I was born in Switzerland. Switzerland is a typical country where borders are very important. This topic of borders and transborder cooperation is the main topic for Europe nowadays, because Europe is very different. This problematic of borders is an emerging one in the old and the new scenario of Europe.

So, I do have some experience. During the last years I tried to develop some more theory, because I discovered, as an economist, that you can find classical theory approach to the question of borders. But, this classical approach, for example, by geographer as Christaller, or other academician like August Loesch from the special economics, just gave us an answer in terms of penalisation of the border regions. I believe the Swiss example shows us that border regions can be very developed regions and so, the problematic is to improve the theoretical framework.

In this approach I was able to do some work within the Nectar group, the European network on transport and communication research. A subgroup of this network two years ago produced this book “Theory and practice of transborder cooperation”. And I was the editor with geographer Reichmann, who unfortunately disappeared two years ago.

What can I say in this theoretical approach? I can summarize my approach with the help of the Figure No. 1. The question of borders is of course not a simple question. It is very complicated to enter this topic, because we say “Europe without borders” - may be true in one part, but we are aware that there will still be some kind of frontiers. We need from an individual, sociological and political point of view some kind of frontiers. The problem is that we can have different approaches to the problematic of frontiers. A frontier is a dual concept, it is at the same time a separation factor between different political institutional systems and a contact factor between different societies and collectivities. So, this double function of separation and contact is very useful to have in mind. Unfortunately, this double function, this concept is not very well prepared to be translated into practice.

One of my original attempts to enter this topic produced this typology. If we are looking at the effect of the borders, you can find three types of regions, or three types of effects. The first one is: border as a barrier. In this case the separation and the closing factors are predominant, and, of course, the consequences are the penalizing economic effects of the border conceived as a barrier.

In the second type is what I call the border as a filter, as a filtering function. For example, that I have in mind in my study of Switzerland. In this case the border is relatively open, but filtered by national policies. The effect of this practical concept of border as a filter is some kind of economic development with juxtaposed segmentation effect. This border as a filter produces some effect in terms of segmentation, differentiated rents, position rents, because in this case you can just try to see or to develop economic activities based on differences. Smuggling is the simplest way to exploit this difference.

But, the third kind of border is the border as a contact zone. In this case the contact function prevails on the other effects of barriers. Of course, this border as a contact zone is the border that is in the mind of people who think about Europe without borders. In this case economic development should be implemented according to the process of normalization and integration and you can really speak about transborder cooperation.

This typology was quite useful in empirical studies. Of course, the reality is between border-barrier and border-contact zone. If I
Fig. 1 Border Typology: Functions and Effects of the Border

The Border is a dual concept; it is at times:

- separation and closing factors are predominant
- penalising economic effects
- the border is relatively open, but "filtered" by national policies
- economic developments with juxtaposed effects (segmentation; differentiated yields, position yields)
- economic developments to a process of normalisation-integration (transborder cooperation)

R. Ratti, 1993

speak as a Swiss I can say “Yes, we are very open, we want to have a transborder cooperation.”, but in reality it is still the typology of the border-filter. When Switzerland voted in December '92 against joining the European economic space, it was divided in two parts. The French speaking voted in favour of joining the EES as a kind of intermediate stage to the full membership of the EU. The German and the Italian speaking said “no” to this economic space. Probably the transition is the historical phase in Switzerland, but as it’s a very open small country, I think the logic was not to lose this possibility of filtering the relationship with Europe, and in particular this border with filtering function was in mind of Swiss citizens, for example in the question of foreign work and labour market. I remember
that Switzerland has 20% of foreign inhabitants, and we have quite a lot of border workers, so we are open enough; but in the case of joining with a full membership in the EU, the majority of Swiss people and cantons were afraid that this could give them too many problems. So, this conception of filtering is in the mind of Swiss people.

And this can, from the economical point of view, explain quite a lot of very interesting things, in terms of segmentation, differentiated rents, position rents, and you can do quite sophisticated analysis in this way. But, just going in the direction of the border as a contact zone, of course you can show that this passing from situation of barrier and filter border to a new scenario of contact zones means quite a lot of changes in terms of logic, approach of social economic and cultural problematic.

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**Fig. 2 Spatial and economic consequences of changements in frontier effects**

**Types of Frontier Effects**

<table>
<thead>
<tr>
<th>Sectors</th>
<th>a) &quot;barrier/filter&quot;</th>
<th>b) &quot;contact&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour market</td>
<td>Segmentation (importance of labour market policy)</td>
<td>New policy in terms of transborder labour market</td>
</tr>
<tr>
<td>Infrastructure / international transports</td>
<td>Concentration at the frontier</td>
<td>Distribution of activities in the transborder area (Huckepack, Lugano, Busto Arsizio, Como, Milano)</td>
</tr>
<tr>
<td>Industrial localisation</td>
<td>Vertical labour division</td>
<td>Network production (with territorialized supporting space)</td>
</tr>
<tr>
<td>Finance activities</td>
<td>Luango as an island for italian capitals</td>
<td>Lugano as a financial place of italian culture</td>
</tr>
<tr>
<td>Tourism</td>
<td>Market segmentation</td>
<td>Global policy of the transborder area</td>
</tr>
<tr>
<td></td>
<td>TICINO = Anticipation of mediterranean climate from north</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMO = Anticipation of Alps from south</td>
<td></td>
</tr>
<tr>
<td>Territorial organisation</td>
<td>Dichotomy development in the boundary area</td>
<td>Competition/Cooperation inside a network of medium size agglomerations</td>
</tr>
<tr>
<td>Education / University</td>
<td>Separation determined by important differences in structures and national training politics</td>
<td>Politics of mutual recognition of educational qualification/coordination in developing commun training programmes</td>
</tr>
</tbody>
</table>

Source: R. Ratti
In the logic of the barrier and of the filter border of course you have strong border effects, concentration of some activities at the border. and if think in terms of Europe as a network, in terms of frontier as a contact zone, the logic will be quite different. You have to rethink border infrastructure in terms of competitive network. This means, for example, that cross-border station customs situated on the border, are really in crisis and are changing very rapidly. Take an other example: the labour market policy in the situation of barrier and filter frontier effect, in this case the labour market is really segmented, there are several sorts of protectionism, division of labour. If you want to think in terms of border as a contact zone, you have to be able to think in terms of integrated transborder labour market. That means that even educational institution's training should be of transborder character.

The industrial localization is very different if you are in historical situation of barrier - filter logic or in the new one. In the traditional situation, border regions are penalized, except in the case of tariff factories effects. that means that near the border you can observe the localization of individual activities just put near the border to enter a national economy. Like some Swiss investment in Italy near the border, just to enter in the national economic context. I have studies the opposite: German investment in Switzerland, Swiss investment in Germany, but this was at the beginning of this century, between the two wars.

Today the new logic is the logic of a territorialized supporting space, the network logic. And the future of the borders regions depends on the capacity to develop what I call a transborder supporting space, which is a kind of active space, and depends no more from
Fig. 4 Tipology of situation determined by frontier problems
specific frontier effect. Another case is university education training. Most of educational training is of national character, and you see today very good new experience in the logic of contact zone, e.g., university between Basel and Karlsruhe in the region of Hochrhein. There are eight universities and if you are a member of one university you have open door to the other seven, because they are considered as parts of the same transborder region. Take the case of the technology policy, you cannot really develop a technology policy in border regions under the traditional context, because the border regions are considered as a peripheral economy and under the core periphery logic. Instead, if you open the border and think in terms of contact zone, you can think in terms of innovative environment approach.

In most of the European countries you don't have a common transborder regional planning. Planning is nationally based and this of course is negative. In the new scenario you can think in terms of competition and cooperation inside the network of a medium sized agglomeration in transborder context. This is what I can say on economic-social processes in one and in the other situation. The topic of transborder cooperation is an emerging topic, but if you look at empirical studies and very good experience in this field you will discover that despite the amount of discussion, of political focus on the transborder cooperation, practical successful experiences are still quite rare. The historical example is Regio Basiliensis, in northern part of Switzerland. It is a tripartite transborder region; French, German and Swiss one. This is quite a good example, but this question is still a new one, and you can distinguish different levels of transborder cooperation. It is like a triangle; at the basis you have the simplest way or the first step, which is simply reciprocal information. In quite a lot of border regions you still have a lack of reciprocal information. The second step is "concertazione" - just discussing on a specific problem and, so just avoiding the worst thing, but is not yet cooperation. Cooperation is the third stage. Most of the European examples of transborder politics are at the level of these three stages of cooperation and not yet at the level of a common project of harmonization of the policy, and the latest step is the step of integrated project. At this step you can find the policy of EU, the INTERREG programme. The EU has developed this special programme just to try to improve the transborder cooperation, in terms of integrated project.

You can define different spatial levels of cooperation. You have the level of transborder regional cooperation, e.g., between Trieste and Slovenia, just the boundary zone, which is the classical case of transborder cooperation.

But another level of transborder cooperation is the level of interregional cooperation. This is the transfrontier one, e.g., Arge Alp, Alpe-Adria, and Cotrao. The Alpin Arc should be only one region but in terms of cooperation is divided in three parts. COTRAO is an association of the western Alps. Arge Alp is an association of central regions in the Alps, and Alpe-Adria is the Alps region and the eastern and the northern part of Adriatic. You can discover a third level of cooperation. This is the Europe of regions, the cooperation between European regions. It is very interesting that in this field the questions of frontier are viewed as very important. At the level of Europe you have the association of European regions and the European council that since quite a lot of time tried to introduce legal instruments to improve transborder cooperation. It is worthwhile to remember that the convention of Madrid in 1980 and the Chart of Madrid is the starting point of transborder logic and policy.

I can just remember specially for the academic researchers that my differentiation and typology of border barrier, filter, and contact zone is very useful for empirical approach, but this is not only typology, or better, this is a typology adopted to study regional development in border regions. In a broader and dynamic sense you can build another typology by combining the different concepts of frontier: frontier as a line, frontier as a zone or frontier as something fixed with frontier which could be mobile. (Figure No. 4) For example
if you combine frontier as a line with a fixed model of the frontier you enter in the typology of the cooperation between states.

This case is the box of the institutional cooperation. But you can have another combination - frontier as a line combined with a mobile frontier. In terms of economics you can observe the frontier as a mobile line and this is very useful for studying the market. The market area is something that is expanding but you can have another interpretation of this combination of concepts of frontier line and frontier mobile, in terms of military strategy. You have this specific approach in the literature. this is also interesting from the cultural point of view. You can combine the concept of mobile frontier with the concept of frontier as a zone. In this case one can study pluralistic societies which are the result of a different and a mobile effect. You can study religious and cultural effects in terms of frontier.

The last case is to combine fixed frontier with a frontier zone. If you think both in terms of frontier as a zone and fixed frontier, you have the transborder regional cooperation. You still have a frontier of regions of a state, but you don’t think in terms of dividing line, but in terms of a zone and in this case you are in the typology of the border as a contact zone.

Fortunately, this theoretical and maybe abstract concept is needed to be able to identify the specific empirical problems and to be able to think in terms of logic and processes and not only in terms of specific topic. This is the best approach to the dynamic problematic of frontiers.