

# The future of the Basque Homeland: An ekistic approach

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## Introduction

The theme of this paper is that of synthesis of planning for the future of Basque cities – which I see as an appropriate microcosm of the general theme of these meetings: Defining Success of the City in the 21st Century.

Any discussion of defining success for future human settlements becomes, in an important sense, a footnote to Plato. Specifically, it becomes an explanation of the opening words of the *Republic*: "Since we know that every polis [human community or settlement]<sup>1</sup> exists for some purpose ..."

This summary paper follows an earlier overview of Basque planning.<sup>2</sup> Both papers are products of my personal, self-

financed research effort on the subject, which should be completed during the next several years. The present paper derives from a larger one presented at the WSE Berlin meetings, October 2001. That larger paper has been divided into three sub-papers for possible publication<sup>3</sup>:

- The first of the shorter papers summarizes an updated earlier effort, exploring what usefulness "ekistics" – as the applied science of human settlement development planning – may have in providing a framework of international professional knowledge, policy, and action in its subject matter. It is proposed that the Anthropocosmos Model be modified in specific ways to turn it into a full-fledged planning methodology.
- Second, another shorter paper recapitulates an updated attempt to explore the extent to which the Basque microcosm of human planning history and contemporary activity may potentially provide a useful *gestalt* for understanding that same subject matter in specific regions or areas elsewhere in the world. Deeper examination of the contemporary pattern and trends of ekistics-focused planning in the Basque Homeland then follow. Explanatory documents are appended to this second "short" paper.
- This third shorter paper provides tentative conclusions, which become a synthesis of the current practice and trends and of the major ekistic dimensions as they apply to this planning region of Europe, and beyond.

The objective of this entire body of writing is to address several major questions. These may be summarized as follows.

- What is "place planning" behavior and activity in any culture, and how shall we recognize it when it exists? This question is addressed largely by assuring that the fundamental "classic" anthropological and sociological insights are fundamental to our inquiry.
- Why is Basque culture and history potentially useful for providing a microcosm of human "place planning"? We point to a relative (not absolute) distinctiveness or "singularity" of Basque culture, linguistically, historically, and contemporaneously, that makes the Basque case particularly promising as such a microcosm. It is a very old and remarkable continuous culture, which now centers on "the Basque paradox." That paradox turns out to be simply a very distilled example of the universal human "old brain vs. new brain" complexity. In addition to these considerations, we present the reasons for which the Basque example may provide a useful prototype for autonomous linguistic and cultural regions elsewhere in the world. Finally, there is the history of negative stereotyping by contacting and neighboring cultures – again, providing useful insights for the many cultures elsewhere in the world which have been, and are being accorded similar negative stereo-

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typing.

- What is the potential of the ekistics framework for the future planning of the Basque Homeland and – by extension – for other regions of the earth? On this question, I trace the recent history and pose the problem of gaining wider and more explicit acceptance of the ekistics approach, both in scholarly research and writing and in practice.

- Finally, I pose a series of minor modifications to the “Anthropocosmos Model” or matrix, as a way of enhancing the full potential of the ekistics approach.

The reader’s understanding of the text that follows referring to the Basque Homeland in detail will be facilitated by the map in figure 1.

## The evolution of the Basque prototype

The second of these questions – that of the Basque prototype – has necessarily drawn my most concentrated attention. I began with the evidence of a migration from somewhere in or near the Caucasus Mountains (probably in what is now the Democratic Republic of Georgia). This pre-Indo-European migration appears to have the first true human residents in much of Western Europe about 40,000 years ago. (The Indo-European Celtic and Germanic-speakers came more than 30,000 years later). Lacking any substantial evidence to the contrary, and based on what paleontology and linguistic evidence there is, I call these pre-Indo-European in-migrants the “Paleo-Basques.”

I show how these Paleo-Basques improved upon Neanderthal hunting practices by using environmental adaptations to kill large and dangerous game animals. Within a few thousand years, the Paleo-Basques had developed the Cave Painting civilization of the high Paleolithic era. Recent research at Chauvet Cave has shown that all this started more than 30,000 years ago. Tracing the evolving interpretations of the immense body of animal-spirit art generated in this civilization, I show how scholars have come to believe that it was a form of strategic anticipation, conducted mostly by shamans seeking spiritual transformation into the form of wild animals. I show how these practices were to be later linked to more environmental modification in ceremonial building, and ultimately to urbanization.

This body of art suggests our central hypothesis on Paleo-Basque planning: that it was a fusion of “strategic anticipation,” intendedly rational primitive science, and a strong enduring element of spiritualism or emotion. Extension of this hypothesis suggests that we may expect to find different mixes of these elements in Basque planning at various historic benchmarks.

- The practices of the High Paleolithic civilization seem to have spread sporadically, from place to place in southwest Europe and from time to time, for **about 20,000 years**, essentially disappearing about 1,000 years ago.

- There seems to have been no high culture in effect when the Indo-European in-migrants arrived **about 4,000 years ago**. By then, the Basques had developed small human settlements, hamlets, to support livestock and woodcutting operations. But full-fledged, fortified urban centers such as La Hoya in the age of copper probably involved both Basques and Celts.

- However, at the time of the **Roman invasion** of southwestern France, there was at least one unambiguously Basque fortified city, Sos. Its defense was the first historic record of Basque strategy, led by Aduatan.

The impact of the Roman domination of the Basque Homeland was important in setting the infrastructure of Roman roads and rural *vilas*, and especially in establishing *civitas*-rank Roman towns. There were an inordinate number, fully twelve,

such towns in Southern France because of the special *novempopulae* policy that the Romans accorded the Basque-speaking tribes – as is documented in the “stone of Hasparen.”

Yet we have no evidence that Basques (other than “king” Aduatan) were given any leadership status in these works and institutional arrangements. So the Roman impact may have been more superficial than profound, more at the level of training stone masons than in preparing planners. Then, within a few hundred years, the Romans disappeared from the Basque Homeland. On the other hand, most of the lowlands on the French side had become Romanized Gascognes, speaking Béarnaise or some other form of what is now called Occitan, rather than Basque. This applied to the entire area of *Aquitania* lying south and west of the Garonne River. The reversion to a semblance of pre-Roman Basque culture was, already then, largely confined to the south of the Adour River. On what is now the Spanish side, the pattern was more complex and incompletely documented, some Basque being spoken at various locations north of the Ebro River. Yet Catalan or other forms of the Occitan language were widely spoken, much further north.

- **The Dark Ages** brought numerous barbarian invasions by Germanic tribes, and later by the Moors, to the Basque Homeland. There was substantial contact between these cultures and the Basques, but none of it was enduring enough to have anything besides local effects.

- **Throughout the Middle Ages** the fate of the Basque Homeland was tightly tied to the Kingdom of Navarre, the initial kings of which were ethnic Basques (even though some form of Occitan was always the official written language. One indirect effect of this kingdom was the establishment of some support facilities, including towns, for the pilgrims to Santiago de Compostela, such as was the model village of Ainhoa. Still other examples of planned urbanization came, as in Bastida/La-Bastide-Clairence, from Navarese attempts to exploit the British-controlled trade route along the Adour River. While there is no evidence that these planned community solutions were actually planned by Basques, both were constant examples of what a well-planned community would look like and how it would function.

- **The Renaissance** brought the defensive complex to some Basque cities, notably Baiona/Bayonne, Iruñea/Pamplona, and Victoria/Gasteiz, Donibane-Garazi/St.Jean Pied de Port, as well as Pau, just outside the Basque Homeland to the northeast. All of these examples and more were not for defense from Basque invaders but rather against potential nation-state invaders. Defenses in Spanish cities are always to the North, and those in France stress the South. Baiona/Bayonne was defended by the British against either French or Spanish invaders who might come from the sea. The designs of these fortress cities were all imports, but the Basques were instructed by them.

- **Under the French and Castilian-Spanish nation-states**, acculturated Basques came to have professional positions of serious influence, especially in the 18th, 19th, and 20th centuries. These professions included the priesthood and the military especially, but many other professions as well – including the building professions of architecture and engineering. From these posts of power, they became involved in the planning of the various urbanizations of the 19th and 20th centuries. The technification of such urban planning is known to have increased after 1850.

- This pattern of planning prevailed for spontaneous market villages and towns and for administratively inspired settlements (such as those mandated **after the French Revolution** to fill out the various categories of regional and local governance). It is all the more remarkable that Basque villages and

towns have retained some degree of distinctiveness, when compared to nearby settlements in France and Spain.

● The pattern continued into the **industrial era**, but in this kind of town or city it cannot be claimed that the same degree of distinctiveness was characteristic. Whether one talks about Bilbo/Bilbao or Bokale/Boucau (the industrial suburb of Baiona/

project “the concrete wall” or “the citadel”), a major effort had to be made to “improve” it to be more in harmony with Basque culture. A \$10 million effort by six local architects was able to effect no more than superficial changes.

● **Post-industrial urbanization**, in the form of tourism, and residences for vacation and retirement, began in the Basque



**Fig. 1:** Euskadi, the Basque Homeland – General reference map. (Source: Philippe Gloaguen et al. (eds.), *Pays Basque (France, Espagne), Le Guide du Routard*, (Paris, Hachette, 2002).

Bayonne), it must be admitted that industrialism largely obliterated Basque (as well as Spanish or French national) distinctiveness in urban development.

We can identify a distinctive Basqueness in the urbanistic responses to industrial settlements. That much is clear in the urban designs for Bilbo/Bilbao of Ricardo Bastia in the very late 19th century. The fact that local leaders (Basque industrialists and bankers) were not wise (or culturally sensitive) enough to choose Bastia’s plans does not detract from the value of them. Similarly, we can see distinctive Basque planning though in the responses to the “ZUP” of Bayonne, placed on a hill between the St-Espirit area of Bayonne and Bokale/Boucau and designed by the internationally eminent modern architect, Marcel Breuer. Facing substantial resistance from Basque and other residents (who called this vast

Homeland early in the industrial era. The two key early locations were Miarritze/Biarritz in France and Donostia/San Sebastian in Spain.

- In the Miarritze/Biarritz case it was due to the choice of this location by Napoleon III and his bride, Eugenia of Spain, as their border vacation residence. Displaced and retired aristocrats from throughout Europe followed, and a wave of wealthy individuals and families followed.
- Donostia/San Sebastian was not so heavy on international aristocrats and the wealthy but heavier on Spanish from the hot interior and south seeking a cooler summer vacation location.

In both cases, but especially on the French side, there was much competition among the wealthy to have distinctive detached residences, and much of the distinctiveness had to do

with an attempted imitation of things Basque. Most notably, the *etxea* (written in French as *eché*), the traditional Basque farmhouse of coastal France was distilled, refined, distorted by a host of architects who produced versions of it throughout the French Basque Homeland and far beyond. The "neo-Basque" style of architecture was born. With the coming of the automobile, and especially with developments since World War II, whole tracts of suburban dwellings in this style have begun to develop throughout southwestern France. The phenomenon is less marked in Spain but still in evidence.

Genuine Basque place-planning had a new stimulus in the extension of environmental planning powers to the Basque Autonomous Community in Spain, when the socialists came to power following the demise of Franco. That approach is still developing, and it is having its impact beyond the borders of the Community – both in Navarre which is outside the Basque Autonomous Community and on the French side of the Basque Homeland.

At the same time, the fields of planning have been evolving both in France and in Spain. Modern urban and regional planning in both countries are much less limited by the strictures of the architectural profession. The term *aménagement* (spatial planning or ordering) has largely displaced *urbanisme* (urban design) in France, where the environmental movement has also become a large part of local planning. The same trend, though much less marked, is evident in Spain.

Basque planners, especially in France and to some degree in Spain, are still too constrained by national laws, regulations, criteria, and financing for them to fully show what they would do under the situation of any real autonomy. Generally speaking, they do the best they can under the situation. They do some impressive work, work that is sensibly distinct from that done in nearby non-Basque areas. No strong trends are yet in evidence.

We have examined Basque planning of the region's cities of the past and present, and we can see from this information some possible trends toward the future. But the future of Basque cities is not merely a matter of forces internal to the region, surely not in an era of anticipated globalization. What can be said about the environment of globalized urbanization in the century ahead, for whatever happens to Basque cities is certain to be very much a function of that general pattern?

## Basque use of strategy in built environment

It may be useful here to recapitulate the story of how the ancient Basques increasingly applied strategy to their built environment. We have noted that the adaptation of the environment for hunting purposes was from the beginning the signature of these early Europeans. But, so long as they remained semi-nomadic hunters, the use of strategy in the modification of their own domestic environment seems incremental at best – with very long periods during which no change was discernable.

### Etxe: The Basque house

With the domestication of herd animals several thousand years ago came the importance of the individual house, the *etxe* in Basque. It is a highly functional structure, and yet it came to have a deep spiritual and religious significance that is still retained today in some places in the rural Basque country. The ground floor of a Basque house<sup>4</sup> is considered a kind of sacred temple because it is the point of contact of a Basque family with the underworld, where reside a number of important spirits. The roof is viewed as the point of contact with the sky, with all its spiritual significance.

The key to understanding how a family household worked is the role of the *etxe-andere* (very literally "the lady of the house") who is in every sense the key person in the household. She is described in recent literature as "the minister of the cult of the house," and there are a whole series of rituals, some Catholic, some pagan in origin, over which she presides. Almost a mirror image of the main family house was the summertime shepherd's mountain hut, in which a number of men lived together, often from neighboring households. One of these men (sometimes on a rotating basis) is designated *etxe-andere*, and virtually runs the summer household during that tenure.<sup>5</sup>

### Exalde: The Basque farmstead

Literally, "the place of the house" is the farmstead or property surrounding a house. It shares with the house the attribute of functional spatial organization, but there is more variety in the details of spatial arrangement. There is also almost no hint of sacredness to the farmstead. However, some Basque informants (2001 interviews) did tell me there were a set of rituals to bless the fields, livestock, etc.

### Herrixka: The Basque small village or hamlet

The very small Basque village was invented within the Basque region about 4,000 years ago, well before any hint of in-migration of Gauls or Germanics into southwest Europe. These comparatively concentrated settlements were surely developed for economic, social, cultural, and perhaps political services to agricultural, livestock, and woodcutting hinterlands. Grain storage (so important in Middle Eastern villages) does not seem to have been one of these functions. We have no evidence of specific religious rituals related to the early *herrixka*. They do not seem to have been sacred in the sense that the Greek polis was, though it is difficult to imagine that they would have been entirely devoid of spiritual functions. Some of them, indeed, may well have served as centers for shamanistic activity, especially if there were nearby caves. (This may easily be imagined from the famed border village of Zugarramurdi, which clearly served as such a center even in 1600, several centuries after the advent of Christianity. One has only to eliminate the parish church from Pablo Tillac's sketches to picture how a first millennium pagan village might have been.<sup>6</sup>

"The localization of the places of the 'sabbat' [the chief Basque pagan witchcraft ritual] are revealed as particularly instructive. We can distinguish several tendencies, among which first is the tight relation that exists between the locales and the ancient cult sites – or at least of prehistoric and historic habitats. It was already the case in the reports of 1609-1610, especially in the Spanish Basque Country where often impressive natural refuges particularly excited the imagination of populations. The cave at Zugarramurdi, extraordinary for its proportions and configuration of levels, thus appeared as a veritable 'Sabbath cathedral' and re-appeared often in the depositions of the witches of the surrounding area. The cave is otherwise crossed by a stream called 'Infernukoerreka,' [Basque for] the Creek of Hell."<sup>7</sup>

This extraordinary tunnel-like cave plus sacred stream is located barely five hundred meters from the several residential and storage buildings at the center of the historic hamlet of Zugarramurdi, giving it special status as a kind of "spiritual hamlet." (During the inquisition of 1609-1610, 40 women of Zugarramurdi were accused of witchcraft, and 17 of them were put to death).

The implication is that, while the early Basque hamlets were generally spread over the territory, probably in correlation with, and as service centers to, the livestock and farming activity, the



"spiritual hamlets" on the other hand would have been concentrated around areas of historic and prehistoric caves – such as the Xarita zone between Sare and Zugarramurdi, and a few other areas where the density of such caves is concentrated.

### **Gotorleku or Gastellu: Basque stronghold towns**

These fortified towns were widespread north of the Pyrenees and there were some examples to the south of the range. Archaeology has yet to reveal any unambiguously Basque example of a very early fortified town, although we know there were many north of the Pyrenees and at least several south of that range. One obvious top priority would be the site of Sos, the largest true pre-Roman city of Aquitania. Another would be further work at Larroque, the *oppidum* near Sorde l'Abbaye, which has been incompletely excavated.<sup>8</sup> For now, we must suppose that the Basques learned to fortify human settlements from, or in imitation of, the Gauls. We have discussed La Hoya above.

### **The Basquo-Roman *Civitas* town and *vila* rural estate**

As discussed above, we have twelve full-fledged Roman *civitas* towns in France and two in Spain as the basis for discussing this kind of settlement planning. Excavations are so incomplete and written records so scant, however, that we really still know relatively little about them. Most of the numerous French examples have hardly been excavated at all, though perhaps Dax, there, and Pamplona, in Spain, are the most promising. We do of course know quite a lot about the planning of Roman towns in general. At the present state of knowledge we must suppose that the Basques were little involved in the planning and design of these *civitas* towns.

Another area fertile for archaeology is the rural *vilas*, which were the basis of rural spatial structure in agricultural areas. Two of these Roman *vilas* have been excavated incidental to the study of a medieval site<sup>7</sup> and many more are known to exist.

### **Medieval and Renaissance new towns and Bastides**

The examples of Ainhoa and La-Bastide-Clairence were discussed above. Clearly, non-Basque forces were predominantly influential in their establishment. What remains to be established is whether the many other settlements of the same period, which evolved out of spontaneous economic and political forces rather than outside intervention, bear any traces of Basque influence.

### **Larger market-villages and commercial towns**

Spontaneous market and political forces are also thought to be crucial in the formation of market-villages and in the evolution of larger commercial towns, especially in the 17th and 18th centuries. How were such forces articulated by Basque culture of the day in (what is today) both France and Spain?

### **Industrial towns and cities**

We have discussed the efforts of planning the large industrial city, in the case of Bilbo/Bilbao at the turn of the 20th century, above. Similarly, we have looked at Boucau, the industrial satellite of Baiona/Bayonne. However, much needs to be filled in regarding the numerous smaller industrial centers, in both Spain and France, from the mid-19th century onward.

### **Metropolitan planning**

While we have outlined the beginnings of the planning for the BAB (Bayonne-Anglet-Biarritz) *Agglomération*, much remains to be filled in on the evolving arrangements for such metropolitan planning, in both contemporary nations. Crucial to the present work is the input of Basque culture into such urban-regional decision making. This will be necessary to set the stage for thinking about the planning for the emerging Basque Coastal Megalopolis, as well as for its satellite metropolises in Iruñea/Pamplona and in Victoria/Gasteiz.

### **Basque Homeland-wide regional planning**

The emerging framework for planning by the Basque Autonomous Community in Spain needs to be detailed more adequately, as well as the potential transfer or expansion of such practices to the possible new *département* of the French portion of the Basque Homeland.

## **Alternative *gestalt* (holistic) views of a successful urban future**

### **The ekistic *Ecumenopolis* end-state**

With the publication of *Ecumenopolis* in the mid-1970s, the ekistic literature fully presented its classic view of the human city and what to do about it. Papaioannou's recent writing provides an updating of that view.<sup>9</sup>

The *Ecumenopolis* view developed at about the same time as a series of multiple-variable models, both conceptual and mathematical, after 1960, to try to forecast the future of contemporary urban societies, generally in the aggregate. Fundamental to these was the Club of Rome on the "limits of growth," an attempt to show mathematically that natural resources and pollution must at some specific point constrain future population and economic growth. The "City of the Future" explicitly recognized the Meadows study and its conclusions, but it did not really follow the sophistication of the methodology; and it departed fundamentally in its very different conclusions. *Ecumenopolis* also completely ignored a series of econometrically inspired "urban systems" models by Forrester, as well as a series of metropolitan economic, housing, and land use models.<sup>10</sup> In brief, the City of the Future project did not derive from any of the more sophisticated interactive simulation forecasts. There was neither a well-developed environmental component nor a well-developed economic component interacting with the population projection – though separate energy and income projections as well as more intuitive environmental, economic and technological forecasts were collated with the population forecast. In essence, it was a quite straightforward population projection, with implicit but not explicit environmental, economic, and technological forecasts. It cited the formal goal-interactive methodology that was used in the Doxiadis Associates Detroit study, but the "IDEA" was never central to the City of the Future project itself. Finally, the approach was entirely preoccupied with the end-state of complete world urbanization, not allowing for possible constraints to that end-state or countervailing forces to it.

### **Anis-ur-Rahmaan's proposed synthesis of future cities**

Writing at about the same time as Papaioannou's updating to the *Ecumenopolis* synthesis, but working much more directly from futures-research methodologies, Rahmaan came up with a potentially even more useful synthesis. He interacted four factors, "global economic restructuring," "political alliances for development," "globalization of technology," and "global socio-

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cultural diffusion,” to provide an aggregate synthesis. Then he applied this to cities. There were four components to Rahmaan’s model:

- Alliances for development;
- Globalization of technology;
- Global economic restructuring; and,
- Global socio-cultural diffusion.

These “functional determinant” components, in interaction, lend themselves to presentation as a prism (fig. 2).

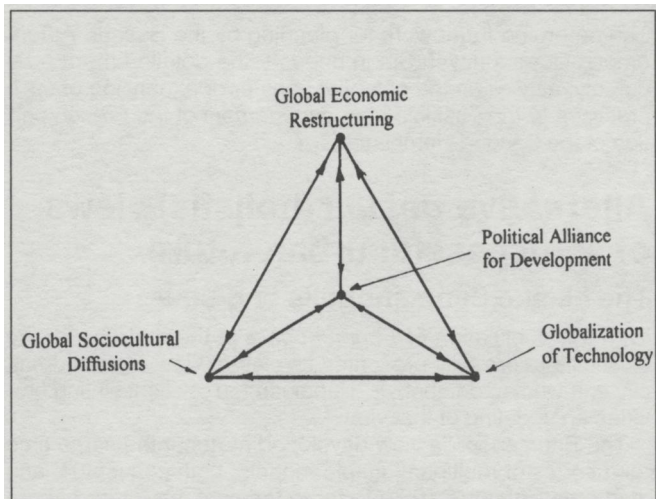


Fig. 2: The salient determinants of the Global City. (Source: Rahmaan, 1999).

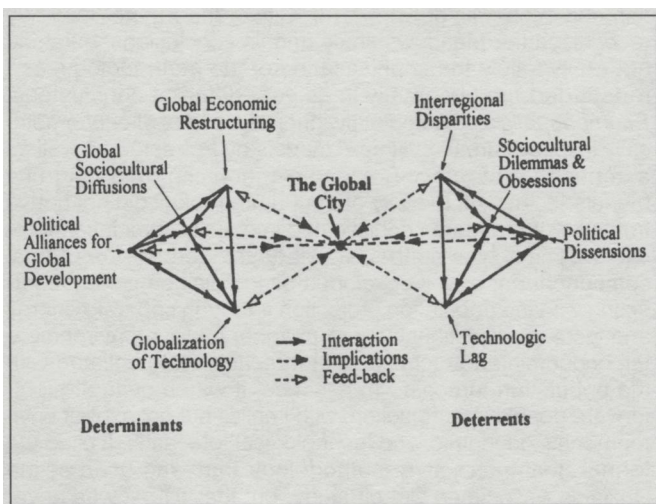


Fig. 3: Physical implications of the functional determinants and deterrents on the Global City. (Source: Rahmaan, 1999).

This aggregate *Gestalt* has physical implications for the “Global City” (fig. 3) as Rahmaan says<sup>11</sup>:

It [the diagram of the functional determinants and deterrents] comprises two sets of diametrically opposite, highly dynamic and interacting variables, one facilitating and the other hindering the formation of the Global City. Each set interactively impacts the Global City and in turn gets a feedback from it through a system of two back-to-back prismatic frameworks. The beauty of the back-to-back prismatic frameworks is that each of the five variables in each set is directly connected with each other and can influence – and in turn be influenced by – each other.

## Joel Cohen’s vision of the world’s urban future

Let us take as a point of departure the “model” of the demographer Joel A. Cohen, which he put forth about four-and-a-half years ago (1998).<sup>12</sup> Here it is:

A century from now, humanity will live in a global garden, well or badly cared-for. The majority of people will live in cities, surrounded by extensive thinly-populated zones, for nature, agriculture and silviculture. Globally, between 100 and 1,000 cities of between 5 and 25 million people each will serve the desires of their residents, for food, water, energy, collection of wastes, political autonomy and natural and cultural amenities. Some cities will serve populations that desire to live only with other people who are ethnically and culturally similar to themselves. Other cities will serve populations attracted by ethnic and cultural diversity. Various cities will earn changing reputations by being favorable for youth, raising children, working, or retirement. The efficiency and quality of services provided by cities will depend on the quality of their administrations, on the behavioral abilities, and the courtesy of their populations.

Cohen foresaw that many contemporary rights and obligations will be supplanted by markets. One example will be permits to permanent residence in specific cities. The prices of these rights will probably be added to real estate prices or rents. Cities will compete with one another for market rewards for public goods offered. The rights to leave any city or region will have to be balanced against the rights to move to specific cities and nations. Social and individual values will determine the point to which markets will be permitted to intrude into relationships that were previously determined by culturally traditional methods. He sees women largely freed from child-bearing and child-rearing roles as the average woman comes to have two, one or no children in a longer lifetime. Women will intensify their demands for more significant roles. Implications are increased educational and employment opportunities. The aging of population will increase dramatically and among the aged, women will outnumber men 2:1. Whole new social arrangements will develop among the elderly.

In Cohen’s projection, growth of the world’s human population will end sometime in the 21st century, but some regions will continue to be net importers or exporters of people. Growing pressure for migration from poorer countries to richer ones will stress countries that are culturally xenophobic – as well as those traditionally receptive to international migration. The result will be many frictions until human beings learn more courtesy and tolerance. Interracial mixed marriages will produce a whole spectrum of skin coloration in many regions.

Cohen’s forecast of the bio-physical environment is especially important for our purposes. He says the continental shelves of Asia and other land masses will be developed to provide food, energy and perhaps residential space. The partly depleted stocks of most marine species will be carefully managed, to an extent far beyond the limited “farming” of seafood that exists today.

Those woodlands and forests that survive the growth of population and economic exploitation of the 1920-2050 period will be preserved as educational and touristic curiosities. Many of these will also be meticulously managed for fibers, food, pharmaceuticals, and recreation. The simple agricultural ecosystems of today will be replaced by others of great complexity. Biological controls and the optimizations of farmers will maximize production, while pesticides and herbicides will be almost entirely eliminated. Inputs to agriculture required for food and energy will be derived from human, animal, and industrial wastes – replacing many of the fertilizers and organic combustibles of today. Undesirable effluents, such as eroding soil or agricultural drainage with pesticides and fertilizers, will be eliminated or converted into productive inputs for industrial or urban uses.

Also managed will be the atmosphere. Rights to add carbon dioxide, methane and other chemically significant trace gases and particulates will be negotiated in the open market, for services that natural ecosystems provide. Governments will recognize the potential of the atmosphere and of many other services that ecosystems provide, to produce taxes that will support other public services. Gases will be manipulated as part of the production of foods and management of wild flora and fauna. An example is genetically engineered bacteria that will manipulate production of agricultural methane. Flora and fauna will be revalued as it is realized that we do not know how to multiply old woodlands, coral reefs, and the diversity of living forms. The genetic resources of nature and aesthetic amenities will be more and more highly valued. Conservation movements will gain renewed force, in collaboration with commercial enterprises.

The intensive management of continents, oceans and the atmosphere will require massive improvements in the collection and analysis of data and, especially, in our concepts. A century from now, we will live on a land totally interconnected electronically ("a wired earth"). Land, air and the sea will be continually monitored. Just as the meteorological stations, on the earth and in satellites, of today, we will monitor the atmosphere, the oceans and terra firma of the next century with networks of sensor stations at all heights and depths.

Mathematical models of the earth, the air, and the sea will try to predict major events, such as El Niño, hurricanes, earthquakes, volcanic eruptions, plumes of hot water from cracks in ocean floors and principal ocean currents. The models will improve with increases (at least a million-fold) in computational power during the next century. The models will integrate not only the atmosphere and ocean surfaces but also human populations and populations of other biological forms (including domestic animals, trees, cereal products, and infectious diseases), economic reserves and flows (including all natural resources, information and flows of information – scientific, literary, artistic, folklore – and family, social, institutional, and political constraints and resources). Integral models will include factors outside human control such as solar flares, and will represent, without predicting, human decisions.

Despite improvements in software, concepts and administration, the earth will still bring surprises. Geophysical surprises spring from being more conscious of what the planet does, of instabilities inherent in geophysical systems, as described by the mathematics of chaos theory, as well as from additional human impacts. Included in these "surprises" will be a continuing stream of human illnesses due to infection from newly-discovered viruses, as well as from the continuing increased densities at which the human population will reside. As concerns economy, culture (and politics):

Economies will increase their integration. Cities are going to concentrate the talent and resources required for international commerce. Almost no product complex will be conceived, financed, designed as to engineering, produced, sold, used, and taken out of use within the boundaries of a single political unit. Businesses will learn to profit from the eternity of atoms, designing products for use, return and regeneration. Governments will find that an increasing percentage of the power to control the economic welfare of their citizens will reside outside their political boundaries. Economic integration will give profit to those who can recognize the comparative advantages of other societies. Information will become more and more valuable. Those who can create, analyze it, and manage data bases will be the winners. Information technology and economic integration will grow hand in hand. Culture will penetrate everything regarding the population, the environment, and the economy. The productive and reproductive roles of men and women, for example, will define which biological materials are seen as food and which not, and its form as demanded by consumers in the economy.

## A modification to the Cohen model

Soon after the publication of Cohen's vision, the present author produced a critique of it.<sup>13</sup> He pointed out some conceptual problems in Cohen's formulation (partly confirming, as Cohen had predicted, that some of the hardest problems of the future would be conceptual).

- First, Cohen's main "analytical pyramid," which he used to reach many of his conclusions about the urban future, was overly simplified in terms of what Cohen himself had to say. Rather than a simple pyramid, with a base and three diagonals (environment, then population, economy and culture), there were really six dimensions: an environmental base, and five diagonals, with the addition of "technology" and "politics" from Cohen's own discussion. So we had to be working from a "pentagonal pyramid."

- However, two of the supposed diagonals (culture and population) are problematical. (Are we talking about merely population numbers or are we into the characteristics of the population? Apparently the latter). Then population is not a straightforward quantitative variable such as mere numbers of people would be. Thus it has to be seen, diagrammatically, as a "second base" rather than a diagonal. Similarly, "culture" is problematical. These conceptual refinements will be necessary for good integration of Cohen's "prism" with the Anthropocosmos Model of ekistics, as well as with the model of Rahmaan.

- Third, one important implication of this refined conceptual analysis is more urbanization, into even larger metropolitan areas. Mann estimated that there would be, globally, even more and larger metropolitan areas, even though the population of the earth will be slightly declining. He foresaw an ultimate urbanized population of between 250 and 2,500 metropolitan regions of between 15 and 50 million people. The hinterlands around each of them will be rough hierarchies of service-providing villages and towns, rather than the homogeneous low-density areas Cohen anticipated.

- Finally, rather than the unrelieved rational globalization of Cohen's vision, Mann foresaw strong pockets of traditionally dominated metropolitan regions. He noted that Cohen's vision evokes the "God is dead" of Jean-Paul Sartre in the late 1940s and the parallel "Ideology is dead" of American futurists of the 1950s – both of which we now know to have been vastly overstated. Evidence is to be found in the resurgence of fundamentalist religions and regional ethnic political movements in various parts of the world.

## Ekistic synthesis

The present author's thesis is that the Ekistic Anthropocosmos Model, appropriately enlightened by the formulations of Rahmaan and Cohen/Mann, will prove the best way to conceptualize the future Basque urban and environmental planning system, evolving in the direction of its prehistoric and historic trajectory – however truncated by specific events of history. The Basques are ready to plan for the kind of future that Doxiadis and his group foresaw, as well as the Rahmaan and Cohen-Mann images of the future. What remains to be worked out are the intricacies of synthesis of the various ekistic elements and units, appropriately interacted with each other and with the several other dimensions I have suggested as extensions of the model above.

What lies ahead for the Basque region in the next several hundred years is a very major coastal metropolis. It will extend from some point north and east of Bayonne through Donostia (San Sebastian) and probably including everything between and somewhat beyond the Bilbo (Bilbao) metropolis to the western and southern edges of the Basque-speaking region. It will be a complex, multi-nucleated metropolis, with precious

bits of lower density and more traditional ports and ecological preserves dotting the coastline. My hunch is that this huge metropolis will reach some 15 million in population by the year 2500. At various points, major natural forest, tourist, and preserved agricultural and livestock grazing corridors will reach out to the internal metropolises of Iruñea (Pamplona) and Vitoria-Gasteiz – as is already the pattern from Donostia (San Sebastian) and from Bilbo (Bilbao) and as is already planned for Baiona (Bayonne) to Pamplona. It is possible that one more modest interior metropolis will evolve between Iruñea (Pamplona) and Vitoria-Gasteiz, probably centering on Logroño. The interior metropolises will probably have ultimate populations of between one and five million inhabitants

Outside the metropolises will be the “global garden” of agricultural and natural woodland and forest preserves. The Basque country on both sides of the Pyrenees is ready for this, for that is what has been evolving by spontaneous forces in the region – with heavy growth of retirement and second-home developments. Still, it will be the most challenging kind of planning because of the necessary balance between preserving cultural practices and providing modern conveniences.

## Notes

1. This version of the larger paper was prepared during the months following its presentation in Berlin. New material is set off in brackets. The immediately prior version of [the larger] paper was “Euskal Herriko Ekistika,” at the Čelakovice meetings of the World Society for Ekistics, June, 2000. Both papers are alternative, ekistics-oriented parts of another paper “Basque Planning: An Overview,” being prepared for the *Journal of the American Planning Association*. One or two other papers should follow next year. All of these anticipate a larger, monograph-length work in progress on the subject, which is expected to be completed for publication during coming years.
2. See C.J. Friedrich (1959), “The concept of community” in C.J. Friedrich (ed.), *Nomos II (Community)* (New York, American Academy for Political and Social Philosophy).
3. “Basque Ekistic Planning and the Future of Human Settlements in Europe’s Western Pyrenees Region: Updating the Euskal Herriko Ekistika Research Project” (processed). Available from the World Society for Ekistics, Athens, Greece and from the author.
4. There exists a very large bibliography on the Basque house in Spanish and French, as well as in Euskara/Basque. See Bibliography.
5. Note that the attribution of a woman’s role to a man in this case is recounted as straight humor, entirely without sexual innuendo. Note too that the male(s) in the “woman of the house” role have no religious or ritual functions, which are a major characteristic of the role in the main farmhouse.
6. See Claude Dendaletche, illustrated by Pablo Tillac (2000), *Les Sorcières de Zugarramurdi* (Cahors, Editions Auberon).
7. Sight translation by the author from François Bordes, *Sorciers et Sorcières: Procès de Sorcellerie en Gastogne et Pays Basque* (Toulouse, France, privately published, 1999).
8. See Robert Arambourou (1962), “Aux Origines de Sorde l’Abbaye,” in Les Amis des Eglises Anciennes des Landes, *Les*

*Eglises Anciennes des Landes* (Dax, The Organization), pp. 9-23; Jean Cabonot and Delphine Meyer (1998), *Sorde l’Abbaye* (Dax, Association des Amis des Eglises Anciennes du Département des Landes), 49.

9. See Doxiadis and Papaioannou (1974), *Ecumenopolis*; Papaioannou (1998), “Megacities versus Megalopolises”; and Papaioannou (1999), “Tomorrow’s world.”
10. See D. Meadows et al. (1972), *The Limits to Growth* (London, Earth Island, for Potomac Associates); Jay Forrester (1969), *Urban Systems Dynamics* (Cambridge, MA, MIT Press); John Kain and others (1970-1985), various publications on the “NBER Urban Housing and Land Use Model” (New York, National Bureau of Economic Research) and literature cited there.
11. See Anis-Ur-Rahmaan (1999).
12. See Cohen (1998). Based on a talk by Cohen to the Syndics of Columbia University in March 1997 at Biosphere 2, Oracle, Arizona, USA.
13. See Mann (1998). Available in Spanish from the author or through the Program Office, College of Architecture, Planning and Landscape Architecture, University of Arizona.

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