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Performing Leadership “In-Between” Earth and Sky

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Résumé :

This research aims to understand how leaders co-perform distributed leadership. Following Spillane’s (2006) definition of distributed leadership as located “in-between” leaders, we analyze the interactions in-depth (through e-mail and phone calls) between the forecasters (the “earth”) and the team leaders during the summit attempts (the “sky”) of two commercial expeditions: one to Broad Peak, and one to Mt. Everest via the northern ridge. Our research contributes to the understanding of the construction of distributed leadership. First, it describes the discursive practices through which team leaders and forecasters co-perform distributed leadership. Second, it shows that while facing relatively similar natural, technological, task-related and human conditions, leaders co-construct two different forms of distributed leadership: coordinated distribution (Spillane, or sequential, Thompson, 1967) and collaborated distribution (or reciprocal). Finally, it underlines that different leadership configurations may result in similar, favorable outcomes, thereby inviting us to take distance with a determinist concept of leadership.

Mots-clés : discourse analysis, distributed leadership, task interdependency, mountaineering

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Performing Leadership “In-Between” Earth and Sky

Introduction

Although 8000m summits have attracted an increasing number of commercial expeditions since the late 80’s, the 1996 Everest tragedy reminds us that mountaineering in high altitudes remains highly risky (Krakauer, 1997; Kayes, 2004; Tempest, Starkey and Ennew, 2007). Making sense of, and adapting to, an extreme, complex and fast-changing environment requires not only that the individual be in very good physical condition, possess a high level of technical expertise and experience, but also have the capacity to adapt to, if not anticipate, a hostile and ever-changing environment; a capacity that is all the more vulnerable as physical, emotional, and cognitive abilities become severely altered due to fatigue, cold and lack of oxygen (Elmes and Frame, 2008).

Since the 1996 tragedy, mountaineering has dramatically evolved. To increase their probability of success in summit attempts and thus the commercial attractiveness of their business, team leaders do not hesitate to use the latest communication technologies (i.e. usually the internet at the base camp, mobile and sat phones in higher altitudes) and weather forecasts. Commercial expeditions, in particular, are now systematically assisted by professional forecasters – located worldwide – who send them daily updated weather forecasts that detail the various ascent parameters. Temperature, humidity, wind, risks of snow fall and storm are estimated for the next few hours and days at different altitudes and for the particular slope of the mountain where the team is located. These forecasts are communicated by e-mail, sms or phone calls. They can take the form of plain text (in e-mails), abbreviations (in sms) or graphics (maps, windgrams or meteograms, see Appendix 1 for an example). These forecasts are crucial in high altitude where weather conditions are extremely versatile: Even if not 100% reliable, they limit the risk of being trapped in bad weather conditions by alerting the leader before leaving the base camp or during the ascent – and so they can stop before the weather deteriorates. Alternatively, weather forecasts can also indicate favorable conditions.

As reaching an 8000m summit takes a few days (after, of course, approximately 6 weeks of acclimatization) knowing when a weather window opens up can make a difference. In such situations, the team leader no longer decides alone when to attempt a summit (or to stop it). These decisions are highly influenced by, if not shared with, the forecaster.

Since the late 90's, a growing number of researchers (e.g. Gronn, 1999; Pearce and Conger, a & b, 2003; Spillane, 2006) have adopted a shared, relational or distributed perspective on leadership, bringing invaluable insights into the antecedents and outcomes of such leadership configurations. With a few exceptions (see Crevani, Lindgren and Packendorff, 2010), the discursive practices of leaders during their interactions, through which such distributed leadership is performed, have not been investigated. Inspired by conversation analysis and ethnomethodology (see Heritage, 2004; Potter, 2004), we consider here that talk and texts are a medium for social action: It is through these actions that people construct the context of their interactions (Silverman, 2006), make sense of their experience (Weick, 1995), display mutual understanding (or misunderstanding), co-orient themselves (or not, see Crevani, Lindgren and Packendorff, 2007) and their action. With this in mind, we follow Fairhurst (2011: 503) when she points out that, "leadership is often much more distributed" with a focus on the details of interactions.

How do leaders co-perform distributed leadership during their interactions? Embracing Spillane's (2006) definition of distributed leadership as located "in-between" leaders, we analyze the interactions in-depth – through e-mail, sms and phone calls – between the forecasters (the "earth") and the team leaders during the summit attempts (the "sky") of two commercial expeditions: the first one to Broad Peak, and the second one to Everest via the northern ridge.

The theoretical contribution of the research is threefold:

Firstly, our research provides a detailed description of the discursive practices of both the team leaders and the forecasters through which they co-perform distributed leadership. While coordinated distribution is dominated by assertive practices (giving information and feedback), collaborated distribution is accompanied by the team leader's specific requests and ques-

tions, so that the forecaster is progressively enrolled in the decision process and increasingly gives suggestions and advice.

Secondly, it shows that while facing relatively similar natural, technological, task-related and human conditions, team leaders and forecasters co-construct two different forms of distributed leadership: a coordinated distribution (Spillane, 2006, or sequential, cf. Thompson, 1967) in the Broad Peak expedition and a collaborated distribution (Spillane, 2006, or reciprocal, cf. Thompson, 1967) in the Everest expedition. Our research contributes to a socio-constructionist concept of leadership showing that the leaders' actual practices play a crucial role in the leadership configuration.

Thirdly, our research provides a rather nuanced picture of leadership's effects on team performance, underlining that different leadership configurations may result in similar, favorable outcomes different leadership configurations may lead to favorable outcomes.

On the whole, our research contributes to a better understanding of how distributed leadership is co-performed "in-between" leaders.

The remainder of the article is organized as follows. First, we briefly review the work on distributed leadership and highlight the interest of studying these processes through the interactions between leaders. Second, we describe the context within which this research took place, and the methods of data collection and analysis that were used. We then present the two case studies, and conduct a detailed analysis of the interactions between the team leaders and the forecasters. Finally, we discuss the research contributions.

1. Understanding distributed leadership

While individualist, essentialist and heroic concepts of leadership continue to dominate, a growing number of researchers call for adopting processual, adaptative, shared or distributed perspectives on leadership (Avolio, Walumba and Weber, 2009: 441-2; Crevani, Lindgren and Packendorff, 2007; Fletcher, 2004; Kozlowski and Ilgen, 2006: 109). It is argued that senior leaders or leaders in cross-functional teams do not necessarily possess sufficient and relevant information and knowledge to make fast, appropriate decisions (Pearce and Conger, 2003b: 2;

Pearce, Manz and Sims, 2009). In a complex, turbulent environment an individual, vertical leader is less likely to have all the knowledge and skills required to effectively lead the team and make adequate and informed decisions. Leaders are encouraged to develop *shared leadership* (Carson and Tesluk 2007; Pearce and Conger, 2003), delegating to the front-line so that team members lead themselves. Other researchers argue for the study of *distributed leadership* (Gronn, 2002; Spillane, 2006) whereby leaders share decision-making with other executives, independent consultants or experts that may belong to other organizations, or be located in different divisions or plants (Bell and Kozlowski, 2002: 31; Hinds and Bailey, 2003). In this configuration, it is not unusual for teams to cross conventional time, space and organizational boundaries, in particular when the project is particularly complex and relies on rare expertise (Gibson and Gibbs, 2006: 458).

1. 1. Distributed leadership defined

Distributed leadership is defined as a set of functions necessary to accomplish the team's mission (Spillane, 2006). These functions are not the prerogatives of an individual leader alone, but are seen as performed *in and through interactions between two or more leaders* (Crevani, Lindgren and Packendorff, 2010; Spillane, Diamond and Jita, 2003; Spillane, Halverson and Diamond, 2004; Mehra, Smith, Dixon, Robertson, 2006). This definition has profound implications for the understanding of leadership.

First, it implies that different leadership functions (e.g. direction and structuration, adaptive monitoring of the team's performance and environment, support and learning, motivation and performing team tasks, Klein, Ziegert, Knight and Xiao, 2006; Morgenson, DeRue and Karam, 2009) may be accomplished by different leaders. For instance, Klein et al. (2006) show that functions of leadership in a trauma center are frequently distributed among the attending surgeon, the resident and the fellow, so that the more experienced team member monitors team action, another team member provides direction and hands-on treatment and a third teaches and explains what s/he is doing. Alternatively, a particular leadership function (e.g. the monitoring of the team, for instance, or the definition of the strategy of a particular division in an organization) may be performed by two or more leaders (Spillane, 2006; Crevani, Lindgren and Packendorff, 2010).

Secondly, the distributed perspective sees leadership as dynamically defined according to the situation. Much attention is paid to the expectations and reactions of the followers (Spillane, 2006) and other stakeholders (Crevani et al., 2007) that may extend, complement or resist the leaders' actions. In the same vein, a distributed approach to leadership implies the investigation of the material, structural and normative environment of the team, in that these dimensions are mediational means through which leadership is exercised. According to Spillane, Diamond and Jita (2003: 542), "Studies of leadership expertise must investigate how, and the extent to which, the expertise essential for the execution of particular leadership tasks is stretched over different leaders as well as over the tools with which they work". Gronn (2002) shows how new communication technologies influence the way leadership is enacted. In this perspective, Bell and Kozlowski (2002) recommend that leaders adapt the communication technology to the complexity of the tasks at hand. When the task's complexity increases, a higher degree of collaboration is needed. Rich media, synchronous communication technologies such as phone or video-conference are recommended as they permit real-time, reciprocal interdependence and facilitate group decision-making (Bell and Kozlowski, 2002: 25; 42).

Finally, researching distributed leadership implies paying particular attention to the "in-between" of leadership, i.e. the actual practices through which leaders interact and exercise leadership (Spillane, 2006: 16; Crevani et al., 2010).

1. 2. Understanding the "in-between" of leadership

Previous qualitative research, while still rare compared to quantitative studies, brings invaluable insight into the ways leaders coordinate their leadership practices. Relying on Thompson (1967)'s typology of task interdependencies (reciprocal, pooled and sequential), and Weick and Robert's (1993) notion of heedfulness, Spillane (2006) suggests that leaders may co-perform leadership practice through three types of distribution.

Coordinated distribution designates leadership practices articulated in a particular sequence. *A priori*, the interactions between the weather forecaster and the team leader during an expedition fall into this particular category: the forecaster analyzes the weather parameters, then

sends predictions for the next few days; information which the leader will use in planning the team's next actions.

In *collaborated distribution*, two or more leaders work together to execute the same leadership routine, such as facilitating a meeting. Collaborated distribution relies on reciprocal interdependencies so that the actions of the leaders are input for those of the others and *vice versa*. Leaders observe the others' perspectives and actions, leading to heedful interrelating. According to Spillane (2006), this does not mean that leaders necessarily share the same views or goals; only that they are responsive to the others' actions and rely on different types of knowledge that they intertwine during interaction. Analyzing in-depth conversations between managers, Crevani et al. (2010) show that through expressing agreement and disagreement, arguments and counterarguments, managers collectively make sense (both in meaning and direction) of what is happening around them. They collectively define boundaries for their actions, construct positions and roles for the different actors, frame some events and information into issues, etc., and, in so doing, progressively define a direction for their actions.

Collective distribution designates a configuration where two or more leaders enact a leadership routine by working separately but interdependently, such as when they perform different types of evaluation and monitoring. Although not performing the leadership routine in the same time and place, the leaders' actions are interlinked because "the design and execution of one dimension is related to the design and execution of the other" (Spillane, 2006: 66).

These different types of distribution are not mutually exclusive and can coexist depending on the complexity and the ambiguity of the task, on the pace of change, and on the requirements of the circumstances. Klein et al. (2006) show that leadership practices in the medical teams they studied are dynamically delegated and distributed depending on the novelty or urgency of the situation, the amount of confidence team members have in themselves and others, and on their experience and skills.

While making an important step towards a better understanding of the ways leaders co-perform leadership, previous research says little about the actual practices through which coordinated, collaborated, and collective distribution is enacted. How do leaders co-perform distributed leadership? Through a detailed analysis of the interactions between forecasters and

team leaders during two expeditions in high altitudes, our research aims to contribute to the filling of this gap.

In the next section, we briefly present the two case studies and the methods of data collection and analysis.

2. The Broad Peak and Everest expeditions

These two case studies are part of a research project on shared leadership and decision-making in geographically dispersed organizations confronted with high-risk situations, (six expeditions have been studied). The two case studies presented here, namely the Broad Peak and Mt. Everest (through the North Ridge) expeditions, are similar in many respects.

First of all, they consist of two commercial expeditions led by high mountain guides known worldwide as highly experienced himalayists. John¹, the leader of the Broad Peak expedition, is one of the few European mountaineers who could attempt the ascent of the 14 highest summits in the world as he has both the ability and drive to do so. He is one of the heads of SkyInc, a French company which specializes in commercial expeditions in high altitudes all over the world including Antarctica. The Broad Peak team is composed of John, two other guides, three Nepalese Sherpas and five clients. Georg, the Swiss leader of the Everest expedition, is the director of StarInc, one of the largest companies² in high mountaineering expeditions. The Everest team consists of Georg, one other guide, seven clients and Sherpas. Both Georg and John pay particular attention to the selection of the clients so as to minimize health risks and to ensure that they have the requisite levels of technical expertise and training to succeed in their attempt.

Secondly, the two expeditions are assisted by the same team of forecasters. Those belong to a small division of a larger Swiss Company, EarthInc, specialized in weather forecasts. The

¹ The names of the protagonists and their companies have been changed to preserve confidentiality.

² StarInc employs more than fifty guides worldwide.

team, headed by Martin, is dedicated to weather forecasts for mountaineers worldwide. The company started its forecasting business for mountaineering in 1997, when Georg asked them to provide weather forecasts for his expeditions. John and Georg are used to working with the EarthInc team, and have extensive experience reading weather maps and charts (see Appendix 1). While the forecasters are not necessarily the same person from day to day, they rely on the same weather models, relatively standardized procedures and team briefings so as to guarantee consistency in the content and format of the predictions sent to the leader of the expedition.

Thirdly, the team leaders and the forecasters use similar technologies to communicate during the expeditions. Weather forecasts are sent by e-mails only – when the leader is at the Base Camp, or in the Advanced Base Camp in Everest – and then by e-mails and sms when the team progresses to higher altitudes. The leaders send feedback and specific requests or questions *via* e-mails. When a favorable weather window is forecasted and the team decides to attempt the summit's ascent, it is not unusual for the leader to call EarthInc to get the latest forecasts before the summit push³.

Fourthly, while they do not present the same kind of difficulties, Broad Peak and Everest might be considered comparable⁴. The lack of oxygen and low temperature at Everest, which is one of its major difficulties for mountaineers, can be supplemented by an adequate supply of oxygen and help from Sherpas (Georg, pre-expedition interview). The North route is “a little bit more technical if there is no snow” (Georg, pre-expedition interview) than the South route but it is also safer, as it is less affected by humidity and more affected by the wind. In fact, “The wind forecast is very, very accurate, much better than the humidity or the precipitation forecasts” (Georg, pre-expedition interview). Broad Peak, with its altitude of 8047m, may, at first hand, appear much easier than the Everest, however, significant portions of the ascent approximate 45-50 degrees so that “an excellent physical condition and a very good level in climbing” are requested (SkyInc website). Located near the K2 in Karakoram, North Pakistan, Broad Peak “is not an easy 8000 like the Shisha, the Cho Oyu or the Manaslu”

³ The summit push designates the last part of the expedition, usually the most difficult one in high altitude.

⁴ Of course, this appreciation is highly subjective. By ‘comparable’ we mean that the different difficulties they present can be considered as ‘balancing’ one another. Both Broad Peak and the North Face of Everest are not as technical and difficult as the K2, for instance, but are more difficult than the Manaslu.

(John, pre-expedition interview). The ascent takes the west face, which is less exposed to the sun during the morning. The afternoon snowfalls accumulate, increasing risk of avalanche, and snow tracing work (John, pre-expedition interview).

Finally, around 6-7 weeks (including acclimatization) are necessary to complete the expeditions. The Everest expedition left Europe on April 6, 2012 and came back on June 1st. The weather assistance began on April 18th, and stopped on May 26th, when the team reached the summit (49 days). The Broad Peak team left Europe on June 1st, 2012 and came back on July 8th. Their assistance began on June 4th and stopped July 6th (34 days).

On the whole, while not presenting the same topographical and weather conditions, the two expeditions share important characteristics in terms of team composition, weather assistance, technology and objective: reaching the top without endangering the safety of the clients.

3. Research Methods

3. 1. Data collection

The two case studies rely on interviews, naturally occurring talks (Silverman, 2006) and documentary data. In-depth interviews were conducted with the team leaders both and after the expeditions. The pre-expedition interviews focused on their prior experiences with EarthInc, the composition of the team, preparation of the expedition and the main difficulties that were anticipated. Post-expedition interviews were articulated around the critical phases of the expeditions, the decisions to attempt the summit – or to stop it – and their interactions with EarthInc. Martin, the leader of the forecaster team was also separately interviewed both before and after the expeditions. Peter, another forecaster who assisted Georg during his two summit attempts, participated in the Everest post-expedition interview; Peter also assisted John during his two attempts⁵. The interviews lasted from 60 to 90 minutes and were held in English (except John's interviews, which were held in French). All interviews were recorded and transcribed.

⁵ Unfortunately, Peter could not participate in the Broad Peak post-expedition interview.

These data were complemented with the set of messages exchanged between the forecasters and the team leaders. For the Broad Peak expedition, the complementary data set consists of the e-mails (plain texts and charts) and sms sent by the forecasters, the e-mails sent by John to the forecasters, and the three phone conversations that Peter had with John during his two summit attempts. All these data were in English. For the Everest expedition, this data included the e-mails exchanged between the forecasters and Georg, as well as the four conversations Peter had with Georg during his two summit attempts. These data were in Swiss German and so have been translated into English. Unfortunately, in both cases, only Peter's end of the conversations could be recorded. While John and Georg were equipped with a voice recorder, it was too difficult to use it when calling with the sat phone; sometimes outside the tents, in the cold and wind. As they were focused on the weather conditions however, the content of the conversations was not difficult to understand. While not without limitations, it was possible to draw some tentative conclusions about the discursive practices of the forecaster during the phone call.

The data were further complemented by the information on the Broad Peak expedition sent upon request by the company to the prospects and clients, the diary John recorded on voice recorder, the blog he and two other guides wrote and published on SkyInc's website during the expedition and informal meetings the second author had with Georg after the expedition. For both expeditions, additional interviews and workshop meetings with the EarthInc's team, and other guides, mountaineers and a French weather forecaster have been helpful in understanding the context and issues at stake during the interactions between the forecasters and the mountaineers. The research project also relied greatly on the insider knowledge and mountaineering experience of the second author⁶.

1. 2. Data Analysis

Confronting the different data sources, we first established a chronology of the expeditions and identified the different phases of summit attempts after acclimatization. These chronolo-

⁶ The second author is not a himalayist but has considerable experience mountaineering in the Alps, and can be considered a connoisseur.

gies were validated by the team leaders during the post-expedition interviews. It was possible to approximate the date when the team leader decided to attempt to reach the summit (two attempts during both expeditions) and when they decided to stop (two stops during the Broad Peak, one stop during the Everest expedition).

Secondly, we calculated the number of message exchanges during the summit attempts, as these can be taken as an indicator of the intensity of the interactions between the leader and the forecasters.

Thirdly, in order to get insights into leadership distribution, we analyzed the content of their interactions. As the content of the messages sent by the forecasters mainly consisted of detailed information about the weather parameters (in plain text and charts, see Appendix 1), we focused on the e-mails sent by Georg and John to EarthInc, and on the forecaster's end of the conversations during the summit attempts.

Following conversation analysts and ethnomethodologists, we consider that talk is a medium for social action, so that "the analysis of discourse becomes the analysis of what people do" (Potter, 2004: 201). Rather than explaining people's talk by inferring their underlying beliefs, values, states of mind, or implicit goals, we describe what people are actually doing when talking, for it is through these actions that people display mutual understanding and construct the context of their interactions, their organization (Fairhurst, 2009: 1612), and their social realities (Silverman, 2006: 221). We followed these analytical commitments by analyzing both the e-mails and the conversations between the forecasters and the leaders of the expedition.

We relied on a simplified version of Searle's classification of illocutionary acts to conduct a sequential analysis of the interactions between the forecasters and the team leaders during their summit attempts. In this way, we outlined how they co-perform leadership over time. To be specific, we distinguish between *assertive* and *directive illocutionary acts*. *Assertives* (or representatives, Searle, 1976) are statements that convey information that "commit the speaker (in varying degrees) to the truth of the expressed proposition" (Searle, 1986: 218). It is supposed "to represent a certain state of affairs". The degree of commitment or belief in the described state of affair may be weak, as when someone formulates a hypothesis, or strong, when s/he swears or insists that his statement is true (Searle, 1976: 10). *Directives* are defined

as “attempts by the speakers to get the hearer to do something” (Searle, 1976: 11). Requests, questions, warnings, suggestions or advice are examples of directives whose illocutionary force may go from weak (to invite to, suggest to) to strong (to demand, order, insist).

Researchers in discourse analysis emphasize that classifying an utterance as a directive or assertive is not an easy task, and always implies some amount of interpretation from the hearer and, of course, from the analyst. In fact, the meaning of an utterance cannot be interpreted without taking into account the context that surrounds it (i.e. the talks that come before, and those that follow) in that they indicate how they have been understood by the hearer (Potter, 2004; Heritage, 2004). As some parts of the conversation were missing, it was not possible to conduct a turn-by-turn analysis of the phone call between the forecaster and the team leader.

Though not without limitations, it is believed that the analysis of the leaders and the forecaster’s discursive practices in terms of speech acts can be indicative of the leadership configuration they co-performed when interacting (see also Crevani et al., 2010).

In the next sections, we provide a brief overview of the two expeditions before analyzing their interactions.

4. Understanding the ‘in-between’ of leadership

4. 1. Overview of the expeditions

In both expeditions, the forecast assistance began when the team arrived at the Base Camp. EarthInc usually sent a daily report by e-mail and/or sms around 9 a.m. Swiss time, so that the leader received it at the end of the mountaineering day (usually around 3-4 p.m. Himalayan time). Upon request, EarthInc also made complementary analyses (about the wind, for instance).

The Broad Peak expedition

On June 7, 2012, after 9 days of trekking, the Broad Peak team reached the Base Camp (BC, 4900 m). From the 10th to the 19th, the team prepared the different camps (C1, 5700m, C2, 6700m, and C3, 7000m), carried the materials and progressively acclimatized to higher alti-

tudes. On June 14th John sent his first feedback to EarthInc and underlined that “until now, the reports are not very reliable”. The forecasts of the 9th and 10th were announcing few possible showers in the afternoon of the 11th and rather friendly weather on the 12th. On the 11th and 12th, however, it snowed so much so that the team was forced to return to BC on the 13th.

First summit attempt (June 21-27, 2012). The 20th of June, after one night spent at C3 in very windy conditions, the team went back again to BC where John wrote to EarthInc: “We are now ready for summit after taking a minimum of 3 days of rest”. On June 21st a cyclonic period (i. e. snow and thunderstorms) is announced for the 26th to 29th. John and team decided to leave to summit on the 22nd. The team is at C2 on June 23rd. While the wind is stronger than forecasted, John is optimistic: an sms from EarthInc and a phone call confirm that “the weather looks promising until the 25th”. By the 24th the team is at C3 (7200m). John calls Peter who “told [him] that good weather [is] still expected for coming days” (John’s e-mail to EarthInc, 26th June). At midnight, on the 25th, the team left C3, but at 4 a.m., at 7500m, the team is forced to stop because of heavy snowfalls and zero visibility. With humor, the team’s blog wrote: “We have to find our way in the storm, and no trace any more. This is the Pakistani anticyclone”. On June 26th, back in BC, John sent Martin an e-mail where he details how “during those 3 days, the forecasts have been completely wrong”. Martin, in a long answer, explains that these forecasts conformed to the models’ predictions, that “there were no signs to cancel the mission”; but that due to the proximity of the subtropical and the polar jet streams⁷ in this region, “very stable conditions are hard to find”. On the 28th, 3 clients and 3 Sherpas decided to go home. They are followed by another guide on July 1st. The remaining “team” is now composed of 2 guides and 2 clients.

⁷ According to the geography dictionary (geography.dictionary.org), jet-streams are “relatively fast uniform winds concentrated within the upper atmosphere in a narrow band. The polar jet stream exists in the mid-latitudes at an altitude of approximately 10 kilometers”. “The subtropical jet stream exists in the subtropics at an altitude of approximately 13 kilometers”. “The polar jet stream flows from west to east at speeds between 110 to 185 kilometers per hour”. The polar jet stream contributes to the high-speed wind observed (sometimes attaining 80-100km/h) at high altitudes in the Everest and Karakoram regions.

Second summit attempt (July 2-6, 2012). On June 28th, John sent Martin an e-mail saying that they will be ready for a last attempt only after a few days of rest, although good weather conditions are forecasted for the coming days. On July 1st, moderate winds are forecasted for the 5th to the 8th. On July 2nd the team and two other European mountaineers leave BC. The forecasts now indicate decreasing wind-speed. On the 4th the team is at C3. John called Peter who confirms “nice weather [...] with a wind of 30Km/h for the 6th” (SkyInc’s blog). On the 5th they set up C4 at 7300m. By the 6th, John and another guide are alone: the two other team members are too sick to continue and the two European mountaineers are suffering from frostbite. At 2 a.m., they left C4 but at 9:30 a.m. had to stop at the summit ridge, 7900m, as “gusts [were] so violent that it [was] difficult sometimes to keep standing” (SkyInc’s blog). On the 7th, Peter sent his final feedback to Martin.

The Mt. Everest North Ridge expedition.

The Everest team arrived at BC (5182m) on April 18th, 2012, 12 days after their departure from Europe. After three weeks of acclimatization and progression to higher altitudes (Advance Base Camp-6492m, North Col-7000m, C2-7500, C3-8300m), on May 9th EarthInc announces “a small window” from May 17-18. The window is confirmed on the 12th and 13th by Peter. On the 14th, Georg, coming back from the North Col to ABC, asks whether “it will get serious over the next week”. Martin confirms and adds that on the South Side of Everest, a first rush⁸ is expected on May 17th.

First summit attempt (May 14-19, 2012) On the 14th, Georg asks for more information about the wind. Martin confirms that the wind will not exceed 30km/h on the 19th and the 20th; a wind speed that Georg considers as the upper limit for a successful summit ascent. On the 16th, the team left ABC. He again asks for the latest wind updates. On the 18th, Georg called Peter at the North Col, as “there was much more wind than expected” and then called him once again at ABC where he could check the e-mails and charts. He explained: “You want to

⁸ In season, which lasts approximately one month per year, it is estimated that 500 westerners and 500 Sherpas come to base camps. This means that when a favorable window opens up, more than 100 people may attempt the summit.

see that your decision is correct” and “[...] that there [was] another window”. He also adds that “it is easier to think at 4000m than at above 7800m” (post-expedition interview). At ABC, on the 19th, he again called Peter who confirmed that the wind will reach 40-50km/h on the 19th and that another window opens up between the 22nd and 23rd. Georg decided to bring the whole group down. On the 20th, Georg confirms by e-mail that the wind is blowing at 50-60km/h at 7500m-7800m and concludes that “the weather report is still a hit”.

Second summit attempt (May 20-25, 2012). The weather reports on the 20th and 21st confirm that the Northern jet stream is going to leave Everest from the 25th to the 27th. Georg decides to attempt the summit on the 25th, “so that [they] could have a day of reserve” (post-expedition interview). He also decided to stay at ABC so that he was “sure if that if there is again some weather change that we can react very fast” (post-expedition interview). On the 24th, he left ABC for the North Col at 7000m so he could see the progression of the team with binoculars and talk to them on VHF radio. He called Peter for wind updates. Peter reports that he does not expect an increase in wind speed during the morning but that it is still possible in the afternoon. The team reached the top of the world on May 25th.

Frequency of messages exchanged between the leaders and the forecasters

With the exception of the second summit attempts, the comparison of the number of messages exchanged by e-mails between EarthInc and the leaders of the Broad Peak and Everest expeditions does not display important differences (see Table 1 below).

Table 1. Number of messages exchanged during the Broad Peak and Everest expeditions

	Broad Peak	Everest
E-mails (Total)	46	57
Sender: EarthInc	37	50
Sender: Leader of the expedition	9	7
Number of days of assistance (Total)	34	49
Average frequency	1.4 per day	1.3 per day
Sms (Total)	34	-
Number of phone calls	3	4
Average duration of phone call	3'01"	3'47"
1st summit attempt	(June 21-27)	(May 14-19)
E-mails (Total)	12	11
Sender: EarthInc	8	7
Sender: Leader of the expedition	4	4
Sms sent by EarthInc	7	-
Number of days of assistance	7	6
Average frequency	1.7	1.8
2nd summit attempt	(July 2-7)	(May 20-25)
E-mails (Total)	7	12
Sender: EarthInc	6	9
Sender: Leader of the expedition	1	3
Sms sent by EarthInc	6	-
Number of days of assistance	6	6
Average frequency	1.2	2

On average, 1.3 messages per day had been sent/received, during both expeditions. These messages were mainly coming from EarthInc: during the Everest expedition, Georg sent only seven and for Broad Peak, John sent nine. With the exception of the Broad Peak second summit attempt, the frequency of the messages exchanged increases during the summit attempt phases⁹, indicating the pressing need, in these critical phases, to get both accurate and up-to-

⁹ Here the summit attempt phase begins when the team leader makes the decision to attempt the summit, but not necessarily when they actually leave BC, and ends when the team reaches the summit or stops the attempt.

date information. 1.7 messages per day for Broad Peak and 1.8 messages for Everest were exchanged between the leader and EarthInc during their first summit attempts. Two messages per day were exchanged during the second summit attempt for the Everest expedition, but only 1.2 for Broad Peak. This decrease for Broad Peak is difficult to interpret. One possible explanation is that John was more worrying about his clients' health and about the tracing work than about the weather which was friendlier than during his first summit attempt.

These messages are accompanied by sms for John who could not read his e-mails during the summit push phases. Georg, on his side, preferred to be kept informed by e-mails, for he could "see the charts by [him]self" (Georg, post-expedition interview). Both leaders made short phone calls to EarthInc one and/or two days before the last phase of the ascent in order to get the latest forecasts and weather parameters. On the whole, with the exception of the frequency of the messages exchanged during the second summit push phases – which is higher between Georg and EarthInc, than for John and EarthInc – the analysis of the numbers of messages of the two expeditions do not show major differences.

4. 2. Analysis of the content of the interactions

We have underlined that the interactions between EarthInc and the team leader during the expedition are assumed to follow a coordinated distribution pattern, where the forecaster sends information upon which the leader relies to plan the group's progress. In fact, the vast majority, if not all, of the e-mails (and sms) sent by EarthInc to John and Georg consists of information about the weather parameters for the coming hours and days. The comparison of the content of the e-mails sent by the team leaders, as well as Peter's end of the phone calls shows some difference in their leadership distribution.

Broad Peak co-leadership as coordinated distribution

Out of the nine e-mails John sent to EarthInc during the expedition, five consist of a detailed report¹⁰ on the weather conditions the team had when they were away from Base Camp. The

¹⁰ Feedback is crucial for EarthInc as they usually permit the forecasters to adjust their predictions to the actual conditions experienced by the mountaineers.

following e-mail that John sent after the first summit attempt may be taken as exemplar of these feedbacks.

E-mail from John to EarthInc, 26/06, 10:54

Dear all,

Back to BC after an attempt to summit yesterday.

During those 3 days, the forecasts have been completely wrong, mainly humid air with a lot of precipitations:

On the 23rd, we left C1 under the snow at 6h30 AM. I called you on the 23rd to tell you that the weather we had was not matching the forecasts, you told me that good weather was still expected for the coming days

On the 24th, we wanted to established camp 3 at 7300m, we had to stop at 7000 in a very bad weather

On the 25th, we left C3 at midnight. At 4AM, 7500, no visibility, heavy snowfalls...

On the 10th of june, you already forecasted anticyclonic conditions. We had mainly snowfalls.

This time was the same!!!

What is the problem???

John.

The remaining four e-mails concern the team's plans with two including questions about the weather in general or the wind (see the e-mail below).

E-mail from John to Martin, 28/06, 9:18 am

Dear Martin,

We are now resting at BC. We will be ready to attempt summit again from the 1st of July (departure from BC). Can you see a change of the wind direction? South West doesn't seem to be very good... Thanks for letting know the tendency?

John.

The e-mails sent by John are dominated by assertives about the weather and what the group has done or is planning to do. Directives are scarce and appear towards the end of the expedition when John asks two questions about the weather forecasts.

Peter's behavior during the three conversations he had with John seemed to follow a similar pattern. The following two extracts of conversations took place on June 23rd before the first summit attempt. John probably begins by reporting unexpected snow and then asks for feedback on what Peter has seen on the sat pictures.

Extract 1, phone call between Peter and John, June 23rd.

5 Peter: Eh Yes. I saw the satellite pictures. I saw clouds but it did not look like
6 they are really going up high in the air. I am surprised that it snowed. But did it
7 snow hard or hard just a bit?

Peter (l. 5) confirms that “he saw the sat pictures” but also asserts that he could not predict much snow so that he is “surprised” (l. 6). He then asks for feedback about the amount of snow they had (l. 6-7). John answers and then questions Peter about the snow expected for the following hours, on the 25th and 24th. Peter's answer is displayed in the following extract.

Extract 2, phone call between Peter and John, June 23rd.

12 Peter: It does not look like that the snow will go up really high. If I look at the
13 meteograms, it looks that the humid air is a bit lower and let me open the
14 meteogram very quick so I can explain it further eh it looks like the humid air
15 is going up to 7500m and above the air should be quite dry quite dry and I have
16 only slight signals of a bit of snowfalls and this remains similar also for
17 tomorrow and then Wednesday eh Wednesday excuse me the 25th that's
18 Monday and that's your planned summit day. At that day I suspect that clouds
19 will grow in the afternoon, at noon and in the afternoon and then they can reach
20 also the summit but before, the air at summit should be quite dry. [...] And for
21 tomorrow I eh think ehh that it will be quite good in the morning and some

22 clouds will be around still between 6500 to 7000, 7200 m, that's the forecast. I
23 don't think that snowfalls now you are having is showing or is sign of weather
24 change or something. I think it is, I think it is still quite stable, and for you and
25 it is not a signal for you to turn around and so if you can handle this, then
26 everything should be OK until the 25th.

From l. 12 to l.22, Peter describes what he is doing (“look at the meteogram”, l. 12-13, “open the meteogram”, l. 13-14) and how the humid air and the clouds should behave for the coming days (i.e. “the humid air is going up to 7500m ...”, l. 14-15; “clouds will grow in the afternoon, at noon ...”, l. 18-20; “some clouds will be around still between 6500 to 7000, 7200 m”, l. 22-23”). While he is careful not to suggest that his forecasts are 100% valid (i.e. “It looks like”, l. 12 and 14; “I have only slight signals of”, l.15-16; “I suspect that”, l. 18, “the air at summit should be”, l. 20), he seems to become more confident as he completes the forecast, when he says “I think” (l. 20 and 24) and “I don't think” (l. 23). At the end of the extract, his assertive style goes one step further when he mentions that “it is not a signal for you to turn around” (l. 25).

While, at first, this sentence can be heard as a suggestion, it is, in two respects, equivocal. Firstly, because it lies somewhere in between an assertive (“it is not a signal”) and directive (“for you to turn around”) speech act; and secondly, because it uses a negation, which should not be taken as equivalent to “It is a signal to go ahead” (see Searle, 1976). Although sounding like advice, after a long passage where Peter seems to become more positive about his forecasts, the sentence is opened up to different interpretations (from ‘I cannot tell you should stop’ to ‘you can continue’). John confirmed in his e-mail of June 26th that he understood that “good weather was [still] expected for the coming days”.

The two other phone conversations Peter had with John are ruled by Peter's questions about the actual weather, John's question about the expected weather and their respective responses to these questions.

Overall, the interactions between Peter and John are dominated by assertive speech acts that take the form of assertions about the weather. In this configuration, directives are not absent but mainly consist of questions about the actual or expected weather conditions. With the exception analyzed above, Peter never makes any suggestion about what John and team should do. One may conclude that their interactions display a *coordinated leadership* (Spillane, 2006) distribution where the forecaster sends information upon which the team leader relies to establish the team's plan and that he confirms or invalidates later on.

The Everest co-leadership as collaborated distribution

Out of the seven e-mails sent by Georg to EarthInc during the Everest expedition, five consist of a question or request about the weather conditions (the wind usually), and three also contain feedback on what he or the team has been doing (see e-mail below).

E-mail from Georg to EarthInc, 25th April, 3: 02 am (Everest time)

Good morning

Until now, everything is OK. My group is sitting at the moment in camp 2.

Yesterday, the wind was much stronger, and then dropped. This morning, it is, however, still strong. They would like to start around 09.00-09.30 am. I am wondering if the wind will drop today and how the next night and tomorrow morning will look like
???? I'll call you around 09. 00 am. I know you'll just be arriving at the office.

Sincerely yours,

Georg

One of the remaining two e-mails contained feedback and a thank-you after the team's first summit attempt. The last e-mail was a question about another expedition on Shisha Pangma. So the e-mails sent by Georg contain a mix of directives – through requests and questions – and assertives. Those consist of short feedback about the group's progression, and are not as detailed on the weather conditions encountered as those sent by John for Broad Peak. For EarthInc, the actual weather conditions of Everest are in fact much less difficult to apprehend.

First of all, EarthInc was assisting more than ten teams on the Everest during the same period, all potential sources of feedback. Second, while the weather conditions on Everest were under the strong influence of the jet stream this year, they were “indifferent”, and so much more difficult to predict in the Karakoram area this year (Martin, post-expedition interview).

Much like John and Peter’s phone call, Georg and Peter’s conversations are dominated by questions and reports on expected weather conditions. For the reason detailed above, Peter did not ask any question about the actual conditions encountered by the team. Interestingly, in the four conversations (and the three last, in particular), Peter made detailed suggestions, which contrasts sharply with his practices during his conversations with John. On the 17th, when the group made its first summit attempt, Peter warns Georg about an increase in the wind speed starting from the 18th. On the 18th, Peter first reports the risks of precipitation for the 23rd and the 24th then details the expected temperatures at the summit. The extract below follows this report.

Extract 3, phone call between Georg and Peter, April 18th

- 12 Peter: Yes exactly, I agree that it is the best to start as early as possible. The
13 wind increases already over the night. Then in the forenoon and at midday it is
14 the strongest. The earlier you can start the better. Here I also have a value at 18
15 ZULU¹¹ from the 19th: 30-35km/h, three hours later 37-40 km/h, and another
16 three hours later 40-45km/h. During the day it is going to stay in that range.
17 [...]
18 Peter: Yes that is ok. I think you will be doing the right thing trying to be as
19 early as possible on the summit. That is good like that.

Peter’s agreement (l. 12) follows Georg asking his opinion about starting the summit attempt early. The sentence contains an assertive (“Yes exactly I agree”, l. 12) and a directive (“that it is best to ...”, l. 12). This suggestion is explained further by a detailed report on the wind increase, that is first expressed in qualitative (“The wind increases already...the strongest”, l. 12-

¹¹ ZULU time is the military denomination for UTC, Universal Time Coordinated.

14) then in quantitative terms (“a value at 18 ZULU from the 19th: 30-35km/h, ...”, l. 14-16). In contrast with his suggestion to John during the Broad Peak expedition, Peter formulates a clear suggestion, and repeats it (“the earlier you can start the better”, l. 14; “I think you will be doing the right thing ...”, l. 18-19).

On April 19th, Georg is back at ABC. He calls Peter again and asks for the latest wind reports, for the 19th, and then for the 25th as a decrease in the wind speed is expected from that day on. The following extract confirms how Peter is progressively enrolled by Georg to formulate a suggestion about what Georg and his team should do.

Extract 4. Phone call between Georg and Peter, April 19th

- 19 Peter: Yes exactly. That also goes along with the model. It increases in the
20 night and then rather decreases again so that today in the afternoon/ evening it
21 is at 50 and then in the night it decreases to 40 but then freshens up again and
22 possibly reaches up to 50/60 km/h during the day tomorrow. That means if you
23 want to reach the summit tomorrow you will have to start early ... but it is
24 critical.
25 [...]
26 Peter: If the people are able to return and will have enough strength to go up
27 again, then I think it is better to hope for the 25/26th because then it looks
28 significantly better.

After a detailed report on the wind for the following hours (“it increases ... tomorrow”, l. 19-22), Peter tries to make a suggestion, but it is equivocal as implying both a certain course of action (“you will have to start early”, l. 23) and a warning against it (“but it is critical”, l. 23-24). The next sentence is much clearer. Peter is very careful not to say something that could be interpreted as a command or a definite view in such difficult circumstances, as his suggestion means to stop the attempt and then to try again (“if the group ...”, l. 26-27). But he ends up advising the group to change their plan (“I think it is better to hope for the 25th/26th ...”, l. 27-28). This suggestion is not initiated by Peter but follows Georg’s request for Peter’s opinion about his project to change the plan. The two extracts then show how Georg, in soliciting Pe-

ter's opinion about his plan in the context of the weather forecasts, is able to progressively share his decision process with Peter. Peter, in this configuration, not only agrees with Georg's plan but, during the second summit attempt, goes as far as suggesting the 25th (vs. 26th) for a summit day. Just before that, he had detailed the wind speed expected for the coming hours; then Georg asked about moisture forecasted for the 25th.

Extract 5. Phone conversation between Georg and Peter, May 24th.

23 Peter: [...] There will be cumulus clouds but not as high as on the 26th. In that
24 case tomorrow has better conditions.

Peter first details the moisture expected for the 25th and 26th and then concludes that the 25th “has better conditions” (l. 24), which can be heard as both assertive and directive.

Overall, the interactions between the team leader and the forecaster are dominated by assertive speech acts about the actual (in e-mails) or forecasted (in e-mails and phone conversations) weather conditions. Directives are mainly questions from Georg about the expected weather (or requests of further reports), but also about Peter's opinion on his project. In so doing, Georg progressively enrolls Peter in his decision process so that the forecaster also makes clear suggestions about what to do. The interactions pattern departs from the coordinated leadership distribution observed in the Broad Peak expedition and resembles a collaborated leadership distribution (Spillane, 2006).

Table 2 below synthesizes the results obtained for both expeditions.

Table 2. Forecaster and team leader practices during their interactions.

Synthesis		
	Broad Peak expedition	Everest expedition
E-mails sent by EarthInc	Assertives: about the weather forecasts	Assertives: about the weather forecasts
sent by the team leader	Assertives: feedback about the weather conditions (-)	Assertives: feedback about the group or the leader' past actions and weather conditions Directives: questions / requests on the forecasted weather
Phone conversations		
The forecaster	Assertives: about the forecasted weather Directives: questions about the actual weather	Assertives: about the forecasted weather Directives: suggestions on the course of actions to follow
The team leader (presumed)	Assertives: about the actual weather Directives: questions about the forecasted weather	(-) Directives: questions on the forecasted weather and on the group's projects
Leadership distribution	<i>Coordinated distribution</i>	<i>Collaborated distribution</i>

5. Discussion

This research aims to understand how leaders co-perform distributed leadership. Relying on an in-depth analysis of the e-mails and phone calls between forecasters and team leaders during two expeditions in high altitude, the research contributes to the understanding of the 'in-between' of leadership in four respects.

Firstly, the research provides a first description of the discursive practices of the forecaster and team leaders through which they co-perform coordinated and collaborated leadership distribution. It contributes to the understanding of leadership as a situated practice (Crevani et al., 2010; Fletcher, 2004), a perspective in which empirical studies are still the exception. In fact, while Mehra and colleagues (2006) have shown that teams whose leaders cooperate were as-

sociated with better performance (as opposed to teams centralized around one or two isolated leaders), they did not describe how leaders perform such cooperation process. Spillane et al. (2003; 2004), in their study of distributed leadership in schools, mainly focused on leadership functions such as monitoring and control, or facilitating a meeting, but neglected other strategic functions such as planning and decision-making. Our research complements these previous studies in providing a detailed analysis of the ways leaders coordinate in order to define action plans. Two sets of discursive practices and related leadership distribution are outlined:

- coordinated distribution where interactions are dominated by assertions and questions about the actual and forecasted weather. In this configuration, the forecaster sends the prediction and the team leader makes action plans;
- collaborated distribution where assertions are complemented by the leader soliciting the forecaster's opinion on his project, so that the forecaster is progressively invited to formulate advice and suggestions. In this configuration, the forecaster still sends his prediction but is associated with the leader's decision so that one may talk about shared or co-decision.

Further research is needed on the actual practices of distributed leadership. In particular, empirical investigation on what Spillane called "collective distribution" (i.e. pooled interdependency, Thompson, 1967) would complement our study. In this perspective, the use of different analytical tools, such as discourse analysis (derived from conversation analysis) and ethnomethodology¹², in particular, cf. Whittle and Mueller, 2011, could provide deeper insights into the discursive practices through which leaders enact leadership.

Secondly, our research allows us to take some distance with what may be called a determinist concept of leadership distribution. Both Gronn (2002) and Spillane (2006) have suggested that forms of distributed leadership depend on the physical proximity of the leaders (i.e. are they co-present or not), and on task interdependency (cf. Thompson, 1967). Our results tend to mitigate such a concept. On the one hand, while not without incidence, the task interdependency (i.e. a sequential interdependence between the forecaster and the leader) does not preclude the leaders sharing decisions so that their interactions evolve towards a collaborated distribution.

¹² Although inspired by those analytical commitments, we could not use such methods as parts of the conversation between the forecaster and the leader were missing

On the other hand, and in contrast with Spillane et al. (2004)'s hypothesis, our research shows that temporal and physical distances are not obstacles to such leadership configuration. Here, we follow researchers on communication technologies and virtual teams who have underlined that the use of rich-media technologies (such as phone conversations or video-conferences) permit real-time decision and reciprocal interdependency (Bell and Kozlowski, 2002: 25; 42). In our view, this does not mean, however, that the use of these technologies necessarily lead to collaborated leadership distribution. Our research shows that although sharing very similar conditions (in terms of task interdependency, type of expedition etc.), the two team leaders enacted rather different leadership distribution. Though not without influence, neither the task interdependency nor the media technologies in themselves dictate the leadership distribution, which, in our cases, results first and foremost from the leaders' practices during their interactions.

In the same vein, a third contribution of our research is to provide a rather nuanced picture of leadership effects on team performance. It should be clear that while the Broad Peak expedition did not reach the summit, it cannot be said to be a failure, as all team members came back to BC safely. In this respect, the expedition can be considered as a success and from this perspective one may conclude that, in the context of this research, both leadership configurations have a favorable influence on the team performance.

If one wants to go further and seek to explain why the team did or did not reach the summit, the weather conditions should be seriously taken into account. According to Martin, the leader of the forecasters' team, the weather conditions on Mt. Everest and the Karakoram region were not comparable this year. While the weather conditions were highly determined by the position of the Northern jet stream on Mt. Everest, the weather conditions were extremely unstable around the Broad Peak area. We, of course, are not inferring that leadership makes no difference, as it clearly does in particular for the caring of the clients, Sherpas and the team as a whole. However, other dimensions, in particular weather parameters and other contextual factors, (see Elmes and Frame, 2008) also contribute to the success or "failure" of an expedition.

On the whole, our research contributes to a post-essentialist concept of leadership: leadership is better understood as constructed through the interaction practices of the leaders (as opposed

to relying on the practices of an isolated leader) and as contributing, combined with other parameters, to the team's outcomes (as opposed to determining these results through his behaviors and leadership "style" alone).

A final contribution is methodological. Empirical studies on management during mountaineering in high altitudes usually rely on secondary data and/or interviews conducted after the expedition (Kayes, 2004; Tempest, Starkey and Ennew, 2007; Elmes and Frame, 2008). To our knowledge, our study is unique in that it relies on naturally occurring data (Silverman, 2006). Though not without limitation, we have been able to rely on a method of discourse analysis that contributes to a fine grained understanding of leadership distribution (cf. Fairhurst, 2011: 502). While Spillane (2006: 84) underlined that "Shifting the focus from an exclusive focus on the actions of leaders to the interactions in leadership practice poses major methodological puzzles for scholars and practitioners", our research show that such investigation is possible.

Research limitations and conclusion

Like any other empirical study, our research has limitations. Firstly, although relying on a rather large amount of data, the case studies do not embrace all aspects of leader-forecaster interactions. The team leader's part of the conversations, in particular, could not be recorded. It would also have been of great value to know more about the material context of these phone calls and e-mails as they were being sent and received (e. g. Was there a lot of wind around? Were the forecasters or the team leaders tired? Were the team leaders cold? Were the other team members sick? etc.) Unfortunately, nobody in the research team had the capacity to follow the team leaders during their expedition or the time needed to observe the forecasters. In order to minimize misinterpretations, the interpretations presented here were submitted to the protagonists of the study for comment.

A second limitation concerns potential misunderstanding. Except for John, who is French, all interviews were conducted in English, not the mother tongue of the forecasters, or Georg (who are Swiss German) as well as the researchers. This could have led to misunderstandings from both sides. According to Martin, however, English leads to fewer misunderstandings because English has "fewer words" to describe weather parameters in the mountains compared to

German. We have shown that this, of course, does not preclude equivocality. As earlier mentioned, all interpretations were submitted to the protagonists in order to minimize such misinterpretations.

A final limitation concerns the transferability of the results to everyday management in contemporary organizations. Following Elmes and Frame (2004), we believe that one should not consider these results exemplar or illustrative of (p. 234) “the inherently complex value-laden ‘messy problems’ that dominate governance and executive decision-making in the modern corporate office or broader society”. Yet, we do not mean to imply that no lesson can be learned from our studies. In particular, we contend that if climbing the Mount Everest or the Broad Peak relies on distributed forms of leadership, such configuration are certainly enacted by managers in other, less extreme or constrained environments. This article, then, is an invitation to pursue both teaching and researching on distributed forms of leadership.

References

- Avolio BJ, Walumbwa FO and Weber TJ (2009) Leadership: Current theories, research, and future directions. *Annual Review of Psychology* 60: 421-49.
- Bell BS and Kozlowski SW (2002) A typology of virtual teams: Implications for effective leadership. *Group & Organization Management* 27(1): 1-49.
- Burke CS, DiazGranados D and Salas E (2011) Team leadership: A review and look ahead. In: Bryman A, Collinson DL, Grint K, Jackson B, and Uhl-Bien M (eds) *The Sage Handbook of Leadership*. London : Sage, 338-51.
- Carson JB, Tesluk PE, Marrone JA (2007) Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal* 50: 1217-34.
- Conger JA and Pearce CL (2003) A landscape for opportunities. Future research on shared leadership. In: Pearce CL and Conger JA (eds) *Shared leadership: Reframing the hows and whys of Leadership*. London: Sage, 285-303.
- Crevani L, Lindgren M and Packendorff J (2007) Leadership, not leaders: On the study of leadership as practices and interactions. *Scandinavian Journal of Management* 26: 77-86.
- Crevani L, Lindgren M and Packendorff J (2010) Shared leadership: A postheroic perspective on leadership as a collective construction. *International Journal of Leadership Studies* 3(1): 40-67.
- Elmes M and Frame B (2008) Into the hot air: A critical perspective on Everest. *Human relations* 61(2): 213-41.
- Fairhurst GT (2009) Considering context in discursive leadership research. *Human Relations* 62: 1607-1633.
- Fairhurst GT (2011) Discursive approaches to leadership. In: Bryman A, Collinson DL, Grint K, Jackson B, and Uhl-Bien M (eds) *The Sage Handbook of Leadership*. London : Sage, 495-507.
- Fairhurst GT and Grant D (2010) The social construction of leadership: A sailing guide. *Management Communication Quarterly* 24: 171-210.
- Fletcher JK (2004) The paradox of postheroic leadership: An essay on gender, power, and transformational change. *The Leadership Quarterly* 15: 647-41.

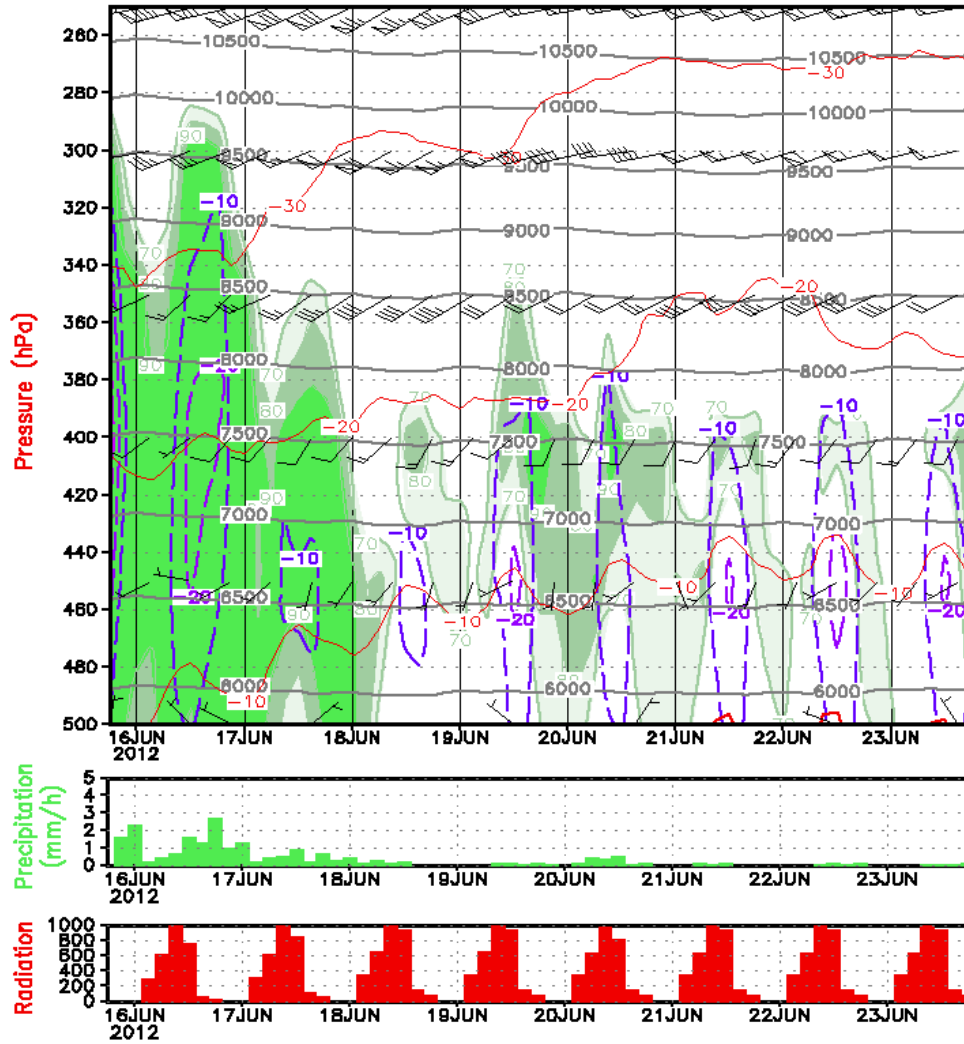
- Gibson CB and Gibbs JL (2006) Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative Science Quarterly*, 51: 451-95;
- Gronn P (2009) Leadership configurations. *Leadership* 5(3): 381-94.
- Gronn P (2002) Distributed leadership as a unit of analysis. *The Leadership Quarterly* 13: 423-51.
- Gronn P (1999) Substituting for leadership: the neglected role of the leadership couple. *The Leadership Quarterly* 10: 41-62.
- Heritage J (2004) Conversation analysis and institutional talk. Analyzing data. In: Silverman D. (ed) *Qualitative Research. Theory, Method and Practice*. London: Sage Publications, 222-45.
- Hinds PJ, Bailey DE (2003) Out of sight, out of sync: Understanding conflict in distributed teams”, *Organization Science*, 14 (6): 615-32.
- Kayes DC (2004) The 1996 Mount Everest climbing disaster: The breakdown of learning in teams. *Human Relations*, 57(10), 1263-84.
- Klein KJ, Ziegert JC, Knight AP and Xiao Y (2006) Dynamic delegation: Shared, hierarchical and deindividualized leadership in extreme action teams. *Administrative Science Quarterly* 51: 590-621.
- Kozlowski SW and Ilgen DR (2006) Enhancing the effectiveness of work groups and teams. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest* 7(3): 77-124.
- Krakauer J. (1997) *Into thin air*. New York: Anchor Books.
- Mehra A, Smith BJ, Dixon AL, and Robertson B (2006) Distributed leadership in teams: The network of leadership perceptions and team performance. *The Leadership Quarterly* 17: 232-45.
- Morgeson FP, DeRue DS and Karam EP (2009) Leadership in teams: A functional approach to understanding leadership structures and processes. *Journal of Management*, 20(10): 1-39.
- Pearce CL, and Conger JA (2003a) *Shared leadership: Reframing the hows and whys of leadership*. London: Sage.

- Pearce CL and Conger JA (2003b) All those years ago, The historical underpinnings of shared leadership. In: Pearce CL and Conger JA (eds), *Leadership: Reframing the hows and whys of leadership*. London: Sage, 1-18.
- Pearce C, Manz C and Sims HP (2009) Is shared leadership the key to team success? *Organizational Dynamics* 38(3): 234-38.
- Potter J (2004) Discourse analysis as a way of analysing naturally occurring talk. In Silverman D (ed), *Qualitative research: Theory, method and practice*, 2nd ed (p. 200-221). London: Sage Publications, 200-21.
- Searle JR (1976) A classification of illocutionary acts. *Language in Society* 5(1) :1–23.
- Searle JR (1986). *Minds, brains and science*. Harvard University Press.
- Silverman D (2004) *Qualitative research: Theory, method and practice*, 2nd ed. London: Sage Publications.
- Silverman D (2006). *Interpreting qualitative data*, 3rd ed. London: Sage Publications.
- Spillane JP (2006) *Distributed leadership*. San Francisco: Jossey-Bass, John Wiley & Sons.
- Spillane JP, Diamond JB, and Jita L (2003) Leading instructions: the distribution of leadership for instruction. *Journal of Curriculum Studies* 35(3): 533-43.
- Spillane JP, Halverson R and Diamond JB (2004) Towards a theory of leadership practice: a distributed perspective. *Journal of Curriculum Studies* 36(1): 3-34.
- Tempest S, Starkey K and Ennew C (2007) In the Death Zone: A study of limits in the 1996 Mount Everest disaster. *Human Relations* 60(7): 1039-64.
- Thompson J (1967). *Organizations in action: Social science bases of administrative theory*. McGraw-Hill Inc.
- Weick K (1995) *Sensemaking in organizations*. Thousand Oaks: Sage.
- Weick KE and Roberts KH (1993) Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38: 357–81.
- Whittle A and Mueller F (2011) Bankers in the dock: Moral storytelling in action. *Human Relations*, 65: 111-139.

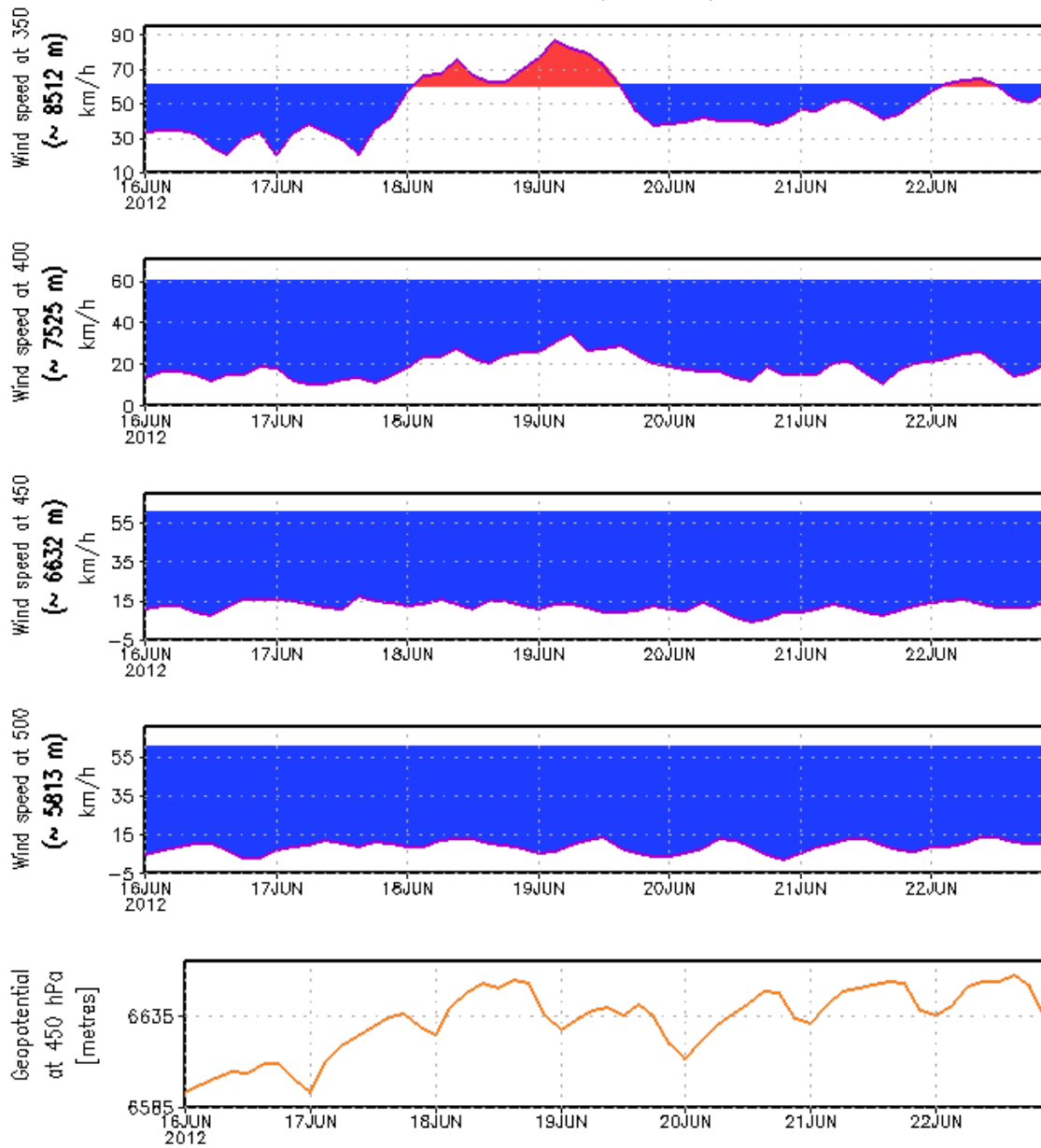
Appendix 1. An example of the forecasts sent by EarthInc.

<p>06/17/12 10:29</p>	<p><u>Sender</u> : Martin</p> <p>Hello John!</p> <p>General Situation: The jet is getting weaker and moving north. The pattern becomes anticyclonic in the next week and the weather more stable.</p> <p>Wind:</p> <p>17th moderate wind speed with around 40 km/h at 8000 meters. 18th: The jet is crossing Broad Peak. Wind picks up to about 60 km/h in the summit area. 19th and onwards: Wind is weaker again but still around 40 km/h at the summit. To the 22nd the wind might be stronger again. This is quite uncertain and has to be confirmed by the next model runs.</p> <p>Weather:</p> <p>17th: The air is still quite humid. In the afternoon cloudy and some snow. Precipitation tendency: 60% 18th and 19th: Partly sunny with some clouds in the afternoon. Precipitation tendency in the afternoon 30%. From 20th on: Friendly mornings. Below 7500 Meters some convection in the afternoon. Precipitation tendency in the afternoon: 20%.</p> <p>Temperature: Rising about 7 degrees in the next days. At summit to around -18 degrees.</p> <p>All the best!</p> <p>Martin</p>
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GFS Profile 18Z15JUN2012
BroadPeak (35.81,76.57)



Wind levels on Gasherbrums, (8068m) 35.72N, 76.7E



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