of finding the correct sequence of placement for the species.^[8] The correct order was determined by a meticulous study of the physical appearance and composition of the species, for example, the shape and structure of its reproductive organs.

The first practices of systemized genealogies were predominantly aesthetic, as they were based on the physical appearance of species, discounting physical functions and other underlying differentiating features. Unlike the early physicists who relied on measurable and quantifiable primary properties of the objects of their study (*e.g.* motion and numbers), natural historians based their studies mostly on non-quantifiable secondary properties (*e.g.* color and sound), a fact which Eugene Hargrove sees as a link between natural history science and arts, which are also grounded on secondary properties.^[9] According to Asma, this "emphasis on the phenomena, the appearances of things, was very disturbing to many naturalists of the period because they were afraid that one could not construct a proper science on something so fickle and fluctuating as the senses."^[10] This fear rose partly from a belief that there must be exception-less, universal truths underlying the natural

world.

Third, sharing a past with the constructiveness of the act of arranging, Wolfgang Iser states that there is now an increasingly shared view among philosophers of science that science and scientific endeavors are fundamentally aesthetic, as the constitution of reality itself is aesthetic.^[11] Iser calls this epistemological aestheticization and sees it rising from thinking of a Nietzschean origin that our cognition is aesthetic, since we produce reality with fictional means to match the comprehension that all things are in reality floating, unstable and insecure.^[12] Therefore, scientific thinking and the theories it produces are also floating and elastic in order to match and to survive the fluctuations of reality.

Yet another way in which aesthetics is present in the sciences comes from the fact that scientific knowledge, which is generally abstract and conceptual, often needs to be visualized for the sake of fluent and effective communication. This visualization includes both the formation of a mental picture and rendering something visible. Sometimes these visualizations are symbolic or analogical like the visual presentations of atoms, which, while being perfectly functional visual models, are only that and do not represent the actuality (in this case partly because it was developed before there were means for actually seeing an atom). These kinds of visual means are an irreplaceable part of scientific representations.

Exhibitions, collections, and especially the ordering of a collection are a part of this visualizing process. The basic purpose of any natural history exhibition or collection is to visualize both the organization of the natural world and the laws and structures that, according to prevalent scientific theory and knowledge, govern and describe the actuality of the natural world. Today the components of this actuality most often addressed are evolution, biodiversity, and ecology, and in the original natural history collections the goal was to create a complete Chain of Being, as I mentioned earlier.

These states of aesthetics and aestheticization lie within the character of science, but there is another form of aestheticization present in contemporary scientific exhibitions. In *Undoing Aesthetics*, Iser writes about the "aesthetic furnishing of reality" by which he means "furnishing reality with aesthetic elements, sugar-coating the real with aesthetic flair."^[13] He recognizes these acts of embellishing and enhancing as attributes of a world that "is becoming a domain of experience."^[14] While this trend is obvious in the world in general, it certainly is present in the museum world, where 'experience' as a concept is, for all practical purposes, taken for granted.

A visit to a museum is perceived as a "museum experience" and is strongly and actively associated with presumably positive characteristics that are rewarding not only intellectually but, more importantly, emotionally, by being inspirational, moving, touching, and meaningful on a personal level, by being physically and mentally comfortable and pleasing, and by being able to transcend everyday experiences. These aspects of an experience work on an immediate, sensuous level of experience and rely on the presence of objects in a way that is rather similar to art museums. While the concept of museum experience is partly a result of epistemological aestheticization and particularly of the changes in our understanding of learning processes, it is expressed most visibly as aestheticization in the appearances of exhibitions.

4. The Wall of Sea Life as a visualization of science

If The Wall is a scientific visualization, shouldn't it present its information

through scientific principles of representation? The overall visual characteristics of the display tend to encourage this interpretation. Objects on display are biological specimens that are preserved according to scientific standards, using both wet and dry methods. As individual objects they represent a variety of species and are grouped according to their closest taxonomic groups, from what I can tell, by genus and family. The design of the display is clearly traditional for natural history museum displays, as it advocates a distinct organization of the natural world.

Though the general design appears to be scientific, there are some characteristics of a scientific representation that are missing. The positioning of the taxonomic groups in relation to each other is somewhat unclear. This arises from a lack of clear, even strict visual rhythm typical of taxonomic displays of this kind. Tradition leads us to expect a measured and logically evident and predictable organization of specimens by the transformation of a visually observable trait among specimens, *e.g.* the number of tendrils. Traditionally, one expects the arrangement of specimens to follow a clear geometric plan of rows, columns or circles within which variation would become visible. In this display this geometric rhythm is either missing or is rather loose in comparison to other displays of this kind. For example, the shellfish, which show a great variation of color and a gradual transformation of form, if grouped geometrically, are here presented in a free-form fashion (Illus. 2).



As a traditional-style display, the Wall would be expected to promote the conventions of natural philosophical thinking: ascension, universality, and the orderliness of the natural world. Also, we would expect that these conventions could be deduced to a certain degree from the visual appearance of the display, particularly through the geometric positioning of the specimens, which not only visualizes the taxonomic relationships but also connotes these conventions. Certainly, traditional displays and exhibitions are not necessarily clear-cut in this respect, but it must be remembered that they were not meant for the view of the general public but for the professional community, which had the knowledge to interpret its logic. Here, however, the audience consists mainly of the general public, and the objective of the contemporary museum is to share information that the average visitor does not readily possess. From this perspective, the information is not deducible from the display's visual appearance without the presence of interpretive labels, and though a label naming the specimens and the taxonomic groups is present, its placement at the periphery of the space does not support smooth communication, even if it is noticed by visitors. I did not notice a single visitor utilizing the labels methodically, though my observations are based on a rather small group of visitors. It appears unlikely that the information that the labels

have to offer was communicated.

If we hold that a display visualizing science should share at least some principles of scientific practice, then the Wall should be clear in its meaning and logic. The scientific principles and theories within it should be reasonably obtainable and presented in a fashion that does its best to avoid misunderstandings. The visitor should have a clear, even if not necessarily complete, picture of what is being presented.

Held against this background, it does not seem appropriate to view the Wall as a natural history or science display. There is too much ambiguity inherent in it; its muteness is disorienting. It raises a heap of questions, which could be seen as something positive as leading the visitor to seek engagement, but this is too easily undone by the Wall's unwillingness to provide answers. I tried to find something that would explain the intention behind the display in order to dispel the possibility of a misinterpretation on my part, but the only public mention that I could find was on the museum's Finnish website stating, "Upon entering the exhibition a monumental wall of wondrous life-forms from seas around the world opens before the visitor. Both colorful corals and peculiar looking fish can be found on the wall."[\[15\]](#) This descriptive text says nothing about the science but seems, in its wording, to connote a more aesthetic objective.

5. Could it be art?

What if we, the visitors, do not meet the Wall as science but pick up on the aesthetic clues and try to approach it as an object for aesthetic appreciation in a manner corresponding to the act of approaching art? Whether this happens on a regular basis in the exhibition is unclear because of the lack of empirical study but, again, if artistic means, such as a specific layout and lighting,[\[16\]](#) are intentionally used in the exhibit to induce affective learning, what happens when something that is not art becomes experienced as art-like? If this happens, then the conventions of thinking of art and science as contradictory could be mistaken.

I feel uncomfortable or at least hesitant to state that the Wall is art or even art-like. This calls for a definition of art. What criteria should I use? What definitions would render it art? Dennis Dutton argued in *The Art Instinct* that it is not fruitful for aesthetics to try to define art by studying borderline cases, where definitions get stretched and become disputable, but that instead the arguments should first be formed on clear cases.[\[17\]](#) For the same reasons, I believe the contrary to be also true, that it is not necessarily worthwhile to try to determine if borderline cases are art.

At this point I am unable to determine positively whether the Wall is art, art-like, or not art at all. Instead, I will work from the premise that the Wall has some shared features with objects of art and that there is a connection through family resemblance. Welsch referred to this Wittgensteinian idea in order to settle aesthetic's semantic ambiguity without mentioning art in the context,[\[18\]](#) but Dutton presented a set of cluster criteria for art as a starting point for his efforts in describing an art instinct, and it becomes apparent that his aim is to resolve a similar semantic ambiguity concerning the concept of art.[\[19\]](#) Therefore, when using the concept "art-like," I do not intend to claim that the Wall is like art in the literal sense but that it has some shared aspects with objects of art and their aesthetic appreciation. These shared aspects are numerous, but there are two distinct ones, uniqueness and presence, that may help to discover the ramifications of artification of the Wall because they appear to conflict with the pertinent scientific notions.[\[20\]](#)

6. Uniqueness and individuals

One thing that differs significantly between aesthetic and scientific objects is the notion and claim that works of art or aesthetic objects in general are unique, that they are characterized by concepts like uniqueness, individuality, and autonomy. As Dutton pointed out, "The arts are about particularity,"^[21] while science deals with generalizations. What is relevant here is that we, in our ordinary, everyday parlance, are taught to appreciate objects of art as unique entities that need not be anything else than what they in themselves already are. As Roger Scruton described it, we enter a state of mind which we refer to as aesthetic appreciation and in which we appreciate objects for their uniqueness. When regarded in this way, an object is, in that instance, no longer replaceable by another.^[22] Another quite like it will not do just as well. When we regard something as an aesthetic object, it can thus be said that we regard it as being individuated.

It is remarkably easy to detach one specific specimen from the rest of the Wall and appreciate it first and foremost aesthetically. A particularly good example is two jars, the first holding one and the second two tiny young sea turtles. (See Illus 3.) The juvenile turtles are, like all reptilian offspring, tiny copies of their adult forms, if only "cuter" by proportions. I found it very difficult not to let them affect me by trying hard to see them exclusively as specimens and not as tiny, dead babies, but it was to no avail. It was especially moving and engaging to view the two turtles embracing in the pale liquid of the container, glowing in a warm light that was like a gentle searchlight emanating from beneath and framing them against the dark background, as if to suspend them in the ocean depths where, by rights, they should be. In my eyes, by my sentiments, they became individuals, sadly dead, which no specimen in a natural history collection should ever be. It became impossible for me to see those two jars as specimens. I could no longer study their features and see them as examples featuring the shared attributes of all sea turtles. For me, those features were now faces.



While aesthetic objects can very well be regarded as individuals, scientific specimens are not as a rule perceived as individuals, unique, or autonomous. They are illustrative representatives of their species or kind. They never stand alone, not even when they have something singularly distinctive to them. Uniqueness on an individual level is problematic especially in life sciences. A singular observation of a kind is not assumed as unique but as a first occurrence. If an animal unknown to science is found, it is not referred to as a unique animal but as a member of a previously unknown species. A singular white dove in a flock is not unique but rather a variation. To encapsulate, it could be said that, in science, "unique" translates as "the first observed incident," "one of its kind so far," or "rare." It might be special or unusual but only in regard to the whole, and it is seldom, if ever, autonomous.

While it is perfectly acceptable to view an individual painting in an art museum separately from the rest of the art works and its art historical background, treating specimens in a natural history exhibition similarly would be misleading. There, individual specimens always denote something else and exist within a context; if this connection is ignored, the information contained in the act of displaying becomes obscured. The act of disregarding the context renders the specimen mute. While it can be argued that appreciating a work of art is appreciating it without any use for it in mind, the premise of a natural history exhibition is that all acts of displaying, including the artistic or aesthetic ones, are used as a means for something else. Objects almost always represent a concept or natural laws.^[23] Therefore, if I choose to adopt a somewhat disinterested aesthetic appreciation as my mode of engagement in a natural history museum, I end up undermining some of the didactic goals and opportunities of discovering resemblances and relationship. I turn off its

voice, so to speak.

But by presenting a specimen primarily as an individual and not as a representative of its species, an exhibition can guide its visitors' attention to reach beyond what is present to study the bigger picture. In *Stuffed Animals and Pickled Heads*, Stephen T. Asma related the story of the Field Museum's "jewel" Sue, the biggest and the most complete fossilized skeleton of a Tyrannosaurus rex ever discovered.

... Sue represents the best and the worst of edutainment. Sue is the very embodiment of good museum drama. She is ancient in the way that gives visitors a brush with human fragility and infinitude. She is dangerous and imposing (...) in the way that simultaneously repels and attracts visitors. She's rare and strange, and she kindles a bonfire of imagination and research. Her bones tell many tales that researchers and visitors will be trying to decode for years to come. For example, the fact that she broke her leg (usually instant death for a predator) and that it was partially healed suggest that T. rex may have had continuous mates (a male that brought food, in this case.) Sue will be a prism for many such issues of ethology, physiology, morphology, and so on. Besides all that, she's just plain cool.[\[24\]](#)

As a dramatic figure, Sue is something with which visitors can identify, something that ignites imagination to conjure up scenes of the Jurassic era, with Sue alive and active. A name animates Sue. Having a name connotes a personal history, with additional help from interpretive texts, appropriate scenery, and so on. Sue expands to be more than just a specimen but a manifestation or embodiment of the whole concept of the Jurassic era, thus moving the exhibit closer to an artfied exhibit.

7. Presence

There is more to individuality than just names. In "The Power of Presence: the 'Cradle to Grave' Installation at the British Museum,"[\[25\]](#) Camilla Mordhorst analyzed and described an exhibit quite similar to the Wall, with the exception that the "Cradle to Grave" is an established art work by the artist group Pharmacopoeia, an installation that is a part of a popular, award-winning exhibition, the British Museum's Living and Dying gallery.[\[26\]](#) Mordhorst's article includes a detailed description of the installation but it is sufficient for my purpose here to say that "Cradle to Grave" is a 13-meter-long, low glass case containing two lengths of fabric, one representing the life of an unknown woman, the other a man's. On each fabric, over 14,000 tablets, pills, capsules, and so on are arranged chronologically to represent the medication an average British citizen takes over her or his lifetime. Various ordinary objects, from photographs to condoms, all kinds of intimate things, lie along the lengths of fabric. Handwritten captions provide explanations for each particular photograph: "Dec. 99. Terry's beards trim by Rosie – probably 4 weeks from death from cancer at this point."[\[27\]](#) All this is surrounded by the rest of the exhibition, objects and artifacts of life and death from all around the world in airy glass-and-steel vitrines.

Despite the fact that one is recognized as a work of art and the other is not, the Cradle and the Wall have much in common. They both rely on the act of laying out a representative part of the components of a complex system (medical life history, biodiversity of oceans). Both display a visual organization that represents or visualizes something non-visual (passage of life/time, taxonomy of oceanic species/ecosystem). Both have adopted a visual style that bears resemblance to how objects of scientific interests are often displayed. Though both include scientific information as texts (names of the medicines/species), they have an air of silence or muteness about them. And finally, judging from the visitors' reactions, both are

engaging and well-liked.

Mordhorst proposed that the success of the exhibit and the installation can be explained through “presence,” a concept she drew from literary theorist Hans Ulrich Gumbrecht. According to Mordhorst, the installation allows a visitor to perceive the course of life as an extension in space instead of the more conventional understanding of life as an extension of time, where “[t]he abstract ordering of the life course in time is replaced with a concrete physical length of a fabric in a room.”^[28] This happens, according to Mordhorst, because the installation makes a visitor “enter” the life course when he or she walks along the lengths of fabric at his or her own pace and choosing.^[29] One no longer looks into the installation from the outside or over a distance.

In Mordhorst’s view, with which I concur, it is this self-directed interaction with the material presence that creates an experience of life more through the senses than through the an abstract acknowledgement.^[30] She drew her inspiration from geographer Johannes Gabriel Granö’s argument that if a landscape is to be understood properly, it is “necessary to identify the perceived landscape in its immediate incalculable presence (...),”^[31] that is, as a material life experienced and comprehended through the senses. Also, neither the Cradle nor the Wall offers any particular explanations for the causes of the objects’ existence “but simply expose[s] the presence of our composite medical consumption,”^[32] or the presence, or the existence of the abundance and complexity of sea life.

Gumbrecht sees this presence as an instance where a cultural phenomenon becomes tangible, instantly impacting our body and senses through its tangibility.^[33] This is the dimension of presence and its effects that, according to Gumbrecht, have been overlooked in the humanities because of the emphasis given to the act of interpretation as the means of knowledge production,^[34] but I believe that his position and reasoning are applicable to a wider field of human endeavors than the humanities alone. We are accustomed to expect depth from our observations and from things we observe, that there is more than meets the eye and that that information can be obtained through interpretation penetrating the immediate, material presence of things. It is this conceptual information produced through interpretation, as opposed to the immediate sensory reaction, that is here conceived as something having depth or as something having conceptual meaning. Generally, we have come to value this dimension of meaning over the dimension of presence. As Gumbrecht wrote, we tend to attach positive value to this depth and consider our immediate sensory reactions as superficial because they lack the qualities that would give them depth.^[35]

What if the Wall actually has no depth in the sense explained above? If interpretation is, as Gumbrecht put it, an act of looking beyond the material surface of things to find the meaning beneath the material actuality of the object,^[36] and we are somewhat conditioned to seek interpretation, would it not be confusing to find the Wall to be superficial, with no hidden meaning to be discovered? What if, after spending an enthusiastic moment exploring the creatures of the Wall with aesthetic preferences, I then referred to the conventions of natural history exhibition literature and began to look for an intellectual meaning behind this particular exhibit but found very little that is subject to interpretation? If the objective of a natural history exhibition is to communicate scientific knowledge by utilizing specimens for their illustrative value and use the art of exhibiting to entice interpretation, is the presence-effect of the Wall counterproductive? Does it not go against the scientific principles of objective, distanced observation and reasoning based on quantifiability and repeatability?

There is also another concern. Traditionally, the visitor is the observer looking interpretatively into the exhibit from his or her own separate space. The look is expected to be towards the exhibit; it does not seem conceivable for the exhibit to look back. In the case of the Wall, its strength in numbers gave me the feeling that I was not looking at or observing an exhibit but that I had come to a meeting with the representatives of the oceanic world. As I was looking at the creatures on the wall, they looked back at me. I was standing along or amongst them, and the gap between us, the distance that is often associated with intellectual, analytical objectivity, had somehow disappeared or at least been reduced. As this gap shrunk, my role as an active producer of knowledge shrunk along with it. The specimens had found their individual voices. It was as if the tiny turtles had themselves told me their short life history and the same level of personality was present in every specimen. They confronted me as individuals, as members of species traveling on their individual evolutionary roads, as a system of diversity. I sensed a glimpse of the interconnectedness and the changeability of the world. Gumbrecht described moments of presence like these as moments of intensity, where the state of being-in-the-world suddenly appears to us.^[37] In that intensity of presence, an intuitive comprehension of the complexity of the world seems possible.

8. Conclusion, or towards a reconnection of the aesthetic and the scientific

The questions I posed at the beginning now seem to assume that the artification of natural history exhibitions would somehow lead to a dilution of visitors' comprehension of science, and that the inclusion of the artistic and aesthetic would somehow mislead visitors to place less significance on accuracy, precision, objectivity and the scientific method in general. How can scientific laws founded on generalizations be formed if each scientific specimen is to be treated as unique? The presence-effect of the Wall does interfere with some of the principles of science, namely objective distance and the direction of observation, but is this truly counterproductive, a "bad thing"? I would say not.

Could it be, in fact, that the artification of natural history exhibitions is on some level a result of the efforts to reconnect the aesthetic and the scientific? In *Foundations of Environmental Ethics*, Hargrove described how closely early natural history was linked with the arts and aesthetics, especially through landscape painting during the nineteenth century.^[38] Many natural historians were accomplished drawers (partly because of a need to make visual records before cameras were available), and many artists have had a trait of a naturalist in them, like Leonardo da Vinci, to mention an obvious example. The connection of artistic/aesthetic does not end with a scientist's ability to draw but extends much deeper, as demonstrated by Welsch's epistemological aestheticization. As he wrote: "[A]n awareness of cognition's and reality's foundational aesthetic character is currently permeating all academic disciplines,"^[39] and the Wall and the Cradle show how the public reconnection of science and aesthetics can be possible.

Another related issue is the ongoing discussion on the similarities between artistic and scientific practices. Gumbrecht addressed this by suggesting that "aesthetic experience" as a concept should be extended, and by describing it as an oscillation between "present effects" and "meaning effects."^[40] In *Artscience – Creativity in the Post-Google Generation*, David Edwards offered descriptions of how this oscillation can be seen in the work of individual scientist/artists, such as ethnomusicologist Kay Kaufman Shelemay and cell biologist Don Ingber, who utilize both science and art in their practices. Through his narrative it becomes apparent how

significant a role this artistry plays.

This suggests that perhaps natural history exhibitions have at one point begun to put too much effort on interpretation, which has led to the undermining of the presence and being-in-the-world to which Gumbrecht linked his concept. This has perhaps not been an acute issue until recently, but now ecology and environmental studies have made it evident that we can no longer hold on to an approach that places us as observers outside the world. The interconnectedness and unstable, fluctuating nature of the world are becoming more recognized. One way in which this can be seen manifesting itself is the museum visitors' tendency to seek experiences of connectedness. It has become necessary to represent this interdependency and to give the visitors an actual bodily feeling that we are in the world together. Artification appears as a necessary strategy, for through it the notions that are difficult to communicate in the language of science can be expressed in the language of art.

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Endnotes

[1] I use the terms engaged and engagement in the sense described by Arnold Berleant in *Art and Engagement* (Philadelphia: Temple University Press, 1991).

[2] *E.g.* the Museum of Scotland in Edinburgh includes works of Andy Goldsworthy.

[3] Wolfgang Iser, *Undoing Aesthetics* (London: Sage, 1997), pp. 8-9.

[4] Quoted in Stephen T. Asma, *Stuffed Animals and Pickled Heads – The Culture and Evolution of Natural History Museum* (Oxford: Oxford University Press, 2003), p. 242. Exact reference to the original is not given.

[5] Asma, *Stuffed Animals*, p. 242.

[6] Arthur O. Lovejoy, *The Great Chain of Being – A Study of the History of an Idea* (New York: Harper Torchbooks, Harper & Row Publishers, 1960; 1st published 1936), p. 59.

[7] Asma points out that though we can put organisms "into a sequential order of complexity it does not mean that this sequence tells us the actual history of life...What we recognize to be higher and lower as determined by which characters or traits we choose to analyze." Asma, *Stuffed Animals*, pp. 133-134. See also Lovejoy, *The Great Chain*, p. 59. According to Lovejoy, this *scala naturae* was suggested to the naturalist and philosophers by Aristotle, though he recognized "the multiplicity of possible systems of natural classification...." *The Great Chain*, p. 58.

[8] Though the natural order was believed to be linear and direct, the task of proving it so was not. Many contradicting solutions to various problems of continuity were presented, none of which was readily agreed upon by

the community of natural historians. Adjustments to the genealogy of life are still made quite regularly. The Tree of Life can be found online at <http://tolweb.org/tree/>.

[9] Eugene C. Hargrove, *Foundations of Environmental Ethics* (Denton: Environmental Ethics Books, 1989), p. 78.

[10] Asma, *Stuffed Animals*, p. 122. See also Lovejoy, *The Great Chain*, pp. 26-27.

[11] Welsch, *Undoing Aesthetics*, p. 21.

[12] Welsch, *Undoing Aesthetics*, p. 21.

[13] Welsch, *Undoing Aesthetics*, p. 2.

[14] Welsch, *Undoing Aesthetics*, p. 2.

[15] Originally: "Saavuttaessa näyttelyyn sisälle, katsojan eteen avautuu valtava seinällinen maailman merien ihmeellistä elämää. Seinältä löytyy niin värikkäitä koralleja kuin omituisen näköisiä kaloja." Translation by the author.

[16] By artistic means I mean the methods and techniques used in various arts to produce not only the actual work of art as a material object but the rhetoric of wording, composition, color, sound design, and so on, that affect the viewer. In practice, this includes an understanding of the elements of layout, that is, how different compositions promote different reading orders and command the reader's focus, and how lighting can be used to create atmosphere as, for example, in how an object can be made to have an air of sacredness by lighting it from above. These means work in the realm of connotations and subjectivity as opposed to the scientific mode of communication that aims for accuracy, preciseness and objectivity. If scientific means are literal, then artistic means are poetic.

[17] Dennis Dutton, *The Art Instinct – Beauty, Pleasure & Human Evolution* (New York: Bloomsbury Press, 2009), pp. 50-51.

[18] Welsch, *Undoing Aesthetics*, pp. 8-9.

[19] Dutton, *The Art Instinct*, p. 51.

[20] There is one more point to consider before continuing. If the Wall is art, then what exactly is the work of art? What is it that is being artfied? Is it the whole marine biodiversity exhibit or just the Wall or the individual specimens? Somehow my experience of the Wall fluctuates between experiencing singular specimens and the whole space as the art work, and I cannot determine which one it is. Therefore, it feels most appropriate to think of the Wall as quite like a *Gesamtkunstwerk*, where the art lies in the fullness of the experience.

[21] Dutton, *The Art Instinct*, p. 2.

[22] Roger Scruton, *Art and Imagination – A Study in the Philosophy of Mind* (London: Methuen & Co., Ltd., 1974), p. 23.

[23] See Camilla Mordhorst, "The Power of Presence: the 'Cradle to Grave' Installation at the British Museum," *Museum and Society*, Nov. 2009. 7(3), 202.

[24] Asma, *Stuffed Animals*, pp. 269-272, quote on p. 270.

[25] Mordhorst, "The Power of Presence," pp. 194-205.

[26] Mordhorst, "The Power of Presence," p. 194. www.cradletograve.org

offers a detailed representation of the installation including some photos of the exhibition space itself.

[27]

http://homepage.mac.com/susiefreeman/cradletogrove_org/m.photo.html?

36. Mordhorst's quote in "The Power of Presence" (p. 197) has 'beads' instead of 'beards' but the original text from the art work's own web page has 'beards,' so I am quoting from the original here.

[28] Mordhorst, "The Power of Presence," p. 196.

[29] *Ibid.*, p. 197.

[30] *Ibid.*

[31] *Ibid.* Mordhorst doesn't include page numbers for the quote. Italics are mine. J. G. Granö, *Reine Geographie* (Helsinki: Publicationes Instituti Geographici Universitatis Aboensis, 1929).

[32] Mordhorst, "The Power of Presence," p. 197

[33] H. U. Gumbrecht, *Production of Presence – What Meaning Can Not Convey* (Stanford: Stanford University Press, 2004), pp. xi and 17.

[34] *Ibid.*, p. 2.

[35] *Ibid.*, p. 21.

[36] *Ibid.*, p. 25.

[37] *Ibid.*, pp. 97-99.

[38] Hargrove, *Foundations of Environmental Ethics*, pp. 84-85.

[39] Welsch, *Undoing Aesthetics*, p. 22.

[40] Gumbrecht, *Production of Presence*, pp. 97 & 2.