Journal of Alpine Research | Revue de géographie alpine

109-2 | 2021

La montagne et les nouvelles manières de faire connaissance

Mountains and New Ways of Building Knowledge

Anne Sgard and Isabelle Arpin

Electronic version

URL: <https://journals.openedition.org/rga/9332>

DOI: 10.4000/rga.9332

ISSN: 1760-7426

This article is a translation of:

La montagne et les nouvelles manières de faire connaissance - URL : <https://journals.openedition.org/rga/9325> [fr]

Publisher:

Association pour la diffusion de la recherche alpine, UGA Éditions/Université Grenoble Alpes

Electronic reference

Anne Sgard and Isabelle Arpin, "Mountains and New Ways of Building Knowledge", *Journal of Alpine Research | Revue de géographie alpine* [Online], 109-2 | 2021, Online since 31 December 2021, connection on 08 December 2022. URL: <http://journals.openedition.org/rga/9332> ; DOI: <https://doi.org/10.4000/rga.9332>

This text was automatically generated on 8 December 2022.

Creative Commons - Attribution-NonCommercial-NoDerivatives 4.0 International - CC BY-NC-ND 4.0
<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Mountains and New Ways of Building Knowledge

Anne Sgard and Isabelle Arpin

- 1 The production of scientific knowledge is an eminently collective activity. For several decades, and increasingly so since the turn of the century, the researchers who pursue this activity professionally have been encouraged to work not only with one another, but also with professionals from other sectors, and with 'ordinary people.' This issue of the journal is dedicated to these links between researchers and other actors, which are often presented as a source of new and innovative knowledge. The seven articles in the issue provide us with a clearer picture of such links: the terms used to refer to them and the forms they take, where and when they are deployed, the extent to which they are truly new, and their relative importance. They also document expectations of these links, their various contributions, conditions of success, and limitations. Finally, they consider the relations between mountains and these particular ways of 'building knowledge' that straddle the boundary between scientific research and other specific activities in alpine regions.

Characterising the links between researchers and actors

- 2 Only two of the articles in the issue explore links in the context of an activity that is not primarily scientific: one in relation to tourism (Viallette *et al.*), and the other in relation to communications/preventive information (Chambru and de Oliveira). The remaining articles all concern links established between researchers and other non-academic actors in the context of scientific research. This predominant focus on the links between researchers and other actors in the context of research, rather than as part of other activities, may well be explained by the fact that the call for contributions strongly emphasised the 'collaborative turn' in alpine research. A range of terms is used for these kinds of research projects spilling over from the academic sphere, sometimes as synonyms within the same article: participatory, partnership,

collaborative, or embedded research; and participatory science or citizen science. The terms participatory and citizen science refer to projects that involve individuals contributing to scientific activity in their leisure time, while the terms partnership and collaborative research are used for projects in which researchers work with other professionals, for example from nature conservation (Ronsin) or mountaineering (Clivaz *et al.*). The term interdisciplinary or collaborative action research refers to projects with a clearly identified operational goal, here in the contexts of accident prevention (Vanpouille *et al.*) and risk prevention (Chambru et de Oliveira) in the mountains. While the term ‘transdisciplinary’ is widely used in the English-language literature for collaborations between researchers and non-academic actors to tackle a joint problem (Callon, 1984; Hirsch-Hadorn *et al.*, 2008; Jahn, Bergmann, & Keil, 2012), here it is used only in one article (Ronsin).

- 3 The diverse range of projects presented in this issue reveal a range of ‘link-making’ figures, moments and places. First, the figures of mediators who, with one foot in research and the other in a different sphere, are able to move between the two and translate questions and knowledge. The PhD student involved in developing the SERAC database of mountain accident and incident reports, in training to become both a researcher and a high mountain guide (Vanpouille *et al.*), is a typical example of such a figure. Link-making moments and places, such as alpine refuges, also bring researchers and other actors together; the Lautaret Alpine Garden emerges from the issue as a particular ‘hot spot’ (Parker & Hackett, 2012) for links between research and society (Clivaz *et al.*; Vialette *et al.*; Ronsin). These moments and places of shared terrain emerge as a recurring feature. Venturing outside lecture theatres and laboratories and coming into direct contact with the research object (an intermediary object), often involves joint effort, organization, and unsettled weather, but also leads to discoveries, and an enjoyment of the terrain that merits thorough study.
- 4 But to what extent can the links between researchers and other actors be described as new or innovative? The articles by Tancoigne on collaborative research in dairy microbiology, and by Dentant *et al.* on the contribution made by mountaineering pioneers to the discovery of very high mountain regions as a living habitat, are a timely reminder that non-researchers have long contributed to the production of scientific knowledge, and conversely that researchers are involved in other activities. In some cases, however, these links do take new forms, such as scientific hikes, or the novel ‘residencies’ by researchers in protected areas and park managers in research laboratories (Ronsin). In both these cases, it is the journey, either experienced together or into the terrain ‘of the other,’ that appears to nurture the link and the creation of a ‘boundary zone.’ But the true change has been not in the existence of such links, but rather in the way in which they are now considered and incorporated into scientific writing, and the meaning assigned to them. It is worth recalling the resource persons (such as schoolteachers, mayors, and priests) who were key to the work of geographers in the first half of the twentieth century, but received little recognition. They provided a means of producing knowledge that was often overlooked (Tancoigne) and ultimately hidden, and of educating the public by transferring scientific knowledge in a linear fashion. These links are now seen as more complex: not as ‘simple knowledge transfers’ (Vialette *et al.*) but instead asserted and formalised, now become an end in themselves and an object of attention and care. They are also, now, a research object, as can be

seen in the reflective dimension of several of the articles (Vanpouille *et al.*; Chambru *et al.*; de Oliveira; Ronsin; Vialette *et al.*).

- 5 Finally, what is the relative importance of these links, now in the spotlight? Are they as present on the ground as they are in calls for projects and research policies? While unable to provide a definitive answer to this question, we might observe that there have only been a handful of researchers in residence since this programme was set up (Ronsin), that collaborative research remains a minority form of knowledge production in microbiology (Tancoigne), and that the various forms of scientific tourism identified by Vialette *et al.* continue to involve only the most highly educated socioeconomic groups. Best practice projects such as the ‘Sentinelles des Alpes’ programme remain few and far between. While further study is clearly required to supplement these observations, looking at the contribution made by links between research and other activities, expectations of them, their conditions of development, and their limitations, may help provide a better understanding of what makes people want, or not want, to create them and maintain them over time.

Creating and cultivating links: a hard-won resource with limitations

- 6 In most of these articles the links between researchers and other actors are presented as a resource. The involvement of non-researchers in research is designed to promote the production of dispersed knowledge (Clivaz *et al.*) or knowledge of settings that can only be accessed with exceptional physical abilities and physical engagement (Dentant *et al.*). In action research projects, involving non-scientific actors is seen as a way to produce knowledge more relevant to public policy, for example to improve accident prevention (Vanpouille *et al.*) or prevent natural hazards (Chambru and de Oliveira). Conversely, involving researchers in tourism is seen as a way to increase a region’s attractiveness and to raise awareness of global changes among visitors. Other motivations also emerge from these articles, albeit some from between the lines. The shift in the status of mountaineers from ‘category C collectors’ to coproducers of science (Dentant *et al.*), and the classification of tourism and sports actors in underdeveloped mountain areas as coresearchers, provide a way to redistribute scientific expertise, recognition and justice.
- 7 These links are not, however, an easy resource to obtain; both establishing and maintaining them take substantial work (Ronsin; Vanpouille *et al.*; Clivaz *et al.*). To adopt the term used by Michel Callon (1984), substantial ‘interessement’ is needed to involve actors in research, even when they can hope to benefit from the expected results (Clivaz *et al.*; Vanpouille *et al.*). Quite simply, they may not be interested in the issues in question (Chambru and de Oliveira). They may also fear that taking part in the research will disrupt their work or professional interests, or that its benefits will not outweigh their investment; so much so that major actors, such as trade unions (Clivaz *et al.*), may decide not to be involved with collaborative projects. Study participants often need training to enable them to produce the expected knowledge (Vanpouille *et al.*), and collaborative projects need researchers to keep them going. Establishing links that will satisfy initial expectations thus requires substantial human and financial resources, perseverance, trust, relationship skills (Vanpouille *et al.*; Clivaz *et al.*; Ronsin), and time (Ronsin; Tancoigne). And the timelines of researchers do not always match up with

those of the actors with whom they want to work. A degree of reciprocity may also be required: Clivaz *et al.*, for example, show that if researchers want refuge guardians to commit to their projects, they need to get involved in the everyday running of their refuges.

- 8 While these articles clearly demonstrate the existence of conditions for establishing and maintaining links between researchers and other actors, and highlight the associated limitations and obstacles, few of them adopt a critical perspective. The almost entire absence of a critical dimension can be explained by both widespread adoption of the idea that these links are necessarily ‘a good thing’ (Katz & Martin, 1997), and ‘best practice,’ and the fact that the vast majority of the authors are themselves involved in the links that they describe. Chambru and de Oliveira do however show that the willingness of elected representatives to engage with preventive information policies varies based on the political risks and gains they associate with them, rather than based on residents’ concerns. Ronsin, meanwhile, observes that these links do not erase the boundary between the worlds of scientific research and nature conservation and differences in status, and that the reaffirmation of this boundary in certain circumstances may be particularly fraught if these links are longer-standing and closer.

The role of mountain regions

- 9 The call for contributions invited authors to explore the relations between mountains and the links between researchers and other actors. Mountains (solely the Alps, in this collection of articles) are primarily presented in conventional fashion as a setting with clear specific features: one with heightened exposure to global changes, and to natural hazards and accidents in the context of recreational and sporting activities (Vanpouille *et al.*), and one in which the production of knowledge in high mountain regions requires exceptional physical engagement (Dentant *et al.*). We might also observe that mountains are characterised by the importance of protected areas and outdoor activities, and thus the professions associated with them, which are most often represented in these articles.
- 10 Mountain regions are described as particularly fertile ground for scientific activity (Dentant *et al.*; Vialette *et al.*) and for experiments in collaborative and innovative research in particular, although this statement is not necessarily backed up by evidence. While subscribing to this view, Vanpouille *et al.* observe that the rivalries within the ‘microworld’ of the mountains, notably in the area of safety, are in fact more likely to increase secrecy and hinder a collaborative approach to sports accidents and incidents. Clivaz *et al.* also note the existence of differences of opinion between refuge guardians and high mountain guides, which can have an impact on collaborative projects. While mountains do not therefore necessarily foster collaborative research, such research has produced knowledge that has contributed to affirming the specific features of mountain regions and their products: research in dairy microbiology, for example, has helped bring the concept of ‘microbial terroir’ to the fore, and to draw a distinction between cheese production in the Alps and the Jura (Tancoigne).

The articles

- 11 The seven articles in this issue can be divided into two groups: one in which the links between researchers and other actors are primarily designed to pursue the collaborative production of knowledge, and another in which they are also, if not above all, designed to achieve a public policy objective.
- 12 Dentant, Mao, Lavergne et Bourdeau take a historical perspective in their account of the role played by mountaineers in the discovery of high mountain areas as a living habitat, from the early days of alpinism to the present. They highlight the role of intermediary objects, mediators, and boundary zones in the production of scientific knowledge about high mountain regions, and the recent accession of mountaineers to the status of coproducers of science.
- 13 Tancoigne also retraces a history of collaborative research in dairy microbiology in the Alps and the Jura, and illustrates its role in the emergence of the concept of ‘microbial terroir.’ Based on an analysis of a set of sources, she situates her own research in microbiology more broadly, and demonstrates its relative marginality.
- 14 Ronsin studies a new type of link that has recently developed between researchers and the managers of protected natural areas in the Zone Atelier Alpes in the form of a ‘researchers in residence’ programme. Based on an ethnographic study, she shows how these experiences enable researchers and managers to learn about everyday working lives and how their different organisations operate – aspects that were new to them despite a long tradition of collaboration.
- 15 Based on the examples of two collaborative projects, in France and Switzerland, Clivaz, Langenbach, Obin and Savioz explore the benefit of working with mountaineering professionals in order to better understand recreational practices in ‘underdeveloped’ mountain areas. Their comparison of the two examples enables them to identify the conditions of success for such projects, and provides the basis for a set of guidelines.
- 16 The work by Chambru and de Oliveira, representative of the second group of articles, considers public communication policies regarding natural hazards in the mountains. Their article takes a critical look at an interdisciplinary action research project, combining geography and information and communication sciences, which aimed to produce an expert report to support a preventive policy and found itself at odds with the expectations and practices of local residents.
- 17 Also in the area of mountain hazards, Vanpouille, Soulé, Boutroy and Lefevre recount the difficulties they experienced implementing a collaborative action research project to develop a database for crowdsourcing mountain accident reports. The process of developing this database, and of knowledge production, is analysed through the prism of the sociology of science and technology.
- 18 Finally, Vialette, Mao and Bourlon explore the concept of scientific tourism via three examples from the Northern Alps. Their analysis begins by identifying the role and forms of mediation in order to develop a typology of scientific tourism. Based on a visitor survey, they then assess the value of these activities for increasing the attractiveness of regions, with mountains appearing to be particularly fertile ground for innovation.

BIBLIOGRAPHY

Callon, M., 1984.– Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. *The Sociological Review*, 32, 196–233.

Hirsch-Hadorn, G., Hoffmann-Riem, H., Biber-Klemm, S., Grössenbacher-Mansuy, W., Joye, D., Pohl, C., Zemp, E. (Eds.), 2008.– *Handbook of transdisciplinary research*, Springer.

Jahn, T., Bergmann, M., & Keil, F., 2012.– Transdisciplinarity: Between mainstreaming and marginalization. *Ecological Economics*, 79, 1–10. Doi: <https://doi.org/10.1016/j.ecolecon.2012.04.017>.

Katz, J. S., & Martin, B. R., 1997.– What is research collaboration? *Research Policy*, 26, 1–18.

Parker, J. N., & Hackett, E. J., 2012.– Hot spots and hot moments in scientific collaborations and social movements. *American Sociological Review*, 77(1), 21–44.

AUTHORS

ANNE SGARD

Département de géographie et environnement / Institut universitaire de formation des enseignants, Université de Genève, Suisse

ISABELLE ARPIN

Univ. Grenoble Alpes, INRAE, LESSEM