

Chapter 5

Landscape and Economy

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5.1 Introduction

When we think about the landscape, we rarely consider that it may have an economic value or even any links with economy. We are more in the habit of associating spiritual and aesthetic values to the idea of landscape which would appear to have nothing to do with money. Yet this comes from a misplaced idea of what landscape is and of what the aim of economics should be.

It is perhaps not by chance that the most comprehensive review of the Italian agricultural landscape and its transformations was produced by Emilio Sereni, who was an historian and a skilled economist.

Notwithstanding the decades that have passed since the publishing of the “*Storia del paesaggio agrario italiano*” (Sereni 1986), in order to understand the indissoluble bond between landscape and economy it is indispensable to start from some of his insights. On the one hand he defined the agricultural landscape as “the shape which man, through his farming activities, consciously and systematically imprints on the natural landscape”. Later, in commenting on the role played by the intervention of Rome in the formation of the Italian agricultural landscape, the author adds: “We find ourselves in front of one of the most characteristic cases of what may be called the “law of inertia” of the agricultural landscape: that once laid out in particular forms, these tend to endure—even when the production practices that had originated them have disappeared—until new and more decisive technologies do not arrive to disrupt them”.

These two insights, fairly general yet profound, allow us to pinpoint the factors underlying the development and continuance of the agricultural landscape, of its being at the same time a product of today and yesterday. On the one hand it is obvious that, in a given environment, every human group tends to transform the territory in a way that maximizes the benefits for society and for individuals in that society.

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The type and entity of the transformation will depend first of all on the resources available in terms of labour, capital and technology. In second place, it should not be forgotten that every social group has, over time, formulated rules that influence and govern both the use of resources and the organization of economic activities (relations of production). Note that, in general, what happens in the initial phases of transformation of the natural environment, or in the phases when substantial amounts of capital and/or adequate technologies are available, tends to profoundly influence the subsequent evolution of the landscape. The “law of inertia” is essentially due to economic reasons. A cultural and territorial system of the past will be modified only when, having the appropriate technology available, the resulting benefits are greater than the costs required. In the case of some types of infrastructure (the road network, irrigation and drainage canals, etc.), the costs of any transformation may be so high that they are not feasible even when the existing territorial arrangement is no longer entirely practical for the carrying out of agro-sylvo-pastoral activities.

However, an approach anchored to a mere analysis of the costs and benefits for the economic activities cannot give a full account of the inertia of agricultural landscapes. As observed, the transformations of the territory are not only the outcome of the intervention of the single individual, but rather the product of the cultural evolution of a social group, in contact with a given territory. In the moment when he “creates” a territory, man also establishes a society and a culture. A dialectical relationship exists between development of the landscape and establishment of a culture.

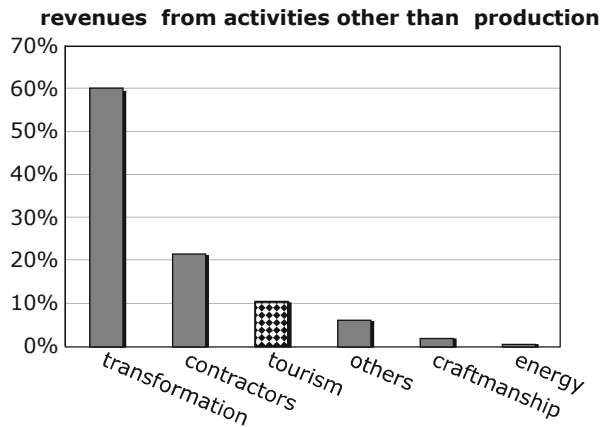
Human activities can therefore never be interpreted exclusively from a mere productive perspective. Indeed, the objectives of a cultural group may go beyond those more strictly productive. Among these objectives, a top priority is the protection of the group and its identity. The landscape is therefore also always an expression of the identity of a group and its conservation can be a value in itself, above and beyond the profitability of the production factors used. This leads to an obvious contradiction between the production needs (that in contemporary society have an essentially individual dimension) and the needs (wellbeing) of society.

It should also be remembered that, in contemporary society, the landscape can have a value which goes beyond the interest of the social group that has contributed to its present configuration, assuming, in some contexts, the nature of a historical-cultural good. On a par with other testimonies of the past (books, works of art, etc.), the landscape is a repository of cultural values whose importance may not be completely understood by those who now live in a given territory.

A proper understanding of what are the “values” of the landscape in general, and of historical landscapes in particular, is a basic element for the correct implementation of landscape policies that are effective and shared by the population. In this paper, after giving a brief outline of the economic nature of landscape, and the resulting problems for territorial management, the benefits that the landscape can provide will be analyzed. Lastly, some indications will be provided on the actions that may be undertaken for the preservation of historical agricultural landscapes.¹

¹ Although the term agricultural landscape cannot be considered entirely correct because, in the strictest terms, it does not include pastoral and forest landscapes, it has been preferred to use this expression for reasons of simplicity.

Fig. 5.1 Tourism in Italy is one of the most important source of income among activities other than production in rural areas. (Source: National Plan for Rural Development 2007–2013)



5.2 The Economic Characteristics of the Landscape

From an economic point of view, the landscape can be considered a pure public good, a good for which principles of excludability and rivalry do not exist and it is not possible for a market to develop. Obviously this does not mean that it cannot have a value, but only that it cannot become an object of trade by a private individual and cannot have a price (Tempesta 1997). A second characteristic of the landscape is that it is an externality (positive or negative) of human activities and, in the case of the agricultural landscape, of agro-sylvo-pastoral activities. It follows that its quality does not depend on an intentional action by a farmer who is working only to make a profit, but is instead an external and unplanned effect of his activity. For example, the conservation of an historical agricultural landscape is a positive externality because the farmer is not remunerated for the landscape benefits that he produces for society as a whole, but only for the goods that he is able to sell on the market. According to economic theory, the lack of remuneration for external benefits means that the supply of positive externalities is lower than would be optimal from the social point of view. The opposite happens with activities that involve negative externalities. In this case the producer will burden society with a cost (the loss of landscape quality) that he does not have to reimburse to the citizens (Fig. 5.1).

Lastly, being a historical-cultural good, the landscape can assume the nature of a merit good. According to economic theory, in the case of merit goods, the benefits perceived by the citizens, because of their lack of knowledge, are lower than those effectively enjoyed or which future generations can enjoy.

A discrepancy therefore exists between market values and social values, and sometimes between perceived values and real value, which may lead to the disappearance of historical landscapes or to their degradation. For example, a farmer, like any businessman, will be interested in obtaining the maximum income from his activities or from his owning the land. Faced with a reduction in the profitability of a crop and the remuneration of the production factors compared with alternative uses, he will have

only two possible choices: abandon the crop or adopt new production techniques that allow adequate profit margins to be regained. In the former case the crop will disappear, in the latter new production techniques or new crops will be introduced that involve land use changes. In either case the final outcome will be an alteration of the landscape inherited from the past.

There are two main, if not exclusive,² ways to correct the incapacity of the market to guarantee an adequate level of landscape quality: land use restrictions and the payment of subsidies. The land use restrictions imposing constraints will inevitably involve costs to private individuals in terms of lost income. Restrictions always involve an inefficient use of the production factors and thus the presence of opportunities for more profitable alternative uses. The land use restriction tool can be socially acceptable when its incidence on the income of the farmers is not overly high, otherwise it might encourage abandonment of the crop, thus accelerating the degradation instead of reducing it.

The payment of subsidies for the conservation and restoration of the landscape was introduced for the first time in EC agricultural policy with Reg. 797 of 1985 (Marangon and Troiano 2006) and is still one of the possible sectors of intervention of agro-environmental policies. The subsidies, when they are commensurate with the landscape benefits produced by the farms, are in many ways the most appropriate tool for the conservation of historical agricultural landscapes. However, the results so far achieved by state intervention in this sector can be considered modest, either because of the lack of financial resources, or due to the wide farm and territorial dispersion of the funded interventions (Marangon and Troiano 2006).

Whichever tool is used for the conservation of historical agricultural landscapes, it will be necessary to evaluate the effects of the landscape policies or, in other words to estimate what benefits there will be for the population. In the case of land use constraints, the lack of quantification of the benefits will bring about a refusal of state intervention and the tendency of citizens to circumvent the law. In the case of subsidies, the amounts allocated to this type of intervention could be lower than would be desirable.

It follows that, if the value of the landscape (or, if preferred, the benefits that it produces) is not made explicit, efficacious policies of landscape conservation cannot be implemented.

² According to some authors (Reho 2006; Marangon 2006), recourse to instruments of the voluntary type could allow actions of landscape conservation to be implemented regardless of state intervention. This would be possible in all the cases where a commercial good can be identified whose production might in some way be complementary to landscape conservation. For example, if rural tourism was in some way linked to landscape quality, farmers, aware of the preferences of the tourists, might work voluntarily to conserve the landscape. Or, if the landscape was in some way perceived by consumers as an indicator of quality of a local farm product, its conservation would guarantee higher prices and therefore increased profitability. However, these possibilities meet major difficulties at operational level. In the case of rural tourism, the costs of landscape conservation weigh equally on all the farms of a given area, while the benefits are the privilege of the few involved in the sale of services to the visitors. In the case of typical local products, many farmers might be encouraged to behave like free riders, adopting production techniques that degrade the landscape, in the assumption that some other farmer will contribute towards conserving an adequate level of landscape quality.

5.3 The Value of the Landscape

From a general point of view it may be stated that anything that can satisfy needs is a resource, and that each resource, if scarce (i.e. available in insufficient amounts to meet needs), will become an economic good and have a value that can be expressed monetarily. But what are the benefits produced by the landscape? To provide a response to this it can be observed that people, when they wish to relax, try to pass some of their time in areas with particular landscape characteristics. A great many individuals make frequent trips to the hills or mountains, or else go for a walk along rivers or in areas of countryside with a lot of meadows, hedgerows, woodlands and watercourses (Marangon 2006; Tempesta and Visintin 2002). From more than 500 interviews conducted in Veneto it emerged that the quality of the landscape is the main element considered in the choice of where to make a day-trip. This depends essentially on the restorative capacity of landscapes largely untouched by man and rich in natural elements (Kaplan 1995, 2001b; Kaplan 2001a). It has been seen for example, that the quality of the landscape interacts with numerous physiological parameters of an individual and that more pleasant landscapes tend to improve overall personal wellbeing (Berto 2005; Hartig et al. 2003; Ulrich 1984; Ulrich et al. 1991; Wells 2000).

5.3.1 *Perception and Value of the Landscape*

In order to understand which factors render a landscape attractive and pleasing it is first necessary to remember that, in the course of human evolution, visual perception has played a fundamental role from an ecological point of view: in the environment where man passed the major part of his evolutionary phase, the African savannah, only a precise perception of the external environment could allow an individual to survive. It follows that the ways of visually perceiving the environment, and therefore the landscape, are an essential part of the genetic heritage that has been selected over the course of millions of years. Appleton (1975) indicated that the elements which make a landscape appealing are those that render a given environment favourable to survival. From this point of view human behaviour can be considered similar to that of all the animals.

On the other hand, much of human behaviour derives from learning and experience. According to Bourassa (1990), we can distinguish three components of the perception of the environment: innate (or instinctive), social and individual. The innate component is linked to our genetic heritage and is common to all individuals. The social and individual components instead derive from learning and are related to the different phases of development of a person. In the first period, which corresponds to early childhood, the relationship with the environment is mediated by the adults who transmit the culture (including environmental and landscape) of the social group. Later on, the relationship with the environment and the territory

will assume an entirely personal dimension and will essentially depend on individual cognitive processes. As regards the instinctive perception, many studies (Kaplan and Kaplan 1989; Parsons and Daniel 2002) report that all the elements are generally preferred which are in some way a reminder of the savannah (the environment where man passed most of his evolutionary phase), therefore undulating landscapes with scattered trees, woodlands, grasslands and small watercourses. On the contrary, the social factors that determine the perceptive value are much more variable, because they are strictly related to the social group and the changes that the culture is subjected to over time. The transformation of the environment is, as previously mentioned, one of the processes through which a social group tries to establish its own identity. According to Costonis (1982), every manmade landscape contains identifying elements that have the function of enhancing the cultural and social stability of the society or group that created it and, at individual level, there is a tendency to prefer the landscape which contains the signs (symbols) of the group. Transmission of the identifying values of the landscape happens during early childhood and is deeply rooted in the individual, operating mainly at an unconscious and emotional level.

The more strictly individual component depends on many factors such as education received, employment, social status, etc. In general, however, it can be ascribed to some elements typical of western culture that are transmitted by higher education. The precepts of “beauty” in this case are the fruit of conceptual processing of the more educated elite and, although mutable in time, have retained some fixed points, in many ways ascribable to classical culture. It can be claimed that there are two basic components to this system of preferences. The first tends to favour natural landscapes which, in some way, can be traced back to that of the savannah (for example the Arcadian landscape, English garden, etc.) (Appleton 1975). The second, on the contrary, favours elements like the harmony, the relationship between proportions, or, more generally, the capacity of man to modify the natural environment in an equilibrated way. This second element therefore tends to favour the appreciation of cultural landscapes, their peculiarity and preservation.

While the benefits of the first two components (instinctive and social) are ascribable to the sense of security that comes from being in a known environment, the third can be ascribed to the need for beauty that man has displayed from a certain stage of his development onwards, demonstrated by the emergence of the first artistic forms and the attention paid not only to the function, but also to the appearance, of artefacts produced from the earliest times (Fig. 5.2).

5.3.2 The Economic Value of Italian Agricultural Landscapes

Man therefore expresses a demand for landscape quality that tends to be biased towards natural and cultural landscapes. As observed, many tourist and recreational activities are motivated by the quest for landscapes of high quality. The fact that a given proportion of the population sustains costs to frequent a landscape implies

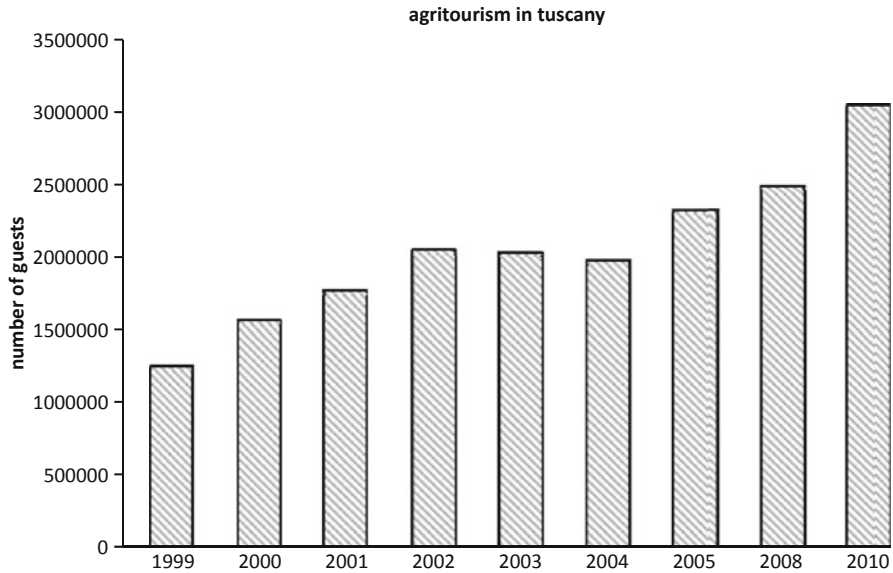


Fig. 5.2 Over the last 10 years agritourism has been growing constantly in Italy, especially in Tuscany, even after 2010, when the economic crisis worsened. This success is largely based on the value of the rural landscape and the lifestyle associated with it. In southern Italy, where economic conditions are particularly difficult, there has been an 80 % increase in the number of agritourism farms in the same period. (Source: Region of Tuscany)

that that landscape can provide benefits whose monetary value is higher than or equal to the costs incurred. The quality of the landscape can also affect the value of houses (Bourassa et al. 2003; Geoghegan et al. 1997; Ready and Abdalla 2003; Tagliaferro 2005) or the cost of an overnight stay on farm holidays (Le Goffe 2000; Vanslebrouck et al. 2005).

Many studies conducted in Italy since the 1990s have allowed a rough order of magnitude to be gained of the economic value that the population attributes to conservation of the historical agricultural landscape. Between 1997 and 2007, sixteen evaluations of the landscape were conducted in Italy utilizing the contingent valuation method (Marangon and Tempesta 2008). In 11 of these, the aim of the investigation was to evaluate the benefits attributed by the resident population or by tourists to the conservation of historical agricultural landscapes (Tempesta 2006). Even taking into account the lack of homogeneity of the approaches used, it can be estimated that the average willingness to pay is 60 € per family per year, i.e. amounting to around € 1 billion 290 million per year.

This is an amount that is higher than the total of the agricultural subsidies paid out annually through the EU agro-environmental measures from 2000 to 2006. This clearly shows that the conservation of traditional landscapes can produce benefits for the population that go much further than the amount distributed for these purposes

by the various agricultural policy measures. It follows that there is the need for a revision of state intervention in agriculture, which should become increasingly directed towards conservation and, where possible, to the restoration of historical agricultural landscapes, rendering the productivity viewpoint that still pervades the EU agricultural policy obsolete.

5.4 Oeno-Gastronomic Tourism and Promotion of Farm Produce

Since after the Second World War, there have been profound changes in crops and production techniques in Italian agriculture. In the attempt to narrow the existing gap with other economic activities, in order to increase the yields of the production factors used (labour in particular), labour-saving technologies have been adopted that have led, especially on the plains, to a drastic simplification of the landscape. In parallel, to meet the need to produce foodstuffs with uniform characteristics, the agri-food sector has forced farmers to drastically reduce the varieties grown, with an increasing standardization of the produce. The local varieties have gradually been substituted by selected, often imported, varieties with high yields per hectare. These processes and the opening of the markets have exposed Italian agriculture to foreign competition, often thwarting the possible economic benefits of technological changes. The gap between the average income of the population and that of farmers, despite radical changes in the production system and massive state funding, has not lessened over time. However, technological changes and the disappearance of traditional products have caused the complete transformation of historical agricultural landscapes, which have often lost their identity.

However, since the 1990s, new phenomena have made progress that might allow this trend to be inverted, at least partially. Firstly, the affluence reached by the Italian population has led to the emergence of a new sector of demand for foodstuffs, with growing interest in their quality and typicality. There has also been a progressive reconciliation of the population to the rural territory, in the quest for that quality of life and countryside that has been lost in the vast metropolitan conurbations. To gain an idea of the importance of rural and oeno-gastronomic tourism, on the approximately 14,800 Italian farms that offer holiday accommodation, around 900,000 guests and 4.5 million overnight stays are currently recorded. According to the fifth Report on Wine Tourism, compiled by the *Città del Vino* and Censis, there were around 4–5 million wine tourists in 2005. The average expenditure per capita is around 160€, of which one fifth is for the purchase of wine and the rest for accommodation, refreshments and the purchase of typical local products. Oeno-gastronomic tourism brings the consumer into contact with the place where the food that he eats is produced. Within this scenario, the quality of the landscape can become a strategic factor for the promotion of agri-food products. While it is true that many typical farm products are nowadays produced using modern techniques that often have very little to do with what happened in the past (for example viticulture on the plain and

sometimes on the hills), it is equally true that abstaining from the promotion of the identifying and cultural characteristics of the landscape of the production area means relinquishing a priori the definition of an image of the product that could conquer important sectors of the tourist and agri-food demand. Obviously this cannot mean a return to the farming of the past, but thought must be given to the need to pay close attention to the conservation of all those elements of the historical landscape that may contribute to the success of the image of the product and of the territory.

5.5 Conclusions

The historical agricultural landscapes are a resource for the rural areas and society as a whole. They can produce direct benefits for the residents and for tourists and can be the engine for important economic growth from which the local communities benefit. They can also, with their strong evocative power, be a powerful tool for the promotion of agri-food produce, and for the development of niche products that can in some way escape the competition from foreign products. But can this great cultural heritage of Italy have a future, and if so, on what conditions?

A first condition, which might appear obvious, is that these landscapes have to be recognized and identified. The characterizing and structuring elements must be defined, be they geomorphological, structural, infrastructural or cultural. Unfortunately, it increasingly often happens that the loss of ties to the country traditions translates into an incapacity to recognize historical landscapes, an incapacity that not only concerns the population, but even more worryingly, those who should be appointed to the task of their protection. If the population is no longer able to recognize the identity signs of the landscape, it will have no incentive to preserve them. Conservation will become merely an unwieldy burden capable of limiting economic growth. This is even more important if it is considered that farmers never work exclusively to make a profit. As the studies conducted in the field of cognitive economics have shown, the motivations not directly linked to income, such as a sense of responsibility towards his neighbour or the community, are often at the basis of behaviours that would otherwise be inexplicable. For the preservation of a dry stone wall, the economic incentives might not be enough if the farmer does not first recognize its cultural importance.

A second important condition will be the identification of thresholds of transformability that allow the landscapes of the past to be adapted to modern cropping needs. Obviously it cannot be expected that viticulture can be practised everywhere in its historical form of the “*piantata intermedia*”.³ This can only happen in limited areas and mainly for didactic purposes. However, it is necessary to avoid that the

³ A “*piantata intermedia*” is a cultivated plot bordered by rows of vines supported by maples and later by mulberry trees. For centuries, vine plots were the only way that vines were grown on the plain.

structuring elements of the landscape are disrupted, such as the agricultural hydraulic system, inter-farm road network, morphology, pattern of settlements, etc.

A sector still practically unexplored, but which must attract the attention of researchers and administrators in the future, is the link that can connect the landscape to the perception of the quality of a product. A preliminary study conducted at the University of Padova has demonstrated that some historical agricultural landscapes have enough evocative power to alter the perception of the taste of a wine (Tempesta et al. 2010).

Lastly, it should be pointed out that the historical agricultural landscapes can be conserved only if there is a thorough revision of state intervention in this sector. Agricultural policy has been, and in many ways still is, a not insignificant factor in the degradation of historical landscapes. An important share of the agricultural subsidies still regards income support and the conditionality entails, in almost every case, the environment and not the landscape in itself. The payment of subsidies within the ambits of agro-environmental actions has often been directed towards actions of re-naturalization that had nothing to do with the characteristics of the historical agricultural landscape. Alongside technological and production standardization, a sort of nature standardization has made the re-naturalization of the territory the cornerstone of the actions of landscape importance in many rural areas.

It is therefore necessary that an increasing quota of the subsidies paid to farms is aimed at actions of conservation and restoration of historical landscapes.

However, this might not be sufficient without a change in the way the subsidies are distributed. It should no longer be exclusively the individual farmers involved, but the local community that makes restoration of the landscape an element of strength for its future development. This can only be made possible by integrating territorial and landscape planning actions with the interventions of agricultural policy and rural development. Territorial and landscape planning should provide the opportunity for local communities to define the priorities and aims of landscape actions; agricultural policy should provide the tools for achieving these objectives.

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