This is not going to be a lecture, but—I hope—a discussion. The theme I am proposing is "What are the consequences of humankind becoming a predominantly *urban* species?"

In terms of the crudest and most simple-minded of definitions, that of primary residence in conurbations officially listed as 'cities', we—that is, *Homo sapiens sapiens*—passed the 50-percent mark some time last year or this year. See, on this point, the *Scientific American* of September this year. So we will be talking about a *fact*—a fact and its probable future. Perhaops I should add that at least one well-informed writer has placed this transition a few years earlier—a difference that is of no basic importance

I am, most certainly, *not* an expert on this topic, perhaps at most on little historical fragments of it, mostly in the Chinese world from archaic times onwards. That is why in particular I would value hearing the interplay of a variety of intuitions and interpretations from a much wider range of knowledge than my own, because our *habitat*, our *immediate* environment, though by no means the *only* one of relevance, as one grows aware once one realizes the range, and tenacity, of the tentacles through which influences from far away flow *to* it and *from* it—our *habitat* is the most formative short-range *general* influence on who we are, and what we, and our children, will tend to become. These days it is also a largely artificially constructed *niche*, both an environment-transforming physical-architectural and *functional* niche, like the mounds in which many kinds of termites live, but—probably uniquely in our *human* case—also a niche that surrounds us and imbues us with an *imagined* life of *shared* meanings and interpretations, most specifically of languages and symbols.

I would like to suggest that we begin with a swift survey and a tentative evaluation of the characteristic effects that are often alleged to be associated with intensifying urban residence in a population. Examples are a *reduced environmental footprint* per person, in part because of lower per-person energy requirements than for rural or suburban areas, whether for transport or temperature control, etc, and an alleged *increased quickness of mind and*, *indeed, of physical movement*, and *at least the simpler, practical forms of creativity* arising, it has been suggested, from more frequent and varied interpersonal interactions. A fascinating possible example may be the invention of a new form of small-denomination money—*cellphone minutes* that can be transferred by mobile phone in order to effect a purchase or a sale, also on the phone— though it is also used in the countryside as well. Highly concentrated slum settlements can also restore *walking* to a position of major importance in

human mobility in daily life. Education, health, water, and electric power are also cheaper on a per capita basis because of the demographic concentration. Conversely, cities are generally agreed to increase the pressures of stress, and the transmission of infectious disease. So, should we, as environmentalists, in fact be welcoming the well-run megalopolis? Do we agree with the words of the *Scientific American* that we have "seen a better future, and it is urban"?

The most persuasive environmental pro-urbanist around at the moment is probably Stewart Brand, who a generation ago inspired the Whole Earth Catalog that preached a very different environmentalist creed, and which some people, like me, found generally attractive even if in some respects distinctly kinky. In 2009 he published a very different book, Whole Earth Discipline, in which he argued that the recent almost worldwide surging migration from countryside into the cities in many regions of the world, often creating huge, superficially chaotic but entrepreneurially vibrant slums, was to be welcomed as solving most of our major environmental problems, regardless of the short-term mess. In particular, he maintains, it is associated with the crash of the birth-rate below replacement levels as women get greater operational *freedom* to act as they want, and more jobs that they can do become available to them. A double gain. In India it can also dissolve much of the servitude imposed by caste. In urban areas children bring no great economic gain to parents, and the social and financial costs of childbearing go up. Thus, fewer children. I wonder how far it applies to core Muslim populations; there is certainly a correlation in the United States between large families and Christian fundamantalism. This new urbanization is also part of another familiar phenomenon, the spread of, loosely speaking, the informal economy, which the OECD has predicted will involve two-thirds of the world's labour-force by 2020.

According to Brand, urbanization also — allegedly — takes some of the pressure off rural natural systems (SB p. 68), though I think this is open to challenge, maybe along the lines of the picture sketched in Bill Cronon's *Nature's Metropolis*, an environmental history of Chicago. The city in terms of its impact exists hundreds, often thousands, of miles beyond the immediatley visible city. Brand does also, however, realistically concede that cities «concentrate crime, pollution, and injustice as much as they concnetrate business, innovation, education, and entertainment» The authors in the *Scientific American* sometimes fall into traps created by their own enthusiasm: thus they claim that the first industrial revolution was mainly urban. It was in fact a mix but in the earliest phase the steam-engine-draining of

Cornish tin-mines, or the pioneering modern iron metallurgy of Coalbrookedale, and most of the early spinning machines worked by nearby waterpower were conspicuously rural. Another point that tends to get forgotten, though stressed long ago by Lewis Mumford in his *The Culture of Cities*, was that many premodern cities, notably in the Western Middle Ages, had lots of green fields within their walls. Urban demographic density increased markedly during and after the Renaissance. Thus the term `city` can be tricky when used in far-ranging historical comparisons: its sense is not entirely stable.

Other aspects of SciAm history are distinctly wobbly. On the famous John Snow, who cracked the problem of the first level of the transmission of cholera, Edward Glaeser writes: «John Snow, a founder of epidemiology, had his great breakthrough in 19th-century London when the city itself provided the information he needed to understand cholera.» Presumably he means the presence of the famous contaminated well, whose function he grasped -- namely that the vibrio vectors — the vibrio is a bacterium — were borne by its water, and that he then persuaded the authorities to shut. He did not, strictly speaking, «understand cholera» as such, but rather the first level of its transmission. There is a second: the vibrio carried along by the water has itself to carry and emit a toxin if it is to transmit the disease. As an argument for the release of creative power by *cities* as such this passage is a rhetorical bypassing of scientific method. Coastal China suffered from Bengal cholera at about the same time as London; in fact there were several successive attacks. It also had a number of quite large coastal cities. For example, Shanghai at this time already had close to the annual tonnage of shipping that went through London. No one in China solved the problem of the primary mode of transmission, for the most likely reason that Snow's manner of thinking in a culture that had already had close to two centuries of scientific revolution was significantly, if not enormously, in advance of the Chinese style of thinking about such matters, and this was in essence a cultural matter. Proper scientific thinking has to at least try to control all these major variables, for all that in the humanities, as history is, this is extremely tricky and virtually never entirely possible.

Following this sketch of the at times recklessly stated and inadequately qualified pro-urban case, I would like to introduce some of the more nuanced ideas of a French scholar who has spent more than two decades looking at some of these themes, but whose work is barely known in the Anglophone world. This is *Augustin Berque*. He is a French Japanologist, a geographer, and an environmentalist. He has written on many topics of interest to

environmentalists, such as the experience of socio-physical space in Japan-Vivre l'espace au Japon-but I will concentrate today only on one. This is that developed in his most recent book, Histoire de l'habitat idéal. De l'Orient vers l'Occident, the history of the ideal habitat, that is to say a dwelling and it surroundings, from the East to the West, through the long run of almost two thousand years. In it he deals with a paradox of which most of us are to some extent already aware, but he does it with a tenacity and an eye for detail that are unusual. This paradox is that in many ways the passion for Nature, or, rather, the imagined passion for an imagined Nature, leads to acts that tend in fact to destroy Nature. The most familiar example is the sprawling suburbanization of Nature by far-flung patterns of semi-isolated residences of well-to-do commuters, longing for landscape, but linked by the intensive routine use of motor vehicles and environment-obliterating infrastructure. His view in this regard is that «nature - as a representation - has become the enemy of nature as an ecological fact.» (346) «We love the landscape,» he says, « but kill it.» (344) With typically mischievous humour he then mentions a recent Japanese advertizement for a massive gas-guzzling, four-wheel-drive, supposedly cross-country, vehicle produced by Mitsubishi: «You love Nature, » says the ad to the wealthy consumer, « Prove it to her with the new Pajero 7-seats.» He could well, had he known about it, also have mentioned the case a few years ago in Adelaide, South Australia, of a firm that was found to be doing very well selling artificial mud to city-dwellers to splash on the lower levels of their overly clean four-wheel drives to make it *look* as if they had *really* been out in the wilds of the bush. -Loving nature.

But Berque is far more complex than a mere propagandist, or mordant humorist, though he can operate in both of these modes. He is well aware that, just as in classical times, only those who are to some extent freed from the struggle from economic survival normally have the time, energy, and occasion to appreciate nature in and of itself at a deep level. «To love nature,» he observes, «one should not be a peasant.» (346) He quotes a remark made by a friend of the painter Paul Cézanne, who was, as in well-known, obsessed with the shape and presence of a local mountain, that of Sainte-Victoire: «Hold on just a moment, I have sometimes doubted if peasants know what a *landscape* is. A tree -- yes. That seems bizarre to you. I have at times gone for walks, «on which», behind his cart, I have accompanied a farmer on his way to sell his potatoes in the market. He had never seen Mount Sainte-Victoire.»

At the same time Berque is aware that it is the so-called `modernity` of our lives, based on technology made possible by modern science, that creates the *machinery* that replaces the

serfs of the ancient and mediaeval nature-loving upper and to some extent leisured class, and provides at least some of us with the means and the intermittent leisure to take a reflective delight in nature. But this process so-to-speak *mechanizes* us both emotionally and intellectually. Yet good science is in a very fundamental sense, `true` in that it reveals «that which things possess that is of substance», to translate an awkward but important phrase of his more or less literally. He is serious enough and intelligent enough to have no truck with the silly view sometimes peddled by the scientifically illiterate that science is merely a fashion of the mind in the way that fashonable clothes are the whim of the fashion houses. Hence there is a genuine tragedy: «science,» he says, «removes us, by this very fact [of its truth], from the reality of existence, which links us to things and gives them their true value.»

What Berque says here is, I think, in the nature of a description of what happens most of the time. I don't think he is arguing that modern science necessarily *has* to have this effect of killing what he sees as 'real' experience. If he were, I would have respectfully to disagree.

When it comes to planning for the future though, Berque, who for all that he is a profound lover of wild nature and, in this book, and others, the author of a number of magnificent descriptions of nature, comes down on the side of *practicality*. «To give priority to the public and the collective [interest],» he concludes, «for example with a dense habitat [that is, humanly dense] and transportation systems used by all alike— is more sustainable than the opposite.» (354) So in some respects at least he seems to agree with the *Scientific American*. But it is, so to speak, a left-wing form of agreement, rather than a free-enterprise or right-wing one.

If Berque's view were taken seriously, not just as a slogan, it would — for all its mild language — entail a revolutionary change in both our economy and our society. Not necessarily bloody — but nonetheless revolutionary. Change is also inescapable, at least if there is not to be a worse disaster. The modern world, he says, suffers from «an illusion of its own omnipotence», above all by «failing to recognize the work done by natural and artificial systems to sustain our way of life». In other words what are often called `natural services` and their sometimes humanly constructed components and counterparts. (342) But isn`t there a risk that a self-contained urbanized habitat will increase this sense of ominipotence, at least until the system begins to falter?

So in some respects at least he seems to agree with the Scientific American. Physically

concentrated cities, perhaps with skyscrapers, are an essential part of the solution.

Where he differs most notably is that he sees, and the *SciAm* team do not, since they are not historians, as he is, are the fundamental differences between the premodern and the modern city. One aspect of this can be illustrated by his discussion of their architectures. He defines what he calls «the *isolated* objects of modern architecture» as having «signed the end of urban composition», that is to say the creation of *interacting* ensembles of different but still harmonious buildings and public areas. The typical modern building is almost a being *in and of itself*, a sort of psychological spaceship that more often than not disdains its surroundings. The great churches of the European past *pointed* towards the heavens; the modern building tends more to *float*, this being one of the functions of the heavy use of *glass* in so many of them, and to exist only in its own internal space. One can quarrel with such overarching generalizations, but they are still interesting to reflect upon.

Beyond the thems for discussion that we have outlined so far there is however a *third* issue,. This is the question of the likely *social* and *psychological consequences* of what might be summarized as the almost total generalization of living in assemblages of demographically compact high-rise city apartments. One author in the *Scientific American*'s pro-urbanization issue says quite explicitly that skyscrapers «might be the most efficient and sustainable way of accommodating the flood of global urbanization» (p. 60), and asserts, with indeed some factual support, that «residents of cities with dense urban cores…use far less energy per capita than those who live in suburban or rural areas». (p. 69) Leaving aside that it at least seems to be the case that vertical assemblages are less conducive to sociability (on which great stress is laid elsewhere) than horizontal ones, this raises some longer-term issues.

For example, it has been argued recently by the American anthropologist Pat Shipman in her book *The Animal Connection* that human beings achieved much of their initial successes through their cooperation with *the animal world*, first of all of course, *dogs*, in a life much of which was based on hunting and herding, but also required defence against hostile animals. She claims that we thus developed *empathetic interactions* with other animal minds that have no known parallel in other species, and comments that we have gained «much more from animals than we appreciate», and that — in an increasingly urbanized world — these links are being broken. «Our links to the animal world are precious», she says, «and shouldn't be taken for granted.» (Quoted in *The Observer* of 2.x.2011, pp. 24-15). Part of being human has

become to have animal colleagues and companions. Additionally, an awareness of wild animals. My wife and I lived in the Australian bush for about 13 years, and there one certainly also develops a strong sense of what, for shorthand, can be called the `minds`, as well as the habits, of different *wild* animals, even at times individual ones. We knew some of our local kangaroos and wombats by name, though I can't easily imagine doing this with members of the two local species of lethal snakes, browns and tigers, who could, if we had been unlucky, have ended our lives in about four hours. Though one remembers them, often only too clearly! But understanding something of a brown snake`s mind is literally vital if one is to escape unharmed from an accidental encounter. Compared with our blunted civilized perceptions, the depths of old-time Aboriginal perceptions were probably many times greater. Think, too, in France of the cave paintings of animals at Chauvet and Lascaux, and, for a later date, of the cliff murals of people among vast herds of cattle at Tassili. Are they not so deep in us pscyhologically that we can be certain we can do entirely without them?

This way of thinking is not as fanciful as one might imagine, though here we are mostly at the level of extensive anecdotal evidence, not science: those with pets seem to be healthier and happier than those without. In chemical terms they have a higher level of oxytocin, known for promoting interpersonal affection. Having and working with animals likewise seems often to have a therapeutic effect on people with psychological difficulties. It has been said to lower blood-pressure, and levels of [bad] cholesterol. But high-density urban living deletes most of this sort of experience from most people's lives. I remember vividly when I left Glasgow to go to Oxford in the early 1970s that I managed to find a small apartment to rent that was near to my College, and to a good school, and not too far from my office to walk, and that, being a single parent with two boys to look after on my own, I had to take it, there being no obvious alternative, and it worked. But no pets were permitted. I had to leave my beloved German shepherd behind with a good friend. Something I have never forgotten.

One more example, of a different type. In *The Observer* magazine for 30 October this year there is an article by Stephen Leonard, a linguist who studied an Eskimo language for a year in northwest Greenland. His comments to some extent reinforce Berque`s, but from a different angle. He begins by remarking that the three remote Greenland communities where he lived were «vulnerable places where tragedy lurked behind every smile and toothless grin.» «In many senses,» moreover, he goes on, «my values and priorities were diamatrically opposed to those of the local people.» For him, but not for them, «to live so close to nature

was a tremendous privilege.» But in some respect he was here probably in a position like that of Cézanne relative to the peasant who *could* see a tree, but not — it seemed — a landscape. «I came», he adds, «to understand how the environmental reality has shaped the life of the Inugguit, but also how the Arctic wilderness had deepened *my* sense of the infinite and unknown.» «It showed me how dualistic our thinking in the west is. To damage the environment is to forget that man and nature are enmeshed.» Having returned home, he reflects. «I will never be able to look at life and our world in quite the same way again. Living in the Arctic...opened my eyes to the lunacy of the congested, overpopulated world we live in... . The society I was living in [there] was not an ideal at all. It just happened to show me what life must have been like before industry left its mark on the world.» In Copenhagen, on the afternoon he returned, «I felt in a sense `displaced` and overwhelmed.... The only signs of life were fixed heads behind steering wheels, moving horizontally and swiftly as if on a conveyor belt in the wrong gear on an assembly-line of environmental destruction.» One wonders, though, how far any of these insights can be conveyed without at least a modicum of direct personal experience.

Leonard's remarks loop back to rejoin a point made by Berque, that in the past it is usually the relatively leisured and well-endowed aristocrat who is in a position to be inspired by nature. Berque cites the early mediaeval Chinese poet Xie Lingyun, also the owner of a vast landed estate, as believing that one is only led to a deep philosophical sense of the world by means of what Xie calls `the delighting mind` that contemplates nature. Real peasants do not see Mont Sainte-Victoire. One could perhaps cite some of the premodern Japanese haiku poets, notably Issa, as near-exceptions, very modest people who did not have servants to rely on, but they were nonetheless well-educated, thus not, in those days, really ordinary at all.

Last of all, I will allude very briefly to a final level. Some of us need a certain exposure to nature to stay sane. It restores a sense of proportion that I, at least, find hard to revive in any other way. And a sudden loss of anger and irritation. Let me try to illustrate this by reading a couple of my own haiku. They are short.

The first was written in 1963 when wandering through the gypsum dunes of Alamogordo in New Mexico in the United States:

Discussion : What are the consequences of humankind becoming a predominantly urban species?

Mark Elvin 2011

They say to you whatever is in your mind the white sands.

Alamogordo was where the first atomic bomb was tested during the second World War. The dunes are curiously hypnotic, virtually without vegetation, like a blank sheet.

They say to you whatever is in your mind the white sands.

That's what sands are like.

The second one was written around 2003 in the bushland of New South Wales, among the casuarina trees and eucalypts, after rain had stopped falling:

Damp needles, leaves — underfoot. Looking round. On the path behind me was anyone ever there?

This is a disconcerting sensation, almost as if the past had completely vanished and one's past self along with it. If one has ever had a past self. No footprints are visible.

Damp needles, leaves — underfoot.

Looking round. On the path behind me

was anyone—*ever*—there?

Let's have a five-minute break for coffee, and then discuss our views of this complex agenda of issues.