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Manless Rope Team: A Socio-Technical History of a Social Innovation

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ABSTRACT

While women have been known to climb mountains since the nineteenth century, mountaineering is still perceived by many as a 'bastion of virility'. Yet, from the post-First World War period until today, French women mountaineers have discovered and organized a novel and atypical experience: climbing in manless rope teams to meet their unsatisfied social needs for independence, equal rights, and acknowledgment of their capacities. A socio-technical history of the innovative manless rope team reveals three distinctive periods, characteristic of the different waves of feminism. The history of this innovation illuminates how women mountaineers contributed to reducing a number of inequalities (access, treatment, and recognition) through the extension of a network of resources (human and material). From the rare, scattered, and invisible individual initiatives of the first half of the twentieth century to an attractive dynamic currently supported by alpine institutions and organizations (industry, media, politics), the recent success of the manless rope team is nevertheless paradoxical. It reflects both a change in society and compromises with the gender system that sometimes change the initial emancipatory project.

KEYWORDS

Manless; mountaineering; non-mixed group; social innovation; rope team

Women have been known to practice mountaineering since the nineteenth century. At times excluded from alpine clubs and forced to federate among women as in England and Switzerland¹ or at times included in alpine institutions as in France and Canada,² these women mountaineers seem to have shared the experience of male domination that organized the distinction, conferred inferior status, and contributed to the invisibility of their practice. Among them, French women were, for example, initially tolerated rather than accepted within the French Alpine Club, created by and for men.³ Under the control of men, they were introduced to an unusual practice and submitted to compromises between gender norms and mountaineering culture in terms of supervision and the type and intensity of the climb.⁴ They generally climbed more for excursion purposes rather than performance,⁵ more as a family than individually, and more under supervision than independently. Nevertheless, at the

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turn of the twentieth century, their story shows a dual process underway. On the one hand, French women were taking part in climbs of increasing difficulty. On the other, a number of them were seeking emancipation from either family (father, brother, husband) or professional supervision (guide) without, however, managing to take the step fully towards total independence, i.e. be able to lead the climb.⁶ Considered as irresponsible beings in the eyes of the law since the Napoleonic Code of 1804,⁷ women were supervised by men, with the latter constituting the *sine qua non* of their inclusion in a sport constructed as a bastion of virility.⁸ Consequently, at the end of the *Belle Epoque*, female emancipation seemed confined to men's representations of their capacities, based on the myth of their fragility and vulnerability with the resulting social expectations.⁹ Yet, stimulated by a war context leading to a number of cracks in the distribution and balance of power,¹⁰ certain women mountaineers began aspiring to resist domination. They participated, by their actions more than their claims, in a wide social movement for women's rights.¹¹ Thus, while remaining removed from feminist movements,¹² some of these mountaineers nevertheless contributed to shifting gender boundaries, in order to 'open the way to subjectification and emancipation'.¹³ They organized manless teams to meet their unsatisfied social needs of independence, equal rights, and acknowledgment of their capacities. From the post-World War I period to today, French women mountaineers discovered and conquered a novel and atypical experience in sporting and mountaineering practices (technique, risk, and more especially self-responsibility and responsibility for others).

While the topic of mountaineering has become a more prominent one in the history of sport,¹⁴ it has been only lightly touched upon from the perspective of gender studies¹⁵ and innovation theories,¹⁶ especially so-called 'social' innovation based on inclusive practices.¹⁷ This last notion is only just beginning to be applied in order to understand social change in sport,¹⁸ and it is quite unused in the study of gender inequality.¹⁹ Manless teams²⁰ provide a possible gendered social innovation aimed at meeting unsatisfied expectations and needs, at times within a dynamic of social transformation, so as to allow excluded teams access to resources and practices.²¹ The data comes from an analysis of publications and archives of the *Club Alpin Français* since 1874 (*Les Annuaire du CAF, La Montagne, Alpinisme, La Montagne et Alpinisme*), of French specialized press (*Alpirando, Montagnes magazine, Vertical, Cimes...*) since 1978 and (auto)biographies of women mountaineers.²² This quite exhaustive collection has been added to since the 2010s through extensive monitoring of online documentary sources (blog notes, internet websites, videos). Additional interviews have been conducted with eight women mountaineers (ordinary climber, federal instructor) engaged in all-female practice.²³ An analysis of the content of these written and oral sources, in accordance with the theoretical frameworks of the socio-technical approach used, enables the characterization of the underlying network of single-mixed teams through the following indicators: identification and characterization of mountaineers, actors and organizations that have hindered or promoted the detachment of men, available material resources, alpinist's discourse and discourse on women climbers.

A socio-technical history,²⁴ intersects the history with the sociology of innovation and techniques²⁵ in order to extend work on the structural, ideological, and practical

conditions of women mountaineers.²⁶ Within that framework, manless teams were the result of the long and complex process relating to the diffusion and socialization of a new practice that, to be successful, must be appropriated in the long-term by its users.²⁷ This process is always collective. In order to analyze the success (or failure) of an innovation, scholars must determine whether the new practice creates an extension and strengthening of networks of support and resources. To understand this dynamic implies describing the individuals and groups who are involved (or on the contrary who resist). It also means taking into consideration, as ‘actors’ in the process, the material elements that will become part of the network and modify the trajectory of the innovation.²⁸ In concrete terms, a manless rope team is defined as a socio-technical system of at least two women without men, joined or not by rope in order to climb such or such a mountain. In that sense, it appears as one of the rearrangements where detachment from well-established elements constitutes ‘the very objective of propelled transformations’.²⁹ This process of excluding men produces a practical, social, and symbolic detachment of male domination (and, symmetrically, new forms of attachment between women). Yet, in the same way as the hidden part of the iceberg, such an assemblage in reality implies a more or less broadening chain of individual (friend or family, supervisor, instructor, journalist, editor, blogger, public, and audience) or collective actors (institutionalized group, association, federation, company – industrial, distribution), as well as non-human elements (mountains and more or less prestigious itineraries, technical equipment, texts and photos, money).

Innovation succeeds when it finds favour not only with the public (women mountaineers) but also with the market (including audience), institutions, and organizations. Beginning with a ‘growing local, non-governmental initiative’,³⁰ the manless team slowly generalized through diffusion and gradual institutionalization at the price of compromise and changes to the original aim.³¹ Thus, female mountaineers progressively freed themselves from the power relationships established by the gender system in and beyond sport and succeeded in reducing three types of inequality: access (being excluded from practices and techniques), treatment (not being given the same material and social performance conditions), and recognition (not being shown the same consideration and value as men). In this sense, this social innovation sheds light on the dual process of domination and emancipation, within the tension between suffering and subverting. Yet, different forms of emancipation echoed the different waves of feminism that, over the century, developed strategies ‘for the inclusion of women in response to all mechanisms of exclusion (legal or illegal, individual or collective, intellectual or pragmatic, etc.)’.³²

Individual Initiative, 1921–1959: Rarity, Invisibility, and Obligation to Succeed

The period immediately following the First World War in France was one of conduciveness to social innovation. In mountaineering, practicing ‘without a guide’ became a legitimate activity for the climbing elite belonging to the high-altitude association *Groupe de Haute Montagne* (GHM) from 1919 onwards.³³ A very small

number of women such as Alice Agussol³⁴ and Paule Collet³⁵ were also members of the club and stood alongside France's best male mountaineers, albeit with restricted opportunity to show their talent. Considered to be socially and physically incapable, women appeared to be kept at a distance when 'the climbs require a considerable amount of time and are exceptionally difficult'³⁶ or invisible when they led the team.³⁷ Such (material and media) exclusion only served to fuel a need for independence that was, moreover, in tune with the times and sustained by various movements in favour of women's rights both outside³⁸ and within the sporting movement.³⁹ The interwar period, for French mountaineers, paved the way for autonomy, with unmixed experiences playing their part in both mountaineering and elsewhere.⁴⁰

In the alpine field, this could be seen in the further detachment of men. In the footsteps of a few foreigners such as Mrs Aubrey Le Blond, Ilona and Rolanda Eötvöss,⁴¹ and undoubtedly other anonymous women in history,⁴² the challenge, for a very small number of French women, was to gain access to a new form of autonomy-based practice that required greater commitment and was more technical as a result: 'Each mountaineer is perfectly aware that she should rely only on herself and that, in a way, she should move forward as if she were alone'.⁴³ Having responsibility not only for oneself but also for others and consequently being able to develop new skills constituted 'the powerful attraction of all-female rope teams'.⁴⁴

The first achievements were standard ones 'of little importance',⁴⁵ such as Paule Collet and Miss Faure's Le Plaret pass in the Ecrins massif in 1921. The innovation here lay not so much in its difficulty as in the transgression it represented.⁴⁶ Yet, through the experience of the best, initiatives were able to develop and become more complex. In 1929, the 'remarkably skillful and intrepid rock climber' Alice Damesme⁴⁷ innovated by climbing the Aiguille du Grépon (3,482 m) with the American Miriam O'Brien.⁴⁸ This particular peak was considered to be an 'extraordinary one' according to the rankings of the prestigious GHM. The initiative created a buzz in the Chamonix microcosm. Some, such as Etienne Brühl, went as far as to declare it outrageous.⁴⁹ With this first achievement under their belt, the two friends' desire to progress grew continuously stronger and culminated, in 1932, with the first manless team climb to a mythical peak (Le Cervin 4,478 m), providing proof of high-level performance.⁵⁰ Micheline Morin (1900–1972) was likewise an example in manless mountaineering. Trained in Fontainebleau and les Ardennes by members of the GHM, she made her first guide-free climbs with them and her female firsts in the Mont Blanc massif, including the Aiguilles Mummery (3,700 m) and Ravanel (3,696 m) in 1924.⁵¹ She left the men behind for technical 4,000-metre climbs with Miriam O'Brien in 1931: the south-eastern ridge of Le Mönch (4,107 m) and Jungfrau (4,158 m). Interpersonal links were built between the American mountaineer and the Morin and Damesme families. In 1933, Alice Damesme and the British Nea Morin (1905–1986),⁵² Micheline's sister-in-law, joined together to successfully climb difficult summits, such as La Meije (3,983 m) in the Ecrins massif, then in 1935, the Aiguille Verte across the Moine ridge (4,122 m) with Alice Damesme. Finally, in 1936, Alice Damesme and Micheline Morin climbed 'one of the most prestigious routes of the Dolomites',⁵³ that of Preuss du Campanile Basso (2,883 m). While all of these climbs,

which at times were a first for all-female teams, were acknowledged as being difficult and requiring a good climbing level, they nonetheless remained below the major challenges undertaken at the time by men or a number of mixed rope teams (e.g. the north faces of the Grandes Jorasses, Eiger and Drus).⁵⁴ This innovative practice mainly occurred in the Mont Blanc massif, with its epicenter Chamonix serving as a meeting point for friends. In this period, a number of other manless mountaineering achievements occurred on France's borders, including the climbs carried out by Swiss Loulou Boulaz with Lulu Durand⁵⁵ and those of German Driesch living in Lausanne (who, beyond her female team climbs – along the ridge of the Argentine and crossing the Aiguilles Rouges of Arolla – also became well-known as a result of her unique solo feats, especially the Stabeler tour in 1930), although relations between these women seemed tenuous. Driven by only a few female mountaineers and ascents, the innovation mainly rested on a local network of friends with strong links on the inside but weak external ones, given their isolation within a mountaineering environment that was predominantly hostile to their actions.

In effect, this social innovation was weakened by the lack of institutional or societal support. The *Club Alpin Français* (CAF), declined to provide human, financial or organizational resources to aid the structuring of these manless expeditions. Even media support (via climbing journals) was limited as a result of the almost total invisibility of these women's performances, at times replaced by disbelief or disapproval – as was the case with Henri de Ségogne or members of the *Alpine Club*.⁵⁶ Consequently, the 'manless' pioneers were not spared the criticism of those men who took a dim view of these 'feminist whims'⁵⁷ and the risk of declining male superiority. 'No! Real women are definitely much too gentle for the harsh mountains and the guys cannot let them go wandering about there without worrying. In their own interest, of course, and what on earth is this all about anyway! We have to have the opportunity to show we are (and oh how much we are) superior'.⁵⁸ As a result, women pioneers often had to stand up to 'the friendly supervision of close men'⁵⁹ concerned about the determination of their wives (or sisters or female friends), either through fear for their lives or worry about their own reputations: 'Our male friends were not very happy about this show of independence which tended to prove we could manage without their help'.⁶⁰ And so, increased male vigilance towards these intrepid women implied keeping an eye on their behaviour and even, whenever possible, creating male teams to accompany them.⁶¹

During this first period, the social innovation network remained restricted and fragile: the rarity and dispersion of manless rope teams on only a few mountains, lack of institutionalized collective entities in France, low resources and small number of contact points combined with the indifference and even hostility of the environment. The latter clearly exemplified the precarious nature of the conditions in which sportswomen of the time practised, including low state subsidies and problems to organize national and international events, as well as criticism, stigmatization, devalored performances and media quasi-invisibility.⁶² Sportswomen remained isolated and were obliged themselves to break the silence surrounding them. As was the case for female aviators Maryse Bastié and Joan Batten, the 'adventure women'⁶³ behind these world firsts, Micheline Morin and Miriam O'Brien, gave shape to the

innovation as a result of their singular accounts within a number of conferences and articles. These women had to show not only a sense of initiative but also discretion, malice, and perseverance, as well as transgression (in their activity) and submission (in their respect of the hierarchy of the sexes). They became emancipated, advanced their cause, and performed their new techniques while, at the same time, losing credibility since ‘as soon as strength is required, a woman, given fewer muscles by nature, finds herself at a serious disadvantage’, unable ‘to sustain for as long [the same effort] as her male rival because her muscles tire more quickly’. This dichotomy ‘can be seen every day during training: consequently, in case of difficulty, she runs a greater risk than him of falling, if her first attempt is not completely successful’.⁶⁴

This way, they found compromises as women while going beyond the limits of traditional and normative ‘femininity’. They did not explicitly identify with the feminist groups of the first wave – unlike the climber and suffragist Julia Archibald Holmes or the mountaineers Annie Smith Peck and Fanny Bullock-Workman who integrated their quest for alpine records into the struggle for women’s right to vote.⁶⁵ They nevertheless remained actors in a social dynamic in favour of the women’s cause,⁶⁶ whose central core was cemented on the quest for rights and equality in the name of their difference: from the right to education to the right to access the territories of sporting excellence.⁶⁷ Thus the fragile network of manless teams contributed to reducing unequal access to sporting activities at the same time as female athletes made a dent in the Olympic fortress.⁶⁸ However, the social innovation remained too weak to challenge the inequalities in treatment (lack of support) and recognition (stigmatization, invisibility) that marginalized both sportswomen and climbers of the time.

Women’s Movements, 1959–1990: Union, Performances, and Caricatures

These scattered initiatives were emulated over the following decades, after years of war and deprivation. As a sign of the times, the field of play became more diverse and complex, particularly in the Himalayan summits at very high altitudes, where women still had to fight for access to prestigious areas where they could take full responsibility. The local network characterizing the social innovation during the previous period began to extend and include new actors in the form of associations that can be considered as the first institutionalized collective groups for French female mountaineers.

The beginnings of these evolutions were visible through Claude Kogan’s (1919–1959) organization of the first international women’s 8,000-metre expedition to the Cho Oyu (8,201 m, Nepal), where she achieved the world’s highest women’s record in 1954.⁶⁹ Arriving in Nice in 1940, at the age of 20, the young woman discovered climbing and rapidly stood out through her level of performance, willpower, and ability to lead the climb.⁷⁰ With her husband Georges Kogan, she practiced swinging leads on very difficult routes such as the ridge of the Sud de l’Aiguille Noire at Peuterey (3,772 m, Aoste Valley, Italy) and consequently discovered high-altitude expeditions. From 1951 onwards, she practiced manless mountain climbing during an expedition to Quitaraju (6,100 m, Cordillera Blanca, Peru) with a

friend, Nicole Leininger.⁷¹ Although a discrete, private initiative with her husband's supervision, the innovation nonetheless rose high on mountains of significance. Six years later, this 'audacious' and entrepreneurial woman – a bathing suit designer in Nice – launched the innovative project of a manless expedition to the Himalayas and travelled throughout Europe with the aim of enrolling the best women mountaineers.⁷² Giving talks in the various alpine associations (Ladies Alpine Club, *Club Alpin Belge*), she recruited three English women – Dorothea Gravina, Margaret Darwall and Eileen Healey – as well as a Belgian lady, Claudine Van der Straten Ponthoz, with whom she had already climbed a number of summits in the Andes. She also contacted her lifelong French friend Jeanne Franco as well as Loulou Boulaz, the best mountaineer of the time. In Nepal, she contacted Tenzing Norgay, the Sherpa (living in India at that time) who had climbed Everest with Edmund Hillary in 1953, and his two daughters, Pem and Nima, along with his niece Douma joined the expedition. Finally, with the help of the alpine network, she invited Colette Leuret, the team's doctor, and Micheline Rambaud, the filmmaker. In total, a team of previously only slightly acquainted 12 women of five different nationalities was now united in the aim of conquering an 8,000-metre mountain: 'That's it, the secret's out. The hidden desire of all the participants in this expedition has been revealed: they have no wish to show any technical prowess, but rather to prove they are capable, even without the help of men, to successfully carry out an expedition of several weeks to the Himalayas'.⁷³

While the network was extending in terms of practitioners, it was also changing its structure vis-à-vis the resources used, despite the persistent lack of institutional support. Thanks to help from Jean Franco (expedition leader for the 1959 climb of Jannu, Claude Kogan was given some logistics equipment in Kathmandu. As expedition leader, she began frantically searching for grants to have equipment, food, and cash supplies. For two years, she fought for the necessary authorizations and visas, organized two deliveries of equipment as well as gathering together 11 Sherpas and 187 porters and preparing a climb of roughly three months over almost 300 kilometres and with a difference in altitude of 7,000 metres. In addition to the support received from manufacturer Ramillon-Moncler in Grenoble and the Ladies Alpine Club, she also obtained exclusives with three major national press organizations, *ParisMatch* in France, the *Daily Express* in Great Britain, and the agency Cosmopress in Switzerland. For all that, as a private expedition, most of the cost had to be borne by the participants, in other words, 450,000 French francs each at the time. A company was created with the nine main members of the expedition as co-associates. Every detail was anticipated, including the sharing of profits or potential debts.⁷⁴

Through this expedition, new links were forged with industries, sponsors, and the media, which contributed to broadening the network. The Comité de l'Himalaya committee, however, 'was divided on the subject and refused to give its backing to the project, although it agreed to provide some financial support'.⁷⁵ Faced with scepticism and the obligation 'to bend over backwards to obtain the support of the Federation',⁷⁶ Claude Kogan wore herself out and was already exhausted, according to her friend Manuel de Diéguez, when she began the adventure.⁷⁷ On October 2,

1959, Claude Kogan and Claudine Van der Straten were buried by an avalanche while at Camp IV,⁷⁸ and the expedition came to a dramatic end. Henri de Ségogne had warned them in 1936: victory was the condition if women's adventures such as these were to be accepted. The controversies thus highlighted the inequality existing in discourse,⁷⁹ including the asymmetrical denunciation of the women's imprudence⁸⁰ without ever referring to the social and material conditions of the expedition.⁸¹ The dramatic end to the climb and loss of the person who had held central place in the relations weakened the structuring network in France for almost a decade.

Consequently, it was not until the 'ere 68'⁸² and the transformations it brought about in terms of women's status that the innovation was reinstated. It was no longer merely a question of gaining rights – education, voting and eligibility, sporting practices, etc. – but also of freeing oneself from patriarchy.⁸³ French sportswomen were apparently less engaged in this second wave of feminism. Nevertheless, some of them, including ordinary mountaineers, represented a feminist 'power to act', to the extent that they developed a critical relationship with gender norms and participated, in discourse and/or in practice, in their redefinition.⁸⁴

Thus, in the alpine world, an unprecedented initiative called the *Rendez-vous Haute Montagne* saw the light of day in 1968 and contributed to reviving and initiating the institutionalization of manless rope teams. The movement was officially endorsed on May 16, 1968, by Baronne Félicitas von Reznicek (1904–1997)⁸⁵ in the presence of 60 or so mountaineers from 12 countries,⁸⁶ with the aim of strengthening ties between women mountaineers of the world. Based on her biographical research on most of them – which she used to publish a detailed book on the conditions in which they climbed⁸⁷ – and a wide political and journalistic network, Félicitas von Reznicek played a particularly structuring role in the development of mountaineering for and by women. Drawing inspiration from the *Conseil Permanent pour la Coopération Internationale des Compositeurs*, for which her father was a delegate, she used the international women mountaineer's association, *Association Internationale des Femmes Alpinistes Rendez-vous Haute Montagne (RHM)* – with its headquarters at the top of the Litlis (3,228 m) near her home in Engelberg – as an annual meeting place and one to strengthen a hitherto scattered and isolated community.⁸⁸

Beyond geographical, political, and ideological borders, this Association gathered women to climb together in a different host country each year including, in the order they hosted them, Switzerland, Austria, France, Germany, Italy, Slovenia, the Czech Republic, and Slovakia. Numbers gradually increased. In 1979, there were 250 of them meeting in Monétier-les-Bains (Hautes Alpes, France), where women 'whose anonymity was a pleasure'⁸⁹ rubbed shoulders with the most well-known (Loulou Boulaz, Wanda Rutkiewicz, Arlen Blum, Vera Komarkova, Heidi Lüdi, Ruth Steimann, etc.). There were also a number of French women present, such as Jeanne Franco, Simone Badier, Christine de Colombel, and Mireille Marks. The gatherings gave French sportswomen the opportunity to observe the female-only performances achieved by foreigners such as Anna Okopinska and Halina Krüger-Syrokomska – Gasherbrum II (8,035 m) in 1975 – and Wanda Rutkiewicz⁹⁰ and the Japanese

Women's Everest Expedition headed by Eiko Hisano – Everest (8,848 m) in 1975. The contacts made would, for example, enable Christine de Colombel and Martine Rolland to take part in the 1982 Women's Expedition to K2 (8,611 m, Pakistan). Each and every time, the meetings were the occasion for women to enjoy sharing their pleasure of mountain climbing and make known their right to practice in complete freedom and autonomy.⁹¹ Yet, their focus henceforth was less on achievement and conquest (as was the case for the pioneers) than on 'being different and going beyond the usual mountaineering criteria and away from the normal places'.⁹² As women in the liberation movement, although not feminists within the Women's Liberation Movement in France, the *Mouvement de Libération des Femmes* (MLF), 'they claim the right to be themselves, without bias or prejudice'⁹³ and denounced, more explicitly, mountaineering misogyny (to the point of attracting media attention and being stigmatized with the name MLF-Alpinists).⁹⁴

In France, the innovation appeared to enjoy increased legitimacy in view of the references made to it in the media. In 1976, the journal *Montagne et Alpinisme* published the testimonials of Françoise Régner, Maryle Léonard, Anne Sauvy, Marie Vorlaz, and Simone Badier, all united in denouncing the inequality existing vis-à-vis equipment (lack of closed toilets in non-women-friendly refuges), administration (registration of women as member's wives by the CAF), and – more widely – the male domination processes at work (absence of women in historical accounts, devalorization of achievements and the femininity of these women, and social construction of women's inferiority): 'The problem posed by women's mountaineering does not, in fact, have anything to do with mountaineering. It is that of alienating beings whose personality does not coincide with the socio-cultural stereotype they are supposed to represent'.⁹⁵ It was the same in the journal *Alpinisme et Randonnée* in which Brigitte Steinmann denounced 'a real inspection of all women's backpacks, an inspection carried out by a master hand, along with strong racist and sarcastic comments about their owners and their content' by many gendarmes who came to check on the Monetier-les-Bains meeting in 1979.⁹⁶

While women practicing manless mountaineering sometimes found themselves caricatured (especially as lesbians), the growing network now aimed to denounce the procedures of male domination (stereotypes, control) and strove for the formalization and visibility of links between women, as well as the acknowledgment of their achievements. Consequently, the early 1980s saw more regular coverage of RHM activities in the alpine press: testimonies in the media,⁹⁷ the organization of a Franco-American exchange event,⁹⁸ the hosting of a delegation of Chinese mountaineers impressed by the 'brave' French women who 'did not hesitate to embark upon difficult routes',⁹⁹ and a world gathering of top-level women mountaineers in France, jointly organized by the *Ecole Nationale de Ski et d'Alpinisme* (ENSA), *Fédération Française de la Montagne* (FFM) and CAF in 1986, all attested to the growing interest of mountaineering organizations in these adventures. As a result, and despite the fact that 'France's husbands (are) not at all ready to let their wives go to the mountains alone!',¹⁰⁰ the social innovation of manless rope teams henceforth found favour in the eyes of a few mountaineering and political leaders, thus opening up new development perspectives for it.

Between 1959 and 1990, the social innovation network of manless teams grew and strengthened within an associative and international dynamic aimed at bringing women mountaineers out of isolation. Like the feminist movements of the second wave, they rejected the establishment of a hierarchical and bureaucratic structure to favour annual meetings without men, solidarity between women and the fight against male domination. While ‘no feminist idea (is) admitted, it is useless to decorate the RHM with it’,¹⁰¹ the fact remains that the trajectories of hitherto individual emancipations were then combined in collectives aiming to denounce and react to the unequal treatment and recognition that differentiated both sportswomen and mountaineers of the period.

Paradoxical Attraction: Success, Institutionalization, and ‘Takeover’, 1990–2019

In the face of a reconfigured institutional landscape for mountain activities in France,¹⁰² of the development of sport and competition climbing,¹⁰³ and in the strong growth in unsupervised activities,¹⁰⁴ targeting young people and women was one way to increase membership numbers. While ‘youth’ policies were implemented, including in particular the creation of mountaineering teams of ‘excellence’ at the FFME¹⁰⁵ in 1988, at the CAF in 1991 they hardly ever addressed young girls, in spite of initiatives from Luc Jourjon,¹⁰⁶ National Technical Advisor (NTA), and Chantal Mauduit, one of mountaineering’s rising stars. Nonetheless, several French and foreign icons (e.g. Catherine Destivelle, Christine Janin, Lynn Hill, and Alison Hargreaves) provided increased visibility (particularly in the media) and legitimacy for women mountaineers. They did not appear, however, to be committed to manless rope teams, other than making an impression with solo climbs.¹⁰⁷

From 1997 to 1999 onwards, the federation path taken joined that of French public policies seeking to promote parity in politics¹⁰⁸ and, within the framework of the Ministry of Sports, sport for women.¹⁰⁹ A group of ‘high-level’ young women mountaineers was therefore created by the FCAF, the high point of its creation’s being when four of the mountaineers carried out an expedition in 1999¹¹⁰ to the Baruntse summit of 7,129 metres in Nepal, renowned but technically not very difficult.¹¹¹ As a sign that the network was becoming stronger, such institutionalization of the innovation was validated by the president of the FCAF who declared the event ‘to be opportune and that we must continue in this way by implementing strong actions aimed at increasing the number of women in mountaineering, in order to address the imbalance between practitioners of both sexes... . We must actively promote this among our female members ... by helping them to meet together to share energy and by making them aware of their tremendous potential’.¹¹² In 2005, at the initiative of Cécile Villemus (member of the Comité Alpinisme) and guide Gaël Bouquet des Chaux (NTA responsible at the time for a recently formed regional women’s team in Rhône-Alpes), the FFME in turn launched a national girl’s mountaineering team, the Equipe Nationale Filles d’Alpinisme (ENFA). The challenge was clearly to enable them to detach themselves from a certain amount of male dependence: ‘Unfortunately, in a mixed rope team, it

is effectively often the boy who will lead. Offering a team that is 100% female will allow women to express themselves in their own right in the mountains'.¹¹³

The institutionalization of manless teams within French mountaineering federations officially marked the end of discriminatory access to this form of practice. From this moment on, women were given new resources (financial allocations, equipment, political support from patrons and, as a result, the opportunity to sign contracts with traditional sponsors of male activities), albeit still without being treated and acknowledged in exactly the same way as men. Consequently, manless teams were an adaptation from what was in place for young men, with more permissive selection, and often differentiated training and practice.¹¹⁴ In 2002, for example, a mixed expedition to an unexplored summit in Nepal, the Teng Kang Poche (6,487 m), enabled the FCAF to express its satisfaction – despite the failure of the expedition, attributed to weather conditions¹¹⁵ – at having obtained 'high participation from among women mountaineers ... now just as well off [girls] as boys'¹¹⁶ and having responded 'to the ministerial wish to encourage female mountaineering'.¹¹⁷ Yet, the objectives were different: a first technical rock climb for men, a first climb on easier snow/ice-covered ground on a different face for women.

Even so, the network mobilized around manless teams extended and strengthened as a result of commitment from institutional actors (managers, technical executives, high-altitude mountain guides), which sustained the success of the social innovation. This situation was nonetheless paradoxical since the emancipation of certain women failed to call into question the principles of male domination. Last but not least, from selection (tests in field conditions, letters of interest, application analysis) to technical supervision or decision-making, female teams were no longer teams without men, but rather the business of men who, in mountaineering organizations and elsewhere moreover, held most of the positions of power. Up until the 2010s, national teams remained under the responsibility of male guides, often famous (Christophe Moulin, Stéphane Benoist, Philippe Batoux, etc.), while professionalization of female guides remained minimal but nonetheless real.¹¹⁸ Gradually, the number of expeditions increased and became established within the institutional and media landscape,¹¹⁹ although a euphemizing of women's practice continued: the ascent (first or repeated) of technical and complicated routes for boys, first climbs focusing on exploration and discovery of easier and less risky ones for girls. All of which was justified by paternalist discourse, such as that of 2008 during the Pakistan expedition (the first to an unclimbed peak, the Female Peak),¹²⁰ when Pierre-Henri Paillason, the FFME's National Technical Director (NTD), justified the choice of alternative routes by saying 'Advanced mountaineering requires slow maturation... . The aim is to show these girls how to adopt extreme caution in the mountains while, at the same time, giving them the means to learn how to prepare an expedition seriously'.¹²¹ 'Caution training camps?' a journalist asked mischievously, thus highlighting the difficult deconstruction of gender stereotypes concerning women's mountaineering.¹²² Furthermore, the controlled emergence of 'advanced' mountaineering among women, intended to be exemplary, nonetheless concealed the fragility of a network of ordinary practitioners.¹²³

Yet, at the turn of the 2010s, this social innovation underwent a new phase of development with the emergence of local initiatives, provisions, and organizations

that promoted women's mountaineering to a lesser extent and at different territorial levels. Alpine organizations gradually set up local groups to allow easier access.¹²⁴ Through these many groups, the social innovation in question spread and led to the creation of new manless teams. By way of example, the club 'Lead the Climb', affiliated with the Fédération Française des Clubs Alpains et de Montagne (FFCAM), was a female-only federation club set up (in December 3, 2017) in response to the need of certain novice or expert female mountaineers to remain 'among themselves' with the aim of detaching themselves from male leadership. What was still, 40 years earlier, a non-institutional marginal and ostracized group now became a factor for success. In 2019, the club, with a membership of 179, organized 90 training sessions (nearly always full) and saw its recognition and legitimacy grow.¹²⁵ While there were only 10 applications for the first year of the ENFA (2005), the GFHM received 120 in 2018, with 56 candidates attempting the physical tests for only eight places.¹²⁶

Finally, this network was strengthened by private initiatives that simultaneously joined together: on the one hand, informal groups via social networks – such as '*On n'est pas que des collants*' ('We're more than just pantyhose') or '*Talons aiguilles*' (stiletto heels) – on the other, associations (such as 'Mountain Girl' or 'Girls to the Top') which positioned themselves in this new market dedicated to a manless sport. Male authority diminished throughout all of these groups, making way for strong, even exclusive, female presence as federation or professional managers in positions of responsibility.¹²⁷ Moreover, these women-only organizations contributed to promoting the emergence of new vocations as federation leaders or high-altitude guides.¹²⁸ Ties between the key actors in these groups were strong: they knew each other, exchanged via a variety of digital communication means, supported each other, and promoted themselves to strengthen the diffusion of the social innovation.¹²⁹

Further actors likewise reinforced the network and institutionalization of the same social innovation. From an economic point of view, the industry and commerce of outdoor sports items developed a gendered form of marketing¹³⁰ in an endeavour to capture the new clientele. By developing offers that were dedicated to women via (pseudo-) adapted equipment, these actors contributed to establishing the visibility of these new practices.¹³¹ They sponsored women mountaineers and all-female initiatives precisely for the innovative nature of their actions. And so, the Petzl company became the privileged partner of the GFHM and 'Girls to the Top': 'In the same way as our slogan – Access the Inaccessible – a team of girls that sets itself a challenge has the same attitude as a high-level athlete engaged in opening up a route. Beyond their performances, we support their commitment, values and the excellent communication work they produce. They are in line with what our brand is seeking: to break the barriers of mountaineering and its high-level image'.¹³² A number of women mountaineers benefitted from increased visibility and financial and material resources, even though the price to pay sometimes implied maintaining gender stereotypes. The innovation was subject to compromise. Consequently, Fanny Schmutz-Tomasi – guide, practitioner in both mixed and manless teams – added: 'Marketing, most certainly. But I am well aware I take advantage of it to get my equipment'.¹³³ Such allegiance to the gender system could also be found in media orchestration (driven by sponsors and federations) where 'girly' colours, stiletto heels,

and flowers, even suggestive clothing, were employed as rituals of femininity¹³⁴ aimed, despite the transgressions existing in alpine practices, at showing gender and sustaining historically and socially constructed gender attributes. Increasingly present in mainstream and specialized media,¹³⁵ the social innovation of manless teams was acknowledged and diffused, albeit not without ambiguity regarding sustaining symbolic appropriation of the women's bodies. Narratives and, more so, institutional communication (federation, advertising) bore witness to the continuation of rhetoric and orchestration related to gender differentiation¹³⁶ whose differences were sometimes internalized by the sportswomen in the way they referred to their relationship with the activity (minimization of risk and engagement, limited difficulty, and taste for contemplation), with oneself (interiority, humility, doubt) and with the others (self-effacement, gentleness, openness).

The social innovation of the manless team, from 1990 to 2019, was successfully institutionalized in France within the two main mountain federations and recognized by media, markets, and new practitioners. Nevertheless, this diffusion took the form of an appropriation that produced new forms of male domination. Integrated, recognized as legitimate, innovation spread and normalized while losing the subversive dimension of its origins. Thus, an ex-member of GFHM declared: 'It is thanks to this group where we finally all start with the same, I don't know how to say it, the same level, the same 'handicap'. Well, it's not really a handicap, but we are always withdrawing when we climb in a mixed team... . I didn't feel any discrimination, I didn't experience it especially. And I'm not a feminist. Besides, I think the other girls at the GFHM are far from being convinced feminists. We want to go up the mountain with our boyfriends, our husbands, everyone, we just don't want to be second all the time'.¹³⁷ Reflecting a certain ignorance of previous struggles to obtain the right to technical progress among high-level female mountaineers, this alpinist, like many others involved in manless practice, is today somewhat suspicious of being qualified as a feminist, considered a stigma that is 'difficult to accept'.¹³⁸ While this denial of feminist activism in sport is not new,¹³⁹ it is contradicted, in practice, by the emergence of recent non-mixed organizations like Lead The Climb.

From Equal Access to Equal Treatment to Equal Recognition

Contributing to the emancipation of women mountaineers and responding to an unsatisfied social need for equality, manless teams constitute a social innovation driven, in France, by a network of variable range and significance over the last 100 years.

Until the end of the 1950s, women-only climbs were the result of individual initiative. They were rare and concerned few women (considering the archives studied), scattered over various geographical sites and different decades. While bonds of friendship united them when meetings and opportunities were possible, their practice was discreet and made unthinkable the constitution of formalized groups. Consequently, the network struggled to develop as a result of the indifference, even hostility shown by mountain organizations. Yet, despite their rarity, these initiatives contributed to a form of feminism in action allowing some women fully autonomous

access to an activity from which they had been excluded. Within the alpine field, they played a part in the so-called first-wave feminist fight, in other words, the demand for equal rights between men and women. These initiatives were in line with those of other pioneers (sporting or managerial) transgressing the gender system but without sufficient support to call into question the levers of male domination.

The decades of the second wave of feminism between 1959 and 1990 contributed to a reconfiguration of the innovation network. From a women's expedition to the Himalayas, considered as a business, to an international women's collective supported by an association, the first signs of collective action for manless practice emerged. Women, such as Claude Kogan and Félicitas von Reznicek, continuously interested and enrolled new actors (women mountaineers but also alpine organizations, media, and businesses). As a result, the network increased and was internationalized, although it remained vulnerable. On the one hand, it rested exclusively on singular figures, as was the case with Claude Kogan whose disappearance in 1959 led to a break in the process. On the other, it was subjected to resistance from men and institutions, opposing a project that was more clearly part of the second-wave feminist dynamic, that of refusing any mixing of the sexes in the name of female autonomy in existential choices,¹⁴⁰ conquest of power, and denunciation of patriarchal structures.

Regarding the twenty-first century, the social innovation of manless teams has entered a phase of attraction and increased institutionalization. Alpine institutions (both federations and training schools, such as ENSA) are opening, promoting, and supporting this practice among women, although still without achieving the same treatment and recognition as men. Gradually however, groups, associations or sections of women, now supervised by women, are multiplying. More actors have come on board (politicians, sponsors, media, and the general public) and invested decisive resources (laws, money, equipment, training, communication means). From beginner alpine routes to the opening of the first technical ones on the other side of the world, all mountain massifs and routes are now included in the network. However, every source of support interested in this innovation integrates its own stakes (increasing membership numbers, responding to legal obligations, developing markets or image, etc.) and thus contributes to changing the innovation's form and/or the meaning of these empowerment activities. Combining diffusion, normalization, and takeover, the growing success of the social innovation attests to the beginnings of a change in society, while losing part of its scope of emancipation. Somewhere between concession and compromise of principles, extending the network 'in such a way that there are no losers'¹⁴¹ has often involved the euphemizing of previous feminist stakes. In this sense, the social innovation has taken on board certain characteristics of third-wave feminism, ringing in postfeminism and the desire to realize a facelift aimed at making feminism more marketable to young women around the idea of diversity, actors, stakes, and strategies.¹⁴²

In the course of a century, the social innovation of manless teams has not only modified its network but also its aims: focus has shifted from equal access to the demand for equal treatment followed by that of equal recognition, although the latter has only just begun. While not exclusive, these aims reflect the necessary steps in the

process of emancipating women mountaineers. This socio-technical history of manless teams therefore reminds us how far emancipation is the result of confronting and challenging the materiality of domination, how long and complex this process can be insofar as it involves numerous actors and, finally, how much it does not call ‘for the dominated to become aware of the mechanisms of domination but to make themselves a body dedicated to something other than domination’.¹⁴³

Notes

1. For an analysis of women’s situation in European Alpine Club, see for example, Olivier Hoibian, *L’invention de l’alpinisme* (Paris, Belin, 2008); Michel Tailland, ‘Le Ladies’Alpine Club (1907): Club alpin féminin ou féministe?’ in *Sports, éducation physique et mouvements affinitaires au 20^{ème} siècle*, ed. Pierre Alban Lebecq (Paris: L’Harmattan, 2004), 209–18.
2. Pearl Ann Reichwein, ‘*Beyond the Visionary Mountains: The Alpine Club of Canada and the Canadian National Park Idea, 1906-1969*’ (PhD diss., Carleton University, 1995); Siri Winona Louie, *Gender in the ACC, 1906-1940* (MA thesis, University of Calgary, 1996); Susan Leslie, ed., *In the Western Mountains: Early Mountaineering in British Columbia* (Victoria, BC: Aural History Program, 1980), 50–51.
3. This article focuses on the situation of French women, which does not exclude some international comparative references.
4. Cécile Ottogalli-Mazzacavallo, *Femmes et alpinisme (1874-1919): Un genre de compromis* (Paris: L’Harmattan, 2006); Clare Roche, ‘Women Climbers 1850–1900: A Challenge to Male Hegemony?’ *Sport in History* 33 (2013): 236–59.
5. Olivier Hoibian, *Les alpinistes en France: Une histoire sociale et culturelle (1874-1950)* (Paris: L’Harmattan, 2001).
6. In this sense, they differ from their English or Swiss peers who, excluded from the Alpine Club and the Swiss Alpine Club, committed themselves earlier on to difficult routes with professional guides. Cécile Ottogalli-Mazzacavallo and Jean Saint-Martin, ‘L’alpinisme féminin avant 1914: L’exemple d’une singularité à la Française’, *Annual of CESH* (2004): 101–116.
7. Cécile Ottogalli-Mazzacavallo, ‘L’histoire des sportives: Un déni de responsabilité?’, in *Responsabilité et Stratégie des Acteurs du Sport et de l’Education, Expertises et Controverses*, ed. Fabien Wille (Villeneuve d’Ascq: Presses Universitaires du Septentrion, 2017), 65–77.
8. Peter L. Bayers, *Imperial Ascent: Mountaineering, Masculinity, and Empire* (Boulder: University Press of Colorado, 2003); Susan J. Frohlick, ‘“That Playfulness of White Masculinity”: Mediating Masculinities and Adventure at Mountain Film Festivals’, *Tourist Studies* 5, no. 2 (2005): 175–93; Susan J. Frohlick, ‘The “Hypermasculine” Landscape of High-altitude Mountaineering’, *Michigan Feminist Studies* 14 (1999-2000): 83–106.
9. Patricia Vertinsky, *The Eternally Wounded Woman: Doctors, Women and Exercise* (Urbana-Champaign: University of Illinois Press, 1994); Thierry Terret and Michelle Zancarini-Fournel, *Le Genre du Sport, Cléo. Histoire, Femmes et Sociétés* (Toulouse: Presses Universitaires du Mirail, 2006); Thierry Terret, Luc Robène, Pascal Charroin, Stéphane Héas, and Philippe Liotard, eds., *Sport, Genre et Vulnérabilité au XXe Siècle* (Rennes: Presses universitaires de Rennes, 2013).
10. Françoise Thébaud, *Les Femmes au temps de la guerre de 14* (Paris: Payot, 2013 [1986]); Françoise Thébaud, ‘Penser les guerres du XX^e siècle à partir des femmes et du genre. Quarante ans d’historiographie’, *Clio. Femmes, Genre, Histoire* 39 (2014): 157–82.
11. Cécile Ottogalli-Mazzacavallo, ‘Des femmes à la conquête des sommets: Genre et alpinisme (1874-1919)’, *Clio. Histoire, femmes et sociétés* 23 (2006): 165–78.

12. Georges Duby and Michèle Perrot, eds., *Histoire des femmes en Occident* (Paris: Plon, 1991–1992); Eliane Gubin, Catherine Jacques, Florence Rochefort, Brigitte Studer, Françoise Thebaud, and Michelle Zancarini-Fournel, eds., *Le siècle des féminismes (XX^{ème} siècle)* (Paris: L'Atelier, 2004).
13. Geneviève Fraisse, *La sexualité du monde: Réflexions sur l'émancipation* (Paris: Les Presses de Sciences-Po, 2017), 58.
14. Olivier Hoibian and Jacques Defrance, eds., *Deux siècles d'alpinisme européen* (Paris: L'Harmattan, 2002).
15. Paul Gilchrist, 'Gender and British Climbing Histories: Introduction', *Sport in History* 33, no. 3 (2013): 223–35; Carol A. Osborne and Fiona Skillen, 'The State of Play: Women in British Sport History', *Sport in History* 30, no. 2 (2010): 189–95.
16. Eric Boutroy, Bénédicte Vignal, and Bastien Soulé, 'Innovation Theories Applied to the Outdoor Sports Sector: Panorama and Perspectives', *Society and Leisure* 38, no. 3 (2015): 24–39.
17. Robert Grimm, Christopher Fox, Susan Baines, and Kevin Albertson, 'Social Innovation, an Answer to Contemporary Societal Challenges? Locating the Concept in Theory and Practice', *Innovation: The European Journal of Social Science Research* 26, no. 4 (2013): 436–55.
18. Anne Tjøndal, 'Sport Innovation: Developing a Typology', *European Journal for Sport and Society* 14, no. 4 (2017): 291–310; Cécile Ottogalli-Mazzacavallo and Loïc Szerdahelyi, 'The Fight against Gender Inequality in French PE in the Late 20th Century', *The International Journal of the History of Sport* 35 (2019): 606–22.
19. For one exception, see Anne Tjøndal, 'Innovation for Social Inclusion in Sport', in *Sport Entrepreneurship and Innovation*, ed. Vanessa Ratten and Joao J. Ferreira (London: Routledge, 2016), 42–59.
20. For this work, the case of mixed rope teams (an equally important subject which will be the object of further work) was excluded. Manless rope teams constitute a remarkable socio-technical arrangement, as an original social innovation through withdrawal, in that they imply *de facto* autonomy and emancipation of sportswomen and remove any possibility of questioning what has been achieved by women or men. See, for example, the essay of Molly Loomis, 'Going Manless', *American Alpine Journal* (2005): 99–112.
21. Geoff Mulgan, 'The Process of Social Innovation', *Innovations: Technology, Governance, Globalization* 1, no. 2 (2006): 145–62; Juan Luis Klein, Jean Louis Laville, and Franck Moulaert, *L'Innovation Sociale* (Toulouse: Erès, 2014). Work on other situations in Europe has made it possible to identify common features but also certain particularities of the French case. This is still an exploratory study, based on collated material concerning *a priori* French-speaking female mountaineers.
22. There is an obvious limitation in this collection that produces a focus on a few figures sufficiently recognized at the time to leave written records of their ascents. It can be assumed that more ordinary female mountaineers were also able to practice without leaving any written record (which is significant in terms of rendering the women's innovations invisible).
23. In connection with a university dissertation: François De Rosanbo, *Sports alpins et pratique féminine* (Master's thesis, EGAL'APS, University Lyon 1, 2018).
24. Patrice Flichy, *L'innovation technique: Récents développements en sciences sociales, Vers une nouvelle théorie de l'innovation* (Paris: La Découverte, 2003).
25. Gérald Gaglio, *Sociologie de l'innovation* (Paris: Presses Universitaires de France, 2011); Pascal Griset and Yves Bouvier, 'De l'histoire des techniques à l'histoire de l'innovation: Tendances de la recherche française en histoire contemporaine', *Histoire, Économie & Société* 2 (2012): 29–43.
26. Susan J. Frohlick, 'Wanting the Children and Wanting K2': The Incommensurability of Motherhood and Mountaineering in Britain and North America in the Late Twentieth Century', *Gender, Place & Culture* 13, no. 5 (2006): 477–90; Martina Gugglberger, 'Climbing beyond the Summits: Social and Global Aspects of Women's Expeditions in

- the Himalayas', *The International Journal of the History of Sport* 32, no. 4 (2015): 597–613; Martina Gugglberger, 'Wanda Rutkiewicz—Crossing Boundaries in Women's Mountaineering', *Sport in Society* 20, no. 8 (2017): 1059–76.
27. Madeleine Akrich, Michel Callon, and Bruno Latour, 'The Key to Success in Innovation', *International Journal of Innovation Management* 6, no. 2 (2002): 187–225.
 28. Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (Oxford: Oxford University Press, 2005).
 29. Frédéric Goulet and Dominique Vinck, 'Expansion des innovations par retrait', *Courrier de l'environnement de l'INRA* 66 (2016): 36.
 30. Nadine Richez-Battesti, Francesca Petrella, and Delphine Vallade, 'L'innovation sociale, une notion aux usages pluriels: quels enjeux et défis pour l'analyse?' *Innovations* 38, no. 2 (2012): 15–36.
 31. Louise Dandurand, 'Réflexion autour du concept d'innovation sociale, approche historique et comparative', *Revue Française d'Administration Publique* 115 (2005): 377–82.
 32. Fraisse, *La sexualité du monde*, 61.
 33. Hoibian, *Les alpinistes en France*.
 34. Alice Agussol-Damesme (1894–1974) won fame for her 1913 climb alongside Jacques and Tom De Lépiney, Maurice Damesme (who became her husband after the war), and Henri Bonnin in a climb to the Index via the south-east pass on August 16, 1913, then the following year in climbing scenes.
 35. Paule Collet began practicing in 1910 to 1911 with guide Jean Baptiste Rodier. Following the war, she won fame as a result of ski mountaineering races in winter and crossing the Pic Turbat in July of 1918. With Pierre Dalloz, she began practicing 'guideless' mountaineering and used to meet up with other members of the GHM before being officially integrated into the group in the 1920s.
 36. Henri Vallot, 'Chronique alpine', *La Montagne* (January-February 1921): 43–44.
 37. According to Micheline Morin, her level of excellence was such that 'most of the time, she led (her climbs) as head of the team'. See Micheline Morin, *Encordées* (Neufchâtel: Attinger, 1936).
 38. Christine Bard, *Les filles de Marianne, histoire des féminismes, 1914-1940* (Paris: Fayard, 1995).
 39. Florence Carpentier, 'Alice Milliat: A Feminist Pioneer for Women's Sport', in *Global Sport Leaders*, ed. Emmanuel Bayle and Patrick Clastres (Basingstoke, UK: Palgrave Macmillan, 2018), 61–81.
 40. Alban Jacquemart and Camille Masclat, 'Mixités et non-mixités dans les mouvements féministes des années 1968 en France', *Clio : Femmes, Genre, Histoire* 46 (2017): 221–47.
 41. Shortly before 1900, Mrs. Aubrey Le Blond is said to have taken one of her friends, Lady Evelyn MacDonnell, across the Piz Palù. Around 1907, Ilona and Rolanda Eötvöss from Budapest climbed the Cima Grande di Lavaredo alone. See Morin, *Encordées*, 62.
 42. Other female mountaineers, such as Mary Taylor, Grace Hirst, and Katherine Richardson, have climbed without men, but there is no record of it in French alpine literature in either first or second hand accounts, a sign of the invisibility of the most transgressive women. See Clare Roche, *The Ascent of Women: How Female Mountaineers Explored the Alpes 1850-1900* (PhD diss., University of London, 2015).
 43. Morin, *Encordées*, 60.
 44. *Ibid.*, 60.
 45. *Ibid.*, 64.
 46. The same year, three English ladies, including Dorothy Pilley, successfully made 'two climbs of little importance' in the Saas Fee massif: the Mittaghorn-Eggimergrat and part of Portjengrat. Morin, *Encordées*, 64.
 47. Report of Maurice Damesme on the Trident du Tacul ascent (September 1919).
 48. Miriam O'Brien-Underhill (1898–1976) led (with the guide Georges Cachat as second) the Grepon ascent, on September 8, 1928. The following year, she started climbing

- without men, despite criticism from male alpinists such as Dean Peabody. See David Mazel, *Mountaineering Women Stories by Early Climbers* (College Station: Texas A&M University Press, 1994), 92–5. She was also known for her ‘guideless’ performances, such as her female first to the Pic Gamba (3,067 m) in 1930, where she crossed all the difficult sections as leader. However, she built her reputation as a manless mountaineer. Her achievements earned her a place in the GHM, the Ladies Alpine Club, and the American Alpine Club where she became an honorary member. See Miriam O’Brien-Underhill, ‘Manless Alpine Climbing: The First Woman to Scale the Grépon, the Matterhorn, and Other Famous Peaks without Masculine Support Relates Her Adventures’, *National Geographic Magazine*, August 1934, 22–32.
49. He said: ‘The Grépon has disappeared. Now that it has been climbed by two women alone, no self-respecting man can do it. It’s also a shame because it was a really good climb.’ Miriam Underhill, quoted by Loomis, *Going Manless*, 99.
 50. Sylvain Jouty and Hubert Odier, *Dictionnaire de la montagne* (Paris: Omnibus, 2009), 465.
 51. A route that is still ranked as Difficult today.
 52. Nea Morin, *A Woman’s Reach* (New York: Dodd, Meade, and Co., 1968).
 53. Jouty and Odier, *Dictionnaire de la montagne*, 465. The route is still ranked as Very Difficult.
 54. Agnès Couzy, *Femmes alpinistes* (Paris: Hoëbeke, 2008).
 55. For example, the southwest (SW) face of the dent du Géant (4,013 m) and le Peigne in 1933, crossing the Grands Charmoz and Les Droites from West to East in 1935. Morin, *Encordées*, 67.
 56. Morin, *Encordées*, 155–173.
 57. *Ibid.*
 58. Samivel (Paul Gayet-Tancrède), *L’amateur d’abîme* (Paris: Stock, 1940), 142.
 59. Couzy, *Femmes alpinistes*, 167.
 60. *Ibid.*
 61. *Ibid.*
 62. Terret, Robène, Charroin, Héas, and Liotard eds., *Sport, Genre et Vulnérabilité au XXème Siècle*.
 63. Alexandra Lapière and Christel Mouchard, *Elles ont conquis le monde: les grandes aventurières 1850-1950* (Paris: Arthaud, 2009).
 64. Morin, *Encordées*, 61.
 65. Karen Routledge, ‘Being a Girl without Being a Girl: Gender and Mountaineering on Mount Waddington, 1926–36’, *BC Studies* 141 (2004): 31–58.
 66. The concept of ‘space of the women’s cause’ offers another way of thinking about the architecture of the struggles for the women’s cause, by understanding the plurality of mobilizations beyond social and political movements or organized collectives. Laure Béreni, ‘Penser la transversalité des mobilisations féministes: l’espace de la cause des femmes’, in *Les féministes de la deuxième vague*, ed. Christine Bard (Rennes: PUR, 2012), 27–41.
 67. Joan W. Scott, *La citoyenne paradoxale: Les féministes françaises et des droits de l’homme* (Paris: Albin Michel, 1998); Karen Christensen, Allen Guttman, and Gertrud Pfister, *International Encyclopédia of Women and Sports* (New York: Macmillan Library Reference, 2001).
 68. Matthew Llewellyn, ‘The Curse of the Shamateur’, *The International Journal of the History of Sport* 28, no. 5 (2011): 796–816.
 69. Raymond Lambert and Claude Kogan, *Record à l’Himalaya* (Paris: Hachette, 1963).
 70. Charlie Buffet, *Première de cordée, Claude Kogan, femme d’audace et de passion* (Paris: Robert Laffont, 2003).
 71. Georges Kogan and Nicole Leininger, *La Cordillère Blanche* (Paris: Arthaud, 1952).
 72. This synthesis is the result of an analysis of Claude Kogan’s correspondence with Lucien Devies (from ‘Fond Lucien Devies’) and Micheline Rambaud (Micheline Rambaud’s

- personal archives), as well as Micheline Rambaud's expedition journal (Cécile Ottogalli's personal archives). See Cécile Ottogalli-Mazzacavallo, 'Des femmes au Cho Oyu en 1959: Retour sur un voyage héroïque', *La Montagne* 3 (2009): 72–5.
73. *La Tribune de Genève*, March 6, 1959. Press release comes from Micheline Rambaud's personal archives shared with the authors. ->
 74. Journalist Stephen Harper followed the ascent and, through his works, contributed to a sensationalized 'takeover' of the events: Stephen Harper, *Lady Killer Peak* (London: World Distributors, 1965); Stephen Harper, *A Fatal Obsession: The Women of Cho Oyu* (Brighton, UK: Hardcover, 2007).
 75. Fédération Française des Clubs Alpins et de Montagne (FFCAM), Centre Fédéral de Documentation Lucien Devies, 'Un historique des Expéditions lointaines françaises,' <http://centrefederaldedocumentation.ffcam.fr/expeditionslointaines.html> (accessed February 26, 2020).
 76. Buffet, *Première de cordée*, 182.
 77. Manuel de Diéguez, *Combat*, October 1959. Article in the collections of the Bibliothèque nationale de France.
 78. In an attempt to join them at Camp IV, Sherpa T Chewang also died in an avalanche.
 79. Susan Birrell, 'Approaching Mt. Everest: On Intertextuality and the Past as Narrative', *Journal of Sport History* 34, no. 1 (2007): 1–22; Julie Rak, 'Social Climbing on Annapurna: Gender in High-altitude Mountaineering Narratives', *English Studies in Canada* 33, no.1 (2007): 109–46.
 80. Christine Grosjean, *Alpirando* 136 (1990): 56.
 81. Ottogalli-Mazzacavallo, 'Des femmes au Cho Oyu en 1959'.
 82. In Western countries, the '1968 era' spans the period between 1962 and 1981: Philippes Artières and Michelle Zancarini-Fournel, eds., 68, *une histoire collective 1962-1981* (Paris: La Découverte, 2008).
 83. Christine Delphy, *The Main Enemy: A Materialist Analysis of Women's Oppression* (London: Women's Research and Resources Centre, 1977).
 84. Catherine Achin and Delphine Naudier, 'Trajectoires de femmes 'ordinaires' dans les années 1970: La fabrique de la puissance d'agir féministe', *Sociologie* 1, no. 1 (2010): 77–93.
 85. The daughter of composer Emil Nikolaus von Reznicek, with whom she discovered mountaineering at the aged of 12, Félicitas von Reznicek became a journalist at Editions Ullstein. A resistance fighter from the very beginning, naturalized British by Winston Churchill in 1951, she went into exile in Switzerland in 1953, where she got involved in the development of women's mountaineering.
 86. Rendez vous Hautes Montagnes (RHM), 'Frauen des VI: Grades, Rendez-vous Hautes Montagnes', <https://www.rhm-climbing.net/history/> (accessed February 26, 2020).
 87. Félicitas von Reznicek, *Von der Krinoline zum sechsten Grad*. (Salzburg/Stuttgart: Verlag das Bergland-Buch, 1967).
 88. Félicitas von Reznicek called upon her political support to allow women mountaineers from Eastern Europe to overcome the obstacles of the Iron Curtain and travel to the Alps. Karin Steinbach Tarmutser, 'Wenn das Klettererlebnis Frauen verbindet', *Neue Zürcher Zeitung*, September, 9, 2013), <https://www.nzz.ch/wenn-das-klettererlebnis-frauen-verbundet-1.18153007> (accessed June 30, 2020).
 89. Ibid.
 90. Gugglberger, 'Wanda Rutkiewicz'.
 91. The fight to win rights was extended to the professionalization of women mountaineers. Following in the footsteps of Gwen Moffat (first female mountain guide in the United Kingdom in 1953), Martine Rolland was the first Frenchwoman to be awarded the Ecole Nationale de Ski et d'Alpinisme (ENSA) diploma for high-altitude mountain guides in 1983. Cécile Ottogalli-Mazzacavallo, 'Tu seras guide de haute montagne, Martine', in *Femmes et hommes dans les sports de montagne: Au-delà des différences*, ed. Cécile Ottogalli-Mazzacavallo and Jean Saint Martin (Grenoble: MSH Alpes, 2009), 113–30.

92. Kris Bel and Brigitte Steinmann, 'Femmes sur les sommets ou femmes en vitrine', *Alpinisme et Randonnée* 11 (1979): 21.
93. Simone Badier, 'Alpinisme au féminin', *La Montagne et Alpinisme* 2 (1976): 274.
94. Anne Sauvy, 'MLFA ou les crampons bleus', *La Montagne et Alpinisme* 3 (1976): 343–9.
95. Ibid.
96. Bel and Steinmann, 'Femmes sur les sommets ou femmes en vitrine', 20.
97. Mireille Baltardive and Meije Le Cottier, 'Rencontre du deuxième sexe', *Alpinisme et Randonnée* 21 (1980): 28–9, 61–2; Colette Villaret and Bénédicte Reynaud, 'A nous les petites falaises!', *Montagnes Magazine* 43 (1982): 38–42.
98. Isabelle Agresti and Rose Chauvet, 'Des françaises au Colorado', *La Montagne et Alpinisme* 3 (1984): 446.
99. Paul Brasset and Maurice Faure, 'Les femmes chinoises et l'alpinisme', *La Montagne et Alpinisme* 4 (1984): 535.
100. Christine De Colombel, 'Des femmes et le K2', *La Montagne et Alpinisme* 2 (1983): 64.
101. Bel and Steinmann, 'Femmes sur les sommets ou femmes en vitrine'.
102. Fédération of the CAFs (FCAF) in 1994 and the New *Fédération Française de la Montagne et l'Escalade* – FFME – created in 1987.
103. Olivier Aubel, *L'escalade libre en France. Sociologie d'une prophétie sportive* (Paris: L'Harmattan, 2005).
104. Paul Irlinger, Catherine Louveau, and Michèle Métoudi, *Les pratiques sportives des Français: Usages sportifs du temps libéré* (Paris: INSEP, 1987).
105. The FFM became FFME, recognizing the importance of sport climbing ('Escalade').
106. Luc Jourjon, 'Alpinisme : Jeunes haut niveau', *La Montagne et Alpinisme* 4 (1994): 77.
107. For example, there is no reference to non-mixed teams in Catherine Destivelle, *Ascensions* (Paris: Arthaud, 2003) or Alexandre Dyck, *Chantal Mauduit. Elle grimpeait sur les nuages* (Chamonix: Guérin-Paulsen, 2016).
108. Cécile Dauphin, *L'état et les droits des femmes: Des institutions au service de l'égalité?* (Rennes: Presses de l'Université de Rennes, 2010).
109. Catherine Louveau, 'Dans le sport, des principes aux faits ...', *Travail, Genre et Sociétés* 34, no. 2 (2015): 181–6.
110. 'Quatre femmes au sommet', *La Montagne et Alpinisme* 3 (1999): 55. –>
111. Paul Grobel, 'Cotations et Himalaya', <http://paulo.grobel.pagesperso-orange.fr/cotations.htm> (accessed December 16, 2016).
112. Bernard Mudry, 'Editorial: Alpinisme au féminin', *La Montagne et Alpinisme* 2 (2002): 11.
113. FFME, 'L'ENAF, l'alpinisme de haut-niveau au féminin', http://ffme-imag.fr/dossier_9/lenaf-lalpinisme-de-haut-niveau-au-feminin (2016) (accessed February 11, 2019). ENAF (Equipe Nationale d'Alpinisme Féminin) is the later name of ENFA.
114. This finding is based on the analysis of the programmes, training courses and destinations of seven cohorts. –>
115. Lindsay Griffin, 'Teng Kang Poche', *American Alpine Journal* 45, no. 77 (2003): 381.
116. 'Alpinisme: intense activité au CAF', *La Montagne et Alpinisme* 1 (2003): 51.
117. 'En route pour le Teng Kang Poche', *Relais JS* 72, May (2002): 14.
118. Christine Mennesson, 'Les femmes Guides de haute montagne: Modes d'engagement et rapports au métier', *Travail, Genre et Sociétés* 13, no. 1 (2005): 117–37.
119. As for the FFCAM (new name of the FCAF as from 2005), the national teams (GEAN) became partially mixed, with the introduction of an informal rule of proportional women/men representation according to membership (two to three women for six to seven men per year). As for the FFME, teams remained separate: *Equipe Nationale d'Alpinisme Masculine* or *Féminine* – ENAM or ENAF (which replaced the ENFA).
120. Group supervised by guides Gaël Bouquet des Chaux and Pierre Neyret and including Sara Berthelot, Karine Ruby, Marion Poitevin, Marine Clarys, Fanny Devillaz, and Fleur Fouque. *Pakistan 2008-ENFA*, directed by Neyret and Bouquet des Chaux, CA: FFME WebTV, <https://www.dailymotion.com/video/x7iygx> 2008 (accessed November 12, 2018).

121. Manu Rivaud, 'Drôles de dames dans la face Nord du Triglav', *Montagne Magazines* 325 (2008): 67.
122. Frohlick, 'That Playfulness of White Masculinity'.
123. At an international level, an alpinist suggests, beyond top-level female mountaineers, the importance of inspirational 'accessible examples for female climbers' (Loomis, 'Going Manless', 103).
124. For example, in 2018: *Groupe Féminin de Haute Montagne (GFHM) Rhône-Alpes*, *Equipe Pyrénéenne d'Alpinisme Féminine (EPAF)*, *Groupe Alpin Féminin de Haute-Savoie (GAF74)*, *Equipe Régionale Féminine d'Alpinisme Languedoc-Roussillon (ERFA)* and *Equipe Départementale d'Alpinisme Féminin Hautes Alpes (EDAF05)*.
125. The 146th General Assembly of the FFCAM awarded the club a trophy ('8 d'or') for 'the way it promoted female leadership'. Lead The Climb, <https://www.facebook.com/leadtheclimb/> (post published January 27, 2019).
126. GFHM, <https://www.facebook.com/gfhmteam/> (post published on 21 December, 2018).
127. For example, Cécile Chauvin (GFHM 2011), Tanya Naville (GAF74 since 2014), Julia Virat and Marion Poitevin (GAF74 2017), Elodie Lecomte and Lise Billon (ENAF 2019).
128. The guide profession remains a male fortress with only 2 percent of women in 2019, see Nina Kropotkine-Watson, 'Alpinisme au féminin', *Alpine*, October 3, 2018, <https://alpinemag.fr/alpinisme-au-feminin/> (accessed February 26, 2020). Yet, a regular increase in the number of women at the *Ecole Nationale de Ski et d'Alpinisme* - ENSA may be observed (1 in 1983, 10 in 2005, 35 in 2018). A large part of these new professional women carried out their initial training within these non-mixed structures (e.g. four of the six female guides in 2017 came from the ENAF). Since 2016, ENAF, through partnership with ENSA, enjoyed equal treatment: as for men, the national team could be granted exemption from three of the official guide tests.
129. 'Women need to practise among women, whether we agree with this idea or not! Create your own 'women mountaineers' section in your CAF club or FFME 😊😊, it should be a success'. Lead The Climb, <https://www.facebook.com/leadtheclimb/> (post published in December 16, 2018).
130. Fabien Ohl and Marjke Taks, 'Secondary Socialisation and the Consumption of Sporting Goods: Cross Cultural Dimensions', *International Journal of Sport Management and Marketing* 2, no. 1/2 (2007): 160-74.
131. As an indicator of this evolution, it was in 1997 that the first 'equipment test' reports dedicated to women appeared in the specialized press: Daniel Léon, 'Vestes de femmes', *Vertical* 102 (1997): 74; Daniel Léon, 'Femmes en marche', *Vertical* 104 (1997): 74.
132. Alexandre Autexier (Mountain Guide, Petzl Marketing Manager, quoted in Philippe Vouillon, 'L'alpinisme au féminin', *La Montagne et Alpinisme* 264, no. 2 (2016): 46.
133. Damien Tomasi and Fanny Tomasi-Schmutz, interview by Ulysse Lefebvre, *Montagnes Magazine* 433 (2016): 28-9. This double standard in recognition seems effective in the U.S. (Loomis, 'Going Manless').
134. Erving Goffman, 'La ritualisation de la féminité', *Actes de la Recherche en Sciences Sociales* 14 (1977): 34-50.
135. During the period between 1950 and 1989, there were 10 articles in the French mountain press (*La Montagne & Alpinisme*, *Cimes*, *Alpinisme & Randonnée* and *Montagnes Magazine*) dedicated to women's mountaineering (portraits, narratives, tests). Between 1990 and 2018, with a number of editorial changes (*Vertical* created in 1985, *Alpinisme & Randonnée* stopped in 2006), there were 49 articles.
136. This social construction is still also effective in the U.S. (Loomis, 'Going Manless') or in Spain (David Moscovo-Sanchez, 'The Social Construction of Gender Identity amongst Mountaineers', *European Journal for Sport and Society* 5, no 2 (2008): 183-90).
137. Elsa R. (Communication Manager, Member of GFHM), interviewed by François de Rosanbo (2018), quoted in De Rosanbo, *Sports alpins et pratique féminine*, 63. ->
138. The instructor Tanya Naville, quoted by the journalist Philippe Vouillon, 'Première de cordée', *Femmes Ici et Ailleurs* 34 (2019): 56.

139. Christine Mennesson, 'Pourquoi les sportives ne sont-elles pas féministes: De la difficulté des mobilisations genrées dans le sport', *Sciences sociales et sport* 5, no. 1 (2012): 161–91.
140. Duby and Perrot, *Histoire des femmes en Occident*.
141. Jean-Luis Klein and Denis Harrisson, eds., *L'innovation sociale. Émergence et effet sur la transformation des sociétés* (Québec: Presses de l'Université de Québec, 2007), 2.
142. Diane Lamoureux, 'Y a-t-il une troisième vague féministe?' *Cahiers du Genre* 3, no. 1 (2006): 57–74.
143. Jacques Rancière, quoted by Geneviève Fraisse, *La sexualité du monde*, 66.

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