



# I.

## Landscape, well-being and quality of life

### Landscape and the well-being of society and the individual

Yves Luginbühl

A current debate focuses on the influence of landscape for human well-being, in a more complex way than materialistic and physiological concepts. From the dawn of humanity, the main aim of our social activity has been the organisation of space in search of maximum efficiency. The notion of landscape as such may be relatively modern, but the desire for a pleasing environment has been present throughout history. Concern for a beautiful, orderly landscape is manifest in interventions by ordinary people and by those in power. Elisée Reclus remarks, moreover, on the human satisfaction of leaving our mark upon the landscape, and therein investing hopes for a better life or an achievable utopia.

The *Good and Bad Government* frescoes by Ambrogio Lorenzetti in the Ducal Palace at Siena depict human's concern with the well-being and the landscape even before the existence of the word landscape. The scenes illustrate the contrast between a charming, prosperous land resulting from management by a wise government and a degraded, chaotic environment resulting from bad management. In this artwork there is a clear link between well-being and an inherently beautiful landscape, that in this case acquires a utopian dimension.

A landscape must be harmonious (and not only from the aesthetic point of view) in order to be considered beautiful. It must also reflect the harmony between humans and nature, and the harmony residing in the heart of society. Landscape becomes

well-being through these very associations. Landscape is also linked with freedom, when freedom is understood as the opportunity to sculpt the environment to satisfy our needs or desires, and to feel the spiritual well-being that comes from transforming the landscape beyond a mere combination of shapes and forms.

Well-being can be defined as the satisfaction enjoyed by individuals through their senses. We perceive the landscape mainly through our sense of sight, which discerns beauty through the prism of our cultural background. However, the other senses also come into play in our appreciation of landscape. Through the sense of touch we perceive the different surfaces of the land beneath our feet. The sense of smell is also basic for arousing pleasant (or unpleasant) sensations that may determine our level of personal well-being. Furthermore the sense of hearing enables us to distinguish natural, pleasing sounds from irritating or deafening noises. The sense of taste is less obvious, but we often associate certain foods with their place of origin.

As it has been said, human beings have always aspired to mould the landscape in order to create a pleasant environment that satisfies their material needs but also to be a source of well-being. In this sense, it is increasingly frequent that the inhabitants of any given place wish to actively engage in the planning of their own territory, and recently this has been reflected in the increase of public participation in decision-making processes concerning the landscape. It is also true, however, that the state of today's landscape leaves much to be desired: the land has undergone a great transformation over the last sixty years. In our highly competitive capitalist world, the search for maximum agricultural productivity using new technology has not only destroyed the beauty and complexity of traditional rural landscapes but is also incompatible with the judicious management of natural spaces. The negative connotations of farmland today make people tend to associate landscape with natural spaces rather than with agricultural land. In the cities, the situation is not much better. The preponderance of real estate profits has led to the "banalization" of the urban environment. As a result of this and other factors, many people perceive the modern city as a place of danger, insecurity and uneasiness.

The degradation of rural and urban landscapes, insofar as it directly affects the well-

being of the population, is causing increasing citizen concern and involvement. Future territorial planning must engage with a thinking society, and involve the different (political, scientific and social) sectors in taking decisions to achieve well-being in landscapes that have been imagined or thought out by the people who live therein.

## Landscape and quality of life

Enric Pol, Angela Castrechini and Andrés Di Masso

The relations between landscape, well-being and health are extremely complex. The restorative powers of a landscape are seen in terms of its value as a place in which to relax, unwind and forget about our worries, as well as a place where we can reflect on our lives and our personal concerns. However, the qualities associated with a restorative landscape are not always objective. They depend on a series of subjective factors and nuances; on our attribution of variable causes and symbolic values; in short, on our social construction of reality.

We should bear in mind that people do not perceive isolated, disintegrated stimuli, but selective clusters of stimuli from which we have a predisposition to perceive. The reasons for this are diverse: the stimuli may respond to some prior sensitization in us, they may be congruent with our cognitive organisation; they may make us feel part of the group to which we want to belong. “Belonging to the group” is another factor that determines our preference for landscapes and the use we make of them. The prevailing values of our society have not only made us into users of the landscape, but also into consumers of the landscape, with terrible effects. One of the paradoxes of our accelerated society is that while we want to preserve an increasing number of “restorative” landscapes, we also want rapid access to high-quality services that inevitably impact on the very landscapes we want to preserve.

Research studies sometimes draw up hierarchies of landscapes in relation to well-being. However, our aesthetic preference for one particular landscape (and its perceived restorative capacity) is based on the significance of the landscape in question, and not the other way round. This association between significance and aesthetics underlies the well-being of the person. Furthermore, the ascription of beneficial effects to

a landscape also increases its benefits. This phenomenon can be partially attributed to a “placebo effect”, but the ascribed benefits are more of a social than an individual nature, channelled through a series of social references and all the values, beliefs and attitudes that go to make up what we call quality of life. However, quality of life is a subjective state that does not automatically come from an accumulation of material goods; quality of life comes from a balance between desire and reality, the achievement of equilibrium on a personal level, within society and within our environment.

The collective preference for certain landscapes is an element that is needed for cultural stability based on collectively held meanings and values. Society as a whole constructs and assimilates these meanings and values; if they are to work as such, they must both satisfy our innate need for stimulation and develop our functions within society.

Interventions designed to enhance the landscape and improve health (and policies for exploiting the synergy between landscape and health) share the ultimate aim of improving the quality of life among the population. It is essential to bear in mind the objective cause-and-effect relationship between the environment and health. Policies carried out in this field should aim at equilibrium rather than accumulation; they should focus on quality of life in relation to the values and social attributes of the landscape.

## Traumatic loss of the sense of place: degradation of the landscape and depressive pathologies

Francesco Vallerani

The degradation of a landscape, both from the ecological and the morphological point of view, can have strong effects on the peace of mind of the people living there. Indeed, there is a close link between environmental and landscape degradation and the increasing unease and anxiety among the inhabitants of places under threat of intense suburban development or the construction of large-scale transport systems. Pessimism grows apace with environmental and landscape awareness, which is a source of concern and fear regarding the quality of life for present and future generations. This situation forces us to talk about the concept of “geographies of

fear”, which expresses a collective anxiety that can lead to states of depression and the loss of identity bonds concerning the own landscapes that give people a sense of security.

People hold very close affective links with their place of origin. The sameness of recent urban development, however, shows that the landscape is no longer an object of love, but a commodity to be exploited and transformed by real estate speculation, industrial expansion and large-scale infrastructure networks. Air and water pollution, forest fires and the savage advances of real estate into protected areas are aspects that are contributing to the growing sense of risk and anxiety in post-modern societies and they can lead to states of depression and anxiety. State of depression is linked to an accumulation of negative sensations, which give rise to negative thoughts and exclude any ray of hope. Catastrophist anxiety, on the other hand, is an unconscious form of self-defence, a preventative alarm that helps to ward off further attack on the sensitivities of people living in landscapes at risk. “Geographical trauma” turns into “psychological trauma” when damage to the landscape signifies change in people’s identity with their landscapes. The territorial sciences and the mental sciences should work together towards an understanding of the perplexity arising from the growing conflict over the landscape and the environment.

However, only the most extreme cases of fear and anxiety derive into clear depressive pathologies. Much more widespread, and just as disturbing, is the relentless pessimism and unhappiness now observed among the thousands of persons who join landscape defence platforms, where they try to exert pressure on the authorities to find proper solutions for environmental and landscape problems. On the other hand, the platforms heighten civic spirit and act as a form of group therapy that combats the negative effects of depression.

## Urban space and health: a historical vision

Francesc Muñoz

The currently accepted association between landscape and health has been confirmed by the determinism of behaviour in some instances and by the aestheticisation of places in others, in the light of the European

anti-urban discourse. Thus to study the relationship between landscape and health, it is useful to look back to the first connections between urban environment and precarious health, out of which grew the original anti-urban discourse in the 19th century. This was an age when cities were insalubrious in so many ways that they came to be described in terms of the risk of death run by their inhabitants.

The “cultural” anti-urban discourse clearly differentiates between nature and culture, between *ruris* and *urbis*. The urban landscape, on the whole, is perceived as a high-risk scenario. Life in the city, including the development of health policies for the city, has been progressively taylorised. From this perspective, there is a clear continuity between the original taylorist measures used to manage the early industrial production areas and the public and domestic community welfare regulations underlying the first public health protocols.

The “sanitarist” approach to the problems related to city spaces is best illustrated by the consolidation of hygienism. This branch of medicine started by detecting risks of illness or death in the city and, in a projection of the anxieties of the emerging bourgeois society, proceeded to analyse the urban landscape in terms of health risk. This led to the institutionalisation of a body of medical know-how, based on the city and its component parts, which was concerned with the various risk thresholds of the urban landscape. Hygienist doctor-detectives first examined markets and barracks, then hospitals and prisons, and finally reservoirs; the main indicator of public health was said to lie in the quality of the air, according to the principles of Hippocratic medicine and the miasma theories that were still current in 19<sup>th</sup> century medicine.

If the quality of the air defined the quality of the urban landscape in terms of public health, it is not surprising that the hygienists were alarmed at the extreme urban density that characterised European industrial cities in the 19<sup>th</sup> century. Criticism of urban density was the main argument of the hygienists, who put forward proposals for a sanitary city as defined by public health policies. Urban density lurked behind the greatest fear of city dwellers: the risk of death. Urban density and the high mortality rate in the city were seen as a matter of cause-and-effect; hence the search for technical solutions in architecture and engineering to improve

ventilation and air circulation and, above all, to reduce urban density.

The paradox of hygienist medicine, however, is that after a century and a half of defining the urban problem and the fears it generated, the solutions to the health crisis came from other sources and through other disciplines, notably the engineering-bacteriology tandem. Vaccination was now the metaphor of the bacteriologist-doctor, just as the machine was the metaphor of the town planner-engineer. In practice, this technical solution heralded the definitive separation between health policies and urban policies; between the two branches of urban management formerly united in the figure of the doctor as both hygienist and urban manager.

The use of technology in urban risk management culminated with the progressive implementation of the sewerage system. Meanwhile, however, the “Lavoisier revolution” followed by the “Pasteur revolution” brought about a Copernican turn in the medical approach to illness and infection. Doctors’ attention turned from the miasma to the microbe, from the exhaustive analysis of urban space as a focus of contagion to a deeper knowledge of the human body. Painstaking scrutiny of the urban landscape was replaced by meticulous observation of the human organism; earnest doctor-detectives snooping around the city streets were replaced by bacteriologists hunching over their microscopes.

The first stable public health protocols in the city were set up on the basis of this double-edged scientific-technical approach. The progressive medicalisation of urban society would not have happened without the consolidation of new patterns and uses of urban space. Hygiene was institutionalised and extended into public, domestic, and production spheres; hospital protocols were exported to the factory, the home and the city.

The transition from the hygienists’ criticism to the search for technical solutions was clearly illustrated by the urban reform movement. The urban reform movement responded to the high death rate in the city with new boulevards and urban expansion; a rational, scientific approach to risk management transformed the hygienist city landscape into the modern city that we know today.

## The architecture of health

Itziar González Virós

Health is a place. We say that somebody is “in” good health, is nursed “back to” health, or leaves their health “behind”. We recognise and choose certain spots as places in which to lead our life for the simple reason that they are healthy places. The benevolence of the land and the elements has always been why humans have settled and founded their cities. Our human desire is to make our home in such a place, where our health will be guaranteed.

For this very reason we yearn for no other architecture than architecture for health; we have no other technical or aesthetic aspirations than those that seek the spontaneous healing of the beholder’s body and soul. If today’s architects and cities disregard this aspiration, they will be disregarding the guiding inspiration of nature with its healing powers (*vis medicatrix naturae*) and its ancient patterns.

What constitutes a healthy place? What are the characteristics of a healing environment? What are the attributes of a life-giving, revitalising space? In the very beginning, there has to be a root pushing down deeply into the rocky soil and blindly seeking out the nurturing water that preserves life itself. This is necessary to guarantee permanence in a healthy place, renovation of the air and the environment, and communion with nutrient-bearing elements. I am talking here about spaces with a certain context, places that store up memories and life-experience, cherished atmospheres that identify us and situate us within the world, “here and now” places that tell us that we are home and that make us feel at home. Architecture for health cannot exist without context, without surroundings, without an interaction between inside and outside. Architecture for health must renew the air we breathe and the shape of the actions we perform. There can be no health without the stability of roots and a sense of belonging that makes us feel immune to changes happening all around us. This is why we must rehabilitate and inhabit the historic town centres as a guarantee of health and long life for our cities.

The next step is the upward thrust, that solid structure that will sustain the thousands of homes and the myriad of freely chosen lifestyles. In due course, the tree trunk expands in concentric rings and spreads out its sap-bearing branches, just like the city spreads out its infrastructures, road systems and

open green spaces. Clear pathways must lead us safely to each place; paths that are accessible for children and for people who are feeling tired; human paths, humanitarian paths. We must become aware of the networks that bind our cities together; and ensure that the endless chains of messages, encounters and farewells can flow freely through these networks. If the homeward path is long or strange, we will not feel at home.

Finally, the canopy of branches and leaves reaches out to provide shade and shelter for those without roots and for those on the move. Architecture for health must design a threshold to welcome strangers seeking a home. The city of the future will be a true city when it safeguards the defenceless and the unprotected. A healthy city must uphold its ancient role as a bastion and a place of safety. The city is not a place where lives just simply pile up, but a revitalising place where lives come together and walk apace; where each action commits us to life and survival, without us knowing or being known by others. A good city engenders community spirit, the true source of health.

Beyond the ritual sounding out of the healthy place, city planners and builders have been and are concerned with maintaining community and environmental wellbeing. The great challenge for 21<sup>st</sup> century architecture is the construction of dwellings in health-giving places; places rooted in history, sustained by the daily momentum of living and canopied by supportive community action providing shelter and sustenance for the needy.

The demand for a healthy, health-generating city is none other than the urgent need for new city and territorial planning. Collective health depends on the town planners' and architects' ability to design projects in terms of community relationships and the quality of life. We must go beyond the mercantile notion of price-tagging everything and the aesthetic notion of projecting images; we must let ourselves be guided by the gift of life itself.

In order to guarantee the health of a city, we must decipher the hidden message of those organisms that self-regulate and interact with the environment. We must stop "being in a city" and start "being part of the city"; we must become a body and a place; we must put down healthy roots. Martial claimed that "non est vivere, sed valere vita est" (life is not merely being alive but being healthy). A city is not a city unless it is rooted and nurtured "in" and "for" health.

## II.

# Environment, landscape and health. Public policies

## Climate, meteorology and health

Mercè Medina Ramón and Josep Maria Antó Boqué

Climate and meteorology are among the major environmental influences that affect our body and determine our state of health and well-being. This relationship has been known ever since ancient times and is still relevant today, despite all the technological advances now at our disposal to face the inclemency of the weather.

Climate, understood as the predominant meteorological weather conditions in any particular region, does not merely determine the landscape of that region but also the lifestyle of its inhabitants, as well as their adaptation to the prevailing meteorology. These factors have an indirect impact on our health (e.g. a diet based on traditional crops or the advantages afforded by open-air physical activity). Furthermore, adaptation to the predominant meteorological phenomena decreases the adverse effects of the same. It has been observed, for example, that the effects of cold weather are much more dramatic in regions with mild winters (such as the Mediterranean countries) than in colder regions where both housing and clothing are designed to withstand low temperatures.

The influence of climate on our health is also evidenced by the seasonal patterns of mortality and morbidity rates, that is, the proportion of deaths and illnesses in a certain place and time, and by certain physiological changes. In winter, for example, mortality rates are 10%-25% higher than in summer. Suicide rates and the incidence

of illnesses such as depression and allergies also show a marked increase during certain seasons of the year.

Meteorological weather, or changes in atmospheric conditions on a shorter time scale (hours or days), also exerts a strong influence on our health. It is often difficult to isolate the effect that each separate meteorological element has on our organism. Certain illnesses, such as rheumatoid arthritis, are affected by the joint action of changes in temperature, humidity and atmospheric pressure. However, most scientific research has focussed on the single effect of each element by themselves.

Temperatures above or below the comfort temperature have been linked to global increases in mortality and also in mortality from cardiovascular, respiratory and accidental causes. Excessive exposure to solar radiation has been linked to the appearance of dermatological and eye disorders, including skin cancer. Lack of exposure to solar radiation, on the other hand, has been linked to deficiency of the vitamin-D that helps to prevent illnesses such as osteoporosis, diabetes and certain types of cancer. Lightning storms have caused deaths and injuries, asthma epidemics are linked to pollination periods and anxiety, irritability and migraine to the warm, dry winds. Moreover, both wind and humidity can modify the effect of temperature on our organism by interfering with the thermoregulation mechanisms of our body.

Extreme meteorological phenomena also have a great impact on people's health. The main meteorological extremes experienced in Catalonia are heat waves and the extremes of the hydrological cycle (droughts and flash-floods). Heat waves have been linked to marked rises in mortality, chiefly due to respiratory and cardiovascular causes. The most vulnerable groups in the population appear to be elderly persons, young children and women, as well as persons with pre-existing health problems or persons in a low socio-economic bracket. The direct impact of torrential rains consists mainly of deaths and injuries caused by drowning, traumatism or electrocution. The indirect impacts are related to alterations in the ecosystem and in social organisation, and may include infections, diarrhoeas, respiratory problems and lack of adequate health care. On the other hand, droughts have an impact on agricultural production (linked in turn to famine and malnutrition in poor countries); and they help in the occurrence of forest

fires, which can cause, apart from important landscape transformations, deaths and injuries and may also exacerbate heart and respiratory problems through the inhalation of combustion particles.

Finally, we should mention the influence of the urban landscape on climate effects. The negative effects of certain meteorological phenomena, such as heat waves and torrential rains, are much more pronounced in cities, due to their characteristic features and the concentration of population. Moreover, climate can modify the effect of city atmospheric pollution on our health. Certain atmospheric polluting agents are more toxic at higher temperatures and the effects of atmospheric pollution are generally higher during the warmer months of the year. Meteorology influences the formation and spread of polluting agents and therefore plays a vital role in determining pollution levels.

## Climate change and health

Pedro Alonso and Cristina de Carlos

Recent research proves that we are facing a global climate change and warns us of the ways in which this may affect health, especially in poorer and more vulnerable areas where an increase in infectious diseases and malnutrition can cause disaster.

Climate has been a determining factor for humanity right from the beginning: the various species of hominids evolved largely in response to variations in climate conditions. Climate changes also influenced, to varying degrees, the rise and fall of civilizations throughout history. With the Industrial Revolution, however, a new man-made component began to alter the natural climatic variations: CO<sub>2</sub> emissions are now seriously affecting the climate and accelerating the process of change. Deforestation, forest fires and above all the constant use of fossil fuels since the 19th century all continue to produce massive CO<sub>2</sub> emissions that aggravate the greenhouse effect and cause the world temperature to increase.

A recent report alerts to the fact that the temperature on our planet has risen by 0.6°C over the last hundred years and could further increase by 1.1°C - 6.4°C during the 21<sup>st</sup> century. Evidence of global warming is multiple and unequivocal: the ice cover has decreased, the sea-level has risen, extreme climate phenomena have become more frequent, and the distribution and life-cycles

of many animal and vegetal species have undergone changes.

From the health point of view, climate change tends to accentuate the differences that already exist between countries. Indeed, social differences have led to a growing disparity in terms of health between post-industrial and impoverished countries. This is easily seen when we analyse the main causes of mortality. Non-transmittable illnesses are the main cause of death in areas with good health indicators such as Europe, whereas transmittable illnesses are the main cause of death in regions with low life expectancy such as Africa.

Climate change can affect human health in many complex ways, ranging from the direct consequences of extreme temperatures or torrential rainfall to the subtler (but equally important) influence of other factors such as food products or illnesses transmitted by vectors (infected animals). Furthermore, the repercussions of climate change depend greatly on the environmental, social and sanitary conditions existing in each region, thus making it harder to quantify the overall effects. It is true to say, however, that climate change contributes to the global toll of illness and premature death. In all likelihood, infectious diseases will witness a heavy increase in the near future, not only because of temperature changes and the spread of virus in the new environmental conditions, but also because of food and water scarcity (which deteriorates hygiene conditions and weakens the immune system). Increase in diarrhoeal diseases will also have a greater impact on the more impoverished countries. Another expected effect of climate change is more frequent occurrence of extreme meteorological phenomena such as hurricanes, which will affect countries to varying degrees depending on the economic and sanitary resources available to combat the effects.

To sum up, climate change will produce an unfair distribution of unequal risks: developed countries are responsible for the changes, but impoverished countries with fewer available resources will bear the main brunt. Strategies to combat climate change include forecasting the effects and keeping ahead of their impact, improving and adapting public health programmes in the face of the new risks. The vulnerability of the population must be reduced via better access to the health system, correct nutrition and more wide-ranging education campaigns. Governments must become involved and

work together to set up corrective measures that will minimise the impact of climate change on the health of their respective populations.

## The contribution of woods and green spaces to health improvement

David J. Moscoso, Mireia Pecurul and Roser Cristòbal

A sedentary lifestyle, stress and other factors associated with the fast pace of highly developed societies have given rise to worrying disorders in physical and mental health, especially among persons living in built-up areas. In recent years, it has become clear that a change in lifestyle can deal with these disorders more efficiently than traditional medical practice. Over the same period, decline in the productive value of woodlands and other natural environments has led to neglect and non-management of large rural areas. Physical activity carried out in a natural or rural setting can make a real contribution to general well-being among the population while at the same time offsetting the deterioration of the countryside.

In Spain, there are few instances of wide-ranging outdoor activity policies that embrace territorial planning, the environment, sport and nature. The 2003-2010 Andalusia Environment Plan includes landscape and environmental improvement in towns and cities, regeneration of polluted land and regulation of usage and leisure in natural spaces; another example is the National Forestry Plan, which prioritises a cultural, socio-economic programme that emphasises the social value of woodlands.

People in Spain are now starting to think of green spaces in terms of improved health and well-being. However, there is still a lack of public awareness as to how such spaces can affect our quality of life; positive action in this direction is only found on rare, isolated occasions and without a framework of guiding principles. The Public Administration has implemented certain policies, but only in a very sectorial way. On the other hand, local institutions and associations play a major dynamizing role and may promote one-off environmentalist policies such as urban allotments, greenways, folk museums, therapeutic routes and nature walks. These policies are designed to bring people into



contact with nature and improve the quality of life among the population, especially in the case of children, the elderly, persons suffering from handicaps or other difficulties, and persons at particular risk of social exclusion.

Promotion of the natural landscape as a generator of health and well-being is also a promising source of rural development for private enterprise, and the new trend towards this type of rural occupation can go some way towards offsetting the abandonment of rural areas. However, with the exception of agro-ecological parks and nature sports, private initiatives are still few and far between.

Favourable response to the above-described initiatives proves the positive effects of outdoor activities in rural and natural landscapes on human health and well-being. At the same time, they re-value natural landscapes that have often become spoiled as a result of general mismanagement. However, scientific research should be developed in this field in order to build up a body of medical evidence that would justify changes in current health and forestry policy priorities. Research studies exist for in other countries but here in Spain there have only been a few specific projects, without the backing of a multidisciplinary approach. There is a crying need for joint pilot research to prove the above hypotheses and compare them with results obtained in other European countries.

## **Landscape, environment and public health: implications for change**

Josep Lluís de Peray and Antoni Plasència

The public health system contributes to the improvement of health and well-being among the population through the promotion of healthy lifestyles and the prevention of health-related problems. The policies are complex to put into practice: absence of public demand requires prediction of needs and decision-making on the correct course of action to follow.

The field of public health involves several branches of science, as well as the entire welfare, social and education service, all of which are working towards designing and developing policies, implementing programmes, administrating health services

and channelling resources into training and research. However, the ultimate resolution on health policies has an indisputable political dimension, insofar as concerns decision-taking and establishing priorities based on the resources available. Hence, one of our main priorities must be to guarantee social equality in terms of health.

In this context, the landscape and the environment present undeniable opportunities and challenges for public health. The positive effects of nature on physical, mental and social health are well documented, even if they have received scant attention up to now. It is known that the environment provides satisfaction for our material needs, whereas the landscape meets our psychological, emotional and spiritual needs; it is also known that both play a positive role for health, but this is not without certain drawbacks.

The link between health and landscape has mainly been researched in the field of health promotion and illness prevention, especially in terms of the health impact of the city landscape as opposed to rural or more natural surroundings. On the one hand, the phenomenon of city development has increased life expectancy due to its more accessible and efficient health system; on the other hand, however, cities have generated their own health problems linked to pollution and new urban lifestyles. In fact, the public health system as we understand it today originated in the hygienist interventions made to improve the precarious urban living conditions in the 19<sup>th</sup> century.

Evidence supporting the positive effect of certain types of landscapes on the health of the population invites us to consider nature as a means by which we can regenerate and build up health, to start interacting with our landscape, rather than just contemplating it as a backdrop. There is abundant literature and documentary evidence on using the environment to improve health and well-being; preventative, therapeutic and restorative uses of the natural environment are all currently being developed. In this respect, we need a policy on public spaces (especially urban spaces) that will facilitate and promote healthy living practices and determine the health impact of certain activities that are either risky or perceived as such by the population. The landscape should be included within the context of a “gentle cultural revolution” and public health placed at the hub of health policies.

The Catalan public health service is currently being updated to respond to new social dynamics, which include increasing demand for health services, higher health expectations, and a growing feeling of vulnerability in the face of globalisation. The reform of the public health service will involve the creation of a Public Health Agency of Catalonia designed to unify all the health policies taken by the Government and the local administration bodies.

## Integral interventions for the reduction of health inequalities at a local level: District Health Programme

Isabel Sierra and Antoni Plasència

People's life conditions, habitat and physical surroundings are the subject of multidisciplinary research straddling sociology, social psychology, cultural anthropology and certain trends in town planning. From this approach, the interaction between rural or urban spaces and their inhabitants is an emerging sector in public policy analysis that opens up an interesting line of future research.

The Act 2/2004, passed by the Government of Catalonia on the 4th of July 2004, on the Improvement of Neighbourhoods, Urban Areas and Villages requiring special attention, also known as Neighbourhoods Act, has given the Health Department the opportunity to design a specific District Health programme dovetailing four of the Government and Health Department core policies: the fight against social inequality and its causes, with special emphasis on health; the need for cooperation with town and city councils in Catalonia, under their respective responsibilities, to create a single health project for the whole country; the need for participation by professional workers in defining the main issues and intervention strategies required on a territorial community basis; the reform of the public health service in Catalonia and the transfer of certain of its elements to the core primary health care section.

The programme is being developed in the first 60 districts entitled to benefits under the new District Law. The starting point is to diagnose needs, carried out on a participation basis and with a qualitative methodology. The next step is to prioritize

interventions relating to health promotion, preventative measures and sanitary care. These interventions are then put into practice and the results assessed. The nature of the target population has prompted actions designed to bridge the existing cultural, social and economic differences and to make the health services more useful and accessible. The "bridge-action" also extends to health education and awareness of preventative measures such as vaccinations, use of condoms, drug abstinence, physical activity, healthy eating habits, and screening tests for certain pathologies.

Expected results, over the next two years, point in three directions. Firstly, the teams involved in the programme will consolidate their mutual cooperation and develop a community approach to issues of health and social well-being; secondly, specific, long-ranging actions will be developed in the health system and the social services with the aim of minimising the effects of social inequalities on the health of the target population; the actions of each team in each district will create synergy and a spirit of mutual cooperation; will produce scientific evidence of the praxis and efficiency of the interventions; and finally, will help to build up a rigorous approach to inequality in health and the strategies needed to forestall or lessen its impact.



## Experiences and therapies

### Landscape and cultural diversity

Klaus Seeland

Landscapes are ubiquitous phenomena. There is no place in the world without landscape. Various cultures are reflected by their different representations in landscape and nature and by the society's dominating rationales and tastes at times in which multicultural societies are more the rule than

the exception. Wherever human beings live, they appropriate nature as culture, i.e. human beings are inevitably shaping landscapes in developing their own culture. There are no landscapes without people and there are, strictly speaking, no “natural landscapes”, because every spot on earth has been shaped, directly or indirectly (e.g. by climatic impact by human intervention). Landscapes are always cultural configurations exposed to economic energies and socio-cultural performances out of which the fabric of any landscape is woven and each has its distinct pattern and thus its unique value. Everything that is culturally relevant in social history leaves its markings on the landscape. Phases of social history are synchronised in contemporary landscape and become a construction of cultural consciousness. The legacy of a landscape consists of its natural potential and the history of its use. Prominent attractions in a landscape are particularly valued, yet it is the entire character of the landscape what ultimately matters. As we learn from history, there was very rarely a planning intention to shape a landscape as such, but the way a cultural landscape usually developed over centuries was for functional or aesthetic reasons.

Landscape aesthetics represent the cultural values of region's residents and their economy and political institutions at a given time. It generally depends on how people do actively interact with particular landscapes and whether the respective landscape is embedded into their social activities or vice versa. Perceiving landscapes as cultural metaphor for regional and national identity means, for instance, that lakes, mountains, forests, cities, etc. make up a unique blend. High standards of publicly appreciated landscape beauty represent a high standard of emotional and cultural attachment that becomes visible in the landscape. A contemporary landscape is a “we-and-the-others-museum” of what matters for various generations and cultures, as well as sub-cultures living together. A landscape reflects the social diversity in a common and thus unifying space. Any landscape is therefore a socio-cultural definition, a process by which diverse landscape phenomena are related to phenomena of a particular human life style and a code of conduct which perceive these phenomena as natural.

Landscapes are social and cultural interpretations of nature and constructions of the human mind to define the position of human beings and their social institutions

towards it. In this sense a landscape always denotes a social relationship between the landscape and the observer and is the experience of surroundings which may physically be the same but could be perceived by different people in different ways.

Once nature conservation or land use policy assesses landscapes it has to measure the appropriateness of policy decisions taking frequentation value, functional value, health value, integration value and acceptance value into account. The valuation of landscapes according to the application of these value categories shows the multiple dimensions of societal and cultural aspects that matter with such highly aggregated phenomena as landscapes are.

Since times immemorial healing landscapes were sacred landscapes and vice versa. Both are prominent elements in landscapes and extraordinary places of outstanding meaning to their respective culture. Sacred landscapes reflect a spiritual diversity. Sacred landscapes are generally exempted from being used for everyday or production purposes. With a view on any landscape one is automatically confronted with cultural diversity for the reasons given above because a rural landscape has become more than ever a characteristic marker of cultural identity and national character.

Little attention has hitherto been given by scientists as well as by administrators to the cultural dimension of landscapes, which is an inherent quality, but has to be made explicit to assess the role of culture in landscape design and planning. Social relationships between plants, animals and landscape phenomena have been well documented in cultural history. The unusual, the new which is encountered in a landscape, particularly if one expects a healthy effect from visiting it, may have unpredictable consequences on the landscape consumer, such as any cultural encounter. Whether a landscape reveals its healing properties to someone depends largely on a mutual responsiveness between the landscape character and the receptiveness of the person who thus represents the openness of a culture and its ability to absorb other messages encrypted in different landscapes. To bring a landscape quality back or to preserve what cultural identity is left in the landscapes of economically developed societies is where landscape as well as health planning comes into the picture.

## Everyday landscape and social and gender diversity in the context of health and well-being

Anna Ortiz Guitart, Mireia Baylina Ferré and Maria Prats Ferrer

The connections between landscape, health and daily life may seem obvious in theory, but it is not so easy to find real case studies to bear out the three-way relationship. Each concept should be analysed separately in order to find out how the interconnections can be brought to bear on building more human and person-friendly cities.

In the wider perspective on health and landscape, we should consider the concepts of quality of life and daily life, the first in relation to health and the second in relation to the landscape, understood here as the identity of a given place and the stage upon which we live out our lives. This leads us to a reflection on the importance of everyday landscapes on the health and well-being of the population.

The concept of everyday life is useful to introduce social and gender diversity in relation to health and landscapes. Precisely because daily life is rich, unforeseeable and flexible, we can consider groups or aspects that would otherwise remain invisible. The overall plan often neglects to see what is actually happening at street level, in the spaces and landscapes where men and women live, work, consume goods, interact and build their identities. A large body of literature nevertheless emphasises the role of public spaces as places that promote sociability, health and well-being in the city.

The new cultural geography has contributed much research on spacial and social behaviour, and diversity of identity by gender, social condition, cultural background, age, physical and mental capacity. Exploration of women's experience of space enables us to see spaces and landscapes in a different light; to seek new solutions for the needs of women, children, the elderly, non-integrated immigrants, persons with reduced mobility and so on; and to demand a more egalitarian use of public space. It has been observed that the presence of women in public spaces around the city (streets, squares, parks) is related to their family and domestic obligations. Women (whether they work inside or outside the home) use public spaces to pick up children from school, bring children or

elderly persons to the doctor, do the shopping, etc. In this respect, women have a closer link than men with their own area and their immediate environment.

The time that children spend playing in local playgrounds (in their own area, near home or near school) is of the utmost importance for their daily life. The use of public space for leisure is valued as a place for outdoor physical activities and so the quality of the environment is important for many reasons. Well-being is linked to such factors as vegetation, water, light, good quality amenities, ease of access, nice views, sunny areas and shady areas, as well as the absence of noise, smoke and traffic.

Urban landscapes would be healthier and more liveable places for everybody (men, women, children, young people, immigrants, the elderly and the handicapped) if they were designed to cater for each and every one of these groups, taking into account identities according to gender and age and the different perceptions and needs of each group.

## Landscape, tranquillity and health

Duncan Fuller, Claire Hagggett, and Helen Dunsford

It has long been established that there is a link between the environments that people experience, and the effects on their health and well-being. Research has illustrated how some landscapes can be both detrimental or beneficial to physical and mental health, with the latter benefits going beyond aesthetic enjoyment to include enhanced emotional well-being, reduced stress, and, in certain situations, improved health in a range of ways including enhanced personal and social communication skills, increased physical health, and enhanced mental and spiritual health, and spiritual, sensory, and aesthetic awareness. Research has also demonstrated that there are particular features of natural landscapes that may allow a variety of restorative processes to take place, indeed some authors argue that the distinctiveness and separateness of the natural landscape from the everyday may be as important as the literal distance. Taking this a stage further, some authors show that vegetation and nature reinforce our spontaneous attention, allow our sensory apparatus to relax, and infuse us with fresh energy, whereas other

work has highlighted particular aspects of a natural environment that aid this, and the factors of a landscape that are more or less preferred.

But there is another feature of environments that allows these restorative processes to take place. Some authors describe the settings which engage effortless attention, or fascination, and allow directed attention to rest. They state that the phrase “soft fascination” was coined to refer to the combination of moderate fascination and aesthetic pleasure that characterises the most effective restorative environments, and that others have used the term tranquillity to refer to the same theoretical combination. They argue that the two components of tranquillity (aesthetic pleasure and moderate fascination) make it an essential feature of optimally restorative environments.

Not only does the tranquillity of a landscape add to its restorative effects, but it is something that people actively seek in order to allow this to happen. If being in particular landscapes can have a positive impact on physical and emotional health, and if tranquillity is an important aspect of these landscapes, then it is clearly important to explore this further and establish what it is about landscapes that allow people to benefit from them. However, there has until now been little clarity about this; and particularly, much ambiguity about what tranquillity might mean. While it is a widely used term, and appears in product marketing, policy statements, and place promotion materials, any more in-depth understanding has remained obscured. Tranquillity is often referred to as one of a number of key social benefits or assets that exposure to the rural or countryside brings, a central reason for visiting rural spaces, and something that should be protected and enhanced; but because of the diverse uses and meanings that tranquillity has, it has also been regarded as ephemeral, too subjective, almost too experiential and difficult to conceptualise and pin down in any meaningful, “academic” or actionable/applicable sense. Qualitative, experiential aspects of landscape are often considered to be far harder to account for in quantitative terms and so landscape characteristics such as tranquillity risk being overlooked because of this perceived difficulty. Indeed, most landscape indicators focus on tangible, quantifiable attributes such as the length of hedgerows, water quality or the physical accessibility of green space. But it is precisely

experiential qualities that are important to consider.

The ongoing UK-based Tranquillity Mapping project, undertaken by Northumbria and Newcastle universities from the north-east of England, and funded by the Campaign to Protect Rural England, Countryside Agency (now English Nature) and others, has established that qualitative consultation of a wide range of countryside users and stakeholders can be accommodated within a quantitative framework for analysis and GIS mapping. It has highlighted the importance of exploring and representing diversity of opinion around such concepts as tranquillity through examination of what tranquillity means to people, where they go to experience it and why it is important to them. Since 2004 this research has allowed the development of a picture of what characterises, and detracts from tranquil areas, or landscapes that enable people to find tranquillity. It has persistently highlighted that that tranquillity is a vital element of people’s experience of the countryside, one that can be used as a workable indicator, and that it has significance that resonance across different places, times, and groups of people. Moreover, the methodology developed allows tranquillity to be a useful concept, of practical value in decision making, and having implications for targets, indicators, policies and plans relating to quality of life, countryside quality, landscape strategies and environmental management.

## Physical activity and contemplation of the landscape

Oriol Sallent Bonaventura

From the beginning of time, human beings have had a chequered relationship with physical activity and with nature. The link between both phenomena has changed over the years, with approaches ranging from the utilitarian (nature as a playing field), the antagonistic (nature as a challenge) to the ecological (nature as a lifelong companion).

Nature and physical activity have been studied as sources of individual well-being, in the widest (physical, mental and social) sense of the word, but research on the joint benefits derived thereof has only been done over the last decade. The concept of *green exercise* denotes the beneficial synergy

coming from physical activity performed in contact with nature. The link between the natural landscape and physical activity has been approached from three different angles: contemplation of nature (through a window or in a landscape painting), activities performed in natural surroundings (walking, cycling) and active participation and involvement with nature. According to some authors, the results include increased self-esteem, improved state of mind, relief from stress and/or depression, and motivation for greater physical activity.

However, the benefits of physical activity in a pleasant landscape or in attractive, well-ordered landscape probably run much deeper. A phenomenological approach is needed to study the fundamentally subjective experience of leisure. Leisure cannot be possessed, spent or consumed, but must be experienced. From the humanist perspective, leisure is an experience with proven benefits for the well-being of the person.

Experiencing nature can mean discovering the natural or cultural heritage of a particular place, having satisfactory social relationships (with people like or unlike ourselves), feeling new emotions and developing oneself as a person. In the latter case, sport brings us pleasant sensations in a gratifying, harmonious way, and landscape brings us aesthetic delight that intensifies and perfects these sensations. The confluence of sport and nature affords states of joy and well-being without requiring complex structures.

Recognition of physical activity combined with the contemplation of a landscape as a gratifying, beneficial source of individual well-being marks the first step towards demanding measures that will guarantee this source of well-being for all.

## Ecotherapy: effects of therapeutic urban green spaces

Ambra Pedretti Burlis

The author embarked on a research study inspired by horticultural therapy and its objective of combining the health of people and that of the environment. However, the study was to embody a broader vision which could provide the foundations for professional training in ecotherapy.

Ecotherapy is an essentially holistic approach, based on health promotion and learning. This broadened the scope of the research into direct and specific applications in current multidisciplinary practice. The theoretical and philosophical concepts of ecotherapy can be achieved by overlaying more traditional therapeutic and restorative models of health promotion, on an explicit, active and reciprocal relationship between man and nature. By finding an active niche in nurturing and conserving their landscape, individuals can be guided by teams of therapists, educators and horticulturalists to learn how to nurture themselves as part of a whole system. Through the use of metaphors taken from the environmental background, ecotherapy seeks to draw attention to the 'self-corrective' capabilities of nature and the living systems around us, discover their equilibriums, accept their redundancies and flexibilities, both on the cultural and the biological level, deploying competencies to re-learn how to respond to obstacles, life changes and events, in non-pathological ways. The model of ecotherapy has been described as a healing and growth process which is personalised according to the individual's needs. Its main philosophy is to encourage a real bond with the ecosystem, which brings about ecological sensitivity as a further outcome. This was a tangible and applied contemporary reality and it provided a gateway into researching its viability and developing innovative practitioner training in this new area.

The practice of ecotherapy seems to have a definitive "mutuality" which can support collective behavioural change. In public health, part of this mutuality can be found in the relationships between therapists and service users, where the latter assume greater responsibility towards the change in personal behaviour. The ecopsychology literature illustrates how the reciprocity between man and nature can be harnessed and exploited in therapy and education, but also how the therapy/education is directly and actively of benefit to the environment locally and, intrinsically globally. The concept of 'kinship systems' at work to actively heal each other, should not be left enclosed at the philosophical level and should be exploited by all health education promoters. In ecotherapeutic approaches there is a further level of mutuality: people who would normally be classed as the 'influenced' in their vulnerable status take the role of the 'influencers'. In benefiting from personal lifestyle changes

and associated recovery, the participants develop a reciprocity towards the environment and their community. In doing so, they influence others to care for and respect the environment and to see their local green spaces as a source of health and well-being. The sense of personal intervention and expertise developed in the course of 'therapy' brings the person to a position of legitimacy through a healthy connection with the public. These powerful interactions can be highly effective towards changing public behaviour. These approaches are inexpensive, practical and a viable and innovative route towards a better public health. They are supported by evidence which shows the health benefits of using green spaces. This model could address many local and global ecological and landscaping challenges. At the same time, the disabled and disadvantaged would derive benefits in terms of rehabilitation and social re-integration. People of all ages would be able to appreciate their landscape as an essential link to their health, thus benefiting directly from contributing in the provision of greenspaces for their communities.

The ecotherapy practitioner is in a potential position of becoming a leader in achieving positive outcomes in the therapeutic environment, but also influencing key policy areas based on the social capital outcomes. The kudos which could derive from this, would certainly emerge from direct value for money results and from a professional and respected profile as ecohealth educators. Policy makers should therefore be encouraged to take a holistic view of these activities within the context of public health and be influenced by the evidence that important targets can be met through the work of these practitioners. The future development of contemporary ecotherapy should be based on sustainable therapy and recovery models, sustainable public health and sustainable healthy public green spaces as a holistic approach to the health of people and our planet.

## Vegetable gardens in the city and therapeutic horticulture

Nicolau Forn's Puch

Horticulture (and ecological horticulture in particular) is known to be an effective means of promoting health as well as physical, men-

tal and spiritual well-being. To be more precise, horticulture fosters a healthy lifestyle, restores mental equilibrium, increases self-esteem and self-confidence, stimulates social relationships and helps to reduce stress. Furthermore, the existence of urban vegetable gardens improves the city environment and landscape by diversifying the vegetation in empty spaces. Urban vegetable gardens give city dwellers a sense of continuity in time as well as reinforcing the much-needed feeling of belonging to a landscape.

The amount and variety of benefits for human health deriving from horticulture would suggest that vegetable gardening is therapeutic for (nearly) everyone. It is especially useful as a therapeutic tool for mental or physical pathologies and for alcohol and drug addiction rehabilitation processes. It can also be used as a social re-insertion programme among people at risk of social exclusion (long-term unemployed, elderly people living alone, troublesome teenagers and non-integrated immigrants).

Horticultural therapists work in prisons, residences for the elderly, rehabilitation centres, schools and hospitals. They design programmes adapted to different ages and circumstances with the aim of improving the mental and physical condition of their patients. Treatment for certain types of pathology may require constant supervision by a team of expert therapists. In other cases, however, direct supervision is not as important as the fact of working alongside other persons with the same problems (battered women, children with learning difficulties, immigrants with adaptation problems, physically handicapped persons and persons with job-seeking difficulties). The mere fact of being in a group of persons with problems can improve people's social skills and help them to feel better about themselves.

Therapeutic programmes usually try to involve patients in every step and aspect of vegetable growing, as a means of restoring their physical and mental equilibrium. Solving dilemmas such as choosing the right plot of land and deciding which seeds to plant is all part of a therapy that confronts the patients with their own abilities. Unlike other therapies that require verbal skills (speech and reflection), horticultural therapy relies on non-verbal skills (visual, olfactory and sensorial memory) that enable verbally-challenged persons to carry out this type of work without feeling aware of their limitations.

In order to promote the benefits of horticulture for individual health and for the

landscape, city planners should allot space for horticulture (vegetable gardens for families and for the elderly, for social, educational and therapeutic purposes) both in the city centre and on the outskirts. In the city centre, good use could be made of unused sites or municipal parks for starting up vegetable gardens where people can grow their own tomatoes and lettuces. On the outskirts of the city, an allotment system could be used as a green belt that would simultaneously restrain urban sprawl and improve the city landscape.