

Fabbro, Sandro

## Conference Paper

The degradation of traditional autopoietic cycles and the research of an autonomous way of local development in the Friulian mountains in North- Eastern Italy

39th Congress of the European Regional Science Association: "Regional Cohesion and Competitiveness in 21st Century Europe", August 23 - 27, 1999, Dublin, Ireland

## Provided in Cooperation with:

European Regional Science Association (ERSA)

*Suggested Citation:* Fabbro, Sandro (1999) : The degradation of traditional autopoietic cycles and the research of an autonomous way of local development in the Friulian mountains in North-Eastern Italy, 39th Congress of the European Regional Science Association: "Regional Cohesion and Competitiveness in 21st Century Europe", August 23 - 27, 1999, Dublin, Ireland, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<https://hdl.handle.net/10419/114323>

### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

39<sup>TH</sup> EUROPEAN CONGRESS OF THE EUROPEAN REGIONAL SCIENCE  
ASSOCIATION

THE DEGRADATION OF TRADITIONAL AUTOPOIETIC CYCLES AND THE  
RESEARCH OF AN AUTONOMOUS WAY OF LOCAL DEVELOPMENT IN THE  
FRIULIAN MOUNTAINS IN NORTH-EASTERN ITALY

Sandro Fabbro,

Department of Civil Engineering of the University of Udine, via delle Scienze n.208,  
33100 Udine Italy, tel 0432-558055; fax 0432-558052; email sandro.fabbro@dic.uniud.it

#### ABSTRACT

The Friulian mountains constitute (although presenting considerable internal diversification) an example of socio-economic and environmental degradation inside a developed region of the North-eastern Italy. So it may be useful to ask how much contribution is made, to determining this situation, by the violence of the impact of modernisation, or by the characteristics of physical and political geography or by the inadequate endogenous (both regional and local) capacity for implementation of autonomous forms of adaptation and innovation. in order to counter-balance the effects of external changes and of “geographical constraints” and to favour the development of internal capacities for the learning of new values, new conceptual views and, therefore, new strategies.

## 1. INTRODUCTION

It is already known that urban-industrial development, led by techno-scientific innovation and, more generally, the processes of “modernisation” (Scaramellini, 1996), have culminated by concentrating themselves particularly in the large areas of lowland bordering the mountain regions which had already been affected by the first settlements of the first industrialisation (above all due to the presence of waterfalls). These important changes in social, economic, cultural, political and, therefore, also territorial organisation, have produced a “catastrophic” effect in the European mountain regions in terms of a general “rupture” - although with diverse levels of intensity and results - of the age-old autopoietic<sup>1</sup> integrity of these systems.

This rupture appears recognisable everywhere in the mountain regions, including those areas which have apparently suffered less from the impact of modernisation.

There is, therefore, a certain consensus (cf. amongst others, Libralato, 1990) in identifying at least three main models of response of the Alpine mountains to the impact of the processes of modernisation:

a) a first model concerns those areas where there have been forms of integration and complementarity whether between new sectors and traditional economies (for example between small industry and modern zootechnics), between areas of lowland and mountain regions (for example with bi-seasonal tourism), or between traditional settlement forms and settlement forms comprising new functions and activities. In these cases a certain level of traditional cultural identity (the community), however creatively

---

<sup>1</sup> With the most recent developments in systemic thought (let us restrict ourselves to mentioning, amongst others, J. P. Dupuy, J. L. Le Moigne, H. Maturana, E. Morin, F. Varela, Von Foerster), attention is clearly transferred from the interactions between the given structures of the system to the endogenous change of these structures. Therefore, whilst in classic systemic thought, broadly speaking, the constraints and possibilities are defined by the structural properties of the system, in the more recent developments, on the other hand, they are defined by the cognitive properties through which the system implements its change. It is a matter, therefore, of an “autopoietic” vision (or “autoreferential” as it is also defined) of the organisation of the complex systems which, as far as is reported by some of its main exponents - for example H. Maturana and F. Varela - principally in biological systems, suggests important metatheoric concepts with reference to the evolution of social, economic, political and, therefore, territorial systems. The autopoiesis of the territorial system is, therefore, the condition of its reproduction; this, however, is not so much a natural and intrinsic property in the structures of the system but rather, a strategy to be realised and preserved in the course of an evolutionary process (cf. Cavallaro, 1995).

modified and re-developed in the light of new requirements, seems to positively co-exist with conditions of modern life and work. However, there remains a dilemma with regard to this model, i.e. whether it is an evolution of the old territorial system, whilst remaining within the old class, or if, on the other hand, the system has slipped within another class;

b) a second model concerns those regions where ambiguous and controversial consequences have been manifested, during the deterioration (demographic abandonment and abandonment of traditional agricultural activities) and introduction of new models of work and life (commuting, development of invasive winter tourism or of small-industrial expansion) which, if on the one hand have generated forms of socio-economic reconversion (not always, however, sufficient to invert the negative trends), on the other have caused considerable loss of cultural identity; it appears, in this case, that the transition of the mountain system must be considered within the structural domain of other broader territorial systems;

c) a third model concerns the areas of total degradation where socio-economic aspects (because of the devastating impact of the economic and external cultural models) have caused extreme levels of demographic abandonment which, in turn, may also prelude high levels of general “de-population” in the territory. In some cases one can, rightly, speak of the “death” of the traditional system of social reproduction and of a change to another class of territorial system.

The case of the Friulian mountains (although presenting considerable internal diversification) seems, in general, to constitute a good example of the third model. With this model it may be legitimately asked how much contribution is made to determining this situation by the violence of the impact of modernisation as well as by the inadequate endogenous capacity for implementation of autonomous forms of adaptation and innovation.

## 2. THE CRISIS OF THE FRIULIAN MOUNTAINS

The Friulian mountains, belonging to the two provinces of Udine and Pordenone, is situated at the extreme Eastern edge of the Italian slope of the Alpine arc and, due to the considerable demographic and socio-economic deterioration which has affected them (Barazzutti, 1993), consist almost entirely of the third model presented in the preceding point, although certain specific elements from the two other models are also present. Amongst other things the watershed of the Eastern Alpine arc separates not only different countries and nationalities (Italy, Austria, Slovenia) but also profoundly different peoples and cultures (Latin, Germanic and Slavonic) and, until a few years ago, a not inconsiderable section of it (the current border with Slovenia) defined the Southern most stretch of the so-called “iron curtain” between East and West Europe.

Whilst the economic cycles and the local communities have continued to reproduce on a local basis with only modest and non-destructive interference by external factors, the Friulian mountain system has stood firm, demonstrating, in fact, in some periods (during the XVIII century for example), a certain vivacity and healthiness<sup>2</sup>. Industrial and infrastructural development in central Europe and industrial and tertiary development in the Friulian lowlands began to exert a considerable attraction due to the formation of jobs, income levels, lifestyles and welfare decidedly better than those of the mountains. This provoked a sudden loss of the “stability” which the Friulian mountains had preserved over the centuries and caused, without substantial endogenous reactions of adaptation, a devastating impact due to the new modes of life and work (cf. Fabbro, 1985, Barazzutti, 1993).

Not all the regions of the Friulian mountains can be linked, *sic et simpliciter*, to this model. However, outside some centres and some particular *enclaves*, the situation of the Friulian mountains has felt the effects of general abandonment due to migratory flows, firstly abroad and then to the Friulian lowlands: this is clearly demonstrated if one considers the percentage variation of population resident in the mountain communities

---

<sup>2</sup> It is mentioned, for example, that in Carnia, perhaps the most important part of the Friulian mountains, in the XVIII century 1100 looms were operating in Jacopo Linussio's textile factory

compared to the whole Italian Alpine arc; in the period 1861 - 1991 the whole of the Italian Alpine arc had an average of + 1.8 (with maximum points of + 8.2 in the Valle d'Aosta), whereas those of Friuli-Venezia Giulia reached an absolute minimum of - 20.9 (cf. Libralato, 1990, Barazzutti, 1993)<sup>3</sup>.

The abandonment of the territory by the youngest and most active sectors of the population has led to both an impoverishment of the demographic stock, with a consequent reduced generational refill, and an impoverishment in the capacities of human resources as a whole in terms of up-to-date reproduction of local "know how", as well as cognitive, decisional and organisational abilities, and, consequently, of learning and adaptation abilities. Therefore, the innovations which were required in cultural organisation (collective images and values), social (job market and land market in order to encourage, for example, the formation of more modern and remunerative agricultural businesses), administrative (school and training), economic, etc., have not consequently been begun<sup>4</sup>.

Why this has happened, or in other words, why there has been a total lack of creative adaptation, is a question which constitutes a real challenge to the deterministic theories of development and/or degradation<sup>5</sup>. Indeed, at the moment in which the pressure on natural resource requirements decreased (further to the decrease in population), one might think that a surplus of productive capacity, on the one hand, and of financial resources on the other (immigration funds) could have enabled an opportunity for "natural" re-equilibrium. But this has not happened!

---

in Tolmezzo and another 3000 decentralised in houses throughout Carnia (cf. amongst others, Ganzer, 1986).

<sup>3</sup> This loss, moreover, does not seem to fully account for the phenomena of abandonment which occurred in the period 1871 - 1911, where there is a considerable growth in population whilst the fall is recorded only from 1911 onwards (cf. Barazzutti, 1993). This would demonstrate that the phenomena of degradation began to operate only at the beginning of the XX century.

<sup>4</sup> It is recorded that the Friulian mountains lost, in the period 1951 - 1981, 33% of local units (compared with an increase in the local units in the lowlands of 14%), whilst only the Friulian mountains in the province of Udine (the most dense both with regard to area and population of the region) reached 41% (Barazzutti, 1993).

<sup>5</sup> Even the documented and stimulating work of Barazzutti seems, on the question of causes, not to go much beyond a disconsolate fatalistic acknowledgement of the phenomena of degradation.

Instead, one might hypothesise that the stronger limit to change lay first of all within the social structure and in the values which this projected, for example, on some fundamental institutions such as land ownership. The response which is most commonly given, in fact, in order to explain the failure of any attempt at productive modernisation in agriculture, is that it has not been possible to transfer, in whole or in part, any of the agricultural land owned by even the most long standing emigrants who have by now renounced any prospect of return or re-utilisation of the land.

Therefore, if one wished to understand something of the latter causes of degeneration, one should not so much look towards global macro-changes and their effects - which are “inevitable” and which now tend to be distributed more and more homogeneously -, nor so much towards characteristics of physical and political geography. Rather one should look towards locally implemented responses, whether or not they are intentional, intended to manage the changes or to oppose the degradation, in this case the policies of development of the mountains, in order to counter-balance the effects of external changes and to favour the development of internal capacities for the learning of new values, new conceptual views and, therefore, of new strategies<sup>6</sup>.

From this point of view it is extremely important to understand how and where one has gone wrong in the “descriptions”, local and regional, of the mountains’ degradation and in the development and implementation of preventive local and regional strategies.

The preceding considerations also imply some important consequences, on the methodological level, for those who analyse the territory and for those who plan territorial strategies and policies. For the analysts it may be said that:

a) great macrostructural “descriptions” are of little use if one wishes to research the endogenous causes of the “autopoietic” crisis of the mountains;

b) “objective” descriptions of constraints and “opportunities”, of the points of “strength” and “weakness” are, in reality, not only inadequate but also distorting, if one

---

<sup>6</sup> In a few words: there is no *survival of the fittest*, there is *survival of the fit*. It is a matter of necessary conditions which can be satisfied in many ways and not of an optimisation of some criterion extraneous to survival itself (Maturana and Varela, 1984).

does not grasp the intrinsic ambivalence with which these so-called “parameters” can be creatively interpreted (cf. Ceruti, 1986) by the local communities.

With regard to policy planners, one can say that anti-degenerative policies generated from outside often fail to marry to a conscious process of internal and external cultural change - with regard to the mountains - and prove, in the best of cases, to be ineffective and, in the worst, perverse and subsequently devastating.

### 3. THE FRIULIAN MOUNTAINS: THE FAILURE OF “DESCRIPTIONS” AND STRATEGIES

The formation of the Friuli-Venezia Giulia Independent Region has ensured that, in the 60s, 70s and 80s, various policies have been undertaken expressly oriented towards the development of the Friulian mountains (Fabbro, 1997).

The regional policies for the Friulian mountains appear to be:

a) in a first phase (‘70s and early ‘80s) both the objectives (of sectorial growth) and the methods of implementation (centralised, *top-down* and according to a rigid sectorial logic<sup>7</sup>) of policies directed towards the mountains, appear, in fact, substantially based on the development requirements of the lowlands and on the operative requirements of the regional Authority and therefore prove to be decidedly ineffective;

b) in a second phase (‘80s), with the post-earthquake reconstruction (1976), the regional policies prove correct in both the objectives and in the methods of implementation. However, it has been previously maintained (Fabbro, 1996) that these policies seem to have given rise to a rather timely and effective functional rehabilitation, but, at least in the mountains, to further forms of cultural degradation (in terms, for example, of a considerable loss of *genius loci*) without, moreover, achieving those economic advantages which have been derived for other areas of the region;

---

<sup>7</sup> Various scholars criticise the public policies of the mountains based on sectorial logic. See in particular Reboud (1988). Talking about the Friulian mountains, Tranquilli sustains, in particular, that “sectorial logic adapts badly to the development of the mountain territories in as much as it moves in the direction of productive scale economies on the level of industry or else on the level of agricultural, commercial and touristic business or else on the level of a development route by means of agglomeration economies” (Tranquilli in Barazzutti, 1993 p. 151).



c) in a third phase (late '80s, early '90s), with the end of the post-earthquake emergency, the regional policies prove more correct in their objectives, although remaining lacking in methods of implementation. In this phase, however, it should be noted that local actors assume a primary role in addition to the regional actors who traditionally hold the area's interest externally.

Let us further analyse this phase.

The awareness of the limits of the sectorial policies which developed in the '80s, leads the regional Government to orientate itself towards the establishment of the so-called "Progetto Montagna" (Mountain Project) and, within this, towards the establishment of the regional Agency for the Development of the Mountain Territories (Agemont). The subsequent developments of the PM and the action of the Agency, in reality, although perhaps quickly formulating a general evaluation, will be rather disappointing.

The "Agemont", suffering the ambiguity of being basically a regional actor, who must play the role of promoter from the lower level of local development, does not seem able to free itself from the more traditional methods of intervention in the Region, therefore proving to be culturally subordinate to the old sectorial and "urban-centric" logics and not at the level of expectations which had been created.

In this context new and more consistent "palingenetic" expectations develop with regard to the application of those community programmes particularly oriented to the development of marginal areas and, therefore, also of mountain regions in a state of degradation.

The application of the community programme "5b"<sup>8</sup> in the Friulian mountains, seems to constitute a lever for breaking from the preceding regional policies but, in a

---

<sup>8</sup> With Regulation no. 2081/93 of 1993, the Council of the European Communities cites, amongst the other objectives for the use of structural funds, objective 5b with which it aims to promote the development and structural adaptation of rural areas.

In the F-VG region, practically the whole mountain area (the standard eligibility criteria being satisfied, essentially, in the demonstration of a low level of socio-economic development in the area) is included in the areas which can comply with the benefits of the said policy. In the "Single Document of Programming (DOCUP) for the development of rural areas, Objective 5b, 1994-1999" the Friuli-Venezia Giulia Region fixes the strategies, the six intervention axes, the procedures and the methods of evaluation of the policy in harmony with the general principles

more in-depth reading, seems to show strong points of contact and continuity with the PM policy.

The “5b” program triggers strong financial expectations and centres attention on so-called “project-relatedness” (public and private) and in particular on the criterion of “integration” which should characterise this public and private project-relatedness on a local level. Moreover, the projects should possess requisites such as economic-occupational relapses, the potential for productive innovation, environmental and urban compatibility, multi-sectorial integration, “build-ability” and, for public projects, “overall-communal” benefit from the expected effects.

Apparently the objectives are usable and have many of the conditions necessary for the policy to prove effective.

However, given both the numerous intervention measures submitted (and, consequently, the dispersion of funds and the poor integration between the measures), and the small amount of time conceded to the construction of territorial development strategy and to the planning of a coherent system of interventions, the whole of the complex problems of intersectorial and intercommunal integration is treated, in the projects, only in superficial and rhetorical, if not even bureaucratic terms.

Therefore, the actual accomplishment of programme 5b seems to constitute a pure continuation, however much richer financially, of the preceding policies but with a considerable inversion of roles: considerable resources and a system of implementation which this time appears to be effective and structured are combined, from below, with project development methods which are weak and inadequate compared to the situation and, from above, with project selection and evaluation methods which are completely formalistic and bureaucratic. This appears to confirm the essentially “rhetorical” nature of many of the guidelines and criteria indicated in the regional programming documents.

---

of the community programme. For each priority axis there is a specific subprogramme of intervention which, in turn, is divided into measures within single sectors, works, resources, etc.. Altogether the whole of the investment is estimated at 273 MECU in the entire region (including some non-mountain communities). The management of the whole policy is entrusted by the Region to one of its instrumental authorities: the Ente regionale per la Promozione e lo Sviluppo dell'Agricoltura (ERSA).

However, as a consolation, it is also said that, in these cases, the policies are more likely to correct themselves: one can, in other words, learn from mistakes provided that, obviously, one conducts an honest survey of the definition and implementation methods of the whole policy.

It is at this point, then, that the outline of a possible fourth phase of the Friulian mountain policies emerge. After the “5b” and “leader” experiences, it is no longer a question simply of “top-down” policies but also, to a higher degree than with the PM, of “bottom-up” policies. This signifies that, from now on, the policy actors and, therefore, the people responsible for any failures, are no longer just regional but also local.

Therefore, the fourth phase of the regional and local policies for the mountains could be the new “5b” and “leader”, the new PM, the re-organisation of the entire institutional system in the mountain area.

After thirty years of what has been mostly failure, a new phase can only emerge from an autoreflexion, conducted by the diverse actors involved, on the contents and the results of the policies, particularly from “5b” which had kindled so many hopes.

### 3. CONCLUSIONS

The global macro-changes, on the one hand, and the physical-geographical, climatic, etc. limits on the other, are not sufficient to explain the phenomena of autopoietic crisis in the Friulian mountains.

It is perhaps more profitable to try to connect all of the relevant factors (the geographical and historical ones together with the cultural and typically political ones) to a co-evolutive model where “subjective” and “objective”, “cultural” and “structural” elements are co-present and interdependent.

In the case of the Friulian mountains, the co-evolutive model shows a perverse combination of a geographic situation, certainly not favourable, with methods of intervention where both the interpretation of problems and the regional strategies have proved to be inadequate compared to the level of the challenge.

More recently a trend has been set, which seems to us to be a positive indicator, towards the search for an increasingly greater decisional and administrative autonomy on the part of the Friulian mountains, even if the institutional solutions (the “administrative district” of Alto Friuli, the Province of the mountain, etc.) on the table are diverse and not totally convincing. This highlights the decidedly positive search for a new identity via a process of political-administrative and cultural differentiation from the lowlands.

This request for autonomy is certainly aimed at the recovery of cultural and decisional autopoiesy. In fact, it is a necessary condition for it.

But is this condition sufficient?

At this point we would like to pose three questions.

Are we certain, in fact, that the loss of autopoiesy, which in the meantime has been consumed, has not impoverished or modified the culture and the local capacities for self-government?

And, in any case, does not the re-starting of autopoietic cycles at any rate imply financial transfers, assistance, differentiated forms of regulation compared to the lowlands, etc., which imply a broader consensus on the part of the whole regional community?

And doesn't the regional consent to a redistributive policy of this type also imply a new social contract between “lowland” and “mountain” which, in the light of shared values, redefines the terms of the “trade-off” between the two parties, or, in other words, the “pros” and “cons” which are due to both the parties?

If this is so, then the revival of autopoiesy in the mountains cannot palingenetically pursue one hope after another. As a pivotal action of a possible fourth phase, an autoreflexion on the “5b” and “leader” projects would seem more useful. An autoreflexion is also a condition for developing both an effective description of one's own state and a recovery of direction and responsibility for one's own actions and one's own project. One can also say that such autoreflexion is the condition for the external and internal differentiation of the system.

There cannot be a new identity, in fact, without, at the same time:

- a. a definition of the broader system from which one wishes to differentiate but also to which one intends to continue to refer for economic, political, cultural, ecological and other reasons (the Friulian lowlands? The rest of the Alpine arc?);
- b. a selective articulation of the internal areas at which intervention policies are aimed.

The points expounded above have two important methodological implications for territory analysts and planners:

- a. with regard to the recognition of external “partners” it is a matter of grasping the implications of a more general “social contract”; this means, in other words, that the roles and stakes of an anti-degenerative policy for the mountains must be clear to all parties involved: it must be clear to the mountains what role they play in environmental, eco-historic and anthropological-cultural terms, not only for themselves but also for the broader community to which they refer and, therefore, those constraints which serve to conserve and reproduce this role must also be accepted; on the other hand, it must be clear that the conservation and innovation of the mountain ecosystem is a duty and a general enrichment which inevitably implies a solid policy of re-equilibrium and a social cost to be borne by all;

- b. with regard to internal differentiation, there arises again, in new terms, the problem of a selective definition of the internal areas - for the purposes of intervention policies - not so much according to a passive and static concept of the values and resources, or the constraints and opportunities attached to them, but rather according to the local capacities for re-designing structures and scenarios to provide added-value to those same areas. From this point of view it is useful to return to a method of reasoning in terms of territorial planning, but as an instrument suitable for favouring local processes of self-definition and self-valorisation;

- c. however, this implies that one is going to define, with the appropriate environmental indicators (Pedrocco, 1997) and on an essentially micro scale, those internal differences whose existence has in some way been overshadowed: the valley floors developed but with uncertain cultural and strategic identity; the mountains less

accessible, now de-populated and, therefore, exposed to the definitive loss of traditional identity but also to new forms of re-naturalisation - more or less spontaneous - and not always necessarily negative; the “in the middle” situations, those where, all things considered, residues of autopoiesis can still be recognised, and upon which it is perhaps still possible to work in order to re-start, at least partially, new autopoietic cycles.

#### BIBLIOGRAPHICAL REFERENCES

- Barazzutti C. (1993), *Irresistibilmente attratti dalla pianura [Irresistibly drawn by the lowlands]*, Ires Progetti, Udine.
- Cavallaro V. (1995), *Costruire il presente. La progettazione delle trasformazioni di una macchina non banale: il sistema territoriale [Constructing the present. The planning of changes of a complex machine: the territorial system]*, Doctoral thesis, Istituto Universitario di Architettura di Venezia.
- Ceruti M. (1986), *Il vincolo e la possibilità [Constraint and possibility]*, Feltrinelli, Milan.
- Fabbro S. (1985), “La Comunità Montana della Carnia” [The Mountain Community of Carnia], in *Il problema della montagna [The problem of the mountain]*, Goal-oriented Project “Economy” of the CNR, sub-project 4: the territorial diffusion of development, topic 7, line B.
- Fabbro S. (1986), “Ma lo sviluppo può risalire la montagna? [But can development re-ascend the mountain?]” In *Montagna problema nazionale [National problem of the mountains]*, Conference Proceedings promoted by the Friulian Institute for the History of the Liberation Movement, Tolmezzo, 6 - 8 November.
- Fabbro S. (1996), “Ricostruzione post-terremoto e governo del territorio: tempestività e continuità *versus* strategia [Post-earthquake reconstruction and government of territory: timeliness and continuity versus strategy]”, in Bonfanti P. (edited by), *Friuli 1976 - 1996: Contributi per comprendere la ricostruzione [Contributions for understanding reconstruction]*, Forum, Udine.

- Fabbro S. (1997), “Il caso della montagna friulana”, relazione al Seminario su “Le finalità della pianificazione territoriale nella montagna alpina tra degrado e conservazione delle identità tradizionali”, Udine, 30 maggio.
- Ganzer G. (1986), *Jacopo Linussio: un manager del Settecento [Jacopo Linussio: a manager of the Eighteenth Century]*, Encyclopaedia Institute of Friuli-Venezia Giulia, Udine.
- Libralato V. (1990), Le Alpi tra pianocentrismo e crescita endogena [The Alps between plain-centralism and endogenous growth], in Forner E. (edited by) *Percorsi di sviluppo locale [Paths of local development]*, Ires 9, Udine.
- Maturana H., Varela F. (1984), *El arbor del conocimiento*, Italian translation by G. Melone, *L'albero della conoscenza [The tree of knowledge]*, Garzanti, Milan, 1987.
- Pedrocco P. (1997), Il caso della montagna veneta, relazione al Seminario su “Le finalità della pianificazione territoriale nella montagna alpina tra degrado e conservazione delle identità tradizionali”, Udine, 30 maggio.
- Reboud L. (1998), “Le Alpi: un laboratorio per un altro modello di sviluppo [The Alps: a laboratory for another model of development]”, in AAW, *Le Alpi per l'Europa: una proposta politica [The Alps for Europe: a political proposal]*, Trento, 22 - 23 November.
- Tranquilli D. (1993), *Un progetto per la montagna regionale [A project for the regional mountains]*, afterword by Barazzutti, 1993.
- Varela F. (1986), *The science and technology of cognition*, Italian translation by S. Isola, *Scienza e tecnologia della cognizione*, Hopeful Monster, Florence, 1987.