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# Big game in the city: the other side of the coin

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## Abstract

The continuing clashes of the natural against the artificial in the built environment are a source of ongoing insight into both, nature and human nature. Circumstantial evidence based on choices of urban landscapes and surroundings indicate that humans follow closely innate aesthetic preferences and “creature comforts.” These appear to be old adaptations that we carry as hereditary baggage. The beautiful and the virtuous tend to be confused. This leads to massive and thoughtless destruction of native biota in favor of artificial landscapes that are very costly to maintain, but which do please our aesthetic senses. We emerge as a species that continually makes into art whatever is in its power to change, and in that sense is, biologically, condemned to art. Both the sensory (aesthetic) and the executive function (art) are in the service of status ranking, another innate behavioral dictate we share with vertebrates. However, we also possess the ability to subjugate innate drives, and cheerfully do so when part of a loyal group in democratic agreement on principles. That is one lesson derived from the study of the successes of North America’s system of wildlife conservation.

## INTRODUCTION

The interaction of wildlife with the city informs us, no doubt, about the nature of adaptation in free-living species. However, the sheer artificiality of the built environment, its consistent structural patterns that transcend cultures and its clashes with nature are also a source of insights about ourselves. Wildlife, in particular big game species, can therefore inform us not only about wildlife, but also about human nature - the other side of the coin. That is, we can use free-ranging visitors of other species to our spaces to learn about ourselves. Consider why sights such as the following may startle us:

- a flight of noisy Canada geese in V-formation flying down a traffic-choked street, such as Broadway in Vancouver, and land on the upper balconies of residential towers,
- a gander on the roof of an apartment building conversing loudly with a goose on a patch of green lawn below,
- a bull elk walking down the streets of Banff with admiring, camera pointing tourists in tow, while the less regal cows graze on lawns, subject to less attention,

- a mule deer buck resting and ruminating on the porch of a vacation home in Waterton National Park’s town site,
- a group of school children laughing and gesticulating, absorbed in their own affair, while on the other side of the street walks a rutting mule deer buck with several does, and neither of the two parties paying the slightest attention to one another,
- a little boy drinking from a drinking fountain, who notices a huge bighorn ram standing a few paces off among tourists. The ram looks at the boy and the fountain. The boy steps back, but keeps the water running. The ram steps forward, drinks from the fountain, then steps back a little. The boy now releases the faucet handle, all matter of fact, as the ram turns and walks to the green lawn where he begins to graze calmly.
- a young bull moose had walked in later May into Calgary, following the banks of the bow River. It settled on an island, where it was regularly all summer long. Then, when the time of the mating season arrived, the moose left his island, entered

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the city and died hours later following a police chase in a failed attempt at capture.

- a large bull elk lying prostrate on a town's lawn. Surrounded by park wardens, who saw off his antlers, drag him into a trailer, transport him to the edge of the national park, where there are no houses or lawns a few people, where he is released to be shot shortly thereafter quite legally as an antler-less elk just beyond the park's border,
- or, turn on the news on a local channel and see an armed emergency police unit, followed closely by reporters and camera crews, descend on two young bull moose who had wandered into a peripheral city park and were feeding calmly on the lush willows along the creek. Shots break, the two bulls sway, stumble and fall.

## **INNATE AESTHETICS: LANDSCAPES**

These interactions of nature with the city do fall into a coherent pattern, but only if we look at a larger picture of what determines our choices about nature, and the environment we choose to create for ourselves. The patterns of landscape changes we universally generate in urban areas provide powerful clues. It was a seasoned ecologist, Gordon Orians (1986), who suggested that the aesthetics expressed in city landscapes are based on innate adaptations. He found that landscapes judged as the most "beautiful" by a large sample of urban residents were savannah landscapes, this is, green grass and trees. Moreover, trees judged to be "beautiful" were such whose lowest branch could be reached by hand. Orians concluded that the aesthetic preferences expressed here were ancient and adaptations that guided emerging hominids to productive and safe environments. Such are the savannahs of Africa, the most productive terrestrial ecosystems, and therefore, good places to search for food, particularly in low carpet of sprouting green grasses (suggested by author: flowering herbs and low shrubs). The wide-open spaces between trees allow an unobstructed view to distant fellow conspecifics or predators, severely limiting surprises from predators. In the wide, open spaces individuals could assemble into "selfish herds," a common anti-predator strategy assumed by innumerable vertebrate species living in open spaces. The "climbable" trees also represented security. They are "escape-terrain" from predators. We recognize from these circumstances the australopithecine stage of human devolution. This was a distinct, lengthy, pre-human stage of adaptation confined to Africa of some 5-2.5 million years ago, towards the end of the Tertiary Period and well before the Pleistocene.

## **FUNCTIONS OF AESTHETICS**

Beauty is not only a guide to favourable landscapes, but to a number of favourable things. Beauty in conspecifics implies virility, health, and the successful mean (or, conversely, avoiding chancy extremes in mate phenotypes) as seen in the enhancement of facial attractiveness by averaging facial features (Langlois et al. 1990). Beauty in tools implies superior function; a sense of beauty is indispensable in tool making. In addition there are comforts that make us gravitate to where we are neither too hot or too cold; that guide us to tasty foods, comfortable clothing, and good smelling localities and individuals. We do not question beauty. We act on it. As we have grown in technological power to change landscapes, we create "grass & trees" landscapes wherever possible, be it the native landscape desert, prairie, taiga or tropical forest. With much expenditure of skills, energy, water, herbicides and pesticides we keep in place the artificial grass & trees landscape, to supplant a species-rich ecosystem of native flora and fauna with a species-poor, artificial, unstable ecosystem. We add to this grass & trees landscape patches of brilliant flora with very showy artificial flowers and shrubs. To these eye-catching horticultural elements, we often add shallow ponds. This reflects, again, the green, productive African savannah as it exists after the rainy season when shallow ponds dot the landscape. These become increasingly attractive as the water recedes and the fertile shorelines sprout a continuous band of fresh, green vegetation, while on the drier, more elevated parts of the land the vegetation is drying out. Australopithecines were probably surface feeders that followed the green ponds fringes as the dry season advanced (Geist 1978).

## **BEAUTY AND VIRTUE CONFUSED**

Man-made landscapes and structures can support, quite accidentally, some natural elements. However, these cannot stall the inadvertent destruction of nature. For the sake of beauty, we ruthlessly and unquestioningly destroy nature. This is environmental destruction on a grand scale and all for the sake of an instinct. We act on aesthetics, ancient adaptations long ago made obsolete by successions of subsequent adaptations as we evolve into full-fledged humans. Here is large-scale destruction not for the sake of a human, but of pre-human notions of beauty. We replace nature with a beautiful artifact. A landscape filled with classical ethnological (innate) "super-stimuli" – grass of the brightest green; trees green, lush, symmetrical and climbable; flowers large and bright, literally – "larger than life." Viewing landscape architects and urban

designers, embarked on beautification, as arch-destroyers of the earth as they replace native landscapes with “beautiful” landscapes, may come as a surprise to some. As I expounded this point at an architecture conference, a senior architect jumped to his feet as and shouted “But, Dr. Geist, do you want to live in ugly surroundings?!” Clearly, the message of the famous architect Ian McHarg (1971), “*Design with Nature*”, had not been appreciated universally by his colleagues.

## CREATURE COMFORTS: CAVES.

We must add several dictates that determine the environment we build. Foremost among these is our desire, nay our addiction, to stay indoors. Today we spend more than 95% of our time within roofed structures, our artificial caves. Cities are never-ending rows and stores of such caves, our settlements, and our working and entertainment places. Moreover, we have caves on wheels and on wings. No past society of cave men could have been as wedded to caves as we are today. Surely, the age of “cave men” has not past.

The origin of the modern “caves” harks back to a profound breakthrough, without which we could never have become human, never mind evolving into sophisticated, brainy Ice Age giants, the super-species *Homo sapiens*. The breakthrough was building, (on the ground and far away from trees), a predator-proof enclosure, within which we could safely spend nights, despite being surrounded by lions, leopards, saber-toothed cats, hyenas, hunting dogs, etc. that would have found us otherwise perfectly palatable prey. Our adapting to the dry, treeless steppe was totally dependent on finding a solution to the problem of how to survive at night on the ground, and not in trees. How can a helpless, almost blind human be safe on the ground at night when predators are most active? The answer to that problem is as good today as it was then: take advantage of the fact that predators are hypochondriacs. One can do so by building a small, covered space, a small flimsy structure, as long as it is interwoven with thorn branches (Kortland 1980). This structure, coupled with mimicking predator threat noises, reinforced by an occasional jab with a sharp digging stick, is expected to keep hungry or curious predators away (Geist 1994). These predators anxiously avoid thorns or combat with a hidden and unknown, yet threatening opponent – as they have to, as injury readily spells death to a carnivore. Being hypochondriacs is elementary self-preservation for predators. We need to be under a roof at night, or – even better – in a cave, in a cliff. This is an inheritance of ours following our australopithecine existence in Africa, acquired on the way to breaking through the ecological barrier posed by the

severe differences in seasons of the steppe. Among primates only the hominid lineage succeeded in this break-through. This opened the way for adapting to temperate, cold, periglacial and ultimately, Arctic climates. However, comparable breakthroughs are very common in large herbivorous and carnivorous Pleistocene mammals (Geist 1978, 1994, 1998).

## INNATE ATTENTION FIXING

Superimposed on our artificial savannah and caves, are innate determinates of “beauty” or attention fixation, most prominently, symmetry, opulence and bloating. That is, if we analyze the attention fixation mechanism used by displaying animals when signaling to one another, we discover the classical mechanisms of attention fixation to a picture plane as long ago discovered by artists and taught to art students (Geist 1978). Symmetry is a vital element of most nuptial and aggressive displays (Geist 1978; Von Frish 1974). Symmetry is a proxy for “health.” The more symmetrical an individual the healthier it is (Parson 1990; Moller 1990). Symmetry is also short-hand for danger as it signals an individual orientating towards the onlooker. In short, symmetry is a powerful attention getter, and a primary determinant of beauty.

Opulence stands for luxury, for richness of the environment, or for the abilities to procure material resources by a well developed, opulent individual. Opulent, large, fully formed luxury organs signal success at finding more than the amount of nutrients required for maintenance. It thus signals a very competent individual at finding resources. Opulence is thus another attention getter. It plays a part in ourselves paying more attention to the largest-antlered elk on the golf course, than to its small-antlered rivals, let alone the antlerless cows. Nor is the fascination with exceptionally large antlers recent. Medieval castles have been built to house and display opulent deer antlers, such as the hunting castle of Moritzburg, close to Dresden, German, while cave sketches from the Upper Paleolithic indicate that our wild ancestors paid much attention to large antlered or large horned male ungulates.

Bloating is an ugly word, but an appropriate one – addresses our attraction to ever larger attractive specimens. It stands for “bigger is better.” This indicates within us sensitivity for super-stimuli. The biological basis is similar to that of opulence: bigger also signals richer environments, or a better ability in making use of the environment.

## INNATE STATUS DISPLAYS

The ability to express our notions of aesthetic in our built environments, shaping such to satisfy innate attention getting principles, is linked within

us to another innate behavioral system - that of dominance displays. These displays are found as routinely in animal behaviour as are livers or gonads in anatomy. The primary activity of dominants in social interaction is to display their superiority to subordinates. In large mammals dominance displays underline the size, weapons, skills, might or "courage" of the displaying dominant. It is - frequently long-winded - bragging or showing off. Anatomical display organs, which may be enlarged on demand, enhance the picture plane of the displaying individual, while sounds may be uttered and smelly glands everted. While in large mammals dominance displays are innate fixed action patterns, in humans they are shaped culturally. Showing off in obvious or subtle form remains as the principle, but showing off is created from cultural elements. The display organ is something we have made; the display implies superiority over the viewer. We show off mightily, but in very complex, often subtle fashions, because of the diversity of cultural elements available for display. Moreover, because our displays are created from what we have invented, and because redundancy can be habituated to while novelty re-alerts the onlookers, our displays vary continually. A noteworthy peculiarity of displaying affluence is to incorporate outdoor nature, back into our caves. At its most modest it is potted plants in a tiny apartment, then pets are added, then a fireplace. At its most opulent it is indoor gardens, trees, cliffs and waterfalls. For a detailed taxonomy of human dominance displays see Geist (1978).

## ART FROM BIOLOGY

We thus generate "art" with whatever we do, and we show off with it. Our ancient caves and thorn shelters are transformed into the art form architecture, or food habits into the art form cuisine, our quest for food into horticulture and domestication, our body coverings into fashion, grooming into cosmetics, our vocal and visual mimicry into music and dance, our communication into poetry, theatre and literature, our knowledge into science and scholarship, our procreation into romance, bordellos and pornography, our skills into sports, paintings, sculptures, crafts, olfaction into the art of perfumery, aggression into uniforms, martial music, arts and competitions, etc. Even where an enterprise is thought of as utilitarian, as in animal domestication, there is a powerful art component shaping it. We humans as a species live life as art. Since we are bound to follow innate aesthetics, as exemplified above by the savannah & case structure of the build environment, among others, we are perpetually condemned to art (Geist 1994). We can no more escape art than we can escape breathing. By innately

following aesthetics, we prefer beauty to reason - unless we are explicitly aware of it and then form an intellectual opposition. Moreover, designers of the built environment tend to confuse beauty with virtue, which is one reason why our designed landscapes destroy precious native ecosystems, a triumph of egocentric design over understanding. The "bottom line": humans are virtually unquestioning followers of innate aesthetics, urges, fears, and appetites. Others, for reason quite different, have come to similar conclusions about human nature. Most astonishing when viewing the early debate between ethologists and psychologists, is the emerging view in psychology that humans are far more subject to hereditary constraints in their behaviour than recent conventional wisdom would admit (Bailey 1987; Cohen 1999).

## BIG ANIMALS AND THE PAST

Enter large mammals in our cities - free-roaming or in zoos. One needs to point out a bias in North America about free-roaming large animals. Not all large mammals are equally likely to enter cities. Those that do are predominately ancient North Americans, survivors from the late Pleistocene Rancholabrean fauna which collapsed post-glacially. Only a handful of species survived of the approximately 70 species of mammals larger than coyotes that were present. Into this ecological vacuum came an East Siberian fauna across the Bering Straights, humans included. The species not likely to enter our cities are the recent Siberian immigrants. This is particularly striking for carnivores: the native American coyote, mountain lion and black bear enter our suburbs and cities and thrive and disperse with little protection, the Siberian immigrants, on the other hand, the gray wolf, grizzly bear, and wolverine do not. Old native herbivores such as *Odocoileus* deer, pronghorns, and peccaries also readily go into cities and may even form viable populations in suburbs and city parks. The reason why old native American species are so adaptable almost certainly harks back to the exceptionally intense predation that typified Pleistocene North American faunas (Geist 1998). Frequent encounters with a diversity of skilful and determined predators made North American herbivores clever and circumspect in the face of danger. Siberian herbivores, in particular elk and moose, are less reluctant than East Siberian carnivores to enter and live in resort towns. Neither the elk nor our current moose were part of the Rancholabrean fauna. However, both were of and on in Alaska for much of the Pleistocene, the elk for at least a million years. Both species must periodically have been subject to the severe predation of native

American predators. This may be the reason why they act somewhat like “Old Americans.”

Zoological gardens are an ancient urban phenomenon, satisfying our deep curiosity about large, moving things. A bull elk calmly walking down Banff Avenue, traffic to the contrary, triggers intense interest. The reasons, again, hark back to our evolutionary past, foremost among them security. Note: we look upon a bull elk in a zoological garden with considerably less awe. We are secure in a zoo, but not on equal footing with 350 kg of armed elk on a city street. We cannot help becoming alert as the bull come close. In addition, large species draw instant attention, which small animals, such as spiders or insects do not. It appears that interest in the latter requires a passion brought on by education, possibly an acquired as opposed to an innate interest.

Secondly, large mammals most likely attract and become a matter of imagination and dreams, because for millions of years they were to us an important food, and item of intense desire – hence fascination. Why do we stare, run after, and photograph them?

Thirdly, the elk represents in the latter context a challenge. At the mildest, it is expressed as teasing. We were in the distant past “somebodies” by besting, by dominating, by winning against dangerous wild animals – the saga of the cave painting of Upper Paleolithic hunters (Geist 1978, Guthrie n.d.). Now, given an excuse to “best” that elk, and it will be swiftly – and I dare say irrationally – taken! It takes very little excusing before men in power will subdue or kill a big game animal, and moreover, will consider it an act of bravado, which they are quite happy to show off with, inviting to be observed, photographed or filmed in the act.

The irrational act is to remove the bull, which was probably born in that town and had lived in it all his life, surrounded by people, houses, and traffic. The rational act, which is void of personal heroic displays, is to design the town so as to segregate elk and people. However, that would mean to restrict or eliminate “green lawns.” It would thus violate our deepest instinctive aesthetics. In a choice of elk but no lawns, or green lawns but no elk, we can safely predict that the elk will lose. Never mind that it is a species barely saved from extinction this century. The author detects the same hostility towards elk as “despoilers” of aspen trees in national parks in North America, never mind the abundance of aspen as a common weed in much of its distribution, and never mind that a megafauna “always destroys trees!” The same negative perspective is reserved for elephants in African national parks as destroyers of trees. Are we that preoccupied with “grass and trees?” Are we incapable of accepting that natural landscape with its megafauna always alters the distribution and structure of the vegetation and disturbs the soil? It is that which is natural, not a

landscape free of megafauna and thus unobstructed tree-growth.

The bull elk, the bighorn, the black bear or the deer in town astonish and surprise because we expect them to flee from us, to fear us, to be “wild.” The ready acceptance of humans by urban big game even offends some people. Some express aversion and are quite willing to destroy such “domesticated” animals so as to insure that big game is always wild and in a “wilderness.” This may be a romantic notion, as many others welcome the free, large mammal in an urban setting. Far from wishing it harm, they enjoy its presence, and – also very dangerous – are attracted to it with the notion of sharing its affection. These large mammals are ruthlessly logical in exploiting their experience with us, as was the big ram that saw the water spouting, and the little boy who instantly and quite matter of fact understood the big ram and allowed it to drink.

## CONCLUSIONS

The structure of our cities and its interaction with nature inform us that we strive to live where our creature comforts, including the wish to dominate, and our inherent sense of aesthetics are satisfied. How to manage nature that creeps into our cities is primarily a function of our safety and our aesthetics. Nature, which does not conform to either, is removed and replaced with “safe and beautiful”, and usually artificial elements. That clashes with the ability to fit ourselves into nature, and “designing with nature”: is thus, clearly, an intellectual task. It may not conform to our emotions. Nor does it readily satisfy our sense of worth, as it is based on generating personal differences to distance ourselves from and stand out from others of our species. Conservation thus demands subjugating, in principle, our emotions to reason, and no easy or satisfying task for an individual if this means giving up personal power. However, matters are neither dismal nor hopeless. Just as it is biological to act on instincts, it is our innate ability to dominate over our instincts, even over our reflexes (Geist 1978; Cohen 1999). This is a distinguishing human feature. Such subjection to reason over emotions is accepted by most if it becomes a democratic group effort. This is one lesson from the great successes of North American’s system of wildlife conservation (Geist 1999).

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