TRANSPORT POLICY IN THE ALPS: ENVIRONMENTAL ISSUES AND TERRITORIAL GOVERNANCE FOR EUROPE

Lisa SUTTO, Associate researcher, Laboratoire d'Economie des Transports, lisa.sutto@developpement-durable.gouv.fr
Olivier KLEIN, Researcher-Lecturer, Laboratoire d'Economie des Transports, olivier.klein@entpe.fr

ABSTRACT

The Alpine space seems to lend itself to the drawing up of coordinated and innovative public policy aiming to reconcile the objectives stemming from some apparently very different representations. Sutto (2009) shows that – concerning the specific field this paper deals with – the transport issue has occupied an essential place in the building of Alpine space policy over the last few years, and indeed continues to do so.
After a short historic overview of transport issues in the Alps, the paper focuses on the most recent "alpinisation" of transport policy, i.e. both the progressive definition on a local alpine basis of some common issues and the arrangement of shared means of action. Secondly, it shows that it is by jointly taking into account the development of procedures for defining and implementing these policies, the changes to their ultimate goals and the progressive build-up of formal knowledge associated with them, that the transformation of public policy pertaining to transport in the Alps can be reported on and analysed. Finally, the possible future developments in Alpine transport policy are analysed. The final part of this paper argues that the choice is still open between a specific, environmentally-ambitious policy requiring the "reterritorialisation" of the Alpine policy or the dissolving of issues relating to Alpine crossings in an undifferentiated European transport policy. Indeed, behind these strategies, the choice of a relatively integrated and relatively decentralised territorial governance model is taking shape.

Keywords: Alpine Space, Sustainable Transports Policy, Territorial Governance, Modal Shift

INTRODUCTION

In spite of the apparently homogeneous requirements and priorities of Alpine areas in relation to environmental protection issues, the Alpine space is not a concrete reality in itself.

It is a construct where the characteristics of a physical environment are mixed with the power relations underpinning a society. Hence, various representations of this space coexist. Based on a different reading of the specific requirements of Alpine areas, these representations are used to draw up policy and justify the corresponding level of political intervention. These multiple representations of the Alpine space should be cross-referenced with the presence of this region at various levels of European territorial governance. Indeed, the region is subject to specific policies issued by different levels of government: while the European Union and Alpine Convention exert a supranational influence on the region, it is also affected by national, regional and local political contexts as well as by initiatives stemming from trans-border cooperation, implemented spontaneously or as part of INTERREG community territorial cooperation programmes. Each representation focuses on different territorial aspects, which – owing to a certain amount of homogeneity in some areas – demonstrate varying degrees of uniqueness. This is underlined, for example, in the prospective study of Bausch et al. (2006). The authors develop six visions of the Alpine space to illustrate this diversity: an Alpine space made up of metropolitan areas, an Alpine space bringing together communities based on geographic, historical, linguistic and cultural proximity, an Alpine space defined by north-south European communication, an Alpine space promoting polycentrism, an Alpine space formed of major European river basins and, finally, an Alpine Space of "world-class mountains" where the Alps are considered as a single entity, whose challenge lies in the ability to coordinate and position the entire area in a global context.

There are several contradictions underlying the existing plethora of spatial representations of the Alpine region, of which the six visions of the study provide but a glimpse. For example, to really grasp the difficulty of using a representation of the Alpine space to draw up policy, the dichotomy between the image of a "barrier" (Raffestin, 2001) and that of a "hinge" (Gregoli, 1999), both applied to the Alps, might be referred to. In the field of transport in particular, associating the mountain with the idea of separation – which also reflects the way the Alpine area is broken up by national boundaries – is especially meaningful and has led to various conceptions according to the country and to the policy makers in charge of regulating traffic in the region. Nevertheless, the Alpine space also acts as a "hinge", both from a European point of view, since the system of Alpine crossings provides for territorial continuity, and, above all, from an Alpine point of view, where a community of challenges associated with the image of the mountain can be seen (life styles, activities, landscapes, etc.).

Yet, there are other contradictions too, such as that opposing the specific nature of the Alps and their analogy with other European areas. The uniqueness of this region, and of its environmental, historical and cultural heritage, justifies the ongoing championing of its fundamental characteristics and of the necessity to preserve these in political discourse. This uniqueness clashes with the "normality" of the most frequently raised issues and challenges pertaining to Alpine development. Using the results of a Delphi survey, Boesch and Sigrist (2006) show that the Alps are faced with the same questions as other spaces and that even recourse to environmental arguments, however relevant these may be to Alpine regions, needs to be weighed against the work required to define the values associated with the impacted contexts and the criteria adopted to measure and capitalise on these impacts when assessing the political measures to be implemented.

Finally, a third dichotomy might be applied to the Alpine space: that opposing the area's homogeneity and its differentiation. Although certain values and stakes may be

acknowledged to be specifically Alpine, this never applies at pan-alpine level, at least not to the same extent. This means, for example, that the challenge of sustainability, recognised unanimously as being fundamental, is actually pursued to highly varying degrees and with very different content in the regional policies of the various Alpine countries or areas, whose priorities vary according to local socio-economic development. Indeed, the Alpine space covers different areas ranging from those on the decline to some of the richest regions in Europe, together with others that are landlocked and marginal or, on the contrary, highly accessible and boasting a well-developed infrastructure. Underlying this third dichotomy is the difficulty of setting up policies specific to the Alps or defining specifically "Alpine" issues. The Alpine Convention, for example, outlines requirements that are recognised and shared by the areas in this region, such as conserving the environmental heritage of the Alps and the living environment of Alpine populations. However, the Convention finds it especially difficult to pursue common goals owing precisely to the diversity and the trickiness of maintaining a local balance between the challenge of natural and cultural heritage conservation, on the one hand, and economic and social development on the other (Gerbaux et Zuanon, 1995). Similarly, Janin Rivolin (2006) points out the difficulties of transnational cooperation in this area with its apparently homogeneous characteristics.

In spite of this observation, the Alpine space also seems to lend itself to the drawing up of coordinated and innovative public policy aiming to reconcile the objectives stemming from some apparently very different representations. Even if the question of the scales which are appropriate for organizing political and economic activities is debated in literature (Johnson, 2009), Sutto (2009) shows that – concerning the specific field this paper deals with – the transport issue has occupied an essential place in the building of Alpine space policy over the last few years, and indeed continues to do so. The objective of this paper is not to demonstrate this yet again. After a short historic overview of transport issues in the Alps, the paper will focus on the most recent "alpinisation" of transport policy, in other words the progressive definition of the issues involved and of the shared means of action. It will show that it is by jointly taking into account the development of procedures for defining and implementing these policies, the changes to their ultimate goals and the progressive build-up of formal knowledge associated with them that the transformation of public policy pertaining to transport in the Alps can be reported on and analysed. Finally, the possible future developments in Alpine transport policy shall be analysed. This final part will show that the choice is still open between a specific, environmentally-ambitious policy requiring the "reterritorialisation" of the Alpine policy or the dissolving of issues relating to Alpine crossings in an undifferentiated European transport policy. Indeed, behind these strategies, the choice of a relatively integrated and relatively decentralised territorial governance model is taking shape.

1. TRANSPORT IN ALPINE REGIONS

The history of the Alps is closely interwoven with that of transport. Changes to traffic and transport possibilities have considerably fashioned the development of Alpine regions and, today, the wealth of these regions still relies on their accessibility, on the potential interpenetration between local, national and international economies offered by the presence of transport infrastructures, and on the various economic benefits that can be reaped in from

traffic in a given area. Nevertheless, for several years now there has been increasing opposition from populations to the building of new transport infrastructures or, more generally, to traffic going through their life space. This opposition is being backed up more and more by local political and economic stakeholders. Local areas play an important role getting the transalpine traffic question onto international political agendas.

The actions of these areas are linked to the deep-reaching changes in transalpine mobility over the course of time. The transformations having taken place over the last few decades are not only due to the choices made in terms of Alpine infrastructures, where the priority has been given to motorways and road tunnels, but also depend on the economic growth model adopted globally (increased role of transport in the economy owing to innovations in production modes such as direct logistics flows and multiple-location businesses, overall transport cost reductions, etc.) and on political changes linked to the European Union integration process. In short, spatial concentration, greater distances between starting points and destinations, heavier traffic and an increasing preference for road-based transport modes have contributed to changing local perceptions of flows. Little by little, the advantages that transalpine traffic represented historically in terms of resources for the areas in this region have subsided.

At the same time, increasing speeds and extended distances have reinforced the hierarchical organisation of Alpine crossing routes. Passes have been abandoned and traffic has concentrated massively on a few major routes, generally those equipped with motorways and large tunnels. The distribution of traffic between rail and road has also undergone some profound changes with the trend being reversed in the 1970s to the detriment of rail transport. Railway lines are still highly conditioned by their peculiarity in relation to the valley network (the access slopes are much steeper). Their resulting low performance– high operating costs, lack of route flexibility, low commercial speed (14 km/h on average) – explains why transalpine railways today only use 31% of their potential freight transport capacity (Guichonnet, 2002).

However, besides the changing traffic characteristics, the growing rejection of such traffic by the Alpine space can also be explained by the fact that its determining factors escape local or Alpine control and seem to be subject to increasingly external decisions. This phenomenon is heightened by the feeling that the transformations are occurring faster and faster. As elsewhere in the context of globalisation, local authorities, but also regional and national policies, are being stripped of their ability to set up efficient solutions for controlling traffic owing to the size of the spatial and temporal scales underlying the phenomena determining Alpine traffic. Given this situation, defining public intervention conditions on a broader scale would seem to be the more logical thing to do. However, another look at the specific characteristics of the Alpine space in relation to its inclusion in the European whole reveals the difficulty of choosing the right scale. Over the last ten years or so a genuine transport policy on an Alpine scale seems to have been gradually emerging. This process, referred to here as “alpinisation”, has been put to the test by recent changes. These changes point to an alternative involving either a renewed focus on the specific characteristics of the Alpine transport space and genuine recognition – that is today lacking – of the role of local areas, or a dissolving of such characteristics to the benefit of an undifferentiated European transport policy.

2. THE THREE DIMENSIONS UNDERLYING THE REDEFINITION OF AN ALPINE TRANSPORT POLICY

Interpreting the development of public transport policies in the Alps as a form of “alpinisation” may appear strange. It is in fact based on the observation of a progressive shift from policies defined within the framework of the administrative limits of States, implemented with little coordination as to the different crossing points considered as broadly independent routes, to the joint setting up by the States concerned of a more integrated Alpine policy understood as an interdependent system targeting consistent objectives across the entire mountain range. Without going into all the historical details of this transformation, the objective here is to show how this transformation is based on three dimensions that need to be taken into account in order to fully understand it: changes to the knowledge used, to the ultimate goals and, lastly, to the procedures implemented.

2.1 Changes to the knowledge used

The establishment of a « shared knowledge base » as well as a « shared vision » between the concerned States is a precondition to fostering trans-national cooperation (Fabbro et Haselsberger, 2009). Following this statement, the setting up of an Alpine transport policy relied first of all on the progressive construction of a shared representation of the issue of transporting goods across the Alps. Even if this shared representation is not solely based on purely technical and rational knowledge, the aforementioned nevertheless plays a part in the evolution in several ways. Starting with a situation whereby each crossing point was observed independently from the others and without any coordination between the different countries, it was, from an operational point of view, the shortfalls of the flow measurement statistical devices that were pinpointed via the heterogeneity of the national databases (CEMT, 1993; Rathery, 1999). As of 1984, Switzerland began to compile the existing data held by Austrian and French authorities in order to feed this into the first Alpine base: Alpinfo. But this endeavour was undermined by the absence of homogeneous flow measurement methods.

Nevertheless, the Alpinfo base did provide a first picture of Alpine traffic, underlining its significant overall growth in the 1980s and a highly contrasting situation in terms of the share between rail (mainly in Switzerland) and road (highly dominant in France and Italy). Alpinfo also provided the bases for a first joint definition of the Alpine traffic issue. Indeed, Alpinfo distinguished between through traffic (whose starting point and destination were located outside the country where the traffic was observed) and commercial traffic (whose starting point and destination were located inside the country being observed). For the small country of Switzerland (or Austria), there was a substantial amount of through traffic (mainly between Germany and Italy). This was primarily seen as a disturbing factor while commercial traffic was linked to its external trade. For the European Union economic integration project, there was no question of this through traffic being rejected by the third countries through which it crossed. Between France and Italy, very long-distance trips (between Lille and Milan, for example) were counted as other shorter trips (between Lyon and Turin, for example) involving commercial traffic, while trips covering the same distance necessarily involved through traffic across Switzerland. Finally, the Swiss and Austrian Alpine routes were

sometimes used by a considerable share of internal traffic. By highlighting the differences in Alpine traffic representation, the Alpinfo base made it possible to outline the problem and open an official debate between countries.

However, the light shed on the heterogeneity of Alpine routes was completed by the revelation of a hitherto unsuspected phenomenon of interdependence when the annual changes to these different routes were analysed. At the end of the 1990s, it was discovered that the traffic across the Alps had a habit of switching between routes that were sometimes quite far apart. This observation fuelled two contradictory fears. The first was that the road traffic rejected by Switzerland would "suffocate" the valleys of neighbouring countries. The second was that the new rail tunnels that Switzerland had decided to build would dry up the potential traffic for neighbouring, and therefore rival, projects. The Alpine routes were built as an interdependent system and, because of this, created a community of fate.

Another piece of knowledge acquired also had an impact on the Alpine transport issue and influenced the definition of the common goals assigned to public action in the different countries. Indeed, faced with the need to produce forecasts in long-term transport demand in order to plan ahead for infrastructures, transport economists focused on the relationship between economic growth and goods traffic. At the beginning of the 1990s, this interest was relatively new. It was fed by growing concerns about congestion, but also thinking relating to environmental issues. As part of these environmental concerns, the increasingly popular concept of growth "decoupling" on the one hand, and consumption of our planet's non-renewable resources, on the other, began to be applied to the transport sector.

Following on from this, a distinction was very quickly made between "absolute decoupling", according to which the consumption of the earth's resources no longer increases with economic growth, and "relative decoupling", which consists in relying on technological progress to prevent excess growth from applying additional pressure on non-renewable resources (Baum, 2002). However, in the transport sector more specifically, the observations made suggested that technological progress would not be enough (Crozet, 2002). "Relative decoupling" was therefore preferentially translated as demand turning towards more environmentally virtuous transport means. This was termed the modal transfer policy.

In the Alpine space, economists' thinking about the relationship between economic growth and transport demand was very much present. It notably favoured large projects such as the Lyon-Turin route for which one of the main initial arguments was to prevent the risk of congestion. However, this thinking, and the progress in knowledge underpinning it, also sparked a progressive change in the ultimate objective of these infrastructure projects and, more broadly, in the building of an Alpine consensus about a transport policy rightly founded on modal transfer. This modal transfer, which was none other than the notion of relative decoupling applied to the transport sector, indeed appeared to be the point upon which a compromise could be set up between those wishing to safeguard both growth and the environment.

Several years later, at the start of the first decade of the 21st century, the Alpine strategy in favour of a modal transfer seemed to have taken a firm stance. On the other hand, this new goal had been transposed to the Lyon-Turin project in a highly rhetorical manner. The argument for this project was at the time based on its ability to attract traffic to the railway. However, this attractiveness had not actually been demonstrated. This became the point of attack by technical and administrative critics, mainly in France and Brussels. It was

summarised in an official audit on major transport infrastructure projects published by the French authorities in 2003 (Rapport d'Audit sur les grands projets d'infrastructures de transport, 2003). The audit shed serious doubt on the interest of the project. The same argument was used by the Italians, whose opposition to the project came to a head in 2005. Furthermore, attempts to involve the private sector in the project's financing came up against the same doubt about the expected traffic volumes.

The project's first response to these obstacles was to adapt its content. A set of additional measures aiming to dissuade traffic from using the road was outlined. These measures were presented as being essential to the success of a modal transfer strategy based on the Lyon-Turn railway. But the criticism was also tackled by transforming the economic expertise tools used to draw up not only the infrastructure project but the additional regulatory measures. The geographic space used as a reference for traffic forecasting was widened, suggesting that the project had become part of a genuinely Alpine policy. Above all, the structure of the traffic forecasting models was reworked in order to fine-tune the chosen mode parameters, which had remained fairly rough up until then. A better description of the transport supply covered was provided together with criteria that were unanimously considered to be determining factors in the choice of transport mode, such as timetable reliability, line safety or customer information. In goods traffic studies, it was rare that such criteria were taken into account. This was especially due to the lack of readily available or valid data to set the model parameters. Such data had to be estimated through stated preference surveys, which had to be implemented with substantial methodological precautions in order to guarantee reliable results. Once again, this illustrates how the transformation of public action with respect to the Alpine transport issue depended greatly on changes to the knowledge used. In the history of Alpine transport policies, this question of knowledge was purposely only brought up within the limited framework of technical and economic expertise. This by no means suggests that this field of public action was not also influenced by the emergence of new fields of knowledge, linked in particular to the environment. Progress in the knowledge of phenomena that were highly specific to Alpine reliefs and which determined the spread and perception of noise or atmospheric annoyance in the valleys was also made and put to use in political arguments (Alpnap, 2001-2006). It appears insightful to underline how public policy transformation also required the renewal of knowledge within a specific field of expertise, albeit one that had already been used to tackle these transport questions such as the technical and economic expertise applied to this field.

2.2 Changes to ultimate goals

Contemporary transport policy, i.e. outlining major new railway routes[1], does not have an environmental basis. The account of the Lyon-Turin project clearly highlights that, up until the end of the 1990s, the justifications put forward for the project mainly focused on greater trade flows across the Alps. The new rail links were presented as a solution to the forecast

[1] Over the course of the 1990s, the Alpine valley network was concerned by four railway projects including the building of a base tunnel and new access lines: the two Lötschberg and St. Gothard tunnels, which were part of the New Swiss Alpine railway lines, the Lyon-Turin project and the Brenner project, including a base tunnel and a new railway line between Verona, in Italy, and Munich in Germany.

saturation of the roads with their ever-increasing flow of traffic. Environmental arguments were also put forward but remained in the wings. Above all, they were used as "fill-ins", i.e. they were brought up when it was politically impossible to double up roads, which explains why the projects were rail-based.

The breakthrough in the definition of the ultimate goals assigned to Alpine transport policies came from Switzerland in the end. Indeed, the main Alpine crossing routes were via Switzerland and Austria located in the centre of the Alps. Owing to the modest size of these countries, most of the traffic they endured actually crossed right through them. It was thus through traffic. Furthermore, the population of both countries shared an awareness of environmental protection issues very early on (Perlik, 2007). Road traffic restriction policies were introduced in Switzerland and Austria at a very early stage. As of the end of the 1980s, Switzerland limited the total weight of trucks travelling across the country to 28t. In other words, it halved the useful load of transport vehicles in Europe (usual gross weight of 40t). In compensation, the country undertook a programme to build two new rail tunnels through the Alps in 1992. In turn, Austria instigated an "ecopoints" system in 1992. This system imposed quotas on the number of HGVs crossing the country based on their nitrogen oxide emissions. In both cases, these policies were unilateral. They were decided on without consulting either the neighbouring countries, those emitting or receiving the road traffic targeted, or those who might have to accommodate the flows pushed away by Switzerland and Austria. Impelled by its member countries, the European Union opposed these measures, basing its arguments on one of its founding principles, i.e. the defence of free movement. Austria's EU membership in 1995 led to the abandoning of the ecopoints system. However, Switzerland, which was not a member of the EU and occupied a central position in the Alpine valley network, was able to resist these authoritarian injunctions. It was thus through negotiation that the protagonists attempted to find a solution to this divergence.

In 1999, the EU-Switzerland agreement governing the movement of goods through Switzerland was thus the result of a compromise expressing typical tensions of planning policies between economic growth and sustainable development (Counsell and Haughton, 2003). It involved Switzerland agreeing to lift the regulatory restrictions on heavy goods vehicle flows. A calendar for the progressive increase in gross weight was also included in the agreement. In return, the EU acknowledged the legitimacy of the objective to decrease road traffic volumes and to transfer traffic from road to rail. It agreed that the Confederation set up a kilometre-based road tax system (the RPLP) to at least partially offset the environmental annoyance caused by road traffic. This compromise also depended on Switzerland committing to build the new Lötschberg and Saint-Gothard rail tunnels to absorb the rejected road traffic.

From a European point of view, the negotiation of this agreement was not simply about accepting a Swiss modal transfer policy within Swiss national territory. The negotiation took place in a context where the EU was gradually widening the scope of its political intervention. This was the case in the transport sector. Following the shortcomings pointed out by the European Court of Justice in 1986 concerning the absence of a European transport policy, the EU gradually invested in this field, by first concentrating its activity on the planning and financing of infrastructures. The 1990s witnessed the definition of a trans-European transport network (TEN-T), the identification of "missing links", the selection of "priority projects", the definition of instruments for the EU to help finance projects, etc. At the end of the decade,

this infrastructure-limited intervention had run its course. Among other projects, the setting up of the single market meant that the EU also had to play a role in transport policy, even if this was just to harmonise competition rules. A transport policy was progressively drawn up. To begin with, it mainly focused on eliminating borders and opening up competition in the sector. Furthermore, owing to the subsidiarity principle, according to which only issues that would be dealt with in a less effective manner by individual states should be handled by the Union, Europe was able to address the environment question. To ensure consistency and coordination and prevent distortions arising from competition, the EU was recognised as the legitimate authority to intervene in such questions. The negotiation of the EU-Switzerland agreement occurred just when these two recent fields of political expertise were put to the test in European matters. The 2001 white paper on transport policy confirmed this development by making the road-to-rail modal transfer for the transport of goods an official European objective.

In terms of the Alpine space, another factor fostered the extension of this Swiss modal transfer objective to the entire mountain range. This was the realisation that all of the crossing points in the range formed a fragile and interdependent system. It has already been explained how the setting up of a unified traffic observation system helped to raise awareness about the interdependency of Alpine crossing routes. It remains to be underlined that this setting-up itself was part of a progressive process to construct the representation of an Alpine crossing system. This process stemmed from Switzerland's determination to legitimise its policy, as well as from the technically-minded traditions of the Swiss and French authorities in charge of transport. The process was initially fuelled by experience sharing as the coordinated observation systems were set up. The results produced then highlighted the interdependence. Finally, in 1999, a series of accidents occurred in the Alpine tunnels. The consequences of these accidents (several dozen victims in all, extensive material damage, occasionally long interruptions in traffic, the questioning of safety procedures, etc.) led to the idea that transport policies for these routes should be coordinated.

Thus, at the dawn of the 21st century, the transfer modal objective supported by environmental arguments became the central theme of Alpine transport policies. Faced with the predicted growth in traffic, this new goal replaced that of ensuring trade fluidity. However, these goals did not change at the same pace or have the same grounding for all national stakeholders concerned. As previously explained, the Swiss and European contexts shed light on the adoption of the modal transfer objective. For France, whose environmental awareness was not as strong as in Switzerland or Austria[2], even in the French Alpine valleys, the adoption of this modal transfer objective can be partly explained by a wish to prevent a considerable amount of road traffic overspill from the Swiss routes. For Italy, traditionally concerned about the possibility of crossing the Alps isolating it from the rest of Europe, accepting the modal transfer objective, which involved reducing road traffic, comes across as an even greater paradox.

[2] Analysing the Alpine Convention protocol development process, Gerbaux underlines how the different texts, each entrusted to a different country, reflect a national vision of the problems. Thus, when she compares the Tourism protocol, entrusted to France, with the Transport protocol, drawn up by Switzerland, the author is able to pinpoint two different conceptions of development. These reflect both a geographic and a cultural rift. On the one hand, the German speakers defend a conservatory idea of the mountain, based on respecting local and regional cultures; the Latins, on the other hand, believe in a balanced and controlled growth, based on the harmonious development of industry and tourism (Gerbaux, 1995).

In fact, the rail crossing project between Lyon and Turin, championed by both France and Italy, played an essential role in the transformation of Alpine transport policy objectives. Indeed, in the northern Franco-Italian Alps directly concerned by the project, the increase in road traffic came to a sudden halt in 1994. Because of this, the main justification for the project, i.e. coping with forecast traffic growth, was undermined and highly questioned by civilian opposition in the Italian Susa Valley as well as by part of the French and Brussels authorities. Adopting the modal transfer objective allowed both countries to step across this obstacle since it meant that the project became necessary. It was necessary not only to absorb the rise in traffic, which had become increasingly hypothetical anyway, but to substantially decrease the number of heavy trucks crossing the Alps, without jeopardizing trade. Basing this revised justification of the Lyon-Turin project on the modal transfer objective made it possible to reconcile this new goal with the Italians' concern about access to Europe. In France, it backed up the relevance of this change in transport policy goal.

Overall, it was obviously the combination of these different reasons that made a joint definition of an Alpine transport policy, harmonised by the objective of modal transfer, possible. However, this convergence must not be idealised. It did not occur without any conflicts between the different stakeholders. A first cause of divergence arose from the time difference in the adoption of the modal transfer objective. Italy in particular was very reluctant to effect this change. This is reflected in its refusal to take part actively in the setting up of joint traffic observation tools. This participation would have meant sharing, at least partly, the resulting observations. The density of the modal transfer objective created a second rift opposing Switzerland and its partners. The traffic threshold, which was not to be exceeded in the long-term and which had been included in fundamental Swiss law (650,000 HGV/year), meant the current traffic volume would be halved (1,250,000 HGV/year). Neither Austria, nor Italy, nor France adopted such an ambitious goal. All three were certainly very careful not to set a figure to the objective to be reached.

The pace at which the modal transfer policy was implemented for a while constituted a third source of dispute between the partners. Indeed, for the Swiss, who had been committed to their traffic transfer objective for a long time already and who had already started to operate one of their two new rail infrastructures (the new Lötschberg tunnel), the battle had already commenced. The Austrians more or less followed suit, but the European veto of their ecopoints systems obliged them to entirely revise, if not their objectives, at least the means implemented by their policy. In France and Italy, the Lyon-Turin project argument had started out by turning the modal transfer objective into a sine qua non condition, suggesting that it would not see the light of day for another 15 years at least. It was only as of 2003 that the idea gradually emerged that the modal transfer policy should be implemented immediately and that the Lyon-Turn project was just one step, albeit essential, on the way to reducing road traffic.

Finally, the partners did not always agree to the means to be implemented for the modal transfer policy. Switzerland argued that the results obtained by tax incentives (the RPLP) were insufficient in terms of the traffic transferred to the railway. They championed the implementation of an Alpine Transit Exchange. In its cap-and-trade version, the idea was to issue a determined number of rights for travelling across the Alps and to allow the economic stakeholders to trade these on a market. France, and to a lesser extent Italy, defended the

idea of tax-based regulation through tolls making it clearly more expensive to cross the Franco-Italian Alps than the Swiss Alps.
Making the Alpine transport policies converge towards the shared goal of modal transfer did not therefore follow an entirely consensual process. Achieving consistency required successive adjustments, based on compromises. In spite of this, and through to the present day, the stakeholders always claimed to adhere to the shared objective of reducing road annoyance through modal transfer. They continued to more or less inscribe this objective in the definition of their transport actions in the Alps. Finally, they never stopped participating in the common bodies where information was exchanged and measures aiming to harmonise Alpine road flow regulation were mulled over and debated.

2.3 Changes to the procedures used to draw up and implement policies

The transformation of Alpine transport policy cannot be understood without taking into account the specific procedures used to effect this transformation. The spread of dialoguing procedures is often linked with changes to public policy goals and, in particular, transport policies in terms of the taking into account of “sustainable development” challenges. This observation can be applied to the Alps too where, as in other regions, the progressive institutionalisation of participative democracy is apparent (Revel et al., 2007). On the other hand, when it comes to a multinational space, it takes on forms and brings together stakeholders – the state authorities – other than those normally involved in such changes. The shortcomings revealed by this mobilisation should also be underlined. Finally, these procedural changes go hand in hand with a transformation in the demands made on technical and economic expertise.
As might be imagined, the first noteworthy point in terms of the procedure applied to the transport policy alpinisation process stems from the gathering together into an arena for exchange and coordination of the stakeholders in charge of these questions from one end of the Alps to the other. The emergence of this arena is perfectly embedded in the other dimensions underpinning the Alpine transport policy. Before 1999, contact between the authorities in charge of transport along the Alpine range of mountains was above all episodic and bilateral. Contact was made in order to deal with a specific issue. Nevertheless, permanent inter-governmental committees (IGCs) were at work, to varying degrees of intensity, for example between France and Italy. These were often in charge of well defined questions (e.g. the management of the Mont-Blanc and Fréjus tunnels). A “Southern Alps” IGC was set up to deal with a more cross-cutting problem. However, the development of the Alpine transport policy did not really fall within the scope of this committee’s work.
The progressive development of observation systems provided another opportunity for contact between transport authorities. For the Swiss Alpinfo system, a permanent network of correspondents in the three national authorities was set up by the Federal Transport Office in 1984. Its objective was to collect the statistical data produced in Switzerland, France and Austria, but without the benefit of a harmonised methodology. The data were compiled by the FTO alone and the results published under its responsibility. Owing to the shortcomings of this initial system, a better coordinated traffic observation data production system emerged

ten years later. However, the birth of CAFT[3] surveys also stemmed from random opportunities seized on by the civil servants working on these questions[4]. It was not until 1999, when the second survey took place, that a more lasting system was designed, with the financial help of the EU. This system was based on a more shared observation of the need for a more harmonised Alpine tool.

Italy's buy-in to this tool illustrates how the setting up of a coordination body, albeit limited to the technical question of producing data, goes hand in hand with the development of knowledge relating to the Alpine traffic phenomenon on the one hand, and to the fixing of better-shared goals on the other. Indeed, this essential country in terms of trans-alpine traffic did not get involved in the data production system to begin with. When the system's results were used in the Swiss-EU negotiations for the Alpine transit agreement, which was likely to undermine the fluidity of its trade with the rest of the continent, Italy realised that it was worth getting involved. It was on the basis of a redefinition of the traffic categories used to dissolve the notion of "transit", specific to small countries in the centre of the Alps (i.e. Switzerland and Austria), that Italy joined in the preparatory works of the 3rd CAFT survey in 2001. The incidents that followed (see Sutto, 2009, p. 360 and onwards) showed that the partners attached greater importance to the consolidation of the cooperative structure they were involved in, at times to the detriment of the shared system's technical performance.

In fact, as of 2001, the implementation of the CAFT system was integrated into a structure based on dialogue and benefiting from broader expertise: the Zurich group. Indeed, following the accidents affecting several Alpine tunnels in 1999 and 2001, the Transport Ministries of Germany, Austria, France, Italy and Switzerland (to which Slovenia was added in 2005, as well as the European Commission) decided to create a lasting structure in order to promote a consistent Alpine policy based on three themes: the safety of crossings, knowledge of traffic and promotion of actions in favour of a modal transfer. It is by and large within this group, which has remained active up until the present day, that a genuine Alpine transport policy was devised. The policy included the shared definition of new technical standards relating to tunnel safety. It used and integrated the traffic observation work and defined a place for discussing and exploring the different joint traffic regulation measures that might be implemented as part of the modal transfer goal.

The role of the Zurich group cannot be fully grasped by looking at the jointly-decided concrete measures alone. Its role in terms of exchanging and sharing information was also essential. Regarding safety technology, it greatly inspired the drawing up of the 2004 European Directive on road tunnel safety. It also led to the emergence of an international community specialising in these questions. Concerning transport policy, the group's existence and the value that each partner bestowed on it helped to ward off divergences and the temptation to impose unilateral measures, fostering a spirit of compromise instead. Thus,

---

[3] Since 1994, the Alpine valley network has been using a second trans-Alpine traffic measuring tool. This is a database born out of the CAFT (Cross Alpine Freight Transport Survey) surveys, in other words a flow observation system and no longer just a data collection system. This makes it possible to perform a more accurate study of trans-Alpine road transport demand and to provide solutions to some of the technical and information-related limits concerning the composition and nature of the Alpinfo database traffic. The CAFT data base describes all land flows of goods channelled by through traffic or commercial traffic across the Alps via road or rail. The road data comes from road surveys performed by the French, Swiss and Austrian ministries of transport every five years (in 1994, 1999 and 2004) and covering the entire Alpine valley network. These data are completed by the collection of information about rail flows channelled by the railways in the three countries (OBB, SBB, SNCF).

[4] See Sutto (2009), p. 354, interview with Michel Houée, officer in charge at the Ministry of Equipment (DAEI/SESP). Interview of 9 June 2006.

Switzerland, who wanted to strengthen its infrastructures in favour of the modal transfer, put forward its Alpine transit exchange proposal to the group in the knowledge that the application of this measure would have to have the enthusiastic buy-in of all Alpine countries and the Commission. In return, the EU and Italy, the two least favourable stakeholders regarding the traffic containment principle, agreed to take it into consideration through a joint Swiss/EU exploratory study.

This multilateral structure to a certain extent backed up the Alpine transport policy as it made it more difficult for a single stakeholder to call into question decisions taken jointly. Above all, its position paralleling the structures of the European Union was quite unusual for Europe. This situation was evidently due to the specific status of Switzerland, the only non-member of the EU. However, it also had political recognition owing to the specific characteristics of the Alpine space, at least regarding the transport issue. It is through this prism that the Commission's reticence to join forces with the Zurich Group, followed by its decision to play the role of observer, can be explained.

However, the mediations involved in the Alpine transport policy were not only channelled by the Zurich Group. The local offshoots of the group in particular involved other procedures. The Lyon-Turin project and the difficulty of embedding it in the Italian Susa Valley is a perfect illustration of this. The "events of 2005", marked by vehement although highly heterogeneous protestation, can be interpreted as the result of the marginalisation of many stakeholders who, whether they were for the project or not, were sidelined from its preparation (Bobbio, 2006). To overcome this conflict situation, the Italian authorities implemented an original system of dialogue. In 2006, the Lyon-Turin project was removed from the Legge obiettivo framework, which confines the process of technically and politically developing infrastructure to the State authorities, and a "technical observatory" was created. Based on a configuration that placed the project opponents in the minority, this brought together the Region, or la Provincia, the Turin conurbation and the Susa Valley local authorities alongside the State departments. The explicit job of this body was to reach a common position on questions that were presented as technical – capacity of the existing line, traffic changes in the Alps, insertion of the project in the Turin rail node, possible plotting of the new infrastructure – but which in fact determined the way the modal transfer policy would be implemented in the Susa Valley (Sutto, 2009, p. 212 onwards). This involvement of local stakeholders in the local application of the Alpine modal transfer policy was not only an opportunistic means of getting the infrastructure project accepted. It also met with the objective of modal transfer itself. In the Alps in particular, this goal targeted first and foremost the protection of the local populations and surroundings, well before the fight against global warming emerged. It was clearly to take into account local interests that the works of the "Virano observatory", named after its president, introduced changes to the initial project. It was even in order to protect residents along the existing line, who were likely to be exposed to increasing annoyance by the road-to-rail traffic transfer, that the new railway line approach was justified. All in all, this episode marked the increasing territorialisation of public policy design in the development and transport fields (Ascher, 2004).

Finally, the revision of procedures for drawing up or coordinating public policy is often put down to the implementation of systems of dialogue. At this point, it is important to underline another factor, linked to the revised forms and use of technical and economic expertise. It is well known that the use of this kind of expertise in a sustainable perspective is one of the

sources of their own methodology renewal (Hanley, 2001). Indeed, the changes to the Alpine transport policy clearly illustrate how technical knowledge, besides progressing in terms of content, is used differently, depending on the intellectual approach adopted. The history of the Lyon-Turin project underlined the use of economic tools applied to transport. In the past, these were mainly used for justification purposes. The interactions between the results they produced and the content of the project remained scarce and long-term: for example, a lot of time went by before the predicted low levels of passenger traffic led to a change in the project's priority target, transforming the Lyon-Turin high-speed train link into a mainly freight project.

It was not until 2003, representing a delay in relation to the adoption of the Alpine transport policy, that the Lyon-Turin project was modified to include the Alpine modal transfer objective in its design. This transformation required the development of new prediction tool capacities in order to simulate the different factors for modal choice determination. However, the project also had to fit into a larger set of measures. These had to be implemented before the new line could be started and were designed to dissuade users from using the road and opt instead for rail transport. In this context, the use of economic prediction and simulation tools had to be much more exploratory. The tools had to be able to test different configurations of transport supply, different hypothetical changes to demand, different tariff-based measures or administrative measures for traffic regulation, etc.

These simulations were no longer only designed to feed the official unilateral reports of state departments in charge of the Lyon-Turin project. They were also fairly systematically used as working tools and to help set up compromises in the various arenas for dialogue. For example, the Lyon-Turin IGC simulated several hypothetical applications of the provisions allowed by the "Euro tax disc" directive relating to the price-setting for use of the infrastructures in Europe. Similarly, the Virano observatory re-examined the forecast change in transport demand across the Alps. Finally, the Swiss/EU joint exploratory study concerning the implementation of the Alpine transit exchange conveys the same transformation of the way in which the expertise tools are used in the elaboration of public policies: as (Crozet, 2004) observed with regard to the role of the economic calculations, it is a question of the transition from technocratic certainties towards political trial and error.

CONCLUSION

Revised through the knowledge that it called upon as well as the goals that it pursued or the procedures according to which it was developed, the Alpine transport policy is obviously still an ongoing construction. It may yet change, notably owing to the contradictions lying beneath its surface. Indeed, it would appear that this modal transfer policy is essentially the result of a consensus set up between the States concerned. The Zurich Group make-up is a perfect illustration of this. Yet, it also seems that the definition and acceptance of the environmental objectives and their accompanying measures, as outlined in the Alpine policy, need governance that is better shared between the various scales of territorial authorities concerned. In short, a sort of "multi-level" governance seems to be called for. This shared governance ties in with the expectations of local authorities. This is illustrated in the content of the Monitraf project that brings together several Alpine regions. A more conflicting

example is the autonomous Aosta valley region with its questioning of the modal transfer strategy (see Sutto, 2009, p. 422 and onwards or Sutto 2010). The ins and outs of the Alpine transports issue are located both within the Alpine space and outside it. The gradual affirmation of a multilevel governance is an opportunity to make this territory an “arena of globalization, rather than a passive victim of global forces" (Gustavsson, Elander, Lundmark, 2009).

This sharing of expertise is also a pragmatic necessity, not only because the local populations and their representatives have the ability to considerably interfere with the implementation of a policy they do not care for, but also because the concrete, and therefore local, definition of the conditions for applying the different measures cannot work without their collaboration. This is illustrated by the objection of the Susa Valley and the resulting “re-territorialised’ redefinition of the Lyon-Turin project. The same question applies to the definition of the road traffic reduction objectives. To avoid the stalemate created by the exaggerated claims of locals to reduce traffic on “their” patch, a global objective has to be fixed within a negotiated framework. When all is said and done, this need to open up the governance of the Alpine transport policy to local authorities is no more than a reflection of the logic underpinning the policy itself: with its primary purpose being to conserve Alpine areas, how can it be deployed without local participation? From this point of view, the “alpinisation” process that has profoundly transformed the transport policy in this zone appears to be unfinished.

At the same time, imagining that an alpine transport policy can be developed using alpine resources alone is unthinkable. As outlined above, this “Alpine” policy is based on the recognition of the specific characteristics of this space: recognition by the Alpine community stakeholders of their problem and of the interest of addressing this jointly; recognition on behalf of the major States (Germany, France and Italy) for whom only a marginal part of their geographic zone and concerns is Alpine; and, finally, recognition by the EU whose job it is to merge local characteristics into a consistent space for public action. Although this “Alpine” recognition seemed to make progress in the 2000s, it never reached a point of non-return. It remains inseparable from the consensus surrounding the Alpine modal transfer policy of which it is one of the conditions, but which also determines its existence.

Thus, the possibility that an Alpine transport policy might continue to be built upon the modal transfer objective mainly depends on factors outside of the Alpine space. Firstly, most of the financial resources needed to build the infrastructures on which the Alpine modal transfer policy relies are outside the Alps. Although the the Lötschberg and Saint-Gothard projects in Switzerland can be considered as being Swiss-funded, and therefore regarded as “Alpine”, the Lyon-Turin project together with its Munich-Verona (Brenner axis) counterpart will not be possible without massive back-up from the States concerned (France, Italy, Germany and Austria) and the EU. This support means that the stakeholders would have to opt in favour of using their already stretched budgets to finance Alpine projects. It is also largely outside of the Alps that the railway needs to prove its worth as an alternative solution to road transport, in spite of its lack of flexibility and faced with the persuasive ability of technologies targeting “cleaner” road transport.

More generally speaking, the EU’s commitment to modal transfer, as outlined in the 2001 white paper on European transport policy strategies, has considerably waned since. Yet, this commitment, albeit limited to the scope of the Alpine space, is a pre-requisite to a continued

modal transfer policy. This policy should, for example, include road use dissuasion measures by allowing European legislation and its practical interpretation to authorise or, on the contrary, ban road use.

Such is the case with the possibility of subjecting goods transport to taxes covering the social annoyance (danger and congestion) and environmental pollution (noise and atmosphere) it causes. The debates on this question are long-standing. The possibility of "internalising external costs", i.e. obliging the economic stakeholders responsible for these costs to pay for them, was already on the agenda of discussions about the revision of the "Euro tax disc" directive in 1999. The text applied in 2006 bans taxing the use of infrastructures over and above their "overall cost" (investment, operation and replacement). The directive therefore excludes the possibility of internalising external costs. However, it does include several provisions, which are more or less applicable to the Alps ("mountain areas along corridors", "sensitive areas", etc.) and which make it possible to exceed this ceiling amount. Broadly influenced by the "Alpine" issue, these provisions are clearly the result of the specific characteristics of certain areas in Europe being taken into account, justifying the application of waivers for these areas. They also anticipate future changes expected since the same 2006 text obliges the Commission to start a new revision targeting the price-setting of external costs. As planned, the Commission put its proposals before the Parliament in July 2008. Since then, however, the political process has come to a halt.

This affair illustrates that, since the 2001 white paper that turned the modal transfer objective into one of the European transport policy priorities, the power struggles surrounding this issue have radically changed. On the one hand, EU enlargement has meant that many marginal countries have been integrated into the European space. These countries are less aware of through traffic problems and are often highly competitive on the goods road transport market, considering a return to rail use as a step backwards. On the other hand, the continuing rise in fuel prices up until 2008, also affecting the Alpine countries, highlighted one of the weak points of the road sector and the inopportune nature of measures in its disfavour. The European Parliament set up following the 2009 elections also appeared to be clearly less sensitive to ecological arguments. Finally, the voluntaristic environmental policy advocated by the EU is increasingly deemed to be ill-fitting to the international context, as illustrated in the analyses of the Copenhagen summit on global warming. An overly unilateral focus on the greenhouse effect, which would mean considerable expenditure in favour of modal transfer in the transport sector as well as an increase in the cost of travel inside the Union, is increasingly juxtaposed with the safeguarding of economic competitiveness in the EU.

The consequences of this reversal in European transport policy began to be perceived in 2006 with the mid-term revision of the white paper. Today, they have resulted in the considerable likelihood of seeing the EU clearly stating its preference for a different transport policy. This policy would combat the annoyance caused by transport by focusing on technological improvements to the environmental performance of transport modes used, i.e. mainly road transport. The current debate about authorising 60t, 25.25m long road convoys (compared with today's 40 t x 18.5 m) is a direct result of this trend[5].

[5] It should be noted that the debated suitability of this solution (termed European Modular System – EMS – by its defenders and Mega-trucks by its opponents) at European level is undoubtedly weaker in the Alps where the steep slopes oblige HGVs to consume more fuel than on other routes, owing to their weight.

This situation has caused a genuine rift between the content and the progress made in Alpine transport policy, on the one hand, and European indecisiveness, on the other. Concretely, this means that the Alpine policy could quite easily disappear in the short term, if opposition to modal transfer were to undermine the recognised Alpine requirements in terms of transport. In this case, Switzerland would be tempted to once more separate its policy from Alpine considerations, if only because it has already made irreversible investments in rail transport that it will have to capitalise on. Elsewhere, the Alpine space would become a wasteland in terms of transport policy. The abandoning of the rail crossing projects would not solve the congestion problems of the major corridors. The distribution of longer road convoys would not meet the expectations of Alpine populations in terms of noise or atmospheric annoyance caused by road traffic either. This would lead to exacerbated local tensions that would have to be handled by the States concerned and in an undifferentiated European framework, at least through the development of existing traffic routes.

The other possible channel to be explored, before even considering how to safeguard the modal transfer principle in the Alps, is to recognise that the specific requirements of the Alpine range call for a specific transport policy. Among other things, this depends on the ability of Alpine stakeholders to set up an efficient and influential political space, able to define and put forward proposals that do not just simply copy the general European strategies. The appropriateness and strength of this political construction would depend partly on its ability to involve grassroots areas of the Alps, and not only States, in its governance.

Ultimately, the ongoing changes to the Alpine transport policy do not only concern the content of public action strategies in this specific field. They also pave the way for a territorial governance model that could prevail in Europe and that could be more or less integrated and more or less decentralised.

BIBLIOGRAPHY

Ascher, F. (2004), Les nouveaux principes de l'urbanisme. Éditions de l'Aube, 103 p.

Baum, H. (2002), Découpler l'intensité du transport de la croissance économique, in : CEMT, Les transports dans les années 2000, questions clés. 15ème symposium international sur la théorie et la pratique dans l'économie des transports. Paris, Les éditions de l'OCDE.

Bausch, T., Dax, T., Rivolin, U., Parveix, F., Praper, S., Vanier, M. (2005), Alpine Space prospective study. Sustainable territorial development in the Alpine Space: towards long term transnational Cooperation. , Alpine Space Interreg IIIb Program.

Bobbio, L. (2006), Discutibile e indiscussa, l'Alta Velocità alla prova della democrazia. Il Mulino n. 423, 1/2006.

Boesch, M., Sigrist, D. (2006), Analysing the Influence of Cultural Differences on Regional Development in the Alps. Research Report Diamont, WP5, St. Gallen. In : http://www.uibk.ac.at/diamont/

CEMT, (1993), Tendances du transport européen et besoins en infrastructures, Paris.

Conseil général des Ponts et Chaussées, Inspection générale, Conseil général des Finances, (2003), Rapport d'Audit sur les grands projets d'infrastructures de transport. Février 2003

Counsell, D, Haughton, G. (2003), "Regional planning tensions: planning for economic growth and sustainable development in two contrasting English regions" Environment and Planning C: Government and Policy 21(2) 225 – 239

Crozet, Y., (2004), Calcul économique et démocratie : des certitudes technocratiques au tâtonnement politique, Cahiers d'économie politique, 47, 155-171.

Crozet, Y., Bagard, V., Joly, I. (2002), Le couplage des croissances de l'économie et des transports de voyageurs est-il inéluctable ? Rapport du Laboratoire d'Économie des Transports pour le compte de la DATAR.

Fabbro, S., Haselsberger, B. (2009), Spatial Planning Harmonisation as a Condition for Trans-National Cooperation: The Case of the Alpine-Adriatic Area. European Planning Studies, Volume 17, Issue 9 September 2009 , pages 1335 - 1356

Gerbaux, F., Zuanon, J-P. (1995), La voie étroite de la Convention alpine. Revue de Géographie Alpine, 2,.

Gregoli, F., Simonetta Imarisio, C. (a cura di), (1999), Le Alpi occidentali da margine a cerniera : le nuove frontiere della geografia. Una geografia senza frontiere. Atti del 41° Convegno nazionale A.I.I.G.. Edizioni Libreria Cortina, Torino.

Guichonnet, P. (2002), Tracés et contextes de la traversée des Alpes au cours des siècles. Revue de Géographie Alpine, 3,.

Gustavsson, E, Elander, I, Lundmark, M. (2009), "Multilevel governance, networking cities, and the geography of climate-change mitigation: two Swedish examples" Environment and Planning C: Government and Policy, 27(1) 59 – 74

Hanley, N. (2001), "Cost – benefit analysis and environmental policymaking" Environment and Planning C: Government and Policy, 19(1) 103 – 118

Heimann, D. et al. (2007), Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space − A Guide for Authorities and Consulters. ALPNAP comprehensive report. Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 335 pp. Available online: www.alpnap.org

Janin Rivolin, U. (2006), Recensement des politiques territoriales dans l'espace alpin. Revue de géographie alpine. Tome 94 (2), juin 2006.

Johnson, C.M. (2009), Cross-Border Regions and Territorial Restructuring in Central Europe: Room for More transboundary Space. European Urban and Regional Studies, Vol. 16, 2, 177-191.

Perlik, M. (2007), Logiques et contradictions du trafic transalpin dans le contexte politique et social européen. Revue de Géographie Alpine, 1,.

Raffestin, Cl. (2001), Les Alpes entre mythes et réalités. Revue de Géographie Alpine, 4, .

Rathery, A. (1999), Trafics transalpins : observation des flux et prévisions, in : Reynaud, C. Poincelet, M. (dir.), Traversées alpines : les apports de la recherche européenne pour une démarche prospective. Actes du séminaire d'Annecy des 9 et 10 septembre 1999. Les collections de l'INRETS, 25-45.

Revel ,M., Blatrix, C., Blondiaux, L., Fourniau, J.-M., Hérard Dubreuil, B., Lefevbre, R. (dir) (2007), Le débat public: une expérience française de démocratie participative. La Découverte, coll. Recherches, 412 p.

Sutto, L. (2009), Le rôle de l'expertise économique dans l'élaboration des politiques alpines de transport et du projet Lyon-Turin: vers l'émergence d'un espace alpin?. Thèse de doctorat Université Lyon 2 – Politecnico di Milano. 497 p.