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Mountain research in the Alps and the rest of the world: a retrospective look

Based on an interview with Thomas Scheurer
(L'Argentière La Bessée, June 2008)

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The expression “alpine research”, as will be seen in this issue, remains quite uncertain/unclear. At first sight, it gives rise to the following question: Does it mean research conducted *on* the Alps or *in* the Alps? Or does it mean *for* the Alps, that is in response to a request from “alpine actors”? It is easy to see that research on alpine areas and according to topics and questions raised by alpine societies is in most cases conducted within the Alps. However, there is no exact agreement: for researchers in Paris and Berlin, even if they are not that numerous, the subject of interest may be alpine societies or environments. Alpine research is therefore alpine by virtue of its subject. Nevertheless, as the articles in this issue demonstrate, the networks of researchers, the places where research is conducted, the driving forces behind research programmes and the organisations responsible for setting up and coordinating research projects are concentrated in the alpine regions. One might even wonder sometimes if there is not a claim for this militant and more than spatial link between the researcher and the area which he studies and where he lives?

A second interpretation of “alpine research”, inspired by the heritage of alpine geography “à la française”, is that it refers to a much more extensive area, ranging from the European Alps to all the mountains of the world. Would alpine research therefore be the matrix, the initiator or the guide for all research conducted on the mountains of the world... given that there are Alps in New Zealand or in Normandy, and alpine flora in all alpine meadows around the globe? These somewhat expansionist aims have now been denounced and seem to belong to another era. Nevertheless the close and intense interaction between research on/in the Alps and research on the mountains of the world calls for a re-examination of these dynamics of knowledge construction.

To obtain a clearer understanding of these questions, it seemed expedient to us to start this issue with a retrospective and comparative look at “alpine research”: its premises in the 20th century, its gradual structuring in scientific and institutional fields, and its present organisation around the ISCAR (International Scientific Committee on Research in the Alps) which promotes, coordinates and represents this research henceforth referred to as “alpine”. An interview conducted during the Alpine Week of June 2008 in Argentière la Bessée, in the French Hautes Alpes department, with one of the main architects of this coordination, Thomas Scheurer (TS), will provide a framework. The framework was also submitted to other contributors (Jon Mathieu (JM)), who provided further details and additional information. The text that follows, which attempts to maintain the style and

form of these free discussions, seeks to retrace the already rich history of alpine research and to provide the beginnings of an answer to these introductory questions.

Interview conducted and text formatted by Anne Sgard.

The premises

RGA. Let's begin by the premises, the fore-runners of the structuring of research on the Alps, conducted at the scale of the mountain massif. What were the first milestones? How did we go from national and/or regional research on the Alps to the "alpine research" project and indeed the expression "alpine research"?

T.S. I think you have to put the emphasis here on disciplinary traditions. One can see that the different disciplines have each developed their own tradition and that some have built this tradition on the entire alpine arc region. Thus there is geomorphology, for example, very important, earth sciences, biology, and the botanical sciences. And then also – and this is interesting – social and human sciences, such as anthropology: we have disciplines that have examined cultural heritage, toponymy, customs... And amongst these there are also researchers who have conducted systematic studies and have designed a interdisciplinary type of approach. ... And there are also geographers with studies of the milieu and the context, particularly with the work of the Institut de Géographie alpine.

J.M. Among the first major contributions, there were the collective works of geographers or historians such as Paul Guichonnet. And let's not forget the local monographies; the first general/systematic study was by an Italian anthropologist, Pier Paolo Viazzo, en 1989.

And when were these studies conducted?

T.S. In the fifties and sixties. It's fairly recent.

But before this, there was the inter-war period, which was marked by a phase of interdisciplinary research. Then we had a period when the disciplines such as geology, pedology, and botany – and the social and human sciences perhaps less – developed a systematic approach. We looked for correlations between different factors; we developed, for example, the sociology of plants, not by describing a species but with the aim of conducting an integral study. Generally it was the Swiss who conducted this type of study. There were two or three researchers who developed a system of pedological analysis, and they worked with others who studied the sociology of plants and these two interdisciplinary approaches were global approaches with a systematic perspective.

It was really very interesting, but after that it disappeared.

But can one still talk of "alpine research"?

T.S. Yes, because it's oriented toward the alpine or mountain context. In principle, these disciplines are developing a tradition of research focused on mountain areas.

I have the impression that the Alps were the privileged laboratory for all these approaches because there are clear spatial differentiations. We had north-south variations, different environments, altitudinal staging, forests, calcareous environments, siliceous environments, etc.

Was this type of work restricted to the Alps or did they try to transpose these methodologies to other mountain areas of the world?

T.S. Yes, yes, to every mountain area.

So can we say that for these studies the Alps served as a laboratory but with more general implications?

T.S. Yes, for example with respect to soil genesis. Through staging, you can quite easily see how this genesis is different, and transpose it to other environments. This approach was applied in Russia; and Hans Jenni went to the US and there he really was the most famous pedologist for a long time.

We also had these “tables” in geology and particularly geomorphology, with the discovery of the first rocky glaciers in the 1910s and the processes of solifluxion in the 1950s. All these phenomena were described in the Alps and were important for the development of these sciences in other areas. But in the beginning this knowledge base was in the Alps.

J.M. Yes, it’s true that the Alps have often functioned as a model for mountain research throughout the world, and that’s been the case for a long time. One can cite three examples from different periods: Alexandre Humboldt who travelled to Latin America and the Andes in 1799-1804 and often made comparative observations with the Alps; then there was Albert Heim who published *Handbuch der Gletscherkunde* in 1885 with a global perspective, but who always started with the Alps with which he was most familiar. And also Jules Blache in 1933 (*L’Homme et la montagne*) who was the first cultural scientist to conduct a comparative study on the mountains of the world, again starting from the alpine model.

How were these studies distinctive from regional, national or even earlier international research studies?

T.S. National, regional... Scientists didn’t operate in that way; it depended more on the discipline. You can say that we went from disciplinary research to research that was rather ecological and increasingly interdisciplinary.

Perhaps, but I’m not certain of this point, the human and social sciences were more oriented toward this national aspect. Jon Mathieu has studied that... to what extent national designs have influenced the history of the study of the Alps.

Maybe it differs from one country to another... In France, everything concerning the Alps was dealt with in a very regional approach. Perhaps in Austria or Switzerland this distinction is less clear or does not even exist.

T.S. Yes, we clearly have the Alps, Austria too. The Alps are regional, that’s clear. Perhaps in Switzerland, in fact, this region is politically more important, but scientifically research was focused above all on the mountains. Studies were really disciplinary: there were conceptions in science that were developed or adapted in alpine research.

J.M. Every country has a different perception of the Alps, sometimes very different, sometimes less. In Switzerland, the national identity has been built on the mountains over a certain period, as it has too, in fact, in Slovenia and, later, in Austria. In Italy it was the

Risorgimento and the Grande Guerra that started a certain “rush to the Alps”, etc. It’s normal that such discourse was often reflected in research policy and in research itself.

So, coming back to what we might call “alpine research”...

T.S. I think it was the International Biosphere Program (IBP) that was very important because there we began to organise scientists and disciplines around a theme, around a problem. To begin with it was the biological cycles: how do they function? And it was from there that the systematic approaches developed, the ecosystems, etc. from this international programme at the beginning of the 1970s. Then from there, the MAB (Man in Biosphere) approach was developed which was, I think, for all alpine research and was important. But unfortunately we didn’t have projects in every country. There were some in Austria, Germany and Switzerland but I don’t believe there were any in France, Italy or Slovenia.

This approach really provided a base for global studies on man-nature interactions. Let’s say these approaches were really scientific approaches, not specifically developed for the Alps, and that they were adapted by finding favourable areas.

I think that that’s important. Because the Alps have never created their scientific method. It will perhaps develop from environments or specific cooperative arrangements where people come together more easily around themes that we don’t find elsewhere. For example, in flat open country geology is not so important, while here the geologist plays an important role. And then we have a history of land use that has perhaps a more decisive influence than in the more open flatter areas. In the latter there are more changes, old forms of land use disappear. But here, they don’t disappear.

So we can identify disciplinary traditions, a turning point in the 1970s with the biosphere programme and then a scientific framework with the development of ecology and ecosystems. There is thus quite a favourable context which finds, in the Alps, a particularly interesting terrain.

T.S. That’s right.

Can one then identify other turning points, other milestones?

T.S. Yes, Jon Mathieu is working on that at the moment: how global mountain research developed. And there I think the Alps played a central role, particularly through the work of Bruno Messerli, who makes the link.

Then, the turning point is really Rio.

I believe that we wouldn’t have been able to begin the process of an Alpine Convention without the Rio process and the “Agenda montagne”, etc. You can’t say that these are two different processes because it’s the Alps and especially Switzerland, with Messerli, but also the Italians that were at the origin of all that. They leaned on their alpine experience to push this process forward.

But did everything that was done within the framework of preparations for Rio and after Rio also contribute to preparing, within the Alps, something that was going to lead to the Alpine Convention?

T.S. No.

How then did the two advance?

T.S. The political processes were different but for research they're linked and, above all, they're situated in the same context, the emergence of sustainable development.

Rio was really the setting up of an agenda on sustainable development in the mountain areas of the world, so that reached a far wider area. For sustainable development in the Alps, it was the Alpine Convention.

I don't have details of the interactions, but it's obvious there were interactions: the same context, the same political motor, but two different processes.

J.M. I believe the 1970s were an important turning point everywhere. It was a time for the politicisation of the environment, the blossoming of political ecology. At the same time it was the start of major research programmes (Grossforschung), which changed the style in a lot of disciplines.

The Alpine Convention was the result of the ecological-political discourse in the 1980s and the effective lobbying of the CIPRA, situated in Liechtenstein. The alliance with the Germans (especially the minister Toepfer) resulted in this convention which surprised a lot of observers after January 1989.

Rio comes a little later, no doubt based on the same politico-cultural atmosphere, but with other actors. Chapter 13 of Agenda 21 on the mountains of the world was the result of a small group of scientists committed to mountain research working with Bruno Messerli (the "*Mountain Agenda*") and the Swiss diplomatic corps. Without the intervention of the Swiss Foreign Affairs Office, this chapter would not exist.

The Alpine Convention and alpine research

And the idea of coordinating alpine research in parallel with the convention, did this come right at the beginning, with the first projects of the Alpine Convention? Or is it something that occurred gradually?

T.S. Well, I have the impression that the first projects, the idea of this coordination of alpine research, first appeared in France, independently of the Convention. I believe it was the "alpine network" in the 1970s. We had this alpine network in Grenoble that had a project to link up all the scientists, of all the important institutes. But I don't think it went as far as Berne, Aoste or Turin.

For me there was another heritage, the ICALPE (International Centre for Alpine Environment). There was a scientific committee. The aim was really the coordination of research for the Alps, but it was too linked to one person and not based enough on the research institutes. That was in the 1980s.

We then saw that ICALPE would ultimately not be able to really contribute to the development of research in the context of the Alpine Convention and that's why Switzerland organised a conference in Berne in 1989. They invited representatives from Germany and

France and asked them whether they thought that a contribution from research was needed in the process that was developing after Berchtesgaden.

This took place in Switzerland, but who was the instigator?

T.S. It was the Académie des sciences naturelles (the Academy of Natural Sciences). It was Christine Clottu who launched the idea. We had the skills and we had to bring them together, because the Alpine Convention raised questions that cut across the Alps. There were institutes that were working on the Alps but that was not enough.

And before that there was the MAB experience: we had seen that there were similarities between Austria, Switzerland and Germany, and there was this alpine network, there was ICALPE... So there had been experiments at the end of the 1970s and in the 1980s and we tried to link them up. And it was also in those years that Bruno Messerli had set up all his contacts in the Himalayas with Jack Ives (which resulted later in the publication "Mountains of the World" in 1997).

Yes, so alpine research and mountain research advanced in parallel.

T.S. Yes, they advanced in parallel.

And in the years that followed, the Alpine Convention was set up. But research had no role at the beginning. We always said "we have to do something" by virtue of clauses 3 et 4... We have to work together etc. ... but there was no theme, nothing to focus on.

Anyway, since that time, research has developed firstly with the Alpine Forum in 1994 and later the founding of ISCAR (International Scientific Committee on Research in the Alps) in 1999. What was new in relation to the alpine network of Grenoble or the ICALPE was that we had found partners in every country, and partners who were scientific. It wasn't the network of actors who understand each other easily and who meet up as friends. We systematically looked for scientific partners and we found them.

So, when and how was the ISCAR set up?

T.S. It was linked to the Alpine Forum, which led to the creation of a scientific committee. It was decided that at least two representatives were needed from each country, one in the social sciences and one in the natural sciences. And from this scientific committee for the first Alpine Forum, there were three editions in 1994, 1996 and 1998. We looked for partners in these countries to form a permanent and official committee.

And then we invited partners to Lucerne in 1999 and signed the convention creating the ISCAR.

So it took ten years from the first initiatives begun in 1989 to the creation of the ISCAR in 1999. What was the role of the alpine forums during these years?

T.S. After Berne, we had a second meeting in 1994 in Dissentis, and we proposed the following operating principle: the Swiss were to begin but the others had to also contribute. What was interesting was that the Swiss promoters wanted to establish the Forum perma-

nently in Dissentis : that would be the place for the Alpine Forum, just like it was Davos for the economy. And fortunately Hervé Gumuchian was present in Dissentis and he proposed holding the next forum in France, because he thought that a rotational system would be preferable. And we had a very critical discussion on where to go. So we opted for the rotational system, with France first and then the other countries taking their turn. And this year it's again the turn of France.

J.M. Yes, I believe that the alpine forums have been very important, and Thomas Scheurer certainly played a central role as organiser. And Christine Clottu (who was working at the Academy of Natural Sciences) was a good diplomat and knew how to build up alliances between the academies of the different countries. It wasn't obvious at that time.

The *Association pour l'histoire des Alpes* has had a similar history. It was founded in 1995 in Lucerne, following a Swiss initiative, and like the forums, the second meeting was in France, in Grenoble, in 1997 (on the initiative of Rene Favier). Then we organised conferences in every country: Trente (Italy) 1999, Kempten (Germany) 2001, Innsbruck (Austria) 2003, Bovec (Slovenia) 2005, Vevey (Switzerland) 2007. In 2009 we will be going back to Grenoble with a most interesting theme: *Man and wild animals in the Alps*.

And with regard to the disciplinary projects we spoke about earlier, were there approximately the same ones in the first forums, with each discipline giving presentations with its own practices and own culture? Or do these forums leave room for other developments?

T.S. The objective of the forums was always to allow the different disciplines to come closer to each other, but we never tried to develop a specific research strategy in what we called "Action plans for alpine research". We didn't want to conduct an alpine research project ourselves or to conceive a particular inter- or trans-disciplinary research method. The basic principle was always to propose research topics around common problems. It was more of a strategic analysis: what are the problems? And then to organise the researchers and to bring the disciplines into these fields. Today, I have the impression that it's not the role of ISCAR, or of anyone else, to organise alpine research.

Yes, it's really a coordinating role

T.S. And even if the Alpine Convention wants to organise, it's "wasted energy", because the scientific community doesn't operate that way. You have to realise that.

The aim is to promote interdisciplinary approaches. ISCAR has always held this position. If we can't manage to work together and to work across the alpine arc, then the organisation doesn't serve any purpose. Interdisciplinary and transalpine, these are the two key words. The rest is organised by the researchers themselves.

And it's clear that it's not easy because it requires a spirit or attitude that is a little different from the way scientists function within their own disciplines.

And that's the same in every discipline and in every country!

T.S. Yes, and what's more, it depends on the people... If there are people who feel that it's important to operate like that and to work in this way, then it works. If not, the project is dead. But you can't artificially set up a project that nobody is interested in.

During these same years, what has been the role of the observatories?

T.S. The observation systems that Vincent Briquel and Hervé Gumuchian developed really constituted an observatory; it wasn't research.

That could have acted as a stimulus, been a motor...

T.S. Yes, it's a base but it's not the object of research. Today, along with SOJA, it's a means for the Alpine Convention to initiate research.

And within the framework of convention protocols, has there been a knock-on effect?

T.S. No, it's so technical that it doesn't help any scientists. You have to make it clear that for scientists, the Alpine Convention, as it is, is not interesting, it's boring!

And that's why we were very happy when Ruggero Schleicher suggested a yearly programme. And then we developed this research agenda that we are now discussing. It's a rather difficult project but its in this way that we can set up links to help bring scientists to work on topics that have been formulated by scientists, but which are also linked with the problems of society.

If not, if we wait for the Alpine Convention to decide on the main orientations of research and financing then we are on the route to commissioned research, and in this case the results are commissioned! I am persuaded that if the permanent secretariat is in charge of research, they are not going to change anything.

So, is it possible to do alpine research without the Alpine Convention? Yes, but you must also admit that ISCAR would not happen without the Alpine Convention. It's really the Alpine Convention that imposed this interdisciplinary and transalpine framework. It was really created by the Alpine Convention and that really helped.

Yes, and then transalpine field studies were rare.

T.S. Yes. Since the Alpine Convention, however, there have been quite a few studies that concern the alpine arc as a whole.

What would be really interesting would be to examine all the alpine forums: to show what topics were chosen and to have another look at all the proceedings, with the presentations, the workshops, etc.

One time, with Schleicher, we envisaged setting up a centre of expertise with researchers from the alpine arc, using the alpine forums as a base: anyone who had made a presentation, acted as a moderator or proposed something would provide part of this expertise. But when I put forward this list to the Alpine Convention, it was a disaster! The different states declared that they already had their own experts!

So alpine research is entirely autonomous with regard to the Convention?

T.S. Yes. In principle there is no commissioned research; it can be oriented toward themes recommended by the Convention : for example, the DIAMONT programme of Axel

Borsdorf or some European projects, conducted on the alpine arc as a whole, where the aim was to provide the Alpine Convention with a data base.

And then you also have to mention the different reports on the Alps published by the CIPRA; there was one on transport, another on water... It's the states that choose the experts and themes, not the scientists.

J.M. Yes, these reports are indeed produced by the CIPRA and, in my opinion, clearly show to what extent the Alpine Convention with its partners (the CIPRA as a lobbying organisation) nevertheless has quite an interesting impact on research.

The situation of alpine research today

What are the factors that are transforming alpine research today?

T.S. The European Union has changed things. Because if we want to survive as an alpine research unit in Europe, we need partners in Scandinavia, Scotland, the Carpathians, etc. It's perhaps an aspect that we've neglected. It's especially through the research programmes of the European Agenda that we realise that alpine research must get involved in work on European themes. Here too the Alpine Convention must make a statement but the link is not yet strong; the Convention does not have enough political weight to have an influence on the setting up of projects and promote research on the mountains of Europe. For me, it's something we must insist on.

Do the major issues of today, particularly concerning the questions of globalisation and climate change, have a specific impact and can one say that alpine research is distinctive? Namely in terms of its adaptability?

T.S. Yes, and this adaptability is strong. You can compare science to surfing! You are there and you are waiting for the next wave, the one that will take you the furthest, fastest! For scientists, it's a bit like that! Today, in most studies the key words that appear are: sustainable development, globalisation context, climate change. Alpine research is, you might say, predestined to react to everything that is an external influence.

I feel that this reactivity is strong with respect to physical change, particularly climate change; much less so for social change and globalisation concerns. For example, we still talk a lot about urban dwellers as opposed to mountain dwellers though the majority of the alpine population live in towns. We tend to remain with the old conceptions and find it difficult to identify processes that are underway now.

Despite everything, we have a lot of interesting work but in the human field, namely on agriculture, forestry, industry, tourism, but it's very difficult to understand and conduct detailed analyses on the interactions with external factors. We are working a lot on this and are building up a solid knowledge base.

And how are alpine research and research on the mountains of the world linked in this context?

T.S. The role of the Alpine Convention is to link them and there are programmes to do that, namely the programmes on biodiversity or the GLOCHAMOR experience. But as

soon as you go to the world scale, there are additional actors and the studies are complex, with a north-south divide that also comes into play. The link is made more by the institutions and the researchers than by the contents.

It's also that at the global scale these organisations lack the means to orient research. For example, the task of the biosphere reservations is not to orient global research, and in any case they don't have the means.

And how is this alpine research situated today between fundamental and applied research?

T.S. For me the distinction is difficult. It is true that alpine research is generally applied, but it needs fundamental elements also. What unites it is that it is field research.

Is it above all a question of demand?

T.S. Yes, maybe. What is specific to alpine research is that this demand comes from alpine societies and local political environments, not from industries for example. So demand is oriented towards an analysis of the situation of alpine societies.

Can one say that alpine research and mountain research in general have established original and privileged links with professional bodies and NGOs?

T.S. It's difficult to generalise. It's also a strategic choice of the ISCAR to work with the NGOs. Scientist can choose to be the "super experts", and when they criticise something politicians listen to them. But it takes time... it's difficult.

So the most direct path is to work with the NGOs who develop political pressure based on scientific results. The scientists help but they remain in their role; they are not militant. For example, as part of the ecological corridor policy, scientists are working with the WWF. The objective is not to take political decisions but to provide the scientific work and to make sure that it is taken into account in an appropriate manner. Try to provide scientific support to the processes of political decision-making.

The Alpine Convention, because it integrates the NGOs as observers, provides an appropriate framework for working with them. This Alpine Week also helps to do this. In fact, this organisation is quite original as well as the observer status given to the NGOs. And it serves as a model, for the Carpathians now for example.

And finally, it's more difficult to work with the States because they have their own experts, with a precise mandate. The relations between national experts and the ISCAR are not clear.

The challenge now is to provide a critical review of the researchers involved in this alpine research: Who? When? What topics... and to enhance the status of the mass of work and studies that have accumulated over almost twenty years and which are sometimes not sufficiently well known.

Translation: Brian Keogh