### LANDSCAPE AND LAND PROPERTY RIGHT

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RESUME: This article shows how individuals privatise the landscape. It reminds us that landscape was invented by art, and painting in particular. (1). An elite modified the outlook on nature. It made landscape of the countryside. Once individuals give aesthetic value to land, they buy not only the property rights to plant seed or build, but also to look. The demand for landscape thus leads to a supply of development in order to look at it. This means producing viewing points (2) controlling their extension (3) and protecting image rights on property

#### INTRODUCTION

The definition of landscape used in this article is that of the dictionary. The landscape is a part of the countryside that nature presents to an observer (Nouveau Petit Le Robert) Faced with landscape; economics can be sceptical (Price 1978, p1). The landscape has no price. It is not exchanged on a market. It is not possible to speak of quantity of landscape. It seems then to escape from economical analysis and its categories. However to affirm that there is no means of treating non-commercial goods would be to be ignorant of economic theory. Hedonist price methods, transportation costs and contingent evaluations suggest giving a price to goods that do not have one in order to integrate them into the economic calculation. It is in this direction that most work devoted to landscape is undertaken.

This type of approach permits a better understanding of individual resources committed in order to consume the landscape, but leaves in shadow most of the strategies invented by entrepreneurs to seize the profits born with the invention of landscape.

This article tries to bridge the gap. It maintains that the integration of the invention of landscape is explained by three economic calculations of the agents involved and in fine its management in exchanging property rights. The invention of landscape illustrates the value that men bestow it and the means undertaken to consume it in a more or less exclusive manner. By transforming a grove into landscape for example, the individual attributes an aesthetic value to the land and neglects its agricultural value. The invention of landscape thus goes hand in hand with the discovery of the aesthetic dimension of the ground. It is assimilated to a change in taste, an opportunity. This article describes the manner in which the market seizes the change and serves a demand which emerged from the landscape. It shows, firstly, that it is because art forms the taste for landscape that individuals are ready to allocate rare resources to consume and appropriate it. Landscape economics logically follow its invention. It is because the countryside has value as landscape that it creates entrepreneur strategies, their principle function being to serve the consumer. It then describes three specific strategies for appropriating landscape: purchase from a permanent point of view, purchase of rights on the extension, and the purchase of rights to the image of the property or natural monument.

# 1 The invention of landscape and its economical consequences

As Anne Cauquelin illustrates in her book L'invention du paysage, the concept of landscape is recent and not evident. There was, at the dawning of the renaissance, the invention of landscape because perspective in painting was developed. After this, literature discovered the mountain and river banks in poems, meditations and tales of voyages. Art thus transformed the evil and horrible mountain into a beautiful monument that one comes to admire and appreciate like a work of art in a museum. Art invents landscape and transforms the way in which men see the world. It made nature a place of aesthetic experience. Landscape is beautiful or ugly. It is no longer a place for living or working. 1930 French law on the patrimony protection translates this transformation of gaze by making landscape a natural monument of aesthetic value. Art and nature become equivalent (Cauquelin 1989, p.32). Art then transforms nature when landscapers and garden art come to put the space into perspective. This gives it the aspect dreamed of by the artist. The painter produces a model; the demiurge gardener in his turn produces a reality which will be a model for the landscape painter (Cauquelin 1989, p.84). The story of landscape is thus the story of deluxe goods invented by the elite and which is progressively consumed by crowds of consumers who hurry to the beaches and mountainsides.

By inventing landscape the elite created the conditions for emergence of a market for the greater number. It is, for this reason, not correct to treat landscape as goods outside of a market even if it seems impossible to exchange landscape. What counts for economic analysis is that men give it value. This means that they are ready to pay, to mobilise resources to obtain it. Landscape economics is born with the value of the countryside. It can spot entrepreneurs' strategies to respond to this demand and sometimes to create it.

The entrepreneur is defined here as he who is more prompt than the crowd to identify an opportunity not exploited by market agents. An opportunity for profit has several origins which can be classified into three categories: the type of exchange, the sources of opportunity themselves and the initiator of change (Eckhardt et Shane 2003, p.340). The type of change comes back to the question of knowing whether it concerns a change created by the invention of new goods and services, new geographical selling areas, new production methods, new ways of organising the firm and/or the discovery of new raw materials. Opportunities also vary according to their origin. They are born from asymmetry of information, exogenous shocks such as political decisions, and demographic evolution due to scientific discoveries. Opportunities are born from change in supply and demand conditions: tastes, culture, perception or new desires.

The invention of landscape creates a new way of seeing. It modifies the demand for space. It changes the ground's value. The mountain, the beach, the desert and the shores now have an aesthetic value which leads individuals to mobilise resources to see them. They are ready to pay to see these natural monuments as they are ready to pay to see a painting in a museum or an architectural monument. The entrance fee is not a ticket, but the amount of resources used to situate oneself. The individual commits resources to move and reside. Landscape economics and natural resources suggest estimating the amount of resources committed by individuals to consume the landscape. The evaluation of transportation costs and their evolution provides an initial indication of the value of landscape and the level of demand. The number of visits reflects the demand. The cost informs us about the intensity of this (Clawson et Knesth 1966). The landscape is for this reason a collective local commodity. Space prevents individuals from consuming it. The evaluation of residence costs and their

evolution provides a second indication of the value of the landscape and the level of demand. Hedonist price methods allow measurement of individuals' willingness to pay. They measure the quality of the landscape based on real estate price differences. A certain number of articles make reference to this effect of landscape on prices. The proximity of green spaces (Parent 1969), the quality of nature (Weichart 1983), air pollution (Gordon et Richardson 1983), access to and view of the sea (Parsons et Wu 1991) are important elements when choosing a new lodging and these are the most valuable properties. The individual really integrates the quality of landscape into his demand for lodging. The quality of landscape can, for this reason, be defined as an environmental attribute of real estate. (Garrod et Willis 1992). The price of the ground also depends upon the value of the view acquired. Lovers of the sea or of Mont St Michel are ready to pay more for land which provides this landscape. The quality of the view has a price on the real estate market (land and lodgings).

The invention of landscape not only creates profit opportunities for travel agencies and property owners. It also leads entrepreneurs to invent services capable of making the most appreciated landscape exclusive. Three types of service can be offered: developing viewing points (2) developing the space and the structure of property to assure the quality of what one sees (3) and (4) ensuring ownership of the image of these goods to make land investment profitable.

### 2 Exclusivity by purchasing a viewing point

The appropriation of a viewing point is the essential means of access to landscape. The current definition of landscape reminds us of this. The landscape is a part of the countryside which nature presents to the observer. It is a landscape observed from a viewing point. The viewing point is a necessary condition but is not sufficient to make landscape. The entrepreneur develops to allow it to be seen. Following the theory of substantive rationale, it is possible then to suppose that he will maximise his profit by optimising the number of viewing points in a given zone. He will offer viewing points in order to seize the value of the landscape. A simple maximisation program allows the description of his objective function. The entrepreneur perceives a source of monetary profit in selling viewing points. He then proceeds with a maximisation calculation for profit under constraint

Maximising profits and producing viewing points

Max  $\pi$  under technical constraint Y = f (S, W)

with  $\pi$  the profit, Y the number of viewing points, S the surface area of the zone to be seen and W the different quantities of work and capital used for building to materialise the viewing points

The profit corresponds to the price of viewing points by their number minus the costs, in other words, the price of the land (Ps) by the surface area (S) plus the price of input (Pw) by the quantities w

(1) 
$$Max Py.Y - (Ps.S + Pw.W) = Py.f(S, W) - (Ps.S + Pw.W)$$

Optimum is reached for the quantities S and W which verifies the following conditions:

$$\partial \pi/\partial S = 0$$
 et  $\partial \pi/\partial W = 0$ , in other words, Py. f's = Ps et Py. f'W = Pw.

Which means (2) f's/f'w=Ps/Pw with f's= $\partial$  Y/ $\partial$ S et f'w= $\partial$  Y / $\partial$ W.

The marginal technical substitution rate (TMST = f's/f'w) measures the supplementary ground which compensates for the reduction in the input quantity, the number of viewing points remaining unchanged. It measures arbitration between juxtaposed viewing points (width) and viewing points stacked (height). The price relation between the ground price and the input price (Ps/Pw) measures the rate at which the producer of viewing points can substitute the ground for input while keeping his costs fixed.

Respecting the equilibrium of the equation (2) the producer of viewing points minimises his costs and maximises his profit by adopting an optimal productive combination knowing the price of the factors and their margin of productivity. He equalises that which he gains by using a supplementary unit factor to that which it costs him. The equilibrium in value is written: (3) f's/Ps = f'w/Pw when the optimal combination is reached, the number of viewing points by level of spending is identical for each factor. If the producer of viewing points respects this equilibrium, he obtains the greatest number of viewing points for a given level of spending (optimum). The entrepreneur tries to discover the site's optimal disposition of viewing points. The first entry is located on the site and then each new arrival is situated in relation to those already on the site. In this way the entrepreneur allows a maximum of individuals to buy a viewing point. He develops to allow viewing. He organises the consumption of the panorama.

This equilibrium varies with the values of Ps and Pw. If Ps increases as compared to Pw, there is a substitution of input to the ground factor and a tendency towards increased construction becomes necessary (profit constant). The entrepreneur superposes the viewing points in order to maximise the number. Buildings go up and the monopoly power of the viewing zone owner (ground) increases. The entrepreneur looks for higher-performance production techniques. In other words the means to build even higher buildings. The bay of Rio de Janeiro perfectly illustrates this logic - build even higher to maximise the number of viewing points of the sea. If Ps decreases as compared to Pw, there is substitution of the ground factor input, the height of construction decreases. The price factor variations are thus responsible for the type of construction.

The consequences of public policy on management of viewing points

Any protection policy aimed at rationing, meaning decreasing the surface of the viewing zone (S) has, as far as this model is concerned, three effects. Firstly, it will accelerate the exhaustion of stock of viewing points which remain exploitable in the zone. Then it increases the density of viewing points in the unprotected zone. This means that constructions will be higher. It increases the entrepreneurs' willingness to pay to obtain a supplementary unit in the viewing zone. (S). Corruption and misappropriation of protection laws on the site and landscape is explained by the level of profit identified by the promoters, in other words, consumer pressure. A ban on construction in a coastal zone, to protect the shores, consequently prevents a large number of individuals from buying a viewing point and consuming the landscape. It thus creates artificial monopoly situations for those who have already entered. If the first arrivals are elite, in other words those who were the first to appreciate the landscape, they are ready to sacrifice the increased land value they could obtain by selling to a promoter in order to keep partial exclusivity of their landscape. They negotiate free access in exchange for a ban on density of the number of viewing points. The ban on sale to promoters penalises the consumer and the owners who wish to profit from the value

attached to their viewing point. It penalises the consumers because they are prevented from accessing the landscape as they cannot buy a viewing point. Instead of maximising the number of viewing points on a site, the regulation institutes a status-quo. It prevents any new entry to the site. It freezes the positions obtained and favorises a price increase for the existing viewing points. The owners win on both sides, they protect part of their exclusivity of the panorama and they give themselves the opportunity to take advantage of added value of their land if they finally decide to leave. The consumers on the other hand are obliged, in order to buy a viewing point, to put up with the effect of rarity. This excludes low revenues. The poor will consume the landscape, but temporarily. They can see (mass tourism) but not move in. They admire the houses at the seaside of the high revenues.

# 3 Exclusivity by purchasing the whole area

The purchase of a zone or a viewing point, and moving about on this zone, only provides partial exclusivity for landscape consumption. An event written about in a French daily which occurred in Normandy, in Calvados, leads even to thinking that the lack of exclusivity can create conflict.

« The Boulevard Aristide Briand in Ouistreham (Calvados). On one side the beach, on the other, villas with an impressive view of the sea. However, between the two, camping cars appeared. The inhabitants were very upset. Their panorama had clouded over. About 70 of them, inhabitants of Ouistreham, sent a petition to the prefect to protest about the camping cars. (D. Gourin, Ouest-France, 17 Août 1990, p.16).

This event illustrates two ways of consuming landscape: the window of the house which is a fixed viewing point and the window of the camping car which is a mobile viewing point. The mobile viewing point introduces the dynamic of mobility. The fixed viewing point introduces permanence. It also allows interrogation about the reasons for the partial exclusivity of landscape. If the villas at the seaside are disturbed by the arrival of camping cars it is because they could come to the sea. This free access is not a necessity. In the absence of a national policy on roads and paths, it would be possible for the owners to organise and charge for access to their panorama, just like the owner of a museum, theatre or castle. Free access would be a choice if the roads and paths could be appropriated privately.

The theory on incomplete property rights permits outlining reasons which would push a entrepreneur, who has the right, to reinforce the exclusivity of his property to prevent free access. The right to property is always incomplete because it is never totally protected. (Barzel 1989). The entrepreneur arbitrates between profits and costs of exclusivity. His calculation evolves in function of profit opportunities present on the market and exclusion techniques. The barbed wire is often cited as a technical intervention which profoundly changed agricultural production techniques in the United States. It made exclusivity of land rights less expensive, and incited breeders to go from extensive techniques to intensive techniques. In the case of landscape, it is mainly the evolution of consumers' willingness to pay for landscape which explains the investment in site access protection. The Bay of Mont Saint Michel in France remains in free access; in these conditions, only if the owners of the land who permit access to it feel that the profits of exclusivity are inferior to its costs, otherwise stated, to the amount of resources they would have to invest to make the Bay profitable. The landscape is not, in this sense, a local collective property by necessity but by choice. It is the law which limits the possibilities to exclude those who do not pay to access it.

At the end of the day, this element leads us to interrogate ourselves about the reasons for obstruction, the first being free access; in other words, the fact that villa owners did not protect access to the sea. The structure of rights influences individual strategies. impossibility of appropriating public roads and paths makes total exclusivity of landscape impossible. The second reason for obstruction is the purchase of a zone with a viewpoint does not render the landscape completely exclusive. A viewing point is exclusive in the sense that its owner is the only one able to see the sea from that point, but that point does not exclude the existence of others. For one individual to benefit from the view of the sea at Ouistreham or the Bay of Mont Saint Michel, he would need to buy the whole viewing zone as well as the zone to be seen, or the total surface of the zone which enables viewing. He needs to be in a position of monopoly. The appropriation of the landscape is complete and prevents conflicts if the individual possesses private property rights on the whole zone; the zone to be seen and the viewing points. Conflict between villa owners (fixed viewing points) and camping car owners is explained by the absence of controls of the zone viewed and/or its surroundings. It is because they do not attribute sufficient value to the exclusivity of the landscape, or that they don't have the right to prohibit access to the beach that conflicts arise. Exclusivity in this sense does not affect only the way in which individuals access the landscape. It also has an effect on their level of satisfaction. It is because the landscape is not totally exclusive that it can be degraded. It is the absence of exclusivity which explains that individuals do not correctly control the evolution of their panorama.

This does not permit, however, to affirm as does Galbraith (1975), that in the presence of a conflict between industrial properties and the aesthetics of landscape, that it is up to the State to impose aesthetic priorities. In the light of what has been said, this suggestion is not correct. State intervention would only, on the one hand, prevent people from expressing their consent to pay, and on the other hand would officially attribute a value to the landscape. If industrial development destroys the aesthetic qualities of a zone, it is simply because the individuals grant more value to industrial property than to landscape.

This does not lead either to the same conclusions as Coase. He upholds that if the judge had cancelled the building permit of a landowner who blocked the surrounding houses' view, he would have prohibited the formation of cities, and then the whole of the collectivity would have to support high cost in preventing the formation of an agglomerate economy. It is because the judge is guarantor of the efficiency of decisions that he did not decide in favour of the complainant. The argumentation developed here is different, and does not pave the way either for public intervention or for the arbitrary legal decision whose objective would be to mimic the market. It is based on a simple principle. Purchase of property rights is the best way to control the evolution of the countryside. An individual whose view has been obstructed by someone else simply has no rights, as he has not consented to allocate resources to protect his view. Beginning from the concept that landscape can be appropriated, it is no longer necessary to have recourse to hypothetical criteria, which is more or less arbitrary efficiency, to explain the judge's decision. It suffices to uphold that the judge's function is to ensure that owners' rights are respected. If they haven't committed resources to ensure the evolution of their panorama, they are responsible. They considered that it wasn't worth it, otherwise stated, that the value of the landscape was insufficient to compensate the costs of its protection, exclusivity.

The main economic strategy to ensure the quality of what we see is then the purchase of the countryside. The landscape channels exploit this demand. It maintains and creates spaces for land owners who are concerned with developing, in making their living space attractive and

agreeable. The attraction for all natural zones susceptible to creating a monopoly is explained by this logic of countryside control by the purchase of the area. Seaside, lakeside and riverside, as well as panoramas in dominant locations or on mountainsides, guarantee to their owners a relative certainty about the aesthetic quality of their view.

# 4 Exclusivity by image right protection

The ownership of a viewing point (zone to see from) and the area (zone to be seen) is not always sufficient, however, to render the landscape completely exclusive. It is in fact possible to arrive at the place by air and photograph or film the area. The sale of pictures and films to editors and movie theatres and all kinds of Medias obviously renders exclusivity obsolete. Henceforth everyone can see the beauty of the landscape on paper or on television. This example could, at first glance, appear to be irrealistic, it was however an important current event in France when a lawsuit, now closed by a decree of the Supreme Court in May 2001 (Ravanas 2002), awarded in favour of the photographers against the land owners.

Debates surrounding image rights of land in French jurisprudence

At the origin of the conflict there was a lawsuit between the Dubray publishing company, which sold postcards of a café, Gondrée, owned by Madame Gondrée, which had been in 1944, the first house liberated by the Allied Forces in Normandy after the landing. A first decision of the Court of Appeals in Caen decided in favour of the publishing company, but a second decision of the Supreme Court annulled the Court of Appeals ruling and scrupulously upheld the absolute rights over images of one's land. The Supreme Court considered that the sale of postcards violated Article 544 of the Civil Code as the editor exploited the property in the form of photographs and thus infringed on the owner's rights to enjoyment of his property. Article 544 of French Civil Code stipulates that "the owner has sole right to the exploitation of his property, in whatever form. » therefore « the exploitation of a building in the form of photography infringes upon the owner's rights to enjoy his property" This decision was in favour of the owners and authorised Mrs Gondrée to refuse that a third party use the image of the building for commercial ends without her authorisation. The Supreme Court, in 1999, decreed then in favour of an exclusive and absolute power of the owner who could oppose the reproduction of the image of his property and conserve its marketable value. The owner of property over which no intellectual property is exercised disposes then of an absolute right to the image of his property and is the only one who can decide about the eventual commercial exploitation of its image. If we keep to this decision, the law protects the exclusivity of the owner's property image rights. He controls both the evolution of his viewing point, by having property rights over the whole and the image of his property.

Other lawsuits following this decision questioned the result. The most symbolic is the conflict between the co-owners of Puy Pariou, in the Puy de Dome –vs- the distribution group, Casino Géant. In May 1999, a photo Tec (SDP) sold, by the intermediary of his local representative, the rights to an aerial photograph of the regional park of volcanoes of Auvergne in France, wherein Puy de Dome and the Puy Pariou appeared. The silent partner, the group Géant-Casino, used this photo to extol the virtues of their agricultural products. In the foreground of this photograph is the crater of the volcano Puys de Pariou. Following this publicity campaign, the volcano's ownership associations demanded that the group Géant-Casino pay damages linked to the prejudice suffered by the owners (the amount was 120.000 French francs). The group Géant-Casino refused to pay and was thus summoned to the Tribunal de Grande Instance (court of first instance of general jurisdiction). The land owners

of Puy Pariou have taken him to court for not having asked their permission. Juridical history this time does not decide in favour of the owners. The tribunal de Grande Instance de Clermont-Ferrand, on 23 January 2002, inspired by a Supreme Court decision, considered that if there is no prejudice it is not possible to claim damages. The owners of Puy Pariou are disgusted because they did not prove that the reproduction of the image of their property had definitely caused a certain disturbance of their rights to use and enjoy. In this case, the property owner remains owner of the image only if the use of this image by a third party causes abnormal disturbance. Property image rights are no longer exclusive but linked to damage evaluated by the judge. Image rights are henceforth decided by the judge.

The consequences of this debate for the analysis of the process of privatisation of landscape

The value of these conflicts is multiple. Firstly, they ask the question: to whom should the image rights belong? The owners or photographers? This question is rich in economical consequence but is beyond the subject of this article. Then they bring to light the existence of a new form of protecting property rights; the law. Exclusivity is not only obtained by owners' decisions. Jurisprudence is also concerned. In the same way, as free access can be imposed by the law which prohibits privatisation of roads and paths, jurisprudence can impose the non-exclusivity of the image of property. A change in the jurisprudence can transit by a legislative measure, otherwise stated, a political action aimed at applying pressure on Parliament. They show, lastly, that the production of an image is a means, amongst others, to exploit the beauty of a natural monument. The demand for landscape is no longer satisfied only by travel or the purchase of a viewing point. It is fulfilled by the image. The landscape as an image is thus not without an owner. It belongs to either the landowner or the photographer. In both cases the image of natural monuments, sites and landscape, is exclusive. It is not free property. It can be sold and give rise to an exchange for mutual gain.

### **6 Conclusions**

The invention of landscape has thus created a modification in the hierarchy of land prices and behaviour patterns. The shoreline, the mountain, wet zones, and green spaces in the broad sense, have become valuable. Individuals no longer perceive the earth as a means of production. They have made it the support for an aesthetic service. The ground and its characteristics are the same, but the way of perceiving them has changed. The increase in revenues, and the appearance of a middle class, has generalised this taste for nature, the sea and the mountain, and transforms landscape from deluxe goods, reserved for the elite, to normal ones, accessible to middle class who, thanks to the decrease in transport costs and the increase in their revenues, have access to this type of consumption. Owners of the most sought after viewing zones, as well as the promoters, have thus been able to perceive in this evolution, the existence of opportunities for profit. They have launched into a policy of development to see better. It is no longer the individual step of a few elite who come to admire the mountain or nature, but an industrial or real estate approach. The entrepreneurs recognised in this desire for landscape the possibility to make exclusive profit. They sold viewing points, purchased extensive properties, coined the images, and thus responded to the demand for landscape of a large mass of people. They made accessible to the greater number, landscape judged to be most sought after, by developing to allow seeing. They made aesthetic wealth available in order to make a profit and respond to the demand.

This dynamic of profit exploitation, linked to the value assigned to a certain panorama, leads to two types of conclusions. It is not right, first of all, to enclose the landscape economy in

the category of non merchant goods, and more specifically, collective goods. Landscape is something that can be appropriated, and privately. It is possible then to create a demand for landscape and invent a new way of seeing the countryside. Nature has progressively become landscape for which men are ready to invest part of their resources. It is possible that industrial buildings, electrical pylons, windmills, and seasides render aesthetic services because artists perceived their beauty by immortalising them in a photograph,, a painting, a novel, or a poem. The aesthetic value men attribute to their country is not immutable. It evolves. This leads to upholding that it is not desirable to think up rigid public policies in matters of landscape, and that the principle source of protection must be the amount of resources men allocate to see, and not that they have hypothetically consented to pay to protect a landscape at the time of a questionnaire of no consequence.

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