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Modern Forestry and Enclosure: Elitist State Science against Communal Management and Unrestricted Privatisation in Spain, 1855–1900

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ABSTRACT

The subject matter of the paper is the role played by the State Forestry Services in the making of western liberal societies in the 19th century. The Spanish Law of common lands reduction (1855) ordered the Forester Corps (Public Works Department) to prepare a survey of grazing lands, scrublands and woodlands to be sold and the ones to be retained. High mountain zones were excluded from the auctions because of their hydrogeological functions. Villages maintained the ownership of this area, but they lost the traditional autonomous management, which was transferred with sharp conflicts to the new government employees. Nevertheless, the State civil service was not monolithic. The Ministry of Finance encouraged the sale of villages land properties with the aim of repaying the public debt (the State confiscated 20 per cent of value at auction). The Ministry of Public Works wanted to keep public ownership. Forest engineers strongly fought against privatisation in the second half of the 19th century. I support the thesis that the New Silviculture reinforced an autonomous trend opposed to unrestricted land privatisation that the Liberal State could not ignore. It was an elitist social-scientific response to the ecological dangers (to be derived from unrestricted free market) with the goals of corporatism and of protecting global society and economy.

KEYWORDS

Forestry, commons, privatisation, Spain, nineteenth century

1. FOREWORD¹

The objective of this paper is to analyse the role of State Forestry Services in the making and development of liberal societies in the 19th century. Following a description of the principal facts related to the process of dismantling communal forests and grazing lands by the liberal Spanish State, the paper focuses on the social and environmental aspects of forestry policies. The Forestry Corps reacted against a free unlimited land market for environmental, social and corporate reasons. The fundamental aspects of the discussion are: a) the unequal but collective interest, shared by many people in mountain villages, for the integral maintenance of their commons; b) the ecological dimension of socioeconomic protection as a mobilising idea of a scientific elite against unrestricted liberalism; c) the relative independence of the liberal State (in opposition to the Old Order) from its class origin.

2. SPAIN: CRISIS OF THE *ANCIEN RÉGIME* AND THE NATIONALISATION AND SELLING OF PUBLIC ASSETS

The crisis of the *Ancien Régime* in Spain is closely linked to the Treasury problems of an absolutist monarchy overwhelmed by the military costs of an empire that refused to die out. The wars against France (1793–95) and England (1796–1802, 1804–08) drove both the sum and incurred interest of the Spanish public debt to untenable levels. In order to ensure the repayment of the debt Prime Minister Godoy created, in 1798, an Amortisation Fund financed with the proceeds from the confiscation and selling of assets belonging to public service institutions, such as hospitals, orphanages, etc.² In the old economy the properties of such civil institutions, as well as those of the Church and villages, were ‘amortised’ or excluded from mercantile traffic. By the middle of the 18th century the ecclesiastical institutions owned 15% of Castilian territory, generating 24% of its gross agricultural product.³ Of the total 50 million hectares of Spanish territory, villages owned a minimum of 10 million hectares by the middle of the 19th century.⁴

In 1806 the persistent wars and the increased debt made it necessary to nationalise and sell one seventh of the assets of the Church. From 1798 to 1808, the alienated assets of this *Desamortización de Godoy* introduced 2.5% of Castile’s territories into the market.

The seizure and sale of assets belonging to villages was not proposed until the Napoleonic invasion, when the liberals of the first modern parliament (*Cortes de Cádiz*), defended, in 1811, the need to insert communal lands into the market in opposition to traditionalists, who rejected the enclosures because they led to social rupture and uprooting of the poor.⁵ In the end only the assets of the Crown

were put up for sale, not those belonging to villages. However, the absolutist Restoration in 1814 annulled this provision.⁶ Still, the Napoleonic Wars (1808–1813) forced an important flux in the sale of commons by many municipalities overwhelmed by a lack of resources.⁷

A new transitory stage of the liberal regimen arrived in 1821. The so-called *Trienio Liberal* (1821–23) reintroduced the measures for ecclesiastical land sales, although its effect was limited due to the return of authoritarianism in 1823. The definitive demise of the *Ancien Régime* and the consolidation of the liberal Government did not take place until the death of the absolutist monarch in 1833. The secularisation and auctioning of the assets of regular clergy was begun in 1835, on the occasion of urban assaults against convents.⁸ The auctioning of property belonging to secular clergy began in 1841. From 1836 to 1849 this disentanglement (*desamortización eclesiástica*), called for by Mendizábal, succeeded in repaying half the existing public debt, given that bonds were accepted as a means of payment in the purchase of the auctioned properties.⁹

With respect to the sale of village property, Spanish liberalism initially gave the power of legal proceedings to Municipalities, which, in turn, could decide on the sale or public maintenance of its commons.¹⁰ For the village properties that were not alienable, the new General Ordinances of Mountain Areas,¹¹ of 1833, created the General Office of woodlands and grazing lands with the purpose of guiding and inspecting the Municipality's work in the sustainable management of said areas. As for privately owned mountains – which included more than one third of the total – the Ordinances sanctioned the owner's right to act freely.

A compulsory sale of a greater part of communal assets came into effect in 1855, with the *Ley de Desamortización Civil de Madoz* (Law of disentanglement of common lands), promulgated by a liberal-progressive Government. Nevertheless, not all of the village land holdings were auctioned off. Those commons for free collective use (in benefit of the inhabitants) were exempted for reasons of social assistance. On the contrary, those commons that had been appropriated by Town Halls were placed on the market (that is, those properties that had lost free usage and local title deeds in favour of municipal title deeds and fiscal use – by means of the auctioning off of grazing and forest products under individual renting). These commons were referred to as assets *de propios* of the Municipalities. Any property wishing to be exempted from sale had to prove, with corresponding documentation, that it had not generated income for the local public treasury as of 1835. Any renting agreement, or even the existence of a small royalty paid by a collective of neighbours, was sufficient to confiscate the property and initiate the proceedings toward its sale.¹²

However, the *Ley Madoz* not only exempted the sale of properties used exclusively by the community, but also those declared to be publicly protected in view of the risk of indiscriminate tree cutting carried out for short-term private gain. This exemption of the sale of properties performing hydrogeologic

environmental regulating functions, was based on a report from the Forestry Corps (*ingenieros de montes*, whose Special School of Engineers had been created, under a German model, in 1847), commissioned by the Government. The foresters recommended the maintenance of public properties found in high and middle mountain zones (areas with conifers, oak and beech), the alienation of the lower zone, and the analysis of the intermediate region, typically of the Mediterranean oak. At this time, the lower lands, in essence the most appropriate for use in agricultural expansion, did not yet merit the protective interest of the foresters (who later lamented the fact that the fragile and erosion-prone lower zones were not under public control so as to proceed with reforestation). Despite the forestry report, the Ministry of Finance, interested in augmenting the sales with the purpose of reducing an ever-increasing public debt, succeeded in including the middle zones in auctions.¹³

One of the greatest problems of the enclosure process in Spain was the disinformation on village properties. The central administration (Madrid) was largely unaware of the extension, location and use of commons. The very same *Ley Madoz* foresaw the calculation of general statistics, to be carried out by the Forestry Corps, of public woodlands and grazing lands, including those properties put up for auction and those to be exempted. The *Clasificación General de los Montes Públicos* appeared in 1859, recording a total of 10,186,045 hectares (3,427,562 hectares were alienable, and 6,758,483 hectares were excluded from sale).¹⁴ The figure of 10 million hectares underestimated the total Spanish public mountain area, given that many villages hid the greater part of their properties from the forestry administration for fear of having them declared alienable or of losing control in managing them. In this way the seizure and privatisation of commons gave way to a harsh confrontation between the intervening State and the greater part of the social body in land owning villages, mainly in high mountains (of the total area of Spain, 70% lies between 400 m. and 2,000 m.).

3. THE COLLECTIVE INTEREST FOR THE COMMONS: THE 'TRAGEDY OF THE ENCLOSURES'

It was usual to find the majority of neighbours defend the integral maintenance of communal uses in areas where collective properties predominated. The well-to-do local families – such as, for example, cattle and sheep raisers – enjoyed the free use of large grazing lands, while the smaller peasants without sufficient land of their own – yet having a few animals – benefited from a common asset that was irreplaceable if it were ever lost. The economies of scale from collective grazing lands saved labour-related costs to all participating neighbours. All of them could collect firewood and timber at no cost. Diverse social groups, with different degrees of access to the village's properties, were cemented together

with a vested collective interest, thanks to the inverse relationship existing between purchasing power and the *vital dependence* on the *livelihood use* of the commons, as well as the direct correlation between economic status and the *commercial dimension* of the *large use* of the commons.

Few were interested in the auctioning of properties freely enjoyed or at a low cost, whose purchase would have required a relatively significant payment – particularly in view of the possible presence of foreign bidders – and would have caused the animadversion of the neighbourhood. Even in the event that the Government declared a property unalienable, the village still lost the traditional autonomy of its management, given that the exploitation of mountain areas was transferred to the control of the State engineers. In this way, the local control of resources was fundamental: as much for maintaining the hegemony of the larger households, as for the reproduction of the poor domestic economies, which would become themselves more vulnerable – due to a lack of social and economic power – if the commons were sold or if the usage was restricted under the charge of the new foresters.

The traditional economy found itself up against the looming ‘Tragedy of the Enclosures’, dramatic for those in need, damaging for those better off, and profitable for few, maybe strangers. The premodern world mistrusted a change in the existing *status quo*, feared a social crisis caused by an end to the commons, and fought against the emigration and expulsion of a peasantry that had suffered the expropriation of its customary legal rights.¹⁵

During this period of change toward a market economy, a clear conflict arose in many European mountain zones (far removed from the more dynamic centres of exchange) between an extensive conglomerate of social sectors belonging to a decaying preindustrial society and other leading groups in the transformation (initially a minority – often comprised only of the State’s government employees).¹⁶ The forest and grazing economies of high and middle mountains (where a majority of the commons were located) are a specific case of marginal localisation, of a less pronounced incorporation of capitalistic mechanisms, and of strong social interests resistant to a greater integration in the larger regional and national markets (especially when this trend debilitated local powers in favour of sectors that were external to the rural community). For this reason, the intervention of the liberal State as manager and producer, and as a dynamic agent in the market, was intense and conflicting in the high mountain zones, especially when its lumber production was fundamental to urban and industrial expansion (railways, paper, resins, etc.). Mercantile expansion on the plains was carried out much more by private interests, seeing the State act primarily as an active mediator and as a builder of infrastructures in technical education, communications, law, police services, etc.

In Spain, the opposition of the majority of the local groups to the expropriation of commons and to the transfer of institutional competencies to the State and

its Forestry Corps has been documented in a number of studies.¹⁷ The conflict between villages and forestry engineers was not expressed so much in the form of an organised, direct, and violent mobilisation, as in the form of passive resistance by the town halls that condoned behaviour in opposition to the new forestry measures: the feigning of ignorance, the filing of misleading and incomplete declarations of properties to the upper administration, the use of partial and self-interested interpretations of the law, the withholding or delaying of tax payments, the undertaking and sanctioning of *illegal* actions (made 'furtive', 'fraudulent', or 'abusive' by the new forestry), the opposition against the privatisation by auction of traditionally collective uses, etc.¹⁸ However, this underground resistance did not exclude sometimes an open confrontation with the new liberal regime's armed forces.¹⁹

4. THE LIBERAL STATE AGAINST THE VILLAGES: THE 'TRAGEDY OF THE COMMONS'

The liberal State monolithically opposed the ownership and free management of the commons by the villages. The doctrine outlining the incompatibility between economic progress and collective property took root in the past and continues to this day. The commons were considered an 'unnatural' way of asset distribution. They were characterised as archaic, retrograde, and feudal, in short, inappropriate for achieving progress and for generating economic and demographic growth. They were charged with lacking a clearly defined proprietor, with an 'open access' system for multiple users who only degrade the environment as a result of overuse and competition between individuals wishing to maximise their own exclusively personal gains. The rationale of each participant in a communal system of free access would be to be the first one in taking full advantage of resources for fear of the use made by others, and thus it would lead to the over-exploitation of natural resources, to what has been referred to as the 'Tragedy of the Commons'.²⁰

In Spain, the need to put an end to the collective local management of woodlands and grazing lands was as vigorously defended by the financial administration, interested in the fiscal revenues generated by land privatising auctions, as by the forest administration, in want of a monopoly in the regulation of the commons that were exempt from sale. The new forestry science, using modern and systematic arguments, of German origin and diffused throughout the western world in the 19th century, offered the categories to refute the ability of villages in the management of their silvopastoral areas. The attack carried out by forestry engineers against the lack of management by the Municipalities was sudden and deadly.²¹ Without a doubt, the new scientific silviculture exaggerated the managerial ineptitude of the villages. Nonetheless, despite the fact that

collective property use gave priority to access by neighbours and excluded foreigners (i.e. 'commons' and not 'open access'), the internal cycles of demographic and economic growth could lead to the over-exploitation of available resources. The more the expansive cycle lasted, the greater the threats to the self-regenerative capacity of traditional silviculture.

When, as of the second half of the 18th century, Europe begins to abandon preindustrial crises and sets the road to sustained growth, so too must collective property in mountain areas find itself up against qualitative changes – although at a slower pace than in lowlands. The economic growth and the internal differentiation of the peasantry, itself now increasingly persistent, gave rise to instances of conflict and privilege in gaining access to the commons and their regulating institutions.²² The pressure from the local oligarchies could block any adaptive reform sacrificing self-regeneration, environmental conservation, and social stability, in favour of unequal economic growth.²³ *Free rider* appeared, interested in hegemonising the new strong expansive waves against the calm stability of a premodern world closely linked to the tranquil rhythms of nature.

It is within this context of capitalism's initial development in rural areas that the links to an expanding market were established not only via the emergence of individuals integrated in the recent information and exchange networks, but also, in an interrelated manner, via the pressure of the liberal State. To the 'Endogenous Tragedy of the Commons', which could be engendered in the bosom of the peasantry, mainly by demographic growth, one must add the 'Exogenous Tragedy of the Commons' forced by the intervention of a State that sold collective properties and limited the production in the remaining ones.²⁴ Poor peasants were particularly prone to suffering the most from a reduction in the collective patrimony. The traditionally unequal communal usage (basically by means of the distribution of quotas in relation to the respective wealth of each family) does not impede the interest of those owning less land in maintaining the integrity of the village's assets. The loss of these goods represents for these people the need for 'illegally' ploughing up, or 'stealing' fuelwood, or using 'furtive' grazing lands or a one-way emigration to the unknown city and industry. The social crisis of the 'Tragedy of the Enclosures', then, precedes the environmental crisis of the 'Tragedy of the Commons'.²⁵

5. THE ENVIRONMENTAL CONSERVATIONISM OF THE FORESTRY CORPS

The 'anticommunal' unanimity of the various agencies of the State did not hold firm, however, beyond the expropriation of the villages. While the liberal Ministry of Finance fought in favour of increasing the sales of village properties, the Ministry of Public Works (from which the forestry engineers depended)

struggled to maintain and ensure its own management of a public patrimony serving environmental functions of water and soil conservation and others. In addition to timber production, the responsibility of public forestry to prevent abusive tree-cutting, erosive processes, aquiferous degradation, avenues and inundations – conditions that could potentially take hold in the event of the transference of the forest to private interests – was more a reality than a simple pretext for the legitimisation of the Forestry Corps in the new industrial society.

Two years after the publication of the *Clasificación General de los Montes Públicos* of 1859, the pressure from the Ministry of Finance succeeded in a major opening of the market. Only those forests comprised of dominant species of pine, oak, or beech, having a minimum area of 100 hectares, would be exempt from auction. Almost 2.4 million hectares were reclassified as alienable.²⁶ The Minister of Public Works, the Marquis of Corbera, submitted its resignation. The forestry engineers were noticeably agitated. In 1868 they created an influential printed forum for voicing their concerns, the '*Revista Forestal, Económica y Agrícola*' ('*Revista de Montes*' from 1877 to 1926, '*Montes*' at present) whose fundamental objectives were the fight against privatisation of village and State lands and the promotion of forestry and related sciences and their technical applications.

The conservative liberalism implanted in Spain after the radical-democratic revolution (1868–1874) brought with it a legislation that was more favourable to public forestry. In 1877 the Law of Reforestation was promulgated and the Commission for the Revision of the *Clasificación General de los Montes Públicos* was created – which was supposed to include wastelands and other treeless areas that had not yet been sold, so that they could be reforested. The year of 1888 saw the introduction of the Law for the reforestation of headwaters, torrents and drainage basins. The environmental protection criteria were gaining ground. The conservationist orientation was consolidated with the creation of a new *Catálogo de los Montes de Utilidad Pública* (1901) (1993), which exempted from auction all public lands above 1,000 m. and, below this mark, it comprehensively extended protection to all species of *quercus* and to the zones fit for reforestation (and also to maritime dunes).²⁷ The Hydrological Forestry Service was also formed in 1901. The Forestry Corps' management extended over a significantly larger area.²⁸

Despite the fact that the ever-urgent Treasury deficit did not cease from playing a pro-privatisation role, the Forestry Department ended the 19th century with a positive balance for its interests.

After G. L. Hartig (1764–1837) and H. Cotta (1763–1844), the new scientific forestry maintained that the long periods of vegetative growth of high mountain areas could only be financed by the State. With intergenerational tree-cutting cycles, often lasting more than a century, the private initiative was generally considered incapable of a sustainable production. The buyers of auctioned

properties could opt, as many of them did (also in Spain),²⁹ for a short-term benefit via indiscriminate tree cutting (often with the expansion of agricultural cultivation in inadequate soil), incurring corresponding ecological costs. If a purchased area was already treeless, the reforestation with species for lumber for building and for the telegraph lines (mainly coniferous of slow growth rate) seemed impossible to the private individual. The Forestry Corps could use arguments in favour of collective environmental protection and in opposition to market freedom in forestry, both in high and middle mountains, that went beyond evident corporative interests.³⁰

Nevertheless, the tensions between the Ministries of Finance and Public Works were not only a conflict between civil servants. The liberal State often lives a contradictory battle between budgetary balance and public spending. An administration that must balance the accounts normally places itself on the pillar of non-interventionist *laissez-faire*; while those that concern themselves more with spending than with saving tend to place requests for funds, at times trying to raise social capital as much as productive capital. In our historic case, public forestry played a double role, as a forest-related producer at the heart of the industrial world, but also as environmental conservationist outside the realm of free market self-regulation.

The ecological dimension of the Forestry Corps, however elitist and corporative as it undoubtedly was – especially when dealing with the villages, is a question that must be present in the historiographic debate.

The positive new external economies generated by modern forestry, related to the preservation of natural mountain resources and their repercussions of hydroecological stability in low level lands, do not imply, however, a neutral progress. The rigid hegemonic importation of Atlantic silviculture practices was, and still is, a topic for debate between the forestry engineers themselves, especially with respect to what was taken as the disregard for Mediterranean silvopasciculture.³¹ Moreover, the requests to link customary forestry practices with a scientific modern forestry management at local and county level were disregarded. Instead, a state model was adopted (typical of the centralised structure of Spain – despite her multinational composition). There was an assault of new forestry directives upon villages, usurping their regulatory capacity.

It is particularly relevant to note the economic specificity of the forestry engineers. Other professional schools, such as those of civil, industrial, or agricultural engineering, are more services suppliers to private initiatives than direct producers. The forestry personnel of the Ministry of Public Works, a truly public enterprise, were then in direct conflict with the liberal sectors that defended the economic aptitude of the market in all circumstances.

Such public intervention in economic and environmental questions would not have come to exist without the advance of natural history and of forestry itself during the 18th century, the birth period of the new industrial economy. Linné,

Buffon, Lamarck, Humboldt (and Hartig and Cotta, of course) were influential in promoting the protection of forests during a period when their cutting and ploughing up was caused as much by demographic growth as by a part of Enlightened thought, mesmerised by the new human abilities of absolute control over nature.

The nascent political institutions of liberalism could not ignore the advancements made by the natural sciences. The creation of the Forestry Corps was one of the main responses to productive as well as to protective needs (and also to political projects of modernisation and centralisation over rural villages). And the safeguard of the Forestry Corps' interests, as afforded by the Ministry of Public Works against unlimited land privatisation, meant also the *autonomisation* of the criteria for public environmental protection within a State that typically promoted a privatising paradigm.

The developmental of capitalism takes place in a constant relation between the mechanisms of the State and the action and reaction of civil society. It allows the assimilation of social sectors and institutional principles normally marginalised during motive periods of transformation. Liberalism expands market relations that, once consolidated, will relax their initial rigidity due to an interaction between social pressures and the solidification of the formal guarantees of the new regime.³² Social groups are integrated in the new society by limiting the self-regulating free market so as to include unionist movements, labour legislation, economic protectionism, etc.³³ Universal suffrage and legal equality are other areas that tend to stabilise a democratic society.

Returning to our particular theme, public forestry arrived together with centralisation of political power and market expansion, but its role in the preservation of hydrogeologic cycles constitutes, in the same way, a protective implementation – certainly an elitist one – of common interests in the face of environmental problems that derive from the unrestricted privatisation of forested areas in high mountain regions and from the lack of concern for landscapes of greater vulnerability. In this way, forestry engineers were not only expropriating state agents, and income generators for the different administrations and for private commercial interest intermediaries (also beneficiaries from the privatisation of public forestry production in auction sales). They were also active elite in support of general public interests, of yet another part of the 'public sphere'.³⁴ Hydrologic-forestry regulation was yet another facet of the agricultural, industrial and urban progress of the times. Soil erosion, floods, lack of water, insufficient irrigation and water levels in the rivers, imperilled the whole of society, economy and future generations.

To sum up, the ecological function of the Forestry Corps cannot be dismissed as empty self-justification. The autonomy of this group of scientists, fighting for productive and protective nature, allowed them to limit the private benefits of those who perceived the intervention as a braking force to the progress to be derived from the freedom of a market without limits.

The *autonomisation* of the State agencies with respect to the particular interests that shape the State during the formative period of a new social and economic system, deserves analysis. Public institutions cannot be explained by a narrow classist interpretation. The liberal State progressively ceases to be a State of class. Bureaucratic process implies that civil servants are socially separated from the entrepreneurial class in a capitalistic world.³⁵ A second impetus emerges from the social battle for sharing in the material wealth generated by industrialisation.

During the transition towards a modern society, legislative and judicial powers were denounced by Marx as fictitious, and rightfully so. In view of his ambitious project – a dictatorship of the proletariat elite –, he could not see how in the heart of industrial advancement, in England, the law was also acting against a bourgeoisie that failed to observe it, or that real wages were beginning to move away from basic subsistence levels.³⁶ The State no longer limited itself to repressing the resistance of the marginalised people; it began to take shape also as a unionist and socialist party representative. If the European continent lived through this democratising process basically during a tragic 20th century, stained with bloody wounds, the Anglosaxon world enjoyed the same evolution in advance, characterised by a specificity that has frequently been attributed to the ‘empire of law’. The secular English tradition of legal equality, acted regardless of the social status of the perpetrator: the public execution of men of high standing communicated and reinforced the idea of equity of the law.³⁷ The *Whigs* of 1688 legitimised their power with laws of their own (against common law) at the cost of also making themselves prisoners of their internal logic. Similarly, in Spain, two hundred years later, in the aftermath of the Carlist wars (civil wars of 19th century between Old and New Order), the ‘anticommunist’ consolidation of the Forestry Corps within the administrative agencies of the State developed a logic of its own in favour of the public good.

The law imposes limits to the arbitrary nature of power. It is much more than a simple reflection of leading interests. It wins autonomy and works in social interclassist intermediation.³⁸ The law, parliamentarianism ... as well as our forestry engineers, do not resolve themselves in the primary analysis of class, but rather, because of their autonomy, dependence, and permanent interaction with society, are able to considerably expand the beneficiaries of the State.

NOTES

¹ My gratitude to Joan Martínez-Alier for his support for translation from Catalan.

² Tomás y Valiente (1977: 43).

³ *Catastro de la Ensenada* (Nadal 1990: 54).

⁴ Bauer (1980: 565).

⁵ Fontana and Garrabou (1986: 127).

⁶The main innovation made by the *Cortes de Cádiz* with respect to woodlands and grazing lands was the abolition of the forestry Ordinances of 1758, affecting the best forested areas with the purpose of making timber available to the military navy at an officially regulated low cost. See, for England, James (1990: 177), for Italy, Bevilacqua (1993: 162) and for France, Corvol (1987: 65). In this way, the door was opened for the forestry market, in the hope that the increase in prices would prove an incentive to the owners to better the management of their forests.

⁷ Sánchez Salazar (1990).

⁸ García Rovira (1989: 269).

⁹ The debt of the State in 1840 was in the vicinity of 10 billion *reales*. However, in 1874 it rose to 30 billion, a heavy burden on the national economy. There were title conversions, with capital and interest losses, in 1851, 1882, and 1899 (Fontana 1985: 230) (Tortella 1994: 163).

¹⁰ The best introduction to the politics surrounding public mountain areas in liberal Spain is Sanz (1985). See also the synthesis (much less severe with the actions undertaken by the forestry engineers) by Jiménez Blanco (1991), and the detailed study by Manuel Valdés (1996).

¹¹ Inspired by the French *Code forestiere* of 1827.

¹² See Nieto (1964: 756), indispensable classic of the legal history of public and communal property. On the liberal process of strengthening the Municipalities and weakening the communal use and management, see Balboa (1990: 81) and Artiaga and Balboa (1992: 105). The critique of the liberal legislation of commons has emphasised the rigidity and lack of realism of the dichotomy between communally-used and rented goods. Indeed, many of the commons were destined to a different uses, some months (or some years) to collective exploitation, others to an individual auctioned use. There were also different simultaneous uses: the tenant often had to share production with a quota reserved for the neighbourhood of the landowning village.

¹³ The Ministry of Finance received 20% of the sale price in the auctioning of properties on account of fiscal rights of the State (it was the same percentage as in the case of forest produce auctions). The villages did not receive the remaining 80% in cash, but rather in the form of a perpetual, non-transferable debt at a rate of 3%, whose interest revenues were to compensate the previous income from the rental of assets, now lost with the sale of the property (Mangas Navas 1984: 149).

¹⁴ Bauer (1980: 565).

¹⁵ The classic debate between the supporters of the enclosures as a means of agrarian modernisation and those defending the commons as a guarantee of social protection and stability (Thompson 1991: 163, 178) (Neeson 1993: 27) is also reproduced in Spain from the second half of the 18th century to the end of the 19th century (See Fontana and Garrabou, *op. cit.*, and Nieto 1964: 221). (See for Catalan Pyrenees, P. Sala, 1998: 56).

¹⁶ See for England, the pioneering study by Thompson (1989: 99, first edn 1975); for France Assier-Andrieu (1981: 52), Corvol (1987: 60) and Bourjol (1989: 113); for the European colonies, in India, Guha (1990) and Guha and Gadgil (1989), and in Indonesia, Peluso (1992).

¹⁷ Balboa (1990); Artiaga and Balboa (1992); Manuel-Valdés and Sáez (1989); Cobo, Cruz and González de Molina (1992); González de Molina and González Alcantud (1992); Montiel (1992); López-Estudillo (1992); Sabio (1992); Moreno (1994); Sala (1997).

¹⁸ This type of conflict fits in with the flexible conception of social movements proposed by Scott (1985). Against the Leninist model by Hobsbawm (1983, first edn 1959), the opposition expresses itself via the Town Hall, which responds to local needs as well as to internal relations of power, unfulfilling, when appropriate, the demands of the administrative hierarchy. Hobsbawm reduced instead the popular protest of the preindustrial world to 'primitivism' which only matures with its integration into the labour movement of Marxist influence, with a clear 'class conscience'. See González de Molina (1996).

¹⁹ In this way the initiative taken by local powers is often in direct correlation with the malaise generated on the street, which can erupt in protest activities with a high level of spontaneity. Given all of this, we believe that the types of rejection expressed by means of the local government cannot be interpreted as the making – on the part of oligarchy who are in control – of a 'false conscience' that mystifies reality as well as manipulates a popular mass of 'minor age', that lacks its own autonomous capacity to analyse, act, and create. See in Thompson (1983, first edn 1978) a head-on attack on Althusserian Marxism, that shows individuals as remote-controlled puppets by an absolute power. In relation to Spanish historiography of peasantry movements, the anti-structuralist interpretation of Torras (1976: 8, 19) was fundamental: peasant support of Spanish counter-revolutionary movements in 19th. century (Carlist wars) should not be viewed as a mere manipulation by the Church, but as a political reaction against liberalism and the loss of the traditional peasant world.

²⁰ This thesis on the tragic and predatory end of collective property was put forth by the Malthusian W. F. Lloyd in 1832 (1968) (McCay and Acheson, 1987: 2) and recently emphasised as much by the economics of natural resources (Gordon, 1954) as by biology (Hardin, 1968). For Hardin, each additional introduction of one head of livestock to a common pasture produces a marginal benefit for the proprietor, while the negative externality due to excessive use of pastures is shared collectively, therefore affecting the respective livestock herder by only a fraction of the marginal social cost. Ciriacy-Wantrup and Bishop (1975) rejected the consideration of common property as an 'open access' system, without an owner, emphasising its normative and regulatory capacity over the peasant community and its means for excluding those foreign to the common property. Hardin recognised his error (1994), although he maintains the need for the privatisation or nationalisation of those commons which in fact have free access, where the threat of environmental aggression still persists due to demographic demands and the lack of regulation. For a criticism of the thesis of the 'Tragedy of the Commons', see also Berkes (1989: 8), Ostrom (1990: 2) and Aguilera (1991).

²¹ See, for Catalan Pyrenees, P. Sala (1998: 147).

²² Norgaard (1995: 158), from the perspective of transaction costs, makes reference to problems of commons management as related to growth: for more individuals there are greater difficulties in negotiation and consensus; the greater the distance between the locations for production and consumption, the greater the inadequacy of the collective property, which is typical of the local regulation of relatively autonomous communities.

²³ García Sanz (1979) is one of the best works in Spain on the self-reproduction in the traditional community, and on the corresponding institutions and their changes.

²⁴ Blaikie and Brookfield (1987: 193); McNeil (1992: 265). Each historic case shows a different interplay of local demographic pressure, local economic expansion, and external pressure on local resources.

²⁵ See, for the Amazonian forest, and for other areas of the planet, Martínez-Alier (1992: 213).

²⁶ The new *Catálogo de los Montes Públicos*, published in 1864 (1991a–b), exempted 4,365,083 hectares from sale in contrast to the 6,758,483 hectares of 1859.

²⁷ The area exempt from sale was increased by 550,000 hectares with respect to 1864 (from 4,365,083 hectares to 4,915,606 hectares). On the other hand, 1.6 million hectares corresponding to commons for free villagers's usage, were kept public, exempted for reasons of social protection.

²⁸ At the beginning of the 20th century, the privatisation pressure continued to decrease. The economic function (driven in large part since 1890 by the creation of the Service of Forestry Planning) took on the leading role of previous environmentalism in public forestry. Conifer reforestation was increased (although in arid areas, particularly in the peninsular southeast, the protective function was still important, given the hydric stress). Production efforts increased in the 1920s, with the impetus of the large national forest industries (paper, solvents, viscose, etc.).

²⁹ P. Sala (1998:175).

³⁰ Historical geographers have studied the naturalist and conservationist perspectives of the forestry engineers (Gómez Mendoza, 1992; Casals-Costa, 1997).

³¹ Montero (1992: 116).

³² For Giddens (1981: 228) this process of 'bourgeois revolution, market consolidation, and democratic reform', develop from the inception of the 'authoritarian liberal state' to its transition to a 'liberal-democratic state', a prelude to the 'welfare state'. The interpretation presented here distances itself from the Durkheimian functionalism basically because of the direction of change, which does not take place top-down, from the social elites or the State as creators of a program to generate cohesion, but rather bottom-up, from the social resistance, active and creative, modifying in an undetermined way, unpredictably, the very character of the capitalist State and society.

³³ Polanyi (1989: 133, first edn 1944).

³⁴ The Forestry Corps was certainly an elitist, hierarchical minority, sometimes intransigent, but it was not immutable in front of the opposition of the villagers, who often achieved the incorporation of traditional management criteria in many regions that had and continue to have more a silvo-pastoral use than an strictly forest use. Likewise, the clean cutting procedures of regular forests, of strict homogeneity connected with tree ages – typical of German silviculture of high yield and quick regeneration – when large areas of poor soil were unprotected, progressively changed to the selective cutting of irregular forest, with a mixture of different-aged stems, characteristic of small traditional silviculture.

³⁵ Giddens (1981: 211).

³⁶ Georgescu-Roegen (1960: 26).

³⁷ Hay (1975: 33).

³⁸ Thompson (1989: 277, first edn 1975). On the contrary, in Structuralism, (marxist or functionalist) the programmatic, clearly defined and outlined ideological hegemony of power, creates an illusion that submits the subordinates to obedience, denying in this way their autonomous capacity for thought, their tendency to react, their demands of promised rights and privileges, their self-benefiting initiatives. One can see this criticism in Abercrombie, Hill and Turner (1987: 9, 35, first edn 1980); Giddens (1981: 18, 215, 223); Scott (1985: 317). From another angle, see the 'subaltern studies' school in India (Ranjit Guha, 1982).

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