Escalation of Commitment in Temporary Organisations: A Case Study of the 1996 Mt. Everest Disaster

AUTHORS: Afërdita Pustina; Juan Felipe Aegerter Alvarez

SUPERVISOR: Markus Hälgren, PhD

LEVEL: MASTERS IN STRATEGIC PROJECT MANAGEMENT (EUROPEAN) MSPME

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ABSTRACT

In an organisation, escalation of commitment represents behaviour of decision makers who become committed to failing courses of action. This behaviour usually derives from the decision makers’ reluctance to acknowledge their failed action in the initial allotment of time and resources, and thus taking actions to manifest their prior decision were correct and they will be achieving the planned goal.

In a single day of 1996 during a climbing expedition destined to summit Mt Everest, eight people lost their lives, including the climbing team leaders, in part due to the decision made that led to the teams to engage in escalation behaviour. The climbing teams in the 1996 Mt Everest expedition serve as examples of temporary organisations in an extreme setting. The purpose of the research is to explore insights on the aspects promoting escalation on the Mt Everest tragedy and shed some light into how escalation manifests in temporary organisations. The factors that might be found will be applicable only to this particular case; nevertheless they might contribute on the overall development of how escalation comes about in temporary organisations. The research question of this study is how aspects promoting escalation where present in the 1996 Mt. Everest expedition?

For many years different theories attempted to explain the factors that promote escalation behaviour. The most important theories were combined together into a theoretical framework developed by Staw and Ross (1987a), which contains four major determinants of commitment in escalation: project, psychological, social and organisational. This framework is applied in this qualitative study based on the 1996 Mt Everest case. The study was executed through the analysis of the firsthand accounts of the survivors and observers present on the mountain that year as well as mass media outputs, the framework of escalation was used as an assistance tool for making sense of the findings the research may produce.

The results of the study managed to place the line of events in the determinants framework and identified all four types of determinants of commitment taking place through the progress of the expedition. A new organisational determinant of commitment was found (pursuit of enterprise growth) which yielded significant practical implications and might also lead the way for future research on escalation of commitment in temporary organisations.

Keywords: Escalation, escalating commitment, temporary organisations, mountain climbing, 1996 Mt. Everest disaster.
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Afërdita Pustina
Juan Felipe Aegerter Alvarez
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1. INTRODUCTION

"Reaching the top of Everest...was really only the halfway point..." - Jon Krakauer, 1997

We are all familiar with situations in which the course of action is not working, but we are unsure whether to withdraw or persist. In these situations, things not only have gone wrong, but the potential actions aimed at curing the problem may actually deepen or compound the difficulty to a level of disaster. These are called escalation situations (Brockner, 1992). Usually the process of escalation of commitment presents actions that lead to failure. Individuals who attempt to cover-up or conceal their mistakes and take potential risks to prove they can achieve their goal do this. Occasionally, escalation being a persistent course of action in decision-making, contributes to disasters, such as the loss of eight lives in a single day during the tragic expedition in Mt Everest in 1996 (Roberto, 2002; Kayes, 2004).

The Mt Everest 1996 disaster was a climbing expedition in which among many teams with the aim to reach the peak of Mt Everest in the Himalayas in Nepal, three in particular suffered the loss of some of their climbers. This expedition considered as a temporary organisation is the example taken in this research, which will be subject for the identification of factors promoting an escalation process. Mt Everest 1996 disaster has been categorized as the “the most widely publicized mountain-climbing disaster in history” (Kayes, 2004:1267). Journalist Jon Krakauer’s book and other survivor accounts based on it explain the causes leading to the tragedy as a case of “failed leadership and decision-making, dysfunctional group dynamics, flawed personality, and the absence of appropriate planning and control” (Elmes and Frame, 2008:214-215).

Expeditions on mountain climbing are known to have many similar elements of a project, and they have constraints and characteristics of temporary organisations. A mountain climbing expedition is then, a temporary organisation (Kayes, 2004; Hällgren, 2007, 2009, 2010). Climbing expeditions have substantial similarities with the temporary organisation. They are limited in time, scope and resources. The fact that a mountain expedition has its own duration and a particular period of time when it can take place, as well as unique scope, that is to reach the top, as well as resources that need to be planned and taken under consideration prior to start of the expeditions indicates that an climbing expedition can indeed be reflected upon a temporary organisation, and similarities are evident. Meanwhile, "action" rather than "decision" is at the heart of the temporary organisation. In temporary organisations the aim is completion of a particular task, and not achievement of a goal as in the case of permanent organisations (Lundin and Soderholm, 1995). This sort of differentiation of a temporary organisation from a permanent organisation represents the temporary organisation as a segment of a permanent organisation, if looked from a time and activity point of view. Therefore, it can be noted that temporary organisations and
systems may well be created into a permanent organisation to perform and complete smaller scale tasks to achieve the large goal of the permanent organisation. On the other hand, temporary organisations may be just a short-term action oriented tasks, but they also may be prone to escalating commitment.

According to Keil et al., (1997) escalation concepts have been applied to many different contexts, including the 1996 Mt Everest disaster (Roberto, 2002). There are many theories that attempt to explain the escalation process, however Staw and Ross (1986, 1987a, 1987b, 1989) have summarized the most important research on escalating commitment situations on four main classes of determinants associated with persistence on a course of action: project, psychological, social, and organisational variables. A dynamic model of behaviour in escalation situations has been build given research findings that indicate the influence of these four groups of variables as the project progresses over time (Staw and Ross, 1986, 1987a). Theoretically the escalation research has been functioning more as a methodological rather than a conceptual paradigm. There has been less agreement on the relevance of various theories for explaining escalation behaviour (Staw and Ross, 1987a). Nevertheless this framework has been successfully applied in research papers dealing with cases when escalation is applied to information system and technology development projects (Keil, 1995; 2007; Keil et.al, 2000; Mähring et.al, 2004; Newman and Sabherwal, 1996).

The expedition of Mt Everest 1996 is considered as an example of escalation of commitment and by using the framework to extract and understand the influential determinants of behaviour and map the balance of the escalation forces over time, we aim to obtain some insight on the development of this kind of predicament in temporary organisations.

As discussed previously, an expedition can be considered as a temporary organisation. In the case of Mt. Everest 1996 disaster the decision-making process of the leaders led to devastating results. Escalation can be a problem because it can lead to waste valuable resources, opportunity costs and even the loss of human lives. This research attempts to identify the how different aspects of escalation behaviour were present in the case. The research question is as follows: how aspects promoting escalation where present in the 1996 Mt. Everest expedition?

In order to accomplish this task, the Staw and Ross's (1987a) framework of theories and derived factors that attempt to explain escalation will be used to perform the research. Empirical data will be collected from several public sources such as published firsthand accounts of survivors of the disasters as well as observers present at the mountain that year and mass media outputs (Krakauer, 1997; Groom 1997,
Escalation of Commitment in Temporary Organisations


In terms of limitations of this research, we will not be explaining why Mt. Everest 1996 disaster happened but rather taking a closer look at the factors present in the 1996 Mt Everest case that could have contributed to escalation of commitment to reach the summit of the mountain in those temporary organisations. It is also very important to note that this case has never been investigated officially (Kayes, 2006), therefore all of the data available as personal accounts and books published by the survivors are personal views, and can be seen from different perspectives. The case, besides being a very touching story, is also unique, therefore this research goes in depth of this event and might not be generalised but rather used as an exploratory guiding light for further research about escalation of commitment in temporary organisations.

2. LITERATURE REVIEW

2.1 From Temporary Organisations to Escalation

A Temporary Organisation as a Project
The concept of Temporary Organisation is present in the literature since 1964, when Miles published his book “On Temporary Systems”. This concept has been further developed through introduction of the “temporary organisations” literature (Bennis, 1966; Goodman and Goodman, 1972; Keith, 1978; Goodman, 1981; Lundin and Söderholm, 1995; Packendorff, 1995). Temporary systems, (Goodman, 1981; Bennis, 1966, Miles, 1964) are defined as “a set of diversely skilled people working jointly at a task of some complexity over a limited time period”. Another aspect of studying the temporary organisations is done through the usage of the project concept (Sapolsky, 1972; Stinchcombe, 1985; Hellgren, 1987; Ekstedt, 1992; Engwall, 1992; Lundin 1992 ; Borum, 1993; Modig, 2007). All of the authors seem to relate the concept of the temporary organisation with the elements of what projects are made of.

A temporary system, as a part of an organisation is a process characterised by time limitation, sharp focus, physical and social isolation of its members, and group size (Miles, 1964). Based on this assumption, (Goodman, 1981) agrees that the temporary system can be considered from a people-changing or an organisation-changing point of view. In this context, it is important to make a distinction between the changes of the persons, relationships and actions in terms of decision-making. These rotations and their combinations can have a different impact on the decision making process. To clarify this process, it is important to make a distinction from people and the organisation. Despite the fact that they complement eachother, indeed they are affected by eachothers changes, In this context, say, when the organisational strategy changes, it affects the people in it. Similarly, when the people change, they affect the
organisation as a whole, as the organisation is loosing it’s valuable resources. Linking this to what has been said for the connection between the TO and the permanent organisation, if at any circumstance any of these two sides change radically, these effects will indeed be reflected to the other side. Perhaps one can see this as the core of the issues that will be further researched in this thesis.

Going back to the project versus the temporary organisation, the project from a temporary organisation, project definitions are analysed further and consider projects as temporary organisations, as a “production function” and as an “agency for assigning resources” (Turner and Müller, 2003). Following the relation of the people and their action, according to Goodman (1981), in traditional management theory, task definition is done with an underlying aim to take advantage and utilise the available resources. In a temporary organisation, considering the time constraint, the focus is more on the assigned problem, rather than utilisation of resources. Therefore, the author continues emphasising that it is expected that an organisation should have ready resources to tackle any of the upcoming issues during a project. Furthermore, Bennis (1966) forecasts an increasing need for ad hoc groups to deal with the nature of organisational problems. Goodman (1981) also claims that temporary organisation is characterised by tasks that are: complex with respect to interdependence of detailed task accomplishment; (2) infrequent, unique or unfamiliar; (3) critical; and (4) definable in terms of a specific goal. A temporary organisation has the characteristics of project, as they both are exposed to the constraint of time and resources. The planning process that is an integral part of the project is indeed needed in the temporary organisations. The constraint of the resources in the project, or limited availability of the same are also present in the temporary organisation.

It is important to differentiate a temporary from the permanent organisation. According to Lundin and Soderholm (1995) "action" rather than "decision" is at the heart of the temporary organisation. This core differentiation is also in line with the behavioural approach of the decision-making in an environment of uncertainty. The action approach is evident due to the fact that in temporary organisations we are dealing with a particular task, and not goal as in the case of permanent organisations. Lundin and Soderholm (1995:439) also argue that to enable the demarcation of the temporary organisations concepts of time, task, team and transition need to be taken under consideration. Despite the fact that these concepts are applied in any organisation, the authors state that these provide the “insights through which the temporary organisation and its environment is defined”. These are also some of the elements that can differentiate a temporary organisation from a permanent organisation.
Temporary organisations have characteristics that differentiate them from long-term organisations. If a temporary organisation is seen as a project, then upon the ending of the project, the temporary organisation ends as such. In the case of the expeditions as a temporary organisation this is indeed true, because upon ending of an expedition, and temporary organisation ceases to exist. On the other hand, in the context of a long-term organisation, considering that there are many parallel projects at the same time, an ending of a single project would be just a closure (completion) of one part of the organisation’s goal as set by their strategy. There are many elements to consider in both cases and indeed Modig (2007) claims that the literature on temporary organisations illustrates attempts to find the characteristics of temporary organisations as well as to map their characteristics.

**Temporary Organisations as Expeditions**

Using the example of a mountaineering expedition, specifically the case of Mount Everest 1996 events (Krakauer, 1997; Groom, 1997; Boukreev and DeWalt, 1998; Breashears, 1998, 1999, 2009; Gammelgaard, 1999; www.pbs.org), it is possible to reflect upon the specific nature of the temporary organisations. Expeditions are an unusual cases to be taken for this purpose, however they are defined as a journey or excursion undertaken for a specific purpose. (merriam-webster.com). When these particular journeys are done for mountain climbing, the process is known as mountaineering. Although unusual to be considered for this purpose, expeditions on mountain climbing are known to have many similar elements of a project, and they have constraints and characteristics of temporary organisations. Indeed, “a mountain climbing expedition is a temporary organisation” (Kayes, 2004; Hällgren. 2007, 2009, 2010). If mountain climbing expeditions are considered as temporary organisations, limitations in time, task, team and transition as explained by Lundin and Soderholm (1995) in the theory of temporary organisations, can all be taken under consideration.

Another interesting point of view is that the mountaineering expeditions are an appropriate example of temporary organisations, due to the fact that the conditions, internal and external, are pushed to the extreme. Their features as from a project (PMBOK, 2004) point of view are the same as any other organisation, except that they are present in different settings. For example in terms of their time constraint, not only they are limited in duration, but also they are also limited in the seasonal aspect when they can take place during the year (www.alpineascents.com) namely spring and autumn. Time limit is also implied by the fact that a task needs to be accomplished, and this limit is what gives sense of temporariness of the task. This is typical of mountaineering climbing expeditions, as there is a task to be achieved, namely to reach the top, and then come back. This is where the time and task relate.

International Mountaineering and Climbing Federation-UIAA (www.theuiaa.org) specifies in their set of standards some of the main elements that expedition members
should possess in order to be able to perform activities. There is a list of requirements of mastering skills as well as knowledge expected from members. In this context, we can reflect upon the team attributes that are necessary to make these expeditions functional. Particularly the UIAA requires group management and leadership, Avoiding and solving common problems, ethics and tradition to name a few. We consider this is in line with (Longman, 2006) when they suggest that when considering project teams it would be useful to consider the interpersonal relationships, team working, leadership, maintaining process discipline and guaranteeing alignment between team-members functional objectives and organisational goals. It is clear that mountaineering as a temporary organisation heavily relies on the team to perform at its best. It is now known that confused team process often leads to disastrous consequences (Janis, 1972; Gephart, 1993; Elmes and Barry, 1999; Snook, 2000; Weick, 1993).

In expeditions, the factor of planning is crucial. According to Choo (2002) methods such as “imagineering”, where you attempt to depict the environment where you are going to go, is more than needed. The author also criticizes the project management nowadays for not planning and analyzing ahead, but rather just going into the unknown. This indeed underpins the thought that although planning does not guarantee project success, lack of planning will probably guarantee failure. Planning is another important feature of project management, and as such it is an important part of temporary organisations. In terms of calculating the most key routines, risk calculation and assessment is another factor in which climbing is based upon. (Akintoye and MacLeod, 1997; Choo, 2002 in Hällgren, 2009).

From Expeditions to Escalation
Following the disaster of 1996, the survivors have published different material that describes the events (Krakauer, 1997; Groom 1997, Boukreev and DeWalt, 1998; Breashears, 1998, 1999, 2009; Gammelgaard, 1999; www.pbs.org). The events, besides being published as an interesting story, have also been a target of many analysis from the academia, (Elmes and Barry, 1999; Useem, 2001; Kayes, 2002, 2004, 2005, 2006; Roberto, 2002; ; Hällgren, 2007, 2009, 2010; Rosen, 2007; Tempest et.al., 2007; Elmes and Frame, 2008) and as such have been taken as examples in classrooms from students all across the world e.g. Harvard case study on Mt. Everest 1996 disaster. There was also an increased interest in mountain climbing expeditions, and researchers claim that Mt Everest in the Himalayas has been the first choice of many expedition groups. (Krakauer, 1997).

Several factors are deemed to have contributed to the 1996 Mt Everest disaster, among them are commercialization (Elmes and Barry, 1999; Elmes and Frame, 2008), leadership and team learning (Kayes, 2004, Roberto, 2002; Tempest et.al, 2007) and goal setting (Kayes, 2005, 2006). In his research, Roberto (2002) has proposed that
the interaction of factors in individual, group and organisational levels in a complex system may have caused the Everest tragedy. He draws from three different perspectives, behavioural decision theory, the team effectiveness literature, and complex systems theory to determine and examine those factors. The factors he identified in his research from the behavioural decision making perspective are grouped under the umbrella of cognitive biases. These biases involve a failure to disregard sunk costs, overconfidence, and a proclivity to estimate recent events more importantly than they really are.

The factors mentioned above are closely related and relevant to escalation of commitment, among those the sunk-cost effect (Garland, 1990) where climbers did not want to ignore the costs they had already incurred and did not want to throw away their investment by giving up the summit bid (Roberto, 2002). In addition, the two team leaders of the 1996 Mt. Everest expedition were aware that escalation of commitment could happen as climbers become close to reaching the top of the mountain (Roberto, 2002:140), furthermore Kayes (2005) acknowledged that escalation provides an insight on explaining the tragedy.

Hence, there is now a pool of information and material to base research upon this case, focusing on how aspects promoting escalation where present in the 1996 Mt. Everest tragedy. Being that these types of cases, as mentioned earlier, are characterized by limits pushed to the extreme in many aspects, it is of interest to analyze them and come to an understanding of the developments in the context of a project as a temporary organisation. In order to do that we proceed to do a review on escalation theory literature, which will set the scenario for applying a theoretical framework of escalation to the 1996 Mt. Everest case from the perspective of the expedition as a temporary organisation.

2.2. Escalation of Commitment to a Course of Action

No definition of commitment is universally accepted (McElhinney and Proctor, 1993). However, commitment is encompasses three principal elements, “identification with the goals and values of an organisation; (2) “a desire to belong to an organisation”; and (3) “willingness to display effort on behalf of any organisation” Armstrong (2007:136).

Groups and individuals become committed to a decision that is taken “explicitly and freely”, and because of this they may feel compelled to look for reasons to justify that their decision was correct (McCain, 1986:280). According to Staw and Fox (1977:432) this can almost turn into a self-justification process, which can lead to negative results in a faulty decision making process, making the negative
consequences of such decisions look like they have a positive value.

Escalating commitment deals with the particular manner in which decision makers react to failure (McCain, 1996). As failure remains after taking a course of action, the additional resources invested merely add to the actual strain for self-justification and engage the individual deeper into a repeating cycle of investment and failure, this has been denominated as escalating commitment (Staw, 1976).

Escalation is observed when an individual or an organisation persists with allocating resources into a course of action that is failing or that has recurring negative feedback (Staw, 1976). Literature on escalation studies why and how organisations commit to failing courses of action based on an iterative decision making process that could take a long period of time, in spite of receiving recurrent negative feedback regarding the feasibility of attaining the goal (Brockner, 1992; Staw and Ross, 1987; Whyte, 1986).

**Features of Escalating Situations**

Staw and Ross (1987:40) defined escalation situations as “predicaments where costs are suffered in a course of action, where there is an opportunity to withdraw or persist, and where the consequences of persistence and withdrawal are uncertain”. At whatever level the situation is developing (individual or organisational) there are three features in common in all of them:

1) All situations involve some loss or costs that have resulted from an original course of action.
2) The events develop in a process over time; it involves a problem in progressing course of action, not a “one-shot call”.
3) There exists uncertainty regarding achievement of the goal (Brockner, 1992); hence withdrawal is not an evident solution in order to solve the problem. Withdrawal could involve incurring in expenses; persistence gives the prospect of possible gain.

Thus it is argued that escalation occurs in a setting where conditions are adverse and there is information about the performance of the project that confirms it is a losing endeavour and should be terminated, thus engaging in escalating commitment is recognized as a negative behaviour that could lead to the waste of valuable resources. On the other hand since in an escalating situation exists the uncertainty of the achievement of the goal and it is possible that the goal can be very close, engaging in escalation might lead to goal achievement. Given the case, this possibility does not imply that escalation should be perceived as a positive behaviour.
Examples of Escalating Situations

In order to get more practical, escalating commitment situation in real life can occur in a wide variety of instances, circumstances and contexts, a few examples are:

At the individual level, escalation can be depicted by the propensity of a subject to continue standing (and waiting) in a long queue because he has already been there for a while, even though the queue is taking quite a bit of time to advance (Newman and Sabherwal, 1996).

At the organisational level comparable problems show up: laboratories must take tough decisions about whether to continue or drop an expensive and unsatisfactory research and development project; and industrial companies many times must resolve whether to give up an uncertain venture versus investing additional resources (Staw and Ross, 1989).

Examples in research regarding escalation in projects are not many, among of them are the two in-depth case studies of the Expo86 World Fair and the Shoreham Nuclear Plant project (Staw and Ross, 1986, 1993) and some studies regarding project escalation on the information systems and technology field (Keil, 1995; Newman and Sabherwal, 1996; Mähring et al., 2004). Findings of these results seem to agree that still there is a need for more studies to be performed on field-based settings at the organisational level. It becomes of importance to carry out this research to understand how factors influencing escalating commitment come about during project stages in order to apply countering mechanisms that have already been identified in escalation literature (Staw and Ross, 1987a).

Lines of Research in Escalation

According to Ross and Staw (1986) there have been three independent research lines on commitment in escalating situations. The first research line they point out is the one executed by Teger (1980, in Ross and Staw 1986) where he used experimental games to simulate escalation situations.

A second series of studies that are considered are those performed by Brockner and Rubin (1985 in Ross and Staw, 1986, 1987a). The research is based on simulated situation design as laboratory games; they have called them, entrapment situations. The context of these situations is when subjects have a tendency to pour resources into a vague or diminishing goal, “nevertheless the principle of over-commitment is central to the concept of entrapment” (Staw and Ross, 1987b).

Both in escalating commitments as in entrapment the persistence towards pursuing a
course of action to achieve a goal increases the loss; even though entrapment studies have revealed that subjects chase goals in the face of increasing costs, they have also shown that most subjects abandon their pursuit before they have no more option but to stop. The main difference between entrapment and escalation studies has been that the first have made rising the amount on resources invested a stern function of time the subject or group is waiting, while in the latter the total amount of investment is an independent variable. (McCain, 1986:280).

A third cluster of studies consisted in role-playing experiments also carried out in laboratory settings (Staw, 1976; Staw and Fox, 1977; Staw and Ross, 1978). The research line of those experiments is reviewed by Staw (1981:584) who inquires “into whether commitment situations can inherently lead individuals into errors of escalation where in each case the escalation seemed to lead to further problems or losses.” According to Staw and Ross (1987) all these three lines of research yielded results, which attest for the propensity of decision makers to become overly committed to escalation situations.

According to Brockner (1992) there is an existing good deal of theoretical debate in relation to the explanation of escalation; a large number of these explanations are viewed in one of the two ways, one of them the decision maker sticks to his decision due what he expects out of goal attainment given that he is close to reaching it. The other view is related to self-justification where the subject feels responsible for the negative outcome of their decision and feels compelled to continue in a course of action to justify it.

The propensity to escalate may be explained in some extent by expectancy theory (e.g., Vroom, 1964 in Brockner, 1992). According to Brockner the perspective of this point of view is based on the evaluation decision makers do about the chances that additional investment of resources will lead to achieving their goal; hence they subjectively contemplate about what they expect to gain out of their decision taking into account how much value will provide reaching the goal. This view is associated with Rubin and Brockner’s (1975) research, which revealed that subjects’ persistence at a failing course of action was bigger in cases where they perceived that their goal was becoming nearer as time went by and the goal had a reasonably large value.

The main force driving this behaviour is the subject’s prospectively rational side, which concentrates on information associated with what people expect from the goals and the magnitude in value of the goals related with continuing to be committed to a decision. This kind of decision makers are associated with research where this type of subjects ignore sunk costs (impact of prior resource allocations) unless the nature of those prior investments assists them to ascertain whether it "makes sense" to stick with the course of action (Northcraft & Wolf, 1984).
The second grouping of explanations observes people following a self-justifying or rationalizing behaviour, in this viewpoint Brockner (1992) based on previous research (Rubin and Brockner, 1975; Staw and Ross, 1976, 1981) states that subjects become locked in a failing course of action because of their reluctance to acknowledge (to themselves and to people around them) that their decisions were wrong and the resources invested were lost, therefore to justify their decisions they increase their commitment to them. The main force governing this behaviour is the side of decision makers where rationalizing or self-justifying is reflected in escalating situations where they are not ready to accept their mistake in committing to a failing course of action.

The explanation of escalating commitment situations by the behaviour of self-justification is roundly criticized. The work of Bowen (1987) indicates that research on escalation situations has been unsuccessful to substantiate the phenomenon because the subjects involved in the experiments where put under ambiguous conditions that lead to ignoring the “ill-structured nature” of the decisions taken, labelling these as decision dilemmas instead of decisional errors. He argues that continuation of resource commitment can be the outcome from a dilemma originated by the interaction amid the level of commitment to a course of action and the amount of ambivalence observed in the feedback on prior resource allocations and in future expectations. On the other hand, Whyte (1986) points out that escalating commitment is the outcome of the way people in nature frame decisions and select among options, reflecting on the success or failure of preceding decisions. As a consequence, escalating commitment may manifest itself in a more ample range of circumstances than self-justification theory proposes.

According to Brockner (1992) the impact of these contrasting views on self-justification provides support that self-justification does in fact contribute importantly to the explanation of escalating commitment behaviour, nonetheless is not all encompassing. That is why he argues, in order to better explain escalation; theoretical perspectives should be analyzed at individual, group and organisational levels. This seems is to be in line with Roberto (2002), when he states that the interrelation, reinforcement and integration of the individual, group and organisational perspectives could provide a generous explanation of the Mt. Everest tragedy; always keeping in mind that the escalation explanation to the tragedy fails to provide a complete answer Kayes (2005:392).
2.3. Theories in Literature Used to Explain Escalation

Self-Justification Theory
According to Staw and Fox (1977) personal responsibility is a primary matter to the notion of psychological self justification, this is supported by his research that showed that people come to be particularly committed to a project when this responsibility has carried negative outcomes. Self justification theory is grounded in Festinger’s (1957 in Keil, 2000) theory of cognitive dissonance, it postulates that subjects have a propensity to escalate their commitment to a project in order to self justify their prior decisions, with the implication of investing more resources and the risk of repeating failure (Staw and Fox, 1977).

As Staw and Fox (1977:432) commented, “individuals seek to rationalize their previous behaviour or psychologically defend themselves against a perceived error in judgment”. In the same line Whyte, (1986:313) claims that, “It is this need to demonstrate rationality, which is seen to activate behaviour that runs counter to commonly accepted notions of rationality”. Self justification theory views escalation behaviour as emerging from some sort of retrospective rationality (Staw and Ross, 1978; Keil et al., 2000, Whyte, 1986) by which previous resource allocations are viewed as costs or losses and are considered pertinent to decision making.

According to Keil (2000) escalation literature shows that the psychological processes that are the basis of self-justification can be supplemented by particular social circumstances. As several authors (Staw and Ross, 1978; Keil et al., 2000, Whyte, 1986) point out, the view of retrospective rationality asserts that people feel obliged to justify their actions in order to demonstrate to themselves (psychological self-justification) and to others (social self justification) that they are capable and coherent, and that their previous decisions reflect that.

In all likelihood a subject with a high level of responsibility for a decision taken with regard to a project will feel a bigger obligation to justify the previous investment of resources, therefore it is highly probable that he will become involved in psychological self-justification (Brockner, 1992).

Prospect Theory
Prospect theory gives a structure for the comprehension of cognitive predispositions that have an effect on the decision-making process of people subject to uncertain circumstances. According Tversky and Kahneman (1981) prospect theory proposes that decision makers’ behaviour toward risk (risk averse or risk seeker) is determined by how a problem is framed, as they observe:
“The psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways.” (Tversky and Kahneman, 1981:453)

As mentioned before, Whyte (1986) has proposed that prospect theory may offer a more appropriate explanation for escalating commitment than self-justification theory; he advocates that the essential difference between self-justification theory and prospect theory is the role attributed to personal responsibility in promoting commitment. In particular, prospect theory proposes that people who have not come to accept the initial loss of allocated resources will probably develop a negative frame of reference of the situation, consequently will lean towards a tendency of risk seeking behaviour (towards possible bigger loss but with an opportunity to recoup initial investment), to quote from Whyte (1986:319):

“A tendency towards entrapment should be observed whenever future choices can reasonably be framed as choices between losses, as after a series of failures. Personal responsibility is not a prerequisite of such a frame, although it may be a contributing element”.

In short, prospect theory could give an explanation of the “sunk cost effect” where the decision making process in framed in negative terms by subjects due to the effect of sunk costs, by that means fostering risk seeking behaviour, which can be considered as escalating commitment to a failing course of action (Keil et al., 2000; Whyte, 1986)

Sunk-cost effects have been observed in both organisational and individuals decisions (Arkes and Blumer, 1985). A line of research on sunk costs effects (Garland, 1990; Garland and Newport, 1991; Garland and Conlon, 1998) has documented the capacity of sunk costs to have an effect on decisions regarding the withdrawal or continuing of a project. Keil et al., (2000) points out that the findings of these experiments were assessed to be consistent with a prospect theory interpretation of escalation.

**Approach Avoidance Theory**

According to Rubin and Brockner (1975) escalating commitment situations can be illustrated as a case of approach avoidance conflict. Approach avoidance theory postulates that in escalation situations, a restraining force (cost of persistence) is frequently dominated by one or more escalation driving forces like: (1) the size of the payoff for reaching the goal; (2) the cost of withdrawal, or (3) the closeness to reach the goal. These contending forces create a dispute over whether to continue or abandon the course of action; as discussed before this line of literature considers
resource allocation a function of waiting time. Therefore a waiting conflict can be portrayed as case of approach-avoidance dichotomy in which proclivities to approach and to avoid heighten as a function of the course of time. As Rubin and Brockner (1975:1055) have indicated:

“A person is thus most likely to withdraw from a waiting conflict at the outset, when the tendency to avoid is greater than the tendency to approach. Once the decision to wait has been made, however, and given the passage of time, the tendency to approach (the driving force) increases more rapidly than the tendency to avoid (the restraining force)—and entrapment becomes increasingly likely to occur”.

The “completion effect” is derived from the approach-avoidance theory and it puts in evidence the impression that “motivation to achieve a goal increases as an individual gets closer to that goal” (Conlon and Garland, 1993:403).

Conlon and Garland (1993) found that research had repeatedly mixed up sunk costs with project completion, and insinuated that the “sunk cost effect” may be driven by the “completion effect”. According to Keil et al., (2000) the results from a series of studies that searched to split those variables (Conlon and Garland, 1993; Garland and Conlon, 1998) seemed to substantiate the completion effect.

As observed by Conlon and Garland (1993:410): “Our results suggest that degree of project completion may dominate any sunk cost effects that are present in resource allocation decisions” (1993:402), and that experiment results were consistent indicating that “information about project completion influences resource allocation intentions to a far greater extent than does information about sunk costs”. This conclusion is conforming to psychological research proposing that goal achievement, can posses a remarkable influence on behaviour (e.g., Katz & Kahn, 1966 in Keil et al., 2000:637).
3. THEORETICAL FRAMEWORK OF ESCALATION

In escalation the principal phenomenon of concern is the propensity of individuals and organisations to get excessively committed and continue in failing courses of action (Staw and Ross, 1989), to make sense of this tendency a diversity of behavioural and economic forces should be taken into consideration. In the real world escalating behaviour may be driven by those forces, and they may differ in intensity in relation to the specific circumstances in which they manifest, consequently behaviour turns into a complex matter to discern (Ross and Staw, 1986; Staw and Ross, 1987a).

Considering that the escalation literature has many theories, research lines and opposing views explaining the phenomenon, this study is based on the application of the theoretical framework of Staw and Ross (1987a). This framework has been chosen to assist in this research since it’s the only widely cited and recognized theoretical construct available that encompasses most of all research in escalating commitment (Brockner, 1992).

The framework attempts to integrate a large number of different studies (including all of the reviewed above) in a model where factors that influence escalation of commitment are categorized. Those factors are called determinants of commitment and they are categorized in the framework in four main types: project determinants, psychological determinants, social determinants and organisational determinants. The determinants are content variables that influence the persistence on a course of action in escalating commitment situations.

The starting model to describe escalation behaviour is to imagine a course of action that has produced questionable or negative outcomes. Negative results will probably elicit re-examination of the course of action with an evaluation of the utility to persist against to withdraw from it (Staw and Ross, 1987a), Figure 1 illustrates the this escalation cycle and how it can be generated.

The framework is very useful to identify a number of category variables that influence project escalation (Mähring et al., 2004) (See Figure 2) and will be applied to the case study to discern between the factors that influenced the decision making process in order to get some insights on how the aspects that promoted escalation were present in the Everest case.
The impact of these four groups of variables in a project progresses over time forming a temporal model consisting of a process with four phases of behaviour in typical escalation situations. The first phase begins with the promise of favourable future outcomes in the course of a project. As the project progresses it gradually becomes a losing course of action during the second and third phases, finishing in the fourth phase with significant negative outcomes. (Staw and Ross, 1986; 1987a; 1993; see Figure 3).

The work of Ross and Staw (1993) indicates that it could be expected that individuals and organisations withdraw from a losing project, the temporal model on Figure 3 shows that opposing forces have a tendency to accumulate over time, making it more
complicated to abandon than would be anticipated if only economic results were contemplated. There is a time related succession in the impact of the variables of escalating commitment in organisations, consequently project determinants are most significant at the early phases of an escalation situation, psychological and social determinants prevail at the central phases, and both project and organisational variables become most prominent at the finishing phase of the escalation episode.

**Figure 3. Temporal Model of Escalation (Ross and Staw, 1993)**

![Temporal Model of Escalation](image)

3.1 Project Determinants

Project factors are the objective features of the project and how management understands it (Ross and Staw, 1993); among these aspects are the economic benefits of persistence or withdrawal (Staw and Ross, 1987), therefore it looks like the way in which a project is economically configured can resolve, in some way, whether an individual will keep on pursuing or drop the situation (Staw and Ross, 1986).

Another aspects that have been shown to determine persistence to a course of action are closing costs and/or salvage value. Where the decision to continue a project can be
taken in some extent, due to its small salvage value and requirement of significant closing costs if terminated partway through its course (Northcraft and Wolf, 1984). Likewise the causes of setbacks to its completion, there is an impact in commitment by whether a setback is caused by a permanent or temporary problem that can affect the perceived benefit of the project (Leatherwood and Conlon, 1985 in Staw and Ross, 1987).

Staw and Ross 1987 also point out that it would also be expected that benefits to be affected by impressions on how probable is that new resource allocations will be effective to get the project back on track (Staw and Fox, 1977). Also commitment is likely to be affected by how big is the size of the goal or payoff of a project object (Rubin and Brockner, 1975). Likewise by future expenses or costs required to attain a project's payoff (Brockner et.al, 1981) or when they are seen as in demand of long-term investment in order to obtain any significant benefits (Staw and Ross, 1987) and by the number of times preceding commitments to course of action have yielded negative results (McCain, 1986).

3.2 Psychological Determinants

Apart from the more objective attributes of a project there are some psychological variable that could be present in escalating commitment situations. Some of these determinants are forces that can cause miscalculations in gains and losses of project standings, while others relate to forces that can straightaway attach subjects to a course of action (Staw and Ross, 1987).

These psychological factors include "reinforcement traps" (Platt, 1973 in Staw and Ross, 1986, 1987a), such as complications in retiring from an activity when previous reinforcement from gains has been received (Staw and Ross, 1987a), also individual incentives, such as the necessity for self-justification.

According to Keil (1995) research proposes that managers may take part in a type of self-justification behaviour in which they carry out additional investments in order to turn a project around rather than closing down the project and acknowledge that their prior decisions were mistaken. Self-justification can prompt managers to "bias facts in the direction of previously accepted beliefs and preferences", having as consequence project escalation (Ross and Staw, 1993:716).

Self-inference is also a psychological factor; a self-inference explanation would contrast with self-justification in the sense that it would not convey any motive to appear rational or competent (Staw and Ross, 1986, 1987a). For example as stated by Ross and Staw (1986:276) “individuals may examine their own behaviour in its social context so as to infer personal values and preferences from prior actions”, furthermore
projects are more liable to escalation when there exists a preceding history of success and when the individual responsibility level is prominent (Keil, 1995).

Similarly decision-making errors like trying to recover resources already invested in a project, particularly decisions regarding sunk costs (Ross and Staw, 1993; Garland et al., 1990). Escalation is also expected to happen when managers erroneously manage information (i.e. bias in information processing), such as proclivities to distort information in the preference of pre-existing convictions (Nisbett and Ross, 1980 in Staw and Ross, 1986, 1987a). Staw (1976) and Arkes and Blumer (1985) provide examples of research on psychological determinants.

3.3 Social Determinants

Great part of research on escalating commitment situations has handled psychological or project variables; escalation is frequently a more complex social phenomena (Staw and Ross, 1987a). Social determinants of commitment may compel an individual to stick with a failing course of action (e.g., managers may continue in a course of action, not only because of self-justification, but because they are reluctant to reveal their errors to others (Staw and Ross, 1986; 1987a, 1989)). This suggests that still if the economic outlook is unpromising and the decision maker agrees with that forecast at a superficial level, there may still be social forces that cause managers to stick to a course of action (Ross and Staw, 1993).

Social factors that promote escalation include the aspiration not to lose reliability and reputation (face-saving behaviour) with others, and also the call for external justification; which occurs when external stakeholders have been prompted to have the idea that project success is being or will be achieved (Brockner, Rubin and Lang, 1981; Fox and Staw, 1979).

Another social determinant of commitment is the modelling of others' behaviour in comparable conditions, research by Brockner et al. (1984 in Staw and Ross, 1986) found that individuals will allocate more resources to a project when others have committed themselves in similar circumstances and when such commitment gives the impression of being successful.

In the same way, social norms favour consistent behaviour, or strong leadership of managers in escalation situations (Staw and Ross, 1981). Likewise, projects are more inclined to escalation when competition exists between the decision-making group and other social groups (Rubin et al., 1980 in Staw and Ross, 1987a). The external binding of individuals to behaviour may also be significant in escalating commitment situations, subjects social personality may happen to grow externally bound by their
deeds with respect to a project (Staw and Ross, 1987a; 1989).

3.4 Organisational Determinants

After examining the psychological and social variables that may have an effect on escalating commitment situations, it is argued that these determinants can influence decision makers in ways that are not determined by objective costs and benefits of a project (project determinants) (Staw and Ross, 1986, 1987a).

Many of most expensive escalating commitment situations imply the persistence of a whole organisation to a failing project, thus it is fundamental to consider some organisational determinants of project escalation (Staw and Ross, 1989). Many of these factors that can influence commitment on the organisational level have the attributes of side-bets, they build over time as one executes a course of action, likewise organisations generate economic, technical and political side-bets during the execution of a project (Becker, 1964 in Staw and Ross, 1987a). Within this category are grouped variables as the level of economic and technical side-bets the organisation is liable to in order to support and execute a project (opening new plants, hiring of staff, development of expertise) (March, 1978 in Staw and Ross, 1987).

Also, organisational factors involve the structural and political environment surrounding a project, variables such as the level of political support for a project within an organisation (Pfeffer, 1981 in Staw and Ross, 1987a), and the extent to which the project comes to be institutionalized with the objectives and values of the organisation (Goodman, Bazerman, and Conlon, 1980 in Ross and Staw, 1993). According to Keil (1995) projects are inclined to escalate when there exists an intense political support at top management level and when the project is very much tied up with the organisation goals (see Table 1 for a brief summary of the types of factors that promote escalation).

3.5 Project Research on Escalation

Previous studies on escalating situations have been realized using as a basis laboratory experiments which focal point was individual decision making, as a result there is a increasing acknowledgement of the demand studies related to organisations that can give some insight on the organisational dynamics of the phenomenon (Garland, et al., 1990; Ross and Staw, 1993). This is why a project research in extreme setting based on a temporary organisation such as a mountain climbing expedition could be of contribution for the field; furthermore the current individual level research may not integrate in appropriate way the social and organisational determinants of escalation (Keil, 1995; Newman and Sabherwal, 1996).
As mentioned before, only a small number of field-based studies of escalating commitment in projects have been undertaken using Staw and Ross (1987a) theoretical framework (Keil, 1995; Keil et al., 2000; Newman and Sabherwal, 1996; Ross and Staw, 1986; 1993). There is two in-depth case studies investigating escalation in projects been performed that are briefly summarized below:

“British Columbia's decision to host a world's fair (Expo 86) in Vancouver. Despite rapidly increasing deficit projections (from a $6-million projected loss in 1978 to over a $300-million projected loss in 1985), the provincial government remained steadfast in its plans to hold Expo” (Ross and Staw, 1986:274)

“Long Island Lighting Company's decision to build and operate the Shoreham Nuclear Power Plant. Shoreham's cost, estimated to be $75 million when the project was announced in 1966, rose over the next 23 years to over $5 billion. A negotiated agreement with New York State finally resulted in Long Island Lighting's abandoning Shoreham without its ever having begun operation” (Ross and Staw, 1993:701)

Table 1. Types of Factors that promote escalation (Mähring et al., 2004)

<table>
<thead>
<tr>
<th>Factor types</th>
<th>Description</th>
<th>Relevant examples</th>
</tr>
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<tbody>
<tr>
<td>Project factors</td>
<td>Concern the objective features of the project and how decision makers</td>
<td>Projects are more prone to escalation when they involve a large potential</td>
</tr>
<tr>
<td></td>
<td>perceive these features (Ross and Staw, 1993)</td>
<td>payoff, require a long-term investment to be profitable, and are costly to abandon</td>
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<tr>
<td></td>
<td></td>
<td>and when setbacks are perceived as temporary problems that can be overcome (Staw</td>
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<td></td>
<td></td>
<td>and Ross, 1987)</td>
</tr>
<tr>
<td>Psychological</td>
<td>Cause managers to convince themselves that &quot;things do not look so bad&quot;</td>
<td>High personal responsibility for the project outcome, visible personal</td>
</tr>
<tr>
<td>factors</td>
<td>(Brockner, 1992)</td>
<td>attachment to the project, prior history of success, and information-processing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>errors (cf. prospect theory) are psychological factors that promote escalation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Brockner, 1992; Staw and Ross, 1987)</td>
</tr>
<tr>
<td>Social factors</td>
<td>Stem from the social environment that can hold the decision maker(s) to a</td>
<td>A group's competitive rivalry with other groups, a group's modeling of behavior</td>
</tr>
<tr>
<td></td>
<td>course of action even after their personal beliefs no longer justify it</td>
<td>after another group, the need for external justification (resulting from lending</td>
</tr>
<tr>
<td></td>
<td>(Brockner, 1992; Brockner and Rubin, 1985)</td>
<td>external stakeholders' belief in project success) and behavioral norms that favor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;staying the course&quot; are all factors that increase the likelihood of escalation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Brockner, 1992; Ross and Staw, 1993; Staw and Ross, 1987)</td>
</tr>
<tr>
<td>Structural</td>
<td>Concern the political and organizational context of the project</td>
<td>These include political support for the project, and administrative inertia and</td>
</tr>
<tr>
<td>factors</td>
<td></td>
<td>tie-in with organizational objectives and values (Goodman et al., 1990; Pfeffer,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1981; Staw and Ross, 1987; Ross and Staw, 1989) They also include external</td>
</tr>
<tr>
<td></td>
<td></td>
<td>political support and external pressure to persist (Ross and Staw, 1993)</td>
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</table>
The study of Expo 86 project revealed that the four kinds of determinants differ in the degree that they impact commitment through different stages of a project; where project determinants had a preponderant role when starting the project and declined its influence with project progression giving room for psychological determinants, then social determinants and in the end organisational determinants will take place on impacting escalating commitment (Ross and Staw, 1986, 1987a). Subsequently the research on the Shoreham nuclear plant suggested that project determinants are bound to re-appear having a strong influence on commitment during the last stage of the project (Ross and Staw, 1993).

Staw and Ross (1987) framework has also been applied to research on information systems development and IT projects (Keil, 1995; Newman and Sabherwal, 1996; Keil et al., 2000; Mähring, 2004). Within the information systems field, Keil (1995) applied the Staw and Ross (1987a) framework to the study of IT project escalation, finding consistency in theory given the support for a great number of the determinants in all four groups (project, psychological, social and organisational). Staw and Ross (1987a) framework was also used by Newman and Sabherwal (1996) to research commitment to an information systems development project. The findings were in tune with Staw and Ross (1987): determinants are connected to each other, but then conversely to the framework (Staw and Ross, 1987a), findings show that different kinds of determinants may have strong influence at various stages of the project and can manifest themselves intermittently throughout all stages of the project. Nevertheless Newman and Sabherwal (1996) point out that further research should investigate if the contrasts between their study and the two in-depth case studies of Staw and Ross (1986, 1993) can represent intrinsic attributes of information system projects. In their research (Mähring, et al., 2004) used Staw and Ross framework to do a theory-comparative analysis with actor-network theory on information technology project escalation. The escalation theory findings indicate that all four categories of determinants were present in the project, and that escalating commitment to pursue a course of action took place in successive decisions as a product of the combined influence of determinants.

These studies have left important implications for further research on escalation situations for academics, practitioners and organisations. Among those, which are noteworthy, stand out the need to understand the organisational culture’s role in escalation of commitment in projects. In addition the detailed examination of the interrelationships between the four categories of determinants of commitment and how they are linked to decision-making in projects should be further researched, since the findings suggest that decisions are affected not only by economic and organisational variables but also by social and psychological factors. (Newman and Sabherwal, 1996).
The implications above appear to support the work of Keil (1995) which points out the need for a more ample view of project management and control, something that takes into account not only rational and technical methods for controlling projects but also an approach that includes a behavioural and psychological perspective. It is clear that escalation can be a problem to projects since the investment of more resources could be unfruitful and even end in disaster that can lead to the loss of human lives. Escalation can also become a severe complication when an organisation is wasting valuable limited resources to a failing project, resources that could be invested in more productive ways which means that there is also an opportunity cost involved. In this case some of the climbers missed the opportunity to have another chance at the summit of Everest in the future, because their lives came to a tragic end.

The choice of the Staw and Ross (1987a) framework to analyze escalation in a project as temporary organisation, means that the analysis tool is useful in summarizing a extensive part of escalation research and that has also been used in studies on IT project escalation and others. With this framework we will analyze data and might be able to gather evidence about which forces where the most influential determinants of behaviour in this particular extreme setting, so that we might understand how the balance of escalation forces over time where present in the 1996 Mt. Everest case study. Furthermore this framework has been successfully applied in research papers dealing with cases when escalation is applied to information system and technology development projects (Keil, 1995; 2007; Keil et.al, 2000; Mähring et.al. 2004; Newman and Sabherwal, 1996).
4. METHODOLOGY

Following the literature of the subject, the next step is to determine the appropriate methodology in the research, namely tools that will enable the answering of the research question. This chapter will define the theoretical and practical approaches in methodology and will enable the users of this research to comprehend the research process and method selected and used to carry out this research. The path in applying the methods and going further in depth of the research is a very important process and needs to be taken seriously as it will impact the final output of the research (Saunders et al., 2003).

4.1 Theoretical methodology

Following the definition of the research question, the next step will be to discuss in more detail the research design in more details: the research philosophy, the approach and strategies used for the research. Saunders et al. (2003) describe these “layers” into the research onion. “The Research process onion”, Saunders et al. (2003) is actually an illustration of how the research process can take place. This approach from the external part towards the centre shows the way of getting to the core of the research approach and the path taken to conduct the research.

Figure 4. The research process onion

![The research process onion](image)
Clearly, the outset layer is the research philosophy. After having defined the research philosophy, the researcher will go towards inner layers, namely, research approach, strategy and the data collection method. These will be discussed in details in the following sections of the methodology.

4.2 Research philosophy

The research philosophy represents the way in data is gathered, reviewed and analyzed. The research philosophy contains two important concepts, and they are: Epistemology and Ontology. Epistemology derives from the Greek word episteme – to know, whereas Ontology from Greek onto – to be (merriam-webster.com). Therefore the term epistemology is what is known to be true, whereas ontology is what is believed to be true. A simple example would for illustration: in epistemology we can say it is raining only after we have seen it falling, whereas in ontology we believe it is just about to rain since it is extremely darkly clouded and thunder has already started. The epistemology considers and understands what is believed as the truth and the study of science, knowledge and testability. Ontology considers one’s views in the world and the study forms of being. Going in depth with the epistemology concept, the literature divides them in three main (but not limited to) concepts: positivism, realism and interpretivism.

Positivism
The positivism as an epistemological position sees the social phenomena as something that is quantifiable and thus can be studied through the application of methods, which are applied in the natural sciences (Bryman, 2008). As a result, logic explanations from the research can derive if this approach is used (Saunders et al., 2003).

Interpretivism
Contrasting the positivism, the interpretivism represents critical views of authors who argue that methods used in natural sciences are not applicable to social world and environment, which is represented by people and institutions, which is also a subject matter of the social world (Bryman, 2008). It was considered that a more appropriate approach between these contrasts would be the one between the positivism and hermeneutics. “Hermeneutics derives from Theology (the Religion Science) and when applied to social sciences, it considers the theory and method of human action” (Bryman, 2008). Interpretivism therefore requires the researcher to grasp the subjective meaning of the social behaviour.

Realism
Realism is in between the interpretivism and the positivism and as such represents a combination of both. The realism represents a belief through which data for both
natural and social sciences should be collected in the same way, as even for the science, there is always an external reality that affects the attention of the scientists (Bryman, 2008). The relation to positivism is that all findings can be narrowed down to a “rule”. However, as mentioned there is always the external environment that affects in one way or another. Therefore this tells that there are some factors within the interpretivism, which means that a clear-cut ‘rule’ may not always be applicable (Saunders et al., 2003).

The ontology deals with the nature of social entities. The main points to consider are “whether the social entities can and should be considered as objective and have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors” (Bryman, 2008:18). There are two main considerations enclosed in the ontology: objectivism and constructionism. Objectivism implies that “social phenomena exist independently from social actors” (Bryman, 2008:19), whereas constructionism or constructivism stresses that “social phenomena and their meanings are continually being accomplished by social actors” (Bryman, 2008:19).

A research philosophy is chosen mainly as a result of two main determinants, one more influencing than the other. The first one is the practical considerations of the research project undertaken, and the second and main influence is probably the researcher’s view of the relation between knowledge and its developing process (Saunders et al., 2007). In this particular study, the practical considerations of the research project are a major influencing factor to choose a research philosophy, taking into consideration the research is a retrospective study of survivor accounts of the events taking place on the Mt. Everest tragedy. On the other hand, the researchers in this study have adopted a view of the world where they are concerned on examining certain aspects of human behaviour that underlie subjectivity and are leaning towards social science methods.

It is precisely the interpretivism view of research that is well suited as a research philosophy for this study since it makes an emphasis on the difference between doing research among humans and objects; furthermore the Mt. Everest tragedy has been labelled as an interaction of complex systems (Roberto, 2002) which is exactly what the interpretivist research philosophies argues for examining at the insights of this complexities in the social world of management; in an opposing view the positivists take a objective stance trying to theorise by specific laws and natural science methods the study of social realty (Bryman and Bell, 2007). Furthermore as Saunders et al. (2007) point out, it is worthwhile to use an interpretivism approach when dealing with situations that encompass complex and unique issues, consequently since the 1996 Mt. Everest disaster carries those features it is quite difficult to make a generalisation out of the outcomes of the study. The generalisation issue will be addressed further.
Escalation of Commitment in Temporary Organisations

ahead in this chapter.

In this particular case, the research question looks to explore insights on the aspects promoting escalation on the Mt Everest tragedy, the factors that might be found will be applicable only to this particular case, nevertheless they will shed some light on the overall development of how escalation comes about in temporary organisations. This goes in line with Remenyi et al. (1998:35) who have stressed the need for examining “the details of the situation to understand the reality or perhaps the reality working behind them”; this statement follows an interpretivist position which considers that is imperative to investigate the subjective connotations that drive human behaviour, such as the ones that motivated the decisions taken by some of the expedition team members. Proving that the motivations and connotations at the bottom of some team member decisions are explored, then we may come to understand how they interpreted things and why decisions were taken at the outset; this approach corresponds to the term constructionism (Saunders et al., 2003).

Constructionism is one of the two main considerations regarding the ontological underpinning of research, which as mentioned before is closely connected to epistemology and deals with the nature of reality and the suppositions of how the world functions (Saunders et al., 2007), the other consideration is called objectivism and it asseverates that “social phenomena and their meanings have an existence that is independent of social actors” (Bryman and Bell, 2007:22). With all this in mind we have defined our research philosophy as interpretivist and also favoured the constructionism approach within the ontological considerations of research.

According to Schatzki (2006), all organisations are characterized by the unfolding of the performances and of material events that are coordinated and linked to one another and also exhibit temporal features such as rhythm and patterning. In the case of Mt. Everest, if this is considered as a temporary organisation in an extreme setting, one can say that through the materials available on the case the research will try to link, understand and relate the existing patterns and interrelations between the events. In this context and complementing the constructionism approach, which as explained is the social phenomena and the meaning of the same is constructed by social actors Bryman (2008:19), meaning people, the research will try to explain the patterns of behaviour and decision making related to escalation in the case. If the process of escalation is seen as the final patterned passage, then one can assume that following Schatzki’s statement, this is a “event –like part of an organisation, and thus actions are performed, structures and practices govern the activity, and the arrangements which are carried out are involved and casually support these actions and practices” Schatzki (2006:1865).
4.3 Research approach

Depending on the research philosophy, a research can be performed through using a *deductive* or an *inductive* approach. This is related to the relationship between the theory and research itself. This also provides the grounds or basis of the research (Saunders et al., 2003).

**Figure 5. The process of deduction. (Source: Bryman, 2008:10)**

Deductive approach represents the process in which “the researcher on basis of what is known about a particular domain and of theoretical considerations to that domain deduces a hypothesis/ess that must be subjected to empirical scrutiny” (Bryman, 2008:9). The deductive approach is a objective replicable approach based in methods from the natural sciences, where existing theory is used for developing hypothesis that are meticulously tested using statistical methods, and which results can be generalised (see Figure 5)(Colley and Hussey, 2003 in Saunders et al., 2007; Bryman and Bell, 2007; Sekaram, 2003). After the data collection and the findings from the data collection, the hypotheses are tested and thus confirmed or rejected according to the findings and revising the theory if the hypotheses are rejected.

The inductive approach is the case when the theory is the outcome of the research. It means that it is the reverse of the deductive approach. The inductive approach is appropriate when the researcher takes an interpretivist position. It is considered that research areas under discussion cannot be generalized; therefore it is important to
carry out the empirical research in order to draw conclusions (Ghauri and Grønhaug, 2002). Therefore the induction process “involves drawing generalisable inferences out of observations”, (Bryman, 2008). Figure 6 taken from Bryman (2008:11) illustrates the differences between the deductive and the inductive approach.

**Figure 6. Deductive and inductive approaches**

The interpretivist research philosophy usually dictates that the research approach shall be *inductive*, nevertheless Saunders et al. (2007) argues that such stance seems deceptive and of no practical value. Inductive research is subjective in nature and is governed by making sense out of the empirical data collected in a holistic way by analysing, recognizing and developing patterns in an inductive manner; thus theory follows data collection (Bryman and Bell, 2007). This describes in a somewhat accurate way what this study pretends to conduct; inductive research is difficult to replicate (Easterby-Smith et al., 1991 in Bryman and Bell, 2007) a feature that is present in the Mt. Everest case since this tragedy is unique in space and time. Predominantly an inductive research is executed when the main focus of the study, as in the case of Mt. Everest, is to understand how the events came about rather than to describe what happened (Easterby-Smith et al., 2002 in Bryman and Bell, 2007); or as Staw and Ross (1987a:45) more specifically have proposed “to understand the behavioural content of decisions rather than just the process of decision making”.

Notwithstanding the contrasts presented regarding research philosophies and research approaches (*see Table 2*), these are not to be seen as entirely exclusive of one another, greatest part of research in social sciences takes place within the bounds of the two opposite poles (Bryman and Bell, 2007). Nevertheless, in order to undertake this study, the researchers will be using the inductive approach making use of an established theoretical framework (Staw and Ross, 1987a) as an assistance tool for making sense of the findings the research may produce; and thus making assumptions out of observations, (Bryman, 2008) adapting to the suitability of the theoretical construct being utilised, since indisputably it will structure the research’s conclusions (Bryman and Bell, 2007). In this particular case, the theoretical framework of Staw and Ross (1987a) has been chosen to assist in this research since it’s the only theoretical construct available that encompasses most of all escalating commitment research and is widely cited and recognized as so (Brockner, 1992).
Table 2. Contrasts between quantitative and qualitative research (Source: Bryman and Bell, 2007:28)

<table>
<thead>
<tr>
<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal orientation to the role</td>
<td>Deductive; testing of theory</td>
<td>Inductive; generation of theory</td>
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<td>of theory in relation to research</td>
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<td>(Research Approach)</td>
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<td>Epistemological orientation</td>
<td>Positivism</td>
<td>Interpretivism</td>
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<td>Ontological Orientation</td>
<td>Objectivism</td>
<td>Constructionism</td>
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</table>

4.4 Research Strategy

Following the research approach, the research strategy needs to be determined. The research strategy represents the means through which the research question will be answered. Research strategy should also take under consideration important factors such as delimitations that can occur during the study, time and resources (Saunders et al., 2003). The research strategy is in compliance with the research approach. The research strategy, considering that selects the qualitative or quantitative approach, is then followed by the selection of the research design and the research method (Bryman, 2008). The research strategy, depending on the research topic, can also be a combination of several strategies for the research to be performed (Saunders et al., 2003).

Certainly, in this study the choice of research strategy is governed by a number of elements that are closely linked to each other as the research question and objectives, the extent of existing knowledge and the chosen research philosophy (Saunders et al., 2007). Additionally the fact that the 1996 Mt. Everest disaster is a well-documented contemporary event, leads the way for a particular research strategy to be selected. Saunders et al. (2007) lists several types of research strategies; among them experiments, surveys, and case studies. An experiment is performed to determine the relationship between two or more variables of a selected sample of subjects in distinctive experimental circumstances (Hakim, 2000 in Saunders et al., 2007). This research strategy in the form of a laboratory experiment is commonly used in the social psychology field, what’s more it was utilized in the seminal work of escalation research by Staw (1976) when he attempted to determine the relationship between two variables, escalating commitment and personal responsibility in a failing decision; laboratory experiments have been the most widely used research strategy in the lines of escalation research (Brockner, 1992; Staw and Ross; 1987a).

Based on the context of the events subject of this study, the proposed research question, the empirical data available, our chosen philosophical underpinnings, and
taking into consideration the approach utilized by a number of authors who have analysed the Mt. Everest events (Elmes and Barry, 1999; Kayes, 2002; Roberto, 2002; Mangione and Nelson, 2003; Kayes, 2004, 2006; Hållgren, 2007, 2009, 2010; Tempest et al., 2007; Hallgren, 2009) the research strategy for this study is an historic case study based on accounts of some of survivors of the tragedy.

Case study
A case study is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context…” (Yin, 2003:13). It is a ‘detailed and intensive analysis of a single case’ (Bryman and Bell, 2003) as one single scenario will be investigated. Based on work by Yin (2003), the most important reasons to use a research design of a case study in this research are: 1) ideal approach for “how” or “what” questions. 2) it concentrates on a contemporary event, 3) allows to perceive the overall picture and significant characteristics of the event’s development, and 4) can handle a diversity of evidence. Expanding slightly on the four reasons indicated above, case studies have a common alignment with the type of question this study attempts to answer, which is how aspects promoting escalation were present in the 1996 Mt. Everest expedition? The Mt. Everest disaster is in fact as well-documented contemporary event as mentioned before; furthermore Robson (2002:178 in Saunders et al., 2007:139) defines the case study as a research strategy, which “involves an empirical investigation of a particular contemporary phenomenon within its real life context”.

The main advantage of the case study is to gain a rich insight and understanding of the context that will be researched (Saunders et al., 2003), with that in mind and as the research questions posited intrinsically implies we set out to explore significant characteristics that shed some insight on the aspects promoting escalation in this tragedy, not to generalise but to come to a better understanding of the development of these events and the decisions that somehow could have contributed to it. In addition the importance of the context is highlighted by the case study research strategy since the divide between it and the phenomenon being studied (in this case escalation) is not explicitly noticeable (Yin, 2003). A research strategy of case study is beneficial to this research since it can handle a variety of empirical data, this issue will be discussed in the data collection section below. According to Eisenhardt and Graebner (2007:26), “the research question in a case study is tightly scoped within the existing theory, and the justification relies heavily on the ability of qualitative data to offer insight into complex social processes that quantitative data cannot easily reveal.” In our case the process of escalation of commitment will be considered as an important phenomenon and may enable some valuable insight of the outcomes of the decisions taken.

The research type of this study is contemplated as exploratory, which is one of the three categories of research types commonly used by researchers, the other two are
**Escalation of Commitment in Temporary Organisations**

descriptive and explanatory (Cooper and Schindler, 2003; Sekaran, 2003). Exploratory studies intend to “find out what is happening, to seek new insights, to ask questions and to assess phenomena in a new light” (Robson, 2002:59; in Saunders et al., 2007: 133). This type of research is often performed to obtain a more valuable comprehension of the research topic, and also because no previous studies of escalation in extreme settings have been undertaken, as in the particular instance of this case study of Mt. Everest seeks to do (Sekaram, 2003:119).

The complex case study of Mt. Everest encompasses different segments of looking into the events. This is because for example a decision-making event has different perspectives to be looked at. In this context, it is important to breakdown the case and creates “mysteries” (Alvesson and Kärreman, 2007), in order to understand what really happened. Alvesson and Kärreman also map out this research process into a decision tree for mystery-focused research as follows.

**Figure 7. Decision tree of mystery focused research (Alvesson and Kärreman, 2007)**
4.5 Data Collection

In this particular study, the practical considerations of the research project are a major influencing factor to data collection, contemplating the research is a retrospective study of survivor accounts of the events taking place on the 1996 Mt. Everest tragedy. Empirical data will be collected from published first hand bibliographic accounts of survivors of the disaster as well as observers present at the mountain that year (Krakauer, 1997; Groom 1997, Boukreev and DeWalt, 1998; Breashears, 1999; Gammelgaard, 1999; Kayes, 2006), in addition mass media outputs will be looked into (Breashears, 1998, 2009). Data was also collected from the website created specifically for the event www.pbs.org/wgbh/pages/frontline/everest/, Frontline: Storm Over Everest.

According to Bryman and Bell (2007) data are in all instances collected in relation to something like a critical organisational problem, such as escalating commitment to a failing project. Such something can also materialize when research is performed when a peculiar opportunity emerges. For example the 1996 Mt. Everest tragedy and the NASA space shuttle Challenger disaster in 1986 prompted business and management research into learning and leadership, decision making and goal-setting, and organisational structure that could have contributed to the tragedy in the first (Elmes and Barry, 1999; Kayes, 2002; Roberto, 2002; Kayes, 2004, 2006; Hällgren, 2007, 2009, 2010; Tempest et al., 2007; Hällgren, 2009) and into decision-making processes and group dynamics that ushered the decision to launch the shuttle regardless the signs of evident safety issues in the latter (Vaughan, 1990; 1996).

In both cases researchers have supported their reconstructions of the events (Elmes and Barry, 1999; Elmes and Frame, 2008; Hällgren, 2009, 2010; Kayes, 2002, 2004, 2005, 2006; Roberto, 2002; Rosen, 2007; Tempest et.al., 2007; Useem, 2001; Vaughan, 1996; Weick, 1993) through biographic written work produced by survivors and close observers of the tragedy (Krakauer, 1997; Groom, 1997, Boukreev and DeWalt, 1998; Breashears, 1998, 1999, 2009; Gammelgaard, 1999) consequently this case also builds on those firsthand accounts and mass media outputs to gain a comprehension of the events.

Bryman and Bell (2007) have drawn the attention to the fact that biographical material and commercially published autobiographical sources can be utilized as the primary source of data in a qualitative research or as supplement to other methods, they put as an example research into organisational culture performed by Martin and Siedhl (1983) where the authors depended substantially on the biography of the
company’s general manager. Those methods mentioned before have been utilised by authors in the reconstruction of the 1996 Mt. Everest events (Elmes and Barry, 1999; Hällgren, 2007, 2009, 2010; Kayes, 2002, 2004, 2006; Roberto, 2002; Tempest et al., 2007), and the 1986 Challenger launch decision where the author as an outsider draws on historical ethnography to retrospectively reconstruct the structure and process of a complex organisation relying soundly on primary source documents (Vaughan, 1996) and also the study of the 1949 Mann Gluch fire disaster (Weick, 1993) based on an award winning book by Norman McLean were are detailed reconstruction of the events was performed by the author for years before publishing his book.

4.6 Limitations of the study

The use of interviews would have been an alternative method to this research, then again given the difficulty of access to survivors and the limitations in time and resources to carry them out on this study they have been ruled out, however the comprehensive array of published text by survivors and close observers will contribute to a rigorous a cross-account analysis of the events (Hällgren, 2009). In addition turning to Orton and Weick (1990 in Hällgren, 2010) we find that when it comes to recreating events and activities there are evident shortcomings, nonetheless in a method like interviews those shortcomings are also present. Certainly one of the limitations of this study is concerned to the fact that the authors of the books used as the empirical basis of this case study, in one way or another expect to profit from the sales of the published manuscripts, hence there might be a tendency to dramatize the facts as they actually occurred or to take a biased perspective of the events. In order to account for this possibility, the study has taken first hand accounts from several survivors of the disaster as well as close observers present in the mountain who witnessed the events as they unravelled. We have taken this measure in order to do a cross-account of the events seen form different perspectives of survivors and witnesses in order to pinpoint possible discrepancies of what happened and therefore contrasting the several accounts that form part of this study to arrive at what we believe is an accurate version of the happenings.

4.7 Data Analysis

Data was collected from the materials available, including books and personal accounts of the survivors, journals, variable published material on the case, as well as transcripts of the survivors from a website made particularly for the case, www.pbs.org/wgbh/pages/frontline/everest/, Forntline: Storm Over Everest. The data have been grouped in a chronological order, focusing on details that were of importance to decision making. The chronological order was backed up by already published similar timelines of the same event (Kayes, 2006). These timelines have contrasted literature variations of timing. The case was followed into another
grouping, according to phases of the case. The phases represent the division of stages of an escalation situation, and this model belongs to the theoretical framework (Staw and Ross, 1987). The division of the events in the phases is as follows:

Phase 1: Promise of future outcomes
Phase 2: Receipt of questionable outcomes
Phase 3: Receipt of negative outcomes
Phase 4: Receipt of highly negative outcomes

These phases enable the depicting of the forces over the time frame of the project that will be later explained in the analysis of the case. The phases provide the map through which an event that is about to escalate is divided; phases starting from positive to most negative. In this way the researcher can analyze the time when the things really started to go wrong, or when they were likely to give a negative outcome. The data was then taken and placed versus the determinants framework and in this way the researchers attempted to identify the determinants of the event that fitted or belonged to a particular phase and attempt to provide a view of how different categories and determinant promote escalation in Mt Everest 1996.

Basically, in different categories of determinants, which all fall into one framework; we intend to identify the driving aspects of the circumstances in the case. The determinants mapped by Staw and Ross includes a number of the theories built upon research in escalation of commitment. It is worthwhile to mention that an event can be seen from different perspectives in a case, therefore it is important not to lose the focus, and in our case the focus is the aspects surrounding the decision making of the leaders and the outcome of these decisions.

The case in general is complex and difficult to map, due to many subjective and objective factors. Since there has been no official investigation of the case afterwards, (Kayes, 2006) one has to rely on personal accounts of the survivors and try to map out the similarities and contrasts. However, in this case the objective reasons of the events remain the same, such as: timeline of the events and other related events, nevertheless the subjective perceptions differ and sometimes they contrast each other, e.g. climbers that turned around earlier than the others and gave up reaching the summit of Mt. Everest have their logical reasons, and are seen as deserters or traitors from the others.

4.8 Quality criteria

The quality level of a study is determined by how trustworthy the study really is (Bryman, 2008). In this context there are several categories throughout which qualitative considerations can be emphasised.
Credibility deals with the fact that “there are multiple accounts of a social reality and the determined feasibility or the credibility of the account that a researcher arrives at is the one that determines the acceptability to the others” (Bryman, 2008). The materials used in this case are all public, and therefore everyone has access to the same information. The contrasting views in the books and personal accounts try to be presented in the less biased way possible by the researchers.

Transferability
There is a possibility that the qualitative findings can be used or oriented towards a contextual uniqueness and significance of the segment in the social world being studied (Bryman, 2008). The transferability in the case level is not appropriate as it is a unique setting and a onetime event. However, the findings in the theory of escalation might be appropriate to explain this complex phenomenon further.

Dependability
Taking care of all the important material during the research, such as transcripts, notes and relevant materials can enable that a peer review is conducted amongst colleagues in the research area (Bryman, 2008). In the case of Mt. Everest no peer review was conducted, however the research had a supervisor who ensured that all satisfactory measures are undertaken during the research.

Confirmability
Complete objectivity is impossible, however “the researcher can be shown to have acted in good faith and has not allowed personal values and theoretical inclinations manifestly to sway the conduct of the research findings deriving from it” Bryman 2008:379). The researchers in this study have acted in respecting all the ethical considerations and they have made their work available to be checked by the supervisor. Any eventual inclination hopefully can be reduced to a minimum.

4.9 Ethical considerations

According to Saunders (2008) researchers must ensure that the study follows good methodological practices as well as it is morally correct from the perspective of those people involved in it. In this context several of the concepts that apply to interviews and organisations are not applicable in this research, however all measures to act ethically have been undertaken by the researcher, namely the treatment of the information in the less biased way as possible. No integrity issues were raised during this study therefore the researchers consider this research as ethically correct.
5. THE CASE: 1996 MOUNT EVEREST DISASTER

“We’ve got the big E figured out, we’ve got it totally wired. These days, I’m telling you we’ve built a yellow brick road to the summit”
(Scott Fischer to Jon Krakauer on climbing Mount Everest) (Krakauer, 1997:66)

The Mount Everest 1996 disaster case is a tragic event used as a tool to describe the importance and the foundations of decision-making in an extreme environment, which can be used as a foundation of a project and its elements seen in a temporary organisation, namely an expedition. The case of Mount Everest 1996 is a widely known case in which three different teams of climbers have attempted to climb to Mt. Everest in spring of 1996. Not everything went according to the plan, and the expedition, which went wrong in its second half, was left with devastating results in leaving a number of climbers dead. The objective causes include deteriorating weather, insufficient resources such as oxygen supplies which are necessary to climb into high altitudes and thin air, as well as unresolved technical issues such as fixation of ropes which is necessary for climbing and involves numerous techniques of doing and handling the same. Despite all the objective difficulties, the subjective fault of irrational decision-making and the simple yet difficult to grasp reasons behind them remain the reason why this event developed in the way it did. Escalation of commitment from decision-making might have happened in this case, as we try to identify the presence certain factors that promoted this phenomenon.

This Everest 1996 episode, has been categorized as the “the most widely publicized mountain-climbing disaster in history” (Kayes, 2004:1267). Important sources of the accounts are the books written by the survivors of the event (Krakauer, 1997; Groom, 1997, Boukreev and DeWalt, 1998; Gammelgaard, 1999; www.pbs.org) and other observers present on the mountain while the events unravelled (Breashears, 1998, 1999, 2009). In this section we provide an account of the background of the two guided expedition companies and of events that unravelled which led to the tragedy on the 10 May 1996 in Mt. Everest in what we believe is a approximately accurate manner, in order to explain the case and set the empirical basis for the analysis.

5.1 Commercialization of Climbing

The attitude towards climbing had changed drastically once the American businessman and part-time climber, Dick Bass, decided to climb the highest summit on each of the seven continents and so achieved to climb the Everest in 1985. Seeing that this is possible people started to get interested and the word was that “if you are
fit enough and have the physiological makeup to function at high altitudes—and
enough training, Sherpa, guides, bottled oxygen, and money ($65,000 being the
norm)—Everest can be bagged” (Wilkinson, 1996:38 in Elmes and Barry, 1999).
Climbing at this point has opened doors to all categories of people that feel and have
the possibility of doing it. However the mountain remaining the same has not changed
and therefore thin air and oxygen lack on the top has caused that people get cerebral
oedema and pneumonic oedema meaning that it was not all about the will and the
money. You need to be really prepared physically to overcome these extreme
conditions. The Everest 1996 expedition was of similar nature. People that have
failed in their previous attempts were taking this opportunity to climb the mountain
and they were doing it in a large scale. It was estimated that at that year the
Government of Nepal had issue the largest number of climbing licenses, each at
around 10,000 USD (Groom, 1997). The mixture of the team climbers and their
previous experiences made it clear that climbing expeditions were becoming a more
of a sport rather than a unique opportunity. A significant contribution to the previous
experiences has given the improvement of the technology and communications, which
in our case were not lacking. The expedition had an editor of a magazine and was
closely monitored by the public, as one of the members in the team was there to report
and update a website on the development of the expedition. This media pressure and
the commercialization of the expeditions have made them moneymaking machines
that were not anymore an issue of reaching the top, but rather of making people’s
dreams come true. These “dreams” were in fact a way for non-experienced rich
climbers to show off when they get back home (Elmes and Barry, 1999). All of the
pressure that was added on the team leaders of the 1996 Mt Everest case, has created
a scenario that these leaders do not take the reasoning as an option to try and
understand that their actions could lead to potential and devastating results and they
were blinded by the desire to achieve success. In the case we are trying to identify the
presence of the determinants that could lead, contribute or promote escalation of
commitment to a failing project.

Escalating commitment has to do with the inclination for decision makers to stick
with failing courses of action (Brockner, 1992) and it may or may not have cost the
lives of Doug Hansen, and others in the 1996 Mt. Everest disaster. Hansen and
Weathers were both members of the New Zealand climbing team who took part on
the climbing expedition that went fatally wrong. On the final summit push day of May
10th a fierce storm attacked the mountain late in the afternoon, just when four teams
were making their way down from the top, leaving as result a total of ten casualties in
that week. Doug Hansen was one among the victims; as the day progressed he could
have turned back on time and save his life but as Krakauer (1997a:89) recounts, “he
was absolutely determined to bag the top”.
5.2 The companies, the Leaders and the Teams

Three expedition teams from different countries were mainly involved in the tragedy that occurred the fatal spring of 1996 in Mt. Everest, the Adventure Consultants team from New Zealand, the Mountain Madness team from U.S.A and the Taiwanese non-commercial expedition.

Rob Hall, the company’s owner and co-founder, led the Adventure Consultants guided expedition team. Two guides Mike Groom and Andy Harris assisted the team, which was formed by eight climbing clients Beck Weathers, Yasuko Namba, Lou Kasischke, Jon Krakauer (a journalist who was going to write an article for Outside magazine), Doug Hansen (who failed to reach the summit the year before), Stuart Hutchinson, Frank Fishbeck and John Taske. The team was composed also of a base camp manager, a doctor and number of Sherpa. The head Sherpa in Hall’s team, or climbing sirdar, was Ang Dorje. (For a list and brief insight on the climbing expedition members including base camp support personnel and Sherpa see Table 3).

Sherpa are devoutly Buddhist mountain people of the Darjeeling region of Nepal that have become physiological adapted to the hardships of high altitude, hence since the first British expedition in 1921 to Everest expedition they have been contracted to help and support climbing expeditions in the Himalayas as porters and camp helpers. (Krakauer, 1997a:19). The Sherpa skills, endurance and allegiance under the rigorous conditions of high altitude climbing are critical to expeditions wanting to reach the summit of Mt Everest, and in their absence is extremely improbable that they would (Elmes and Barry, 1999). Rob Hall held his Sherpa in high regard; he was especially concerned about their well being and made it very clear to his expedition team that they had no chance of reaching the top of Mt. Everest without the support from the Sherpa.

Rob Hall was an exceptionally capable climber, he himself had made the top of Everest in four previous expeditions, and he and his company Adventure Consultants were aware of his conservative and systematic procedures for guiding clients. By the year 1990 Hall was a full time professional climber, that year he reached the summit of Mt Everest for the first time as the leader of an expedition, he did it in company of Peter Hillary, son of Sir Edmund Hillary (New Zealander who made the first known ascent to Everest summit in 1953) (www.adventureconsultants.com), and then he proceeded to climb the seven highest summits in each of the seven continents in seven months with the company of his close friend and climbing partner Gary Ball. To cover the expenses of his costly Himalayan expeditions, Hall requested funding from corporate sponsors. He was sharp-witted enough to understand that getting attention and appearing in the news media was the best way to persuade the corporations into sponsoring his expeditions, as Bill Atkinson climber and guide that used to work and climb with Hall in his youth recalls “Rob always had a bit of a flair for publicity”
(Krakauer, 1997:32). Driven by the fact that corporate sponsoring was getting harder to receive each time, since more spectacular feats were needed to get it and eventually professional climbers would not be up to the challenge, in the course of their seven-month achievement, Hall and Ball forged the idea of launching their own business to guide clients on top of the Seven Summits. That is how Adventure Consultants was born (Krakauer, 1997).

**Table 3. Adventure Consultants Expedition Roster (adapted from www.pbs.org)**

<table>
<thead>
<tr>
<th>Adventure Consultants Team (*-- Died)</th>
<th>35-year old, entrepreneurial leader, successful, competent professional climber, 4 Everest summits</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Rob Hall</td>
<td>Leader</td>
</tr>
<tr>
<td>Michael Groom</td>
<td>33-year old Australian plumber, climbed Everest without supplemental oxygen before</td>
</tr>
<tr>
<td>*Andy Harris</td>
<td>2nd Guide</td>
</tr>
<tr>
<td>Beck Weathers</td>
<td>49-year old, doctor from Dallas</td>
</tr>
<tr>
<td>*Yasuko Namba</td>
<td>47-year old, personnel director in Fed-Ex Tokyo, tryin to complete the 7 summits of all 7 continents</td>
</tr>
<tr>
<td>Lou Kasichke</td>
<td>53-year old lawyer from Michigan, previously climbed 6 of 7 summits.</td>
</tr>
<tr>
<td>Jon Krakauer</td>
<td>Client Journalist, writing a piece for Outside magazine</td>
</tr>
<tr>
<td>*Doug Hansen</td>
<td>46-year old postal worker, had nearly reached Everest summit in 1995 before Hall turned him back</td>
</tr>
<tr>
<td>Stuart Hutchison</td>
<td>Client 34-year old canadian cardiologist, on leave for research fellowship</td>
</tr>
<tr>
<td>Frank Fischbeck</td>
<td>Client 53-year old, publisher from Hong Kong, attempted Everest summit 3 times before with no luck,</td>
</tr>
<tr>
<td>Dr. John Taske</td>
<td>Client 56-year old doctor, australian army retiree</td>
</tr>
<tr>
<td>Helen Wilton</td>
<td>Base Camp Manager 39-year old mother of four, coming back for 3rd season as camp manager</td>
</tr>
<tr>
<td>Dr. Caroline Mackenzie</td>
<td>Base Camp Doctor In her late twenties, accomplished climber and physician</td>
</tr>
<tr>
<td>Ang Dorjee Sherpa</td>
<td>Climbing Sidrar</td>
</tr>
<tr>
<td>Lhakpa Chhiri Sherpa</td>
<td>Climbing</td>
</tr>
<tr>
<td>Kami Sherpa</td>
<td>Climbing</td>
</tr>
<tr>
<td>Tenzing Sherpa</td>
<td>Climbing</td>
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<tr>
<td>Arita Sherpa</td>
<td>Climbing</td>
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<tr>
<td>Ngawang Norbu Sherpa</td>
<td>Climbing</td>
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<tr>
<td>Chuldum Sherpa</td>
<td>Climbing</td>
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<tr>
<td>Ang Tshering Sherpa</td>
<td>Base Camp Sidrar</td>
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<td>Chhongba Sherpa</td>
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<td>Pemba Sherpa</td>
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<td>Tendi Sherpa</td>
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</table>
During the next five years after Hall’s first ascent, Adventure Consultants achieved a phenomenal success rate, it managed to successfully put on top of Mt. Everest thirty-nine climbers; three more climbers than had reached the summit in the 20 years after the first Everest summiteers did. This led Hall to market his company as “the world leader in Everest Climbing”, given this success Adventure Consultants fee for the Everest expedition was about $65,000 the highest fee in the climbing expeditions market. (Krakauer, 1997:33).

The American climber Scott Fischer, who was also the owner of the adventure-guiding company, Mountain Madness, led the second guided expedition team. The Mountain Madness team (U.S.A) was made up of eight climbing clients, Sandy Hill Pittman (a journalist reporting for NBC Interactive Media), Tim Madsen, Charlotte Fox, Klev Schoening, Pete Schoening, Lene Gammelgaard (Fischer’s close friend trying to be the first Danish woman to summit Mt Everest), Martin Adams and Dale Kurse; and two guides assisting the leader, Neil Beidelman and Anatoli Boukreev (regarded as one of the strongest high altitude climbers in the world). On the expedition crew there was also a base camp manager that acted as doctor as well, several Sherpa, and Fischer’s climbing sirdar Lopsang Jangbu Sherpa. Jane Bromet, Fischer friend and climbing partner was staying in base camp as a reporter for Outside Online, providing daily reports of the expeditions progress. According to Boukreev and DeWalt (1999), Bromet was invited because she was considered “loyal and could be counted on to maintain the company line”—something they were not certain that Pittman would do. For a list and brief insight on the climbing expedition members including base camp support personnel and Sherpa see Table 4. (Krakauer, 1997; Boukreev and De Walt, 1997; Gamelgaard, 1999).

Fischer was a forty-year old who founded mountain madness in 1984 thanks to the help from his wife’s high earnings, he was a prominent high altitude climber and Rob Hall’s business rival, and nevertheless they knew each other from past experiences in the elite high altitude climbing circles. This was Fischer’s first time leading an expedition to Mt. Everest although he made the summit once in 1994 without supplemental oxygen in the Sagarmatha Environmental Expedition that helped to remove 5,000 pounds of rubbish from the mountain. Thanks to that Expedition and other charity climb he was given quite a share of news media attention, and his career was rising. Mountain Madness was not making a lot of profit, but Fischer expected things to turn around now that given the successful example of Hall’s Adventure Consultants he was going to enter the Everest guided expedition market where he could charge much more larger fees, Fischer expected that Mountain Madness profitability would steeply increase. (Krakauer, 1997).

Once the teams arrived in Kathmandu, capital of Nepal they went through a preparation period of about six weeks until reaching Camp Four and getting ready for
the summit bid on May 10th. From Kathmandu the teams took a helicopter flight that left them in village called Lukla at 9,200 feet above sea level on the Himalaya. Each team had their own logistic arrangements and acted independently from one another. From Lukla the teams started to trek toward Everest Base Camp located at 17,600 feet. This long walks were part of a plan set up by the leaders of the teams in order for the climbers to get acclimatized to the altitude. Once the teams had reach Everest Base Camp, more acclimatizing ascents were waiting for them towards Camp One, Two and Three, before climbing toward Camp Four and attempting then going for the summit (for a complete mapping of Everest camps see Figures 8). The acclimatizing process has the objective of letting the human body adapt to the shortage of oxygen in the air due to the height of the mountain.

“That is why ascending Everest is a long, tedious process more like a mammoth construction project than climbing as I’d previously know it, counting with the Sherpa staff, there were twenty-six people on Hall’s team and keeping every one fed, sheltered, and in good health at 17600 feet, a hundred miles by foot from the nearest road head, was no mean feat” (Krakauer, 1997:31).

In the tradition of George Leigh Mallory and most other Everesteers, Hall’s strategy was to lay siege to the mountain. Sherpa would progressively establish a series of four camps above Base Camp by carrying up the mountain heavy loads of food, cooking fuel, and oxygen from campsite to campsite until all needed supplies had been fully stocked at 26,000 feet on the South Col. (Krakauer, 1997)

5.3 Preparations for the Summit

The teams arrived in late April at the base camp and attempted to bid for the summit in early May 1996. Taking about six weeks to get acclimatised and prepared for the push towards the summit, the teams, Adventure Consultants and Mountain Madness were set for the final ascent to the summit of Everest. The plan was to leave Camp IV at 25,938 feet at 12.00 am, and reach the summit between 12.00 and 1.00 pm and descent after reaching the summit. Usually the other climbing expeditions have done this, and if the plan was behind schedule, it was a golden rule that the climbers give up. The latest a climbing expedition can turn around is a risky 2.00 pm (Kayes, 2006).

At 09 May 1996, 11:35, local (Nepal) time, members of Adventure Consultants under the leadership of Rob Hall and his two assistants, left from Camp IV to reach the summit. Following them, the team of Mountain Madness left at 12.00 am on May 10, 1996, lead by team assistant leaders Anatoli Boukreev and Neil Biedelman. Scott Fischer had left after his team sometime between 12.00 and 1.00 am. The Taiwanese team under the leadership of Gau Ming Ho, known as Makalu, and three Sherpa left (Boukreev and DeWalt, 1997) but not all of the team members had one. The members
were also using the fixed ropes, and thus were not dependent on each other, and were also using bottled oxygen, and had emergency steroid shots just in case (Kayes, 2006).

Table 4. Mountain Madness Expedition Roster (adapted from www.pbs.org)

<table>
<thead>
<tr>
<th>Mountain Madness Team (*— Died)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Scott Fischer</td>
</tr>
<tr>
<td>Anatoli Boukreev</td>
</tr>
<tr>
<td>Sandy Hill Pittman</td>
</tr>
<tr>
<td>Tim Madsen</td>
</tr>
<tr>
<td>Charlotte Fox</td>
</tr>
<tr>
<td>Klev Schoening</td>
</tr>
<tr>
<td>Pete Schoening</td>
</tr>
<tr>
<td>Lene Gammelgaard</td>
</tr>
<tr>
<td>Martin Adams</td>
</tr>
<tr>
<td>Dale Kruse</td>
</tr>
<tr>
<td>Jane Bromet</td>
</tr>
<tr>
<td>Dr. Ingrid Hunt</td>
</tr>
<tr>
<td>Lopsang Jangbu Sherpa</td>
</tr>
<tr>
<td>Ngawang Topche Sherpa</td>
</tr>
<tr>
<td>Tashi Tshering Sherpa</td>
</tr>
<tr>
<td>Ngawang Dorje Sherpa</td>
</tr>
<tr>
<td>Ngawang Sya Kya Sherpa</td>
</tr>
<tr>
<td>Ngawang Tendi Sherpa</td>
</tr>
<tr>
<td>Big Pemba Sherpa</td>
</tr>
<tr>
<td>Jeta Sherpa</td>
</tr>
<tr>
<td>Pemba Sherpa</td>
</tr>
</tbody>
</table>
At about 5.30 am, three members of the Mountain Madness team reached the beginning of a long narrow ridge that is known as “the Balcony”. Considering the fact that the teams were using fixed ropes, which only work if the rope is secured at ice or stone, the team had to wait for the climbing leaders to fix the ropes and allow them to continue to ascend. “The plan originally, as I understood it, was that both Ang Dorjee and Lopsang, the two climbing leaders of the Sherpa, would leave camp at 10:00 p.m., and they would work together, making sure that the trail was broken and the ropes were in place.” (Neal Beidleman on www.pbs.org). This created the first bottleneck and afterwards the teams started ascending slowly from 8.00 am to 10.00 am. (Kayes, 2006).

5.4 Crowd at the Summit

The second bottleneck was created at the 40 foot stretch of rock known as the Hillary step, named by Sir Edmund Hillary, the first climber to Everest back in 1953. The teams were becoming piled up to climb this extremely steep and difficult part that is actually only 250 feet below the summit. The teams have failed to fix the ropes once again. At about 11.40 am two members of the Mountain Madness and two members from Adventure Consultants began to fix ropes (Krakauer, 1997). The timings when the summit was reached cannot be clearly determined, however this is between 1.12 pm and 1.25 pm, eight members of Adventure Consultants and Mountain Madness reached the summit. People were also coming at the summit between 2.00 and 2.15 pm, and other kept arriving at 3.00 pm. The pictures taken show very little signs of snow or bad weather. “When I arrived at the South Summit, it was still, in my estimation, a beautiful day. There was a little bit of a condensation cloud off of the ridge; there was some wind, but nothing that was out of the ordinary. I sat down, took a few pictures. I was very comfortable there.” (Neil Biedelman, www.pbs.org). Scott Fischer communicated by radio that all of his clients have already ascended to the summit, and that are heading down. He did this communication at 3.40 PM which was way over the allowed time to descend (Kayes, 2006).

5.5 The Descent

After 4.00 pm things went wrong. A picture taken by Fischer shows that climbers were to descent through grey clouds (Kayes, 2006). A storm took over the mountain and slowed the descent totally. Climbers trapped with less than few centimetres visibility, were horrified by what is happening. “Sure enough, we got to the Hillary Step, and there was still an enormous bottleneck of people trying to come over from the South Summit and up the Hillary Step. And we had to wait there for quite a while to pick our number, to go down and through that area. And after that, we were running really late, and here came the storm, as we got lower on the mountain.” (Charlotte Fox, www.pbs.org)
Climbers were also limited on oxygen because they have exceeded the planned time. They began to feel extremely tired and some of them injected steroids (Kennedy, 1996 in Kayes, 2006). The leaders were high on the top of the mountain, and were struggling with the weather. At this point the queue at the Hillary step was going very slow and was progressing very slowly. In the meantime, a team member, Beck Weathers has been waiting for 10 hours straight, as he had lost his sight during climbing due to a previous condition he suffered from.

“I noticed problems with my vision when I moved into Base Camp. There wasn't any question that something was different at this altitude. I'd brought glasses and stuff to read, and when I put them on, the prescription was just off. It was as if I brought somebody else's glasses. So right off the bat, I knew that whatever the issue was, that my normal state of vision wasn't there anymore.” (Beck Weathers, www.pbs.org).

Left with not many alternatives, Neil Biedelman at 5.00 and 5.20 assumed that he was a leader for the group of 8 people that were descending together. On their way back they found Beck Weathers sitting with his lost sight and waiting for the promised return of Rob Hall. He was shivering in the cold (Kayes, 2006). Realizing that Hall was not back yet, Weathers decided to continue descending with Biedelman. At the same time, Hall reported from the top to the summit that he was in desperate need of help and was having difficulties getting Hansen down and that he needed help Kayes (2006).

5.6 Clusters Created

Several of team members who made some early “independent” decisions were back to the Camp IV between 4.30 and 6.00 pm. This meant that they have given up their summit attempt, but has proven to be a smart decision. Upon arrival at Camp IV, the team under the leadership of Biedelman got caught up in the storm, and got lost. Lost in the cold of temperature below “double digit subzero” (Kayes, 2006) cold wind, people grouped together to create a human shelter that would protect them from the cold and freezing. This was known as the huddle (Kayes, 2006). Only after 12 am at midnight, the leader Biedelman, Schoening and Groom were able to locate whereabouts of Camp IV, and they had done this based on Everest peak and Big Dipper. They went back to Camp IV and collapsed, but made sure to tell Anatoli Boukreev the position and whereabouts of the remaining members.

Boukreev made a rescue operation all by himself, and managed to return to the camp IV the climbers that needed help, and then collapsed not being able to go and look for Fischer. Beck Weathers and Nambu were not found, as they were behind and believed to be dead. “Even the stuff right up against your chest is frozen. And so my clothes
got to the point where they were just a carapace of ice on the outside. I eventually went unconscious, but up to the last part when I was sliding under, I was still thrashing around, trying to generate heat. And I think Yasuko was next to me, and I was pretty much trying to shove her and pummel her, and try to keep it going. And at some point in there, though, I went almost into a dreamlike sense of floating across, and it was like, I thought I was being carried. And I had this sense of just gently moving away. And at that point, I wasn't cold. But I wasn't giving up. I was becoming unaware.” (Beck Weathers, www.pbs.org). Beck Weather and Nambu were found by Dr. Stuart Hutchinson and was confirmed by him, that both were breathing but too sick to be saved. The base camp informed Beck’s wife that he was dead.

5.7 Saving Efforts

Boukreev organized a search attempt for Fischer, but returned after seeing the storm. Rob Hall, trapped in the summit has reached the base camp to report that Hansen could not move and is unable to descend, trapping Hall at the same time in the Summit. At about 10 am the team of Sherpa under the Boukreev’s initiative reached Fischer and Gau and were unable to reach Fischer. They left a bottle of oxygen and pulled Gau down, which is extremely dangerous in these conditions (Kayes, 2006). Beck Weathers miraculously regained his consciousness again and went back to the camp with his own efforts at 4.30 p.m. Rob Hall’s fate was now going towards an uncertain path, as he was put into a satellite connection with his wife at 6:40 pm where is said his last goodbye before dying frozen high on the mountain, the same fate Fischer and other climbers had to suffer.
Figures 8. Complete mapping of Mt. Everest Camps and events

Figure 8.1 Front view of Mt. Everest (source: www.pbs.org)

Figure 8.2 Side view of Mt. Everest (source: www.pbs.org)
**Figure 8.3** Mapping of Mt. Everest key events (source: Kayes, 2006)

Altitudes in feet of Mt Everest sites

<table>
<thead>
<tr>
<th>Location</th>
<th>Altitude (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everest Base Camp</td>
<td>17,600</td>
</tr>
<tr>
<td>Camp One</td>
<td>19,500</td>
</tr>
<tr>
<td>Camp Two</td>
<td>21,300</td>
</tr>
<tr>
<td>Camp Three</td>
<td>24,000</td>
</tr>
<tr>
<td>Geneva Spur</td>
<td>25,900</td>
</tr>
<tr>
<td>Camp Four in the South Col</td>
<td>26,000</td>
</tr>
<tr>
<td>South East Ridge</td>
<td>27,600</td>
</tr>
<tr>
<td>Northeast Ridge</td>
<td>28,550</td>
</tr>
<tr>
<td>Summit</td>
<td>29,028</td>
</tr>
</tbody>
</table>
### Figure 8.3 (continued) Timeline of key events (source: Kayes, 2006)

<table>
<thead>
<tr>
<th>No.</th>
<th>Date and time</th>
<th>Key event</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11:35 p.m.</td>
<td>Adventure Consultants and Mountain Madness begin ascent to the Summit. Taiwanese team follows.</td>
<td>25,900</td>
</tr>
<tr>
<td>2</td>
<td>05:30 a.m.</td>
<td>Team members begin to reach Southeast ridge balcony. First bottleneck of climbers develops.</td>
<td>27,000-28,000</td>
</tr>
<tr>
<td>3</td>
<td>8:00 – 10:00 a.m.</td>
<td>Teams make their way up the balcony</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>11:00 – 12:00 a.m.</td>
<td>Second bottleneck at Hillary Step</td>
<td>28,800</td>
</tr>
<tr>
<td></td>
<td>11:30 a.m.</td>
<td>Three members of Adventure Consultants team abandon summit attempt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1:00 p.m.</td>
<td><strong>TYPICAL TURNAROUND TIME</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1:00 -1:25 p.m.</td>
<td>Eight climbers from Adventure Consultants and Mountain Madness reach summit</td>
<td>29,028</td>
</tr>
<tr>
<td></td>
<td>2:00 – 2:15 p.m.</td>
<td>More climber reach the summit</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3:00 p.m.</td>
<td>Taiwanese Leader Gau reaches summit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3:30 p.m.</td>
<td>Other climber reaches the summit</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3:40 p.m.</td>
<td>Mountain Madness leader Fischer reaches summit</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>4:00 p.m.</td>
<td>Adventure Consultant Rob Hall reaches summit just before client Doug Hansen</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>5:00-5:20 p.m.</td>
<td>Beidelman assumes leadership of groups along with Groom</td>
<td>27,600</td>
</tr>
<tr>
<td>10</td>
<td>4:40-6:00 p.m.</td>
<td>Some team members return to Camp IV</td>
<td>25,900</td>
</tr>
<tr>
<td>11</td>
<td>5:00 p.m.</td>
<td>First Radio call from Hall requesting help</td>
<td>27,000</td>
</tr>
<tr>
<td>12</td>
<td>8:00 p.m.</td>
<td>Group led by Beidleman becomes lost at South Col, just 300 yards from Camp IV</td>
<td>26,000</td>
</tr>
<tr>
<td>13</td>
<td>12:00 p.m.</td>
<td>Group led by Beidleman find its way back to the Camp IV and Boukreev retrieves remaining climbers</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>10:00 a.m.</td>
<td>Rescue party finds Fischer and Gau but is only able to retrieve Gau</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4:30 p.m.</td>
<td>Weathers returns to Camp IV unaided</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>6:30 p.m.</td>
<td>Hall talks to wife final time</td>
<td></td>
</tr>
</tbody>
</table>
6. FINDINGS AND DISCUSSION

6.1 The 1996 Mt Everest Case from an Escalation Theory Perspective

Escalation is observed when an individual or an organisation persists with allocating resources into a course of action that is failing or that has recurring negative feedback (Staw, 1976). Occasionally, escalation contributes to disasters, such as the loss of eight lives in a single day during the 1996 tragic expedition to Mt Everest (Roberto, 2002; Kayes, 2004). Escalation can be a problem because it can lead to waste valuable resources, opportunity costs and even the loss of human lives. With these antecedents in mind the purpose of this research is to explore insights on the aspects promoting escalation on the Mt Everest tragedy and shed some light into how escalation manifests in temporary organisations, to do that the following research question has being posed: how the aspects that promoted escalation were present in the 1996 Mt. Everest expedition?

Analysing the empirical basis of the case we came to realize that to fully comprehend what exactly happened on that mountain is impossible to grasp in an absolute manner, mainly because the two leaders and others climbers are dead, so this particular interest goes to a second plane, alternatively the analysis takes us to examine at a higher level the context and background content of the conditions that were drivers for the decisions taken by the leaders of the expeditions to keep climbing up the mountain, even though the turn-around time was past due. These drivers that could have influenced the decision of escalating commitment, such as big size of payoff for the expeditions goal, no salvage value of the expedition, intense competition, striving for profitability and pressure and responsibility to achieve success internally as temporary organisations and externally to their audience (journalists and news media), to name a few.

The Mt. Everest case, we claim, provides insights into how certain aspects that promote escalation are present in temporary organisations working in an extreme setting. This proves useful since there is a growing use of temporary teams in several industries (Tempest et al., 2007). This analysis adds to the dimension on how to better understand the behaviour of temporary organisations in extreme settings and how certain circumstances could contribute to escalating commitment to a failing course of action within them, particular research on escalation involving temporary organisations has not been performed to date, thus the implications of this study could open the way for some insights on the further paths that escalating commitment research on temporary teams might undertake.

In this section we present an analysis of the 1996 Mt Everest case based on the Staw and Ross (1987a) theoretical framework of escalation behaviour. According to
Escalation literature escalation is the product of a series of decisions through a time frame (Brockner, 1992; Staw and Ross, 1987). Table 5 gives an outline in which we have divided the case in a time frame of four phases according to identified key decisions that promoted escalation, in order to analyze determinants influencing each phase.
### Table 5. Timeframe of events that promoted escalation in the 1996 Mt Everest case

**Phases of Escalation at the 1996 Mt Everest Disaster**

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
<th>PHASE 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promise of future outcomes (+)</td>
<td>Receipt of questionable outcomes (0)</td>
<td>Receipt of negative outcomes (-)</td>
<td>Receipt of highly negative outcomes (-)</td>
</tr>
<tr>
<td>Expedition promises big pay off</td>
<td>3 climbers assess the situation and decide to turn around</td>
<td>The turn-around time is reached; team leader keep climbing towards the summit</td>
<td>Storm strikes the mountain</td>
</tr>
</tbody>
</table>

Commitment to a Course of Action (Climbing to Reach the Summit)

### RELEVANT EVENTS AT MT EVEREST

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and launching of the ascent; Conditions seem to be good; Team already prepared by acclimatization; Supplies appropriate; Team leaders skilled</td>
<td>March 31, 1996</td>
</tr>
<tr>
<td>First bottleneck of climbers develops. Delays during climbing. Beck Weathers goes blind, takes Hall's time to leave him behind. The timing is a big question now</td>
<td>May 10th, 1996 11:00 AM</td>
</tr>
<tr>
<td>Time of return has been exceeded three hours ago; Teams were climbing until 4 p.m.; People stay on the summit to take pictures</td>
<td>May 10th, 1996 2:00 PM</td>
</tr>
<tr>
<td>Weather starts going really bad after 4:00 p.m. Visibility is extremely low; Gets crowded in Hillary Step. People start collapsing without oxygen. Biedelmaier takes over a remaining team and they get lost in the storm. They create a human shelter to stay protected. Hall, Hansen, Fischer and others get stuck high on the mountain.</td>
<td>May 10th, 1996 4:00 - 6:00 PM</td>
</tr>
</tbody>
</table>
**Phase 1: Promise of future outcomes.**
On April 6-26 the teams have arrived from different parts of the world to start their expedition preparations. They were located at Base Camp and took their time to acclimatize under the Khumbu Icefall. With several attempts and tests to climb the Icefall, they establish Camps I at 6100 m and Camp II at 6500 m. Afterwards the climbers climbed to Lhotse face to establish Camp III and continue with the acclimatization. On April 30, the climbers returned to base camp to rest and have that as a priority. Final preparation takes place for the summit bid. Ready for the summit bid, the climbers look to be acclimatized and climb directly to Camp II. Afterwards follow Camp III and IV. All teams have reached the highest Camp IV before the summit bid. At this stage the climbers as well as team leaders saw promise of positive results in the future in their climbing attempts and business plans, considering they followed all acclimatisation instructions and plans. The weather conditions on May 9 seem to be appropriate. Teams ready to attempt reaching the summit.

**Phase 2: Receipt of questionable outcomes**
Despite the agreement that Mountain Madness and Adventure Consultants leave first, the Taiwanese team left along to attempt climbing the summit. During the climbing, a bottleneck in Hillary step occurred. Being that Hillary Step (named after Sir Edmund Hillary, the first person to reach Everest in 1953) is an extremely steep terrain and difficult to climb, it is also a side narrow terrain, so climbers lean mostly on one side. The climbers start queuing at the Hillary Step and leave the people waiting to climb. At this point it was clear that some questionable results were going to arise. The timing was not good and the climbers were late to arrive in the summit, which delays their descending time and can be dangerous. One of the climbers, Beck Weathers, goes blind due to a previous condition he developed prior to the expedition.

**Phase 3: Receipt of negative outcomes**
Arriving to the summit was only half of the way. Climbers from their desire to achieve their goal appeared to have forgotten this important fact. They have exceeded the climbing turn-around time three hours ago as they were climbing until 4 pm. People have stayed on the summit to take pictures. Except for the time that was passing, until this point there were no signs of negative weather. Weather started going really bad only after 4.00pm and this is where the team realised that they are in trouble and it is getting serious.

**Phase 4: Receipt of Highly Negative Outcomes**
The visibility became extremely low and probably less than 5 cm. People desperately needed to ascend, however their persistence against the weather was getting limited, and as in this altitude the air is very thin, a normal person not well adjusted cannot really breathe normally. Climbers started to descend, and again there was a crowd at Hillary Step. Running out of oxygen, which was planned for a much shorter duration, the climbers were now getting exhausted and with no sufficient air to breathe. They started collapsing. Freezing winds and storm took over. Neil Biedelman assumed that
he is in charge for the team of the remaining people that were lost. They created a human shelter to stay protected during the evening of the May 10. The people were struggling for their lives. Rob Hall is stuck in the summit and is unable to descent because of his decision to wait for his friend and client Hansen. Hansen gets bad after arriving in the summit and as such blocks Hall as well, who is unable to descend and is left in the summit. At this point people are dying and the ones alive are seeing death capturing them.

*Table 6* pictures what determinants were identified in each phase, therefore providing a general view of how different categories and determinants that promoted escalation in the 1996 Mt Everest case were present at different points in the expeditions timeframe.

**Table 6.** Determinants identified as promoting escalation in different phases of 1996 Mt Everest case.

<table>
<thead>
<tr>
<th>Determinant Types</th>
<th>Determinants</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Determinants</td>
<td>Expedition goal had large size payoff</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Project had low salvage value</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Psychological Determinants</td>
<td>Sunk costs not sunk psychologically</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prior history of successful expeditions</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information processing errors</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal responsibility for failure of expedition</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ego implications of failure of expedition</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Determinants</td>
<td>Competitive rivalry between expedition leaders</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td></td>
<td>Responsibility for failure</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Organisational Determinants</td>
<td>Institutionalization</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td></td>
<td>Pursuit of enterprise growth</td>
<td>x</td>
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In addition, *Figure 9* illustrates on a general way the process of a decision leading to escalation and the determinants affecting the decision in the four categories (project, psychological, social and organisational).

This analysis indicates that the majority of project, social and organisational determinants were significant in all the phases of the expedition. The psychological factors were mostly noted on phases 2 and 3 of the project as prescribed by Staw and Ross (1993) temporal model of escalation. It is worth noticing that during phases 2 and 3 of the project, when the most important decisions regarding to keep climbing the mountain were made (those involving the turn-around time rule) almost all the determinants of commitment were present (i.e., 10 out of 11 identified determinants in phase 2 and all 11 determinants in phase 3), thus leading us to suggest that aspects of the four categories of determinants where present in the temporary organisations at key decision making stages in the ascent to the top of Mt Everest, making it extremely difficult for the leaders of the expeditions to terminate their projects. The analysis underpins Mähring et.al., (2004) and Newman and Sabherwal’s (1996) findings that distinct categories of determinants may take place at a number of phases of a project.
**Figure 9. Escalation process affected by determinants of commitment in the 1996 Mt Everest case**

The aspects analysed in this section may have determined how escalating commitment occurred in the 1996 Mt. Everest expeditions. The analysis of the findings is done using the proposed framework of escalation of Staw and Ross (1987a). According to the framework we have identified and examined the factors promoting escalation in the Everest case and discussed it as specified by the four categories of escalation determinants (*project, psychological, social and organisational*). We have proceeded to map out each of the factors identified in the empirical data obtained under each of the main categories of escalation determinants. **Table 7** recapitulates all the determinants identified in the 1996 Mt Everest case, written off as stated by the framework and listed in the order discussed in more detail below.

### 6.2 Project Determinants Promoting Escalation

By all means an important group of determinants for the Mt Everest disaster involves objective features of the temporary organisation itself. Since both expeditions (the New Zealand and the American) were a case of for-profit enterprises, project determinants involve those features of a temporary organisation that have an impact on the financial value of persistence versus withdrawal of the project. Furthermore, project variables are the primary determinants of decision making at the initial stage of the temporary organisation in this and in most cases (Staw and Ross, 1987a), for the reason that the expedition leaders where running a business for profit (Krakauer, 1997; Gammelgaard, 1999) and would make no sense for them to undertake an expedition that did not have the potential of revenues. Project determinants that might have promoted escalation in the 1996 Mt Everest case are 1) the large size of payoff of the project goal and 2) the low salvage value of the project.
Escalation of Commitment in Temporary Organisations

**Expedition goal had a large size payoff.** The earlier work on escalating commitment situations gravitated around psychological factors that conduced people to take irrational decisions i.e. those not objectively explained or that follow a standard economic decision-making scheme (Staw 1976, Rubin and Brockner, 1975). Turning to Northcraft and Wolf (1984) one finds that escalation does entail rational decision-making, because decision-makers do take into consideration the economic realities of a project when they are evident and important. Particularly in the Everest case, the leaders Fischer and Hall had a very clear understanding of the economic position and the quest for profitability of their enterprises when they assembled the temporary organisations (i.e., expeditions), in an attempt to summit Mt Everest in May of 1996.

In this way the economic realities could have been a major determinant of commitment for the expeditions’ leaders; given that they kept climbing towards the top of the world even though they knew they had a significant time delay that could jeopardize their temporary organisations. This seems to support the view of Staw and Ross (1987a) indicating that project (economic) determinants of commitment may be the basis of several research findings demonstrating that economically promising scenarios are expected to conduct to sustained commitment in escalation predicaments.

The increased interest in the climbing expeditions in the past years has created an general opinion that mountain climbing is a commercialized and a profitable business. In particular, Everest was considered to become a cash cow, the expedition members’ dollar dogs, and commercial expedition companies were induced to address the demand that was stimulated and to service customers who could afford to pay high fees to be guided up the highest mountains (Boukreev and De Walt, 1999).

The existing players in this relatively small market have shown to be appealing to others that were in the industry, but not actively involved. Scott Fischer, the leader of Mountain Madness, was in charge of finding ways of keeping the business going and the 1996 expedition was one of his biggest tasks. Scott Fischer, thought that if Rob Hall and others can make money out of it, why cant I?” (Boukreev and DeWalt, 1999)

For Scott Fischer reaching the summit of Mt. Everest in 1996 had substantial implications, not only for him personally but also for his expedition company. Mountain Madness was not generating a lot of cash for Fischer, however his entry into the market guiding a Mt. Everest expedition allowed him to charge much higher fees. The success of the expedition (reaching the summit with as many clients as possible and safe return) was crucial to establish Mountain Madness as an Everest expedition company in order to secure clients for years to come; as a result profitability of the enterprise would have a considerable increase, or so he expected (Krakauer, 1997).
The large size payoff of a successful expedition would not only be attained by profit made from the clients, but because any of the agencies arriving at the summit would have benefited from the years to come from prospective clients, thus the perceived utility of current course of action is influenced by the objective size of the project’s goal (Staw and Ross, 1987a).

In Rob Hall’s case we note that is not the same scenario since Hall was well established with Adventure Consultants, which proclaimed to be the world leaders in guided expeditions, and he had great success last five years reaching the top of Everest four times; three of those as expedition leader. Nevertheless in 1995 Adventure Consultants failed to place any clients on the summit due to weather conditions and the physical breakdown of a couple of clients which they had to help down the mountain; consequently having not succeeded to get anybody on top, it would not been of any good to Hall’s enterprise if he was unsuccessful again in 1996, especially if his most notable competitor Fischer’s Mountain Madness did had success in reaching the top of Mt. Everest (Krakauer, 1997:273).

If looked from a long-term perspective, the expedition would open many doors for the years to come. Increase in the popularity of the agencies, namely Mountain Madness and Adventure Consultants would have been able to pile up their success of assisting climbers to climb the top of the world. Therefore, the factor of big size of payoff for attaining the goal reassured that the current course of action was to be sustained, and it was less likely that the leaders would take any steps to rethink their decision to keep climbing towards the top. Besides the project determinant of big size of payoff for the expedition goal which, seems to have maintained persistence by supporting the leaders expectations of future gains and benefits, in the Everest case there is also another project determinant which seemingly made it very difficult for the team leaders to withdraw from their quest of reaching the summit of Mt Everest, what is the low salvage value of the project.

Project had low salvage value. This project had a low salvage value. Basically, no arrival to the summit means no success and it can only be measured as such. Taking into consideration what has been discussed above about the great deal of importance and implications the attainment of the expedition goal brings, it becomes of important nature to explain that the expedition per se had low salvage value. It was planned to be a highly profitable as a one off project, considering that the payments from clients were irreversible whether they make it or not to the summit. Having a low salvage value, the project leaders did not support or perceived any utility in withdrawal or changing the curse of action (Staw and Ross, 1987a).
### Table 7. Determinants promoting to escalation in the 1996 Mt Everest case (Refer to Table 1 in Literature Review section for further explanation)

<table>
<thead>
<tr>
<th>Determinant Types</th>
<th>Determinants</th>
<th>Theoretical Framework</th>
<th>How determinants promote escalation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Determinants</strong></td>
<td>Expedition goal had large size payoff</td>
<td>Large projected payoff makes decision makers more inclined toward escalation behaviour</td>
<td>The success of the expedition (reaching the summit with as many clients as possible and safe return) was crucial to establish Mountain Madness as an Everest expedition company in order to secure clients for years to come; as a result profitability of the enterprise would have a considerable increase</td>
</tr>
<tr>
<td></td>
<td>Project had low salvage value</td>
<td>Having a project with low salvage value makes decision makers find it costly to withdraw from course of action</td>
<td>For the enterprises Adventure Consultants and more specifically Mountain Madness, withdrawing from reaching the summit had low salvage value since all the business plan for European market entry, establishing the company as Everest “capable” and future profitability increases would have been put on hold and most likely even endanger quest for profitability next year</td>
</tr>
<tr>
<td><strong>Psychological Determinants</strong></td>
<td>Sunk costs not sunk psychologically</td>
<td>Withdrawing from a losing situation where they already have invested time and money proves very difficult</td>
<td>“The risks were escalating for me. I'm prepared to take some risks, but they were getting beyond what was acceptable to me… the desire to get to the summit is enormous. I'd spent six years training, huge amounts of money. Six weeks of slog to get to where I was and to miss out by 200 vertical meters were more than I could bear”. (John Taske)</td>
</tr>
<tr>
<td></td>
<td>Prior history of successful expeditions</td>
<td>History of prior success reinforces belief in possibility of success, thus promoting escalation</td>
<td>Rob Hall’s success rate in the last five years was so remarkable he did not even considered the option to re-asses the expedition status and feasibility of attaining the goal once the turn-around time was reached.</td>
</tr>
<tr>
<td>Determinant Types</td>
<td>Determinants</td>
<td>Theoretical Framework</td>
<td>Findings in 1996 Mt Everest case</td>
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<tr>
<td><strong>Psychological</strong></td>
<td>Information processing errors</td>
<td>Escalation is also more likely to occur when managers make errors in processing information.</td>
<td>Misunderstanding in information processing could have increased the perception of Rob Hall regarding the utility to keep climbing the mountain once he passed the turn-around time. Based on the accounts it is believed that Hall created a positive frame of the situation that inhibited him from sensing any danger on ignoring the turn-around time.</td>
</tr>
<tr>
<td>Determinants (Continued)</td>
<td>Personal responsibility for failure of expedition</td>
<td>High perceived personal responsibility for failure contributes to escalation of commitment</td>
<td>Scott Fischer and Rob Hall were the team leaders of the Mountain Madness and Adventure Consultants expeditions and also were the owners of each company respectively; this is indeed a strong indicator of their high level of responsibility with the outcome of the expedition.</td>
</tr>
<tr>
<td></td>
<td>Ego implications of failure of expedition</td>
<td>Concern with personal reputation and ego will increase the perceived costs of withdrawal</td>
<td>Fischer’s ego craving for recognition at the elite level climbing circles, and obviously the best unique and only way to achieve this, once his reputation was growing stronger every year thanks to his 1994 environmental expedition to Everest without supplemental oxygen, was to have a successful expedition in 1996 with as many clients reaching the summit that year, he would push himself to achieve the expedition’s goal for his self-esteem and in order to achieve the recognition he felt he deserved.</td>
</tr>
<tr>
<td><strong>Social Determinants</strong></td>
<td>Competitive rivalry between expedition leaders</td>
<td>Motivation for persistence in a course of action involves the desire of participants to defeat the competition</td>
<td>Krakauer (1997:273) “Fischer was trying very hard too eat Hall’s lunch and Rob knew it”, he further suggests that under how things stood the idea of turning Adventure Consultants clients around down the mountain while his competitor’s (Fischer) clients were still climbing towards the summit may have been displeasing enough to muddle Halls ability to think carefully before making a decision.</td>
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### Escalation of Commitment in Temporary Organisations

<table>
<thead>
<tr>
<th>Determinant Types</th>
<th>Determinants</th>
<th>Theoretical Framework</th>
<th>How determinants promote escalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Determinants (Continued)</td>
<td>Responsibility for failure</td>
<td>The social aspect of responsibility pertains to the need to save face, which contributes to escalation</td>
<td>When face saving is involved in continued commitment to a project then escalation is intensified when decision have to be taken in front of a large audience, this research supports our finding which indicate that escalation was promoted by the presence of journalists (Jane Bromet, Jon Krakauer, Sandy Pittman Hill) that where writing articles and reports about the expedition for news media that targeted large audiences (Outside Online, Outside, NBC Interactive Media).</td>
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<tr>
<td>Organisational Determinants</td>
<td>Institutionalization</td>
<td>When the existence of a project and the necessity of its deliverables are taken for granted and become embedded in the organisation, escalation is more likely</td>
<td>Temporary organisations like the 1996 Mt. Everest expeditions of Adventure Consultants and Mountain Madness were not considered by their leaders to be terminated because they were so closely identified with the enterprise. In fact the expeditions were the main purposes of why these two enterprises existed.</td>
</tr>
<tr>
<td></td>
<td>Pursuit of enterprise growth*</td>
<td>*Not widely researched previously. Structural features of an organisation and how these features interact with each other may influence escalation.</td>
<td>Temporary organisation seeking company growth may engage in escalation to achieve goals. There are a number of internal and external features of the organisations subject of this study that have interacted between one another that lead us to find the last organisational determinant present in the 1996 Mt Everest case.</td>
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Northcraft and Wolf (1984) have drawn attention to the fact that in any instance when an economic review of a project is performed it should contemplate its salvage value. For example on the Everest expeditions, a company like Mountain Madness that spends money on the salary expenses of the guides has to realize that those US$ 35,000 are resources that cannot be recovered, the same way with the climbing permits, and all the resources paid for freight cargo of equipment, logistics in Nepal, lodging and catering, Sherpa salary expenses and the likes. All these examples represent "sunk costs" or resources that have been expended due to a decision taken which are irretrievable. Furthermore since the temporary organisations assembled for summiting Mt Everest as discussed before are also working as a big marketing stunt, failing to reach the summit would yield no benefit at all for future business perspectives. The authors indicate that projects with big advertising or research and development budgets will be labelled as non-recoverable investments, whereas those that involve marketable material goods will have higher salvage value. Consequently in a traditional financial perspective decision makers keep investing money in sunk cost situations because they fail to understand that money already spent should not have any influence or impact on decisions regarding whether to keep committing more resources to a project. (Northcraft and Wolf, 1984). This seems to support findings by Arkes and Blumer 1985, in which Staw and Ross (1989) point out that those findings reveal that sunk costs may not be sunk psychologically, on the contrary they remain to have an impact on succeeding investment decisions which, leads sunk costs to be categorized as psychological determinants in the framework and in this study.

For the enterprises Adventure Consultants and more specifically Mountain Madness, withdrawing from reaching the summit had low salvage value since all the business plan for European market entry, establishing the company as Everest “capable” and future profitability increases would have been put on hold and most likely alter the plans Fischer had for his company, with the probability to even endanger his quest for profitability next year.

There was a lot on stake for Fischer on that ascent as we can see, and the low salvage value of the expedition could have strongly acted against Scott Fischer from withdrawing his team from pursuing the summit of Everest, even though he was visibly tired and in all probability sick and overdue on the turn around time\(^1\). All this is enhanced by the circumstances of Gammelgaard (1999) who confesses her growing desire to have children and stabilise in her life, hence another attempt for Everest summit after that did not seem highly likely to occur for her. Consequently the expedition seemed to have low salvage value for the leaders and their companies; therefore it was crucial to successfully complete the project by reaching the summit with as many clients as possible. Taking in consideration the business perspectives of

\(^1\) The turn around time acts as a sort of mechanisms to raise an alarm flag to climbers, it tells them that they will have not enough time to get down the mountain with enough daylight, hence the risks increase drastically
opening European markets and securing clients for future expeditions only reaching
the summit of Everest would give Adventure Consultants and Mountain Madness the
media coverage status for both and credibility for the latter needed to launch
operations in Europe.

6.3 Psychological Determinants Promoting Escalation

Some psychological determinants are forces that can give rise to errors in the
projection of benefits and losses, whilst others concern to forces that exercise a direct
attachment of individuals to a course of action (Staw and Ross, 1987a). Some
psychological determinants seemingly prompted team leaders and critical decision
makers Hall and Fischer to assure themselves that continuing to pursue the summit of
Mt. Everest would lead to success, among them are 1) sunk costs not psychologically
sunk 2) a prior history of success and information processing errors, 3) information
processing errors and 4) high level of personal responsibility for the outcome of the
expedition.

Sunk costs were not sunk psychologically for clients. The psychological perspective
asserts that a decision maker who is receiving negative feedback about a project's
progress might feel compelled to confirm the validity of money and time previously
sunk into the project, therefore additional investment of resources when confronted
with negative feedback by some means gives a justification for the decision taken in
the first place (Staw, 1976). Relating these findings to the members of the Everest
case expeditions’ we find that sinking money, time and effort into a temporary
organisation could promote a sort of psychological effect that negative feedback may
perhaps be unable to put a stop on. However, this is only one of the many factors
influencing commitment since the sunk costs that climbing clients Taske, Hutchinson,
Kashicscke and Fischbeck on Adventure Consultants team had already spend on the
expedition did not keep them from making the correct decision to withdraw from
their course of action, turning around from the summit and walking back towards Camp IV
to safeguard their lives at around 11 am on May 10th; even though they had spent
thousands of dollars and had gone through weeks of hard work and pain to get their
only chance at summiting Mt Everest (Krakauer, 1998). David Breasher’s interview
to John Taske reflects this puzzling dilemma, and helps shed some light on how sunk
costs were not sunk psychologically for the members of the temporary organisation:

“The risks were escalating for me. I'm prepared to take some risks, but they
were getting beyond what was acceptable to me… the desire to get to the
summit is enormous. I'd spent six years training, huge amounts of money. Six
weeks of slog to get to where I was and to miss out by 200 vertical meters was
more than I could bear”. (PBS Frontline: Storm Over Everest).

This statement seems to be on line with the work of Northcraft and Wolf (1984) and
Arkes and Blumer (1985) which argues that for hands-on managers escalation is a
consequence of a baffling predicament that occurs when they are faced with the decision of withdrawing from a losing situation where they already have invested time and money against staying committed to prevail over the hard times. The fact that these four climbers decided to turn around and withdraw from what they perceived as an escalating commitment to a failing course of action, gives indication that the leaders of the temporary organisation were seemingly under the influence of many other factors (project, social and organisational determinants of escalation) that kept them committed to push for the summit. Indeed Hall and Fischer, the leaders of the 1996 Mt. Everest temporary organisations, acknowledged that a high risk escalation of commitment could happen as climbers become close to reaching the top of the mountain (Roberto, 2002).

**Information processing errors.** Escalation situations are not limited to those that imply sunk cost in terms of resources like effort, time and money, they can also be framed as negative or losing situations in which the further allocation of resources is expected to turn around the failing project (Staw and Ross, 1989). The work of Kahneman and Tversky (1979) shows that individuals take more risks on decisions framed negatively (i.e. to recover losses) than when the investment decision has a positive frame (i.e. to attain benefits). In the Everest case analysis we found that success of previous expeditions is a psychological factor that could have influenced the Adventure Consultants leader decision frame for identifying, interpreting and acting on the expedition information. An error in information processing is an effect that mostly affects peoples perceived probability of events (Staw and Ross, 1987a).

Misunderstanding in information processing could have increased the perception of Rob Hall regarding the utility to keep climbing the mountain once he passed the turn-around time. Based on the accounts it is believed that Hall created a positive frame of the situation that inhibited him from sensing any danger on ignoring the turn-around time (Krakauer, 1997). Consequently, the negative framing effect context in which Kahneman and Tversky (1979) observed people to be risk seeking is not clearly present in the 1996 Mt Everest tragedy from the beginning of expedition, given that Hall framed the temporary organisation positively envisioning it able to summit Mt Everest and by default achieving a goal with a big payoff. The negative frame may have been formulated by Hall and Fischer once they realized they were approaching the turn-around time with a climbing progress that was not nearly as close to the summit as they had planned.

**Prior history of successful expeditions.** The success of previous expeditions is a psychological factor that could have influenced the Adventure Consultants leader decision frame for identifying, understanding the meaning and acting on the expedition information. This psychological factor acts as a reinforcement, which can have an influence in commitment in a number of ways. The framework for psychological determinants suggests that reinforcement may inhibit a decision makers willingness to re-examine current commitment to a project (see Figure 5), for the
reason that eventual success might be assumed or because behaviour has been so embedded that revising it is not even considered. (Staw and Ross, 1987a), therefore promoting escalation. Which is the case for Adventure Consultants, the company had an impressive history of success that may have reinforced Hall’s commitment to attain the goal of reaching the summit of Mt Everest with his temporary organisation. According to Keil (1995) it is anticipated that decision makers would disregard negative information (e.g. ignoring turn-around times) or to consider it less important when a prior history of success and high degree of personal responsibility exists, consequently making projects more predisposed to escalation.

Based on the accounts it is believed that Hall created a positive frame of the situation that inhibited him from sensing any danger on ignoring the turn-around time. If we look at the previous years in which Hall was guiding expeditions to Mount Everest he had unusually good luck with the weather, and this, according to Krakauer might have biased his ability to make considered decision or come to sensible conclusions about the developments of the 1996 ascent (Krakauer, 1997:272). David Breashears is cited in Krakauer (1997:272) as saying that Hall experienced superb weather season after season on the summit bid days of his expeditions, “He had never been caught by a storm high on the mountain”.

This particular factor could influence the expeditions leaders in the sense that it would diminish the probability of the re-examination of the current course of action; in other words since Rob Hall’s success rate in the last five years was so remarkable he did not even considered the option to re-asses the expedition status and feasibility of attaining the goal once the turn-around time was reached. Not reaching the summit appears not to have been an option for the experienced professional climber and guide.

Rob Hall’s advertised his company as the world leader in guided expeditions to climb Mt. Everest; he had invested a lot of effort by methodically improving the company’s infrastructure and services and was exceptionally successful at guiding climbing clients to the top of mountains all around the world. Indeed Adventure Consultants had an impressive history of success, in only five years since it’s foundation in 1990 it was able to escort to the summit of Mt. Everest 39 climbers, which is 3 more climbers that had reached it twenty years after the first known ascent to the summit in 1953 by Sir Edmund Hillary and Tenzig Norway (Krakauer, 1997:33; www.adventureconsultants.com). It was this extraordinary success proportions that helped Adventure Consultants to easily fill all the places available for clients in his expeditions and also the reason why fees where the highest in climbing expeditions the market (clients paid $65,000).

According to Krakauer (1997:272-273) chances are that excessive pride and self-confidence had at least something to do with Hall’s decision to ignore turn-around times; he indicates that Hall might have gotten a bit overconfident since he became so
accomplished and successful at guiding climbers of all kinds of abilities up and down the summit of Mt. Everest. Krakauer recalls Hall boasting about that he could get almost any reasonably fit person to the top of the mountain; nevertheless his success rate seemed to support that asseveration.

Hall also clearly showed his striking ability to come out on top of adversity; in 1995 he and his team dealt with the collapse of two climbers (one of them was Doug Hansen member of the 1996 team) in a high altitude location on the mountain, Hall’s team had to drag and carry the climbers from the South Summit to the South Col (see Figures 8), as Krakauer recounts after everybody came alive of that incident, Hall’s pride and self-confidence received a tremendous boost, which was reinforced by his previous success rate record on Everest expeditions, thus leading Krakauer to believe that the New Zealand team leader may have thought that “there is little he could not handle” after that episode (Krakauer, 1997:272).

**Personal responsibility of team leaders for reaching the summit.** The misjudgement of sunk costs and positive framing in a temporary organisation such as Adventure Consultants expedition may be described as information processing errors. Information processing errors, as described earlier, are factors that mostly affect peoples’ perceived likelihood of events rather than determinants that straightforwardly affect objectives or preferences (Nisbett and Ross, 1980 in Staw and Ross, 1986, 1987a). Such determinants present in escalation situations involve processes of thought more related to motivation; hence self-justification factors have been pointed out as an important motivational reason for escalating commitment (Staw and Ross, 1989).

According to Keil, 1995 escalation theory states that subjects with a high degree of personal responsibility, (like Hall and Fischer had in their temporary organisations), may have a leaning towards become involved in self-justification i.e. they will persuade themselves to keep committed to the project instead of withdrawing given that they want to demonstrate their decision was right in first instance. In Hall’s case we find besides a high responsibility with his temporary organisation a high sense of responsibility for the summit attempt of Doug Hansen. Hansen was turned around very close to the summit by Hall in 1995, and in 1996 Hall insisted on him to come back to give it another try, he even discounted Hansen’s client fees. Hall knew that reaching the summit of Everest was very important for Doug Hansen and felt sorry for what happen in 1995, consequently it would have been very difficult for Hall to deny the summit a second time to Hansen. (Krakauer, 1997).

Scott Fischer and Rob Hall were the team leaders of the Mountain Madness and Adventure Consultants expeditions and also were the owners of each company respectively; this is indeed a strong indicator of their high level of responsibility with the outcome of the expedition. Self-justification strongly suggests that individuals are motivated to safeguard their conceptions of competence and rationality. The two
leaders felt highly responsible for the success of their expeditions; Fischer even sacrificed his health and kept quiet about it to keep pushing for the summit even though he was visibly sick and tired (Krakauer, 1997, Gammelgaard, 1999). In the 1996 Mt. Everest case it becomes a bit complicated to gather knowledge on whether self-justification or self-inference had played a role in the persistence of the leaders to pursue the summit, notwithstanding it seems practicable to presume that an important source of commitment to reaching the top of Everest despite the escalating risks was the personal responsibility of the two expedition leaders, Fischer and Hall.

**Team leader’s ego implications of failure.** Turning to the escalation framework of Staw and Ross (1987a:51) one finds that “the variables of ego relevance and self-justification note that responsibility of loses and the ego implications of failure will increase perceived costs of withdrawal”. Ego importance of failure for the leaders of the expeditions where widely discussed in the previous section, findings suggests that those implications for self-esteem were present in a considerably high extent on the temporary organisations set up for the 1996 Mt Everest season by Adventure Consultants and Mountain Madness. The work of Knight and Nadel (1986 in Staw and Ross 1987a) on the impacts of self-esteem supports those findings, indicating that when a project is failing people with high self-esteem have a tendency to continue commitment to the project and searched for information in a smaller extent.

Before 1994, Scott Fischer enjoyed a small bit of renown as a climber in the Seattle area thanks to some climbs worth of noticing, anyhow he was an outsider in the world climbing community, he could not find a stable and prominent sponsor to finance his climbs like some of his well-known climbing mates and indeed this situation bothered him deep inside. Jane Bromet is quoted by Krakauer saying:

> “he worried that some of these top climbers didn’t respect him. Recognition was important to Scott…He ached for it. He had a vulnerable side that most people didn’t see, it really bothered him that he was not more widely respected as a butt kicking climber he felt slighted and it hurt”. (Krakauer, 1997:64).

Jane Bromet was part of the Mountain Madness expedition team that year, she went up no higher than base camp of Everest where she was acting as a journalist filing Internet reports for Outside Online magazine, more important she was Fischer publicists and had climbed frequently with the American guide before, cementing a relationship of friendship.

From what is found in the accounts we can make sense of Fischer’s ego craving for recognition at the elite level climbing circles, and obviously the best unique and only way to achieve this, once his reputation was growing stronger every year thanks to his 1994 environmental expedition to Everest without supplemental oxygen, was to have a successful expedition in 1996 with as many clients reaching the summit that year, he would push himself to achieve the expedition’s goal for his self-esteem and in order
to achieve the recognition he felt he deserved. More than money, Scott Fischer craved recognition, nevertheless Karkauer (1997) points out that in U.S.A culture success is measured by monetary gains, therefore the big pay off of the expedition (economic project determinant) is in a way linked with this psychological determinant of ego importance avoiding failure and seeking recognition.

Scott Fischer’s ego did play a role in his climbing, as Gammelgaard (1999) reports him as saying to her that climbing Everest without oxygen is mainly an “ego thing”. This same ego could have played an important role in Fischer’s decision making the 10th of May of 1996. It’s clear to us now that Scott Fischer was in fact weak after having to make several un programmed climbs up and down the mountain to support clients as several witnesses attested and also probably sick (Krakauer, 1997, Breshears, 2008, Gammelgaard, 1999). In fact when he saw Krakauer coming down from the Summit on May 10th he responded to the question of how was he doing with:“ Just dragging a little ass today for some reason. No big deal.”, (1997a:7). Furthermore the Taiwanese climber Makalu Gau, the last person to see the leader of Mountain Madness alive confirms that Fischer told him: “..I am sick, I am sick..” in his final hours of life when both were lying helpless the night of May 10th at 27,000 feet up the mountain. (Breshears, 2009).

Clearly Fischer wouldn’t want people to see he was weak and sick, and did not want to admit it to others and himself that maybe it would get to the point where he couldn’t continue anymore, as Makalu Gau confirmed he couldn’t. Fischer’s pushed himself to the limits by pursuing the summit, as he often did in the gym as Don Peterson recounts in Krakauer (1997), and his self-esteem might have had a lot to do with it. A number of other combined factors discussed like the search for news media coverage, competitive rivalry, the pressure of having journalists on their expeditions, thus wanting to succeed to be in the spotlight to preserve or gain more status and winning the respect and recognition craved for as professional guides, especially Fischer for being recognized in the elite climbing circles. Therefore the ego importance of failure determinant for the temporary organisations’ leaders was relatively high.

6.4 Social Determinants Promoting Escalation

Since escalation situations as indicated before are a more complex social phenomenon driven by more than just economic and psychological factors, we have also identified what appears to be some social determinants that contributed to escalation in the Mt. Everest tragedy: (1) competitive rivalry between Adventure Consultants and Mountain Madness leaders, (2) the need for external justification or face saving behaviour against news media pressure. As we have described predetermined turnaround times were shockingly ignored by expedition leaders, the extension of this “alarm mechanisms” may have been influenced to some degree by the competitiveness between Fischer and Hall, the first indeed was under great pressure
from the business perspective and was eager and highly motivated to get clients on top, particularly Sandy Hill Pittman who was reporting for NBC News.

**Competitive rivalry between Adventure Consultants and Mountain Madness.** Escalating commitment situations could be instilled by interpersonal conflict, studies have shown that people are more persistent in their line of behaviour when they played against another person rather than by themselves (Staw and Ross, 1987a), accordingly social factors in escalation include competitive rivalry. Brockner et. al., (1981) and Teger (1980 in Staw and Ross, 1987a) theorized that much of the motivation for persistence in a course of action was the desire of participants to defeat the competition e.g., temporary organisations on the 1996 Mt Everest case seemed to involve such a competitive rivalry between Hall and Fischer that reaching the top of the mountain with as many clients as possible could have prevailed over other aspects in deciding whether to keep climbing toward the summit or returning to camp IV when the turn-around time rule became present.

In 1995 Adventure Consultants summit attempt was shadowed by two collapsing clients (Doug Hansen and a French alpinist) near the top of Everest, Hall’s team had to rescue the clients and bring them down to the South Col in an operation that required much effort (Krakauer, 1997:273), this and bad weather hindered the expeditions goal of reaching the summit with only one Sherpa (Lobsang Jangbu) making it to the top.

Failing to reach the Mt. Everest summit again in 1996 would have been detrimental to Hall’s business, particularly if Mountain Madness expedition succeeded. Given the great charisma and charm Fischer possessed and the big pay-off (speaking in economic terms) that reaching the summit would give to Mountain Madness, the outlook was as if Fischer’s enterprise would gain solid position and steal some of Hall’s market share. As indicated by Krakauer (1997:273) “Fischer was trying very hard to eat Hall’s lunch and Rob knew it”, he further suggests that under how things stood the idea of turning Adventure Consultants clients around down the mountain while his competitor’s (Fischer) clients were still climbing towards the summit may have been displeasing enough to muddle Halls ability to think carefully before making a decision. This implies that the team leaders were aware of their competition and that their success would in some way influence their capability to secure future benefits.

Clear evidence of the competition between the two leaders of the expeditions can be found even on back on the preparations for the 1996 Everest expeditions where Fischer’s Mountain Madness and Hall’s Adventure Consultants were contending each other to win away Jon Krakauer’s participation as client on their teams (Boukreev and DeWalt, 1999). They did not hide the fact that they were not interested in Krakauer per se, but they were interested in the fact that Krakauer was going to write an article for *Outside* (a well respected outdoors and adventure magazine published in the U.S.A) about the expedition, this and specifically the advertising and exposure that
commercial adds in *Outside* would give to the guided expedition companies was what they were looking for.

Hall knew that the American market was bigger, to his recognition he said that it was about “eighty or ninety percent of all the potential market for guided expeditions to Everest and the other seven summits” (Krakauer, 1997a:29) and that Scott’s company was a threat given that it was headquartered in the United States, so Hall pushed and cut a deal to have Krakauer in his team and the add space that Outside would give him for based advertising, to paraphrase Krakauer (1997:66-67) on Hall “After this season, when my mate Scott has established himself as a Everest guide, he’ll have a great advantage over Adventure Consultants simply because he’s in America. To compete with him we’ll have to step up our advertising significantly.” Fischer was very upset when he found out that Krakauer was going to join Adventure Consultants expedition and not his own, he was aware that the collateral publicity and advertising he was losing for his company, which he was determined to make profitable and established.

No doubt that there was competition, and at the first level it was to make money, the second level could be to avoid any kind of potential loss, and the third and most difficult to admit was for them to try and defeat each other. Both of them put their lives into the edge of safety and then, unfortunately, paid the highest price. In the case of Everest, if these expeditions were to go separately, there might have been a chance that they wouldn’t have devastating results. However, its worth to mention that in the moment of truth when things mattered the most, in the midst of the storm, they were counting on each other for help (Boukreev and DeWalt, 1999).

**Face saving and external justification: Responsibility for failure of expedition.** In the 1996 Everest tragedy high degree of responsibility for the failure of the temporary organisations is not present only at the personal level in the form of self-justification from the leaders, it is also manifested as a social factor given that Fischer and Hall may have been reluctant to reveal their expeditions failure to others (journalists which would write the story for audiences to read), consequently they kept on climbing the mountain. Generally “face-saving” refers to efforts to maintain dignity or prestige, to avoid admitting to something embarrassing (Kayes 2006:46). This seems to support (Staw and Ross, 1986; 1987a, 1989) argument, which states that organisational settings could be prone to face-saving effects; accordingly leaders are expected to expend great efforts in trying to evade exposure of their mistakes. Furthermore the work of Brockner et.al., (1981) shows that when face saving is involved in continued commitment to a project then escalation is intensified when decision have to be taken in front of a large audience, this research supports our finding which indicate that escalation was promoted by the presence of journalists (Jane Bromet, Jon Krakauer, Sandy Pittman Hill) that where writing articles and reports about the expedition for news media that targeted large audiences (Outside Online, Outside, NBC Interactive Media).
Given the context previously explained in the determinants above, in which both American and New Zealand teams encountered themselves, that is having at stake a showcase for their companies and future benefits in terms of recognition and profitability, if they would be able to reach successfully the summit with as many clients as possible, there was an existing pressure on them to be successful and therefore have positive and favourable reports in news media and journalistic pieces that the journalists were writing for Outside Online, Outside and NBC News. With all this pressure from news media and external audiences Hall and Fischer might have felt compelled to push the limits to get the best publicity stunt (Krakauer, 1997).

(Krakauer, 1997:138) recounts how Beck Weathers responded to an interview in ABC News program Turning Point about having him on the team documenting and writing all about the happenings of the development of the expedition and team members, Weathers expressed his concern about how the presence of a journalist that will write a piece that would reach a large audience of even millions of people might influence the people in the team mainly on their performance and how hard the will push themselves and how it might drive people beyond the limits they wanted to go, this not only for the clients, as he indicates “and it might even for the guides. I mean, they want to get people on top of the mountain because, once again, they’re going to be written about, and they’re going to be judged”.

This can be rescued from Beck Weathers regarding the team members that were in the expedition as clients, but later Weathers was questioned about how this might had an effect of the expedition leader of Adventure Consultants adding more pressure from the reporter in the team to his already loaded responsibilities; his reply was “I cant imagine it didn’t” (1997a:56). He went to recount and analyse that Hall and his company had an extraordinary season in 1994 when, as mentioned before, they reached the summit with a 100% client success rate. After reaching the top of Mt Everest with all his clients two years before, Weather indicates that he though of Hall as perceiving the Adventure Consultants team of 1996 strong enough to accomplish that astonishing feat again. In his mind he portrayed Hall as pushing a bit harder to reach the summit, to paraphrase Weathers in Krakauer (1997a:57): “I think there is a push so that when you wind up again in the news, in the magazine, it’s all reported favourably”.

Not only was Krakauer a climbing client and journalist, but also Sandy Hill Pittman. She was on Mountain Madness expedition and was reporting internet posts for NBC news, a source of valuable exposure in news media and good publicity and advertising on the side for Mountain Madness, thus the favourable outcome of Pittman reaching the summit of Everest would have been great for Fischer’s company, thus as Krakauer indicates Fischer was extremely motivated to get all climbers to the summit, but substantially a celebrity client like Pittman. To substantiate that, Lopsang Sherpa told Krakauer when interviewed that he knew it was
very important for Fischer to get Pittman to the top of the world (Krakauer, 1997). If her summit bid could end up being successful, that could open new business opportunities for Fischer. He was attempting to prove himself in the business, and bring celebrities like Sandy Hill Pittman, who was constantly mentioning names of other “big fishes” like Ivana Trump, etc, into the summit. Clearly Pittman was an expedition member that if she would not make it, she would blame it on Scott Fischer (Boukreev and DeWalt, 1999).

The leaders were striving not to lose their face in front of the others. They were extremely persistent in their course of action, not only because they were not aware of actually making a mistake, but because they were taking the expedition on a personal level and thus were trying to prove themselves. As leaders and representatives of their companies, and in charge of their future business, the leaders took the responsibility that an error would be of a devastating effect in the face-saving of themselves and the agencies they represented. They clearly were positioning themselves as the achievers of their goal, and thus were unable to understand the situation and consider alternative courses of action. The huge expectations from the team towards their leaders might have brought the situation as if the leaders were on an advocacy from the audience, not to mention again the media pressure. The leader of Mountain Madness had a binding of his name with his agency, and thus was extremely reluctant to think about a failed expedition (Boukreev and DeWalt, 1999).

6.5 Organisational Determinants Promoting Escalation

Many of most damaging escalating commitment situations imply the persistence of a whole organisation to a failing project, it is fundamental to consider organisational determinants of project escalation (Staw and Ross, 1989). The framework posits the management of escalating commitment situations, like the one occurred in the 1996 Mt Everest disaster, can be influenced by the structural features of an organisation and how these features interact with each other (Staw and Ross, 1986, 1987a). We have identified what appear to be some organisational determinants that contributed to escalation in the Mt. Everest tragedy: (1) institutionalisation of the project, (2) the pursuit of enterprise growth.

**Institutionalisation.** The structural features of the companies involved in the expeditions (Adventure Consultants and Mountain Madness) play a crucial role for what the findings suggest is a present organisational determinant in the Everest case. The companies structured expeditions as temporary organisations to achieve their quest for profit making. In the case of Mountain Madness it could be argued that the temporary organisation was assembled in a direct way to accomplish the company’s mission to “climb mountains and have a hell of a time doing it” (Boukreev and DeWalt, 1999:7). Per se in the case of Scott Fischer the organisation’s success was at stake, making the project’s objectives very well aligned with the company’s, therefore it makes sense to think of it as a possible case of institutionalisation of the project.
Turning to Staw and Ross (1986; 1987a) they point out that a project may be tied so integrally to the values and objectives of an organisation that it becomes institutionalised. The work of Goodman, Bazerman, and Conlon (1980 in Staw and Ross 1987a) indicates that a project may become institutionalised when activities are taken for granted in the view of the fact that they have become profoundly implanted in the conventions of a group, leading to disregard any proposition that involves withdrawing from the project.

This is clearly portrayed by Mountain Madness owner and expedition leader response to journalist Jon Krakauer suggestion that it would be insane to attempt to climb Everest with his limited high-altitude climbing experience: “You’ll do fine... We’ve got the big E figured out; we’ve got it totally wired. These days I’m telling you, we’ve built a yellow brick to the summit.” (Krakauer, 1997:66). From an organisational point of view, the actions of the leaders might have been taken for granted, as they were actions arising from the embeddedness in the culture of the expeditions the company had undertaken before. This is illustrated as well by the self-confidence the Adventure Consultants leader showed in his professional climbing skills and experience as one of the most successful Everest guides of that time, if not the most. Accordingly is likely that the only lines of business (i.e., temporary organisations as climbing expeditions) of companies like Adventure Consultants and Mountain Madness in the 1996 Mt. Everest tragedy would not even be considered for termination because they were so direct and strongly identified with the enterprise. In fact the temporary organisations as climbing expeditions were the main purpose of why these two enterprises existed.

**Pursue of enterprise growth.** The framework posits the management of escalating commitment situations, like the one occurred in the 1996 Mt Everest disaster, can be influenced by the structural features of an organisation and how these features interact with each other (Staw and Ross, 1986, 1987a). There are a number of internal and external features of the organisations subject of this study that have interacted between one another that lead us to find the last organisational determinant present in the 1996 Mt Everest case.

We found that the two companies involved Adventure Consultants and Mountain Madness were young and relatively small size enterprises. Entrepreneurial leaders seeking higher profitability and increased market share founded and managed them both. Additionally these two firms had direct competitive rivalry in the same market segment. In the centre stage of the interaction between these organisational characteristics, we find temporary organisations were being set up by the managers to pursue the growth of their enterprises. Obviously, a crucial milestone to accomplish that was to first attain the objective of successfully reaching the summit of Mt Everest.
The picture laid out by the accounts (Krakauer, 1997; Gammelgaard, 1999) is that the attainment of the goal had a pretty big payoff for Mountain Madness; establishing itself into the elite climbing market and securing profits for next year was no small feat. Krakauer (1997) gives insight on the aim of Mountain Madness for profitability, however it looks as if Fischer had much more bigger plans for his enterprise. Danish climber Gammelgaard (1999) (survivor of the events on Fischer’s team and also close friend) claims there was much more to it than just profits for the company, Gammelgaard and Fischer had laid out a business plan for expanding Mountain Madness operations into Europe and reaching the top of Everest in the spring of 1996 was a crucial milestones needed to be accomplished in their quest for the European market. To quote from her book: “For years he has [Scott Fischer] worked systematically towards making the Everest expedition the culmination of his business as a professional mountain guide” (Gammelgaard, 1999:21). She goes on to clearly indicate that the success of the company is depending on the Everest expedition.

The business plan Fischer and Gammelgaard had thought about involved the Danish climber making the ascent to Everest without the use of supplemental oxygen, which they expected would make a big impact in news media headlines (given the fact that it was the first Scandinavian woman to reach the top of the mountain) therefore she could hit the spotlight very prominently, and consolidate her position in the European climbing circles as an Everest climber; after achieving that milestone Gammelgaard then would start working for Mountain Madness in Europe, opening the climbing expedition market for Fischer.(Gammelgaard, 1999).

The pursuit of enterprise growth is an organisational determinant that has not been generally discussed in the escalation literature, subsequently is a factor that is not present in the Staw and Ross framework used to analyze the findings of this study. Because of this gap in the framework we have placed this new factor as an organisational determinant since we find that its composition pertains to many organisational features surrounding and interacting with a temporary organisation. Among those we find internal features such as: the age and size of the company (young and small), an entrepreneurial leader in command (related to the small size of the company), the quest for profitability and increased market share, business plans for expansion and demands of success from internal and external stakeholders, and a temporary organisation acting as the vehicle for achieving an objective (or milestone) in the business plan. External organisational features of the pursuit of enterprise growth that also interact with the temporary organisations in the Everest case are the well known competitive environment by the managers, in which the opportunity of a small and profitable market segment was present and aimed for making the best out of it (See Table 8). We consider this finding to be of importance to further develop escalation theory.

This and the other findings are discussed in the next section in a more abstract manner to explore their significance and possible consequences. The findings of this study
support Mähring et al., (2004) who rightly point out that researchers that use escalation theory have a view of escalation as something that happens through a series of different decisions by decision makers of organisations. Indeed, escalation theory indicates that a set of determinants facilitate in explaining why the failing project is not terminated. In this case study temporary organisations were subjected to an analysis according to a theoretical framework which seemed to reflect many of the aspects present which promoted escalation of commitment to a failing project.

According to Staw and Ross the management of escalating commitment situations, can be influenced by the structural features of an organisation and how these features interact with each other (Staw and Ross, 1986, 1987a). As mentioned before there are a number of internal and external features of the organisations subject of this study that have interacted between one another that lead us to find an organisational determinant that has not been widely discussed in the escalation theory, and that we believe had a crucial importance on the contribution towards the escalation of the temporary organisations.

Table 8. Summarizes the internal and external organisational elements that worked together around the setting up of temporary organisations to achieve company objectives, thus giving room to the proposed organisational determinant of this study: the pursuit of enterprise growth.

Table 8. Organisational features of the proposed determinant

<table>
<thead>
<tr>
<th>Proposed Organisational Determinant</th>
<th>Organisational Features Interacting around TO’s</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Internal</td>
</tr>
<tr>
<td>Pursuit of Enterprise Growth</td>
<td>Young / small size enterprise</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial leader in command</td>
</tr>
<tr>
<td></td>
<td>Seeking profitability</td>
</tr>
<tr>
<td></td>
<td>Seeking increased market share</td>
</tr>
<tr>
<td></td>
<td>Plans for expansion &amp; demands of success</td>
</tr>
<tr>
<td></td>
<td>TO’s as vehicle for achieving objective</td>
</tr>
<tr>
<td></td>
<td>Systematic improvement over time</td>
</tr>
</tbody>
</table>

We can find clear links between internal and external organisational features that lead us to spot the pursuit of enterprise growth as organisational determinant. Entrepreneurial leaders with plans for expansion may eagerly seek higher profitability and increased market share, these leaders founded and managed the two small size companies and in addition where the leaders of the temporary organisations set up to reach the company’s objectives. Entrepreneurial leaders often start up their own companies, thus their size is small and they are considered young enterprises.

Moreover these two firms had direct competitive rivalry in a market segment in which they possessed satisfactory knowledge about its behaviours and opportunities given their prior experience and systematic work towards improving their businesses, which
led them to have future plans for expansion. The previous experience gathered made them quite aware of the market segment in which they were operating and provided knowledge and insight on prospective profits and competition of the environment in which the companies were operating. In the centre stage of the interaction between these organisational characteristics, we find temporary organisations were being set up by the managers to pursue the growth of their enterprises in this well known environment.

To accomplish growth managers needed to first attain certain objectives on their business plan, crucial milestones to be accomplished by means of temporary organisations. Consequently makes sense to suggest that when the destiny a of manager in an organisation is closely linked to demands for performance and success, all possible effort will be taken to keep safe from the costs of failure, even if this means trying to support projects that logically should be terminated (Staw and Ross, 1987a).

It is observed that the internal and external organisational features interacting around temporary organisations that give rise to the pursuit of company growth, have a noted relationship with three types of determinants: project social and organisational determinants as showed on Table 9. Therefore the pursuit of enterprise growth may become a particularly strong and influencing organisational determinant of commitment for temporary organisations to persist on a failing course of action, particularly if a strong leader is in command of the enterprise as well as the temporary organisation. Thus we find a very significant opportunity to extend escalation theory regarding the relation of project managers in temporary organisations as vehicles to obtain objectives from a company business or strategic plan. Given the nature of temporary organisations, which are dissolved after the task is completed, the project manager’s destiny (in this case the team leader) could be tied to the project in a different way than it is in an ordinary organisation. This could have theoretical implications that might suggest that a qualified project manager that is hired to execute one project for a company might no be liable to some of the escalation determinants in the same manner as a manager that will have to stay in the organisation after the project has been finished successfully or terminated. It can be argued that an entrepreneurial leader who manages its own enterprise and also leads a for-profit temporary organisation within the company may be prone to escalation due to social and psychological determinants of commitment; Kayes (2006: 154) as well argued that over-reliance on strong leaders was a critical issue on the Everest case.

The pursuit of enterprise growth as organisational determinants finds theoretical support on research done by Davidson (1989) who proposes an economic – psychological model of determinants of small company growth. This model posits that a fundamental determinant of “Actual Growth” (for a small enterprise) is the manager’s “Growth Motivation”, motivation is linked to behaviour and consequently it impacts results. “Actual Growth” and “Growth Motivation” are determined
objectively (e.g. in economic terms like project determinants in escalation) and subjectively (e.g. in behavioural terms like psychological and social determinants of escalation) by three factors Ability, Need and Opportunity.

The three determinants of small enterprise growth as posited by Davidson (1989) clearly align with organisational features present on the organisational determinant “pursuit of enterprise growth” that in turn interact around temporary organisations. To name a few, the leaders of the temporary organisations had economic and social needs; they were seeking a profitable business, expansion for the size of the company and recognition for their work as world-class guides, which belong with internal organisational features. The managers and leaders were confident they had the ability to guide their temporary organisations to success; in fact they had proven professional mountain climbing skills. As external organisational features the leaders were aware of the existence and looking to grasp the opportunity of a profitable and small market segment that guided expeditions to Everest offered to them and to their companies.

Table 9. Determinants of commitment linked with the pursuit of enterprise growth

<table>
<thead>
<tr>
<th>Proposed Organisational Determinant</th>
<th>Organisational Features Interacting around TO’s</th>
<th>Noted relationship to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pursuit of Enterprise Growth</td>
<td>Seeking profit and market share</td>
<td>Project determinant</td>
</tr>
<tr>
<td></td>
<td>Known competitive environment</td>
<td>Social determinants</td>
</tr>
<tr>
<td></td>
<td>Demands for success</td>
<td>Competitive rivalry</td>
</tr>
<tr>
<td></td>
<td>TO’s as vehicle for achieving objective</td>
<td>Organisational determinant</td>
</tr>
<tr>
<td></td>
<td>Project goal had large size payoff</td>
<td>Information Processing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institutionalization</td>
</tr>
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</table>

This argument supported by our findings reflects how the human aspect present in the Everest case promoted escalation of commitment in temporary organisations. Besides the human aspect, economic, environmental and organisational aspects have been discussed in relation to the organisational determinant of the pursuit of enterprise growth. Table 10 summarizes how the aspects that promoted escalation were present in the Everest case and indicates their direct or indirect relationship to all four types of determinants of commitment, which in turn are all encompassed in the pursuit of enterprise growth. Consequently this conducts us to suggest an apparent primary strong influence of this proposed organisational determinant on the contribution to escalation in temporary organisations on the Everest case.
We believe that the organizational determinant found the “pursuit of enterprise growth” in the Everest case could be also interpreted as the destructive pursuit of an idealized goal, a predicament that takes place when organisations set and pursue goals and objectives with mindless commitment. Hence the reader that might feel interested in investigating further on this matter can look into research performed by Kayes (2005; 2006) where the author addresses the 1996 Mt Everest disaster from the perspective of how leaders and teams can become spellbound by a goal because they have in their mind the vision of an idealized future, in the word of the author “the goal becomes the sole identity, and abandoning the goal becomes as unthinkable as abandoning oneself” (Kayes, 2005:393).

7. CONCLUSIONS

With the purpose to attain some insight into how certain aspects that promoted escalation were present in the temporary organisations assembled to undertake the
1996 Mt Everest expedition, we have applied the Staw and Ross (1987a) framework of behaviour in escalation situations which posits that there are four different types of determinants which affect the persistence of commitment to a failing project. According to the framework we identified and mapped the determinants that seemed to have a noted contribution towards escalation on this case study. We based our analysis on the empirical data collected from first hand account of survivors of the tragedy as well as mass media outputs on the event. To conclude this study, this section presents a summary of our findings and results, underlines the implications of this research for practitioners, organisations and academics, points out the limitations of the study as well as the directions for future research.

Based on the analysis of the emperics of the case we came to realize that to achieve an absolute understanding of what exactly happened on Mt Everest is an impossible task. Then again the analysis took us to examine the higher level of the background content of the circumstances that were catalysts of decisions taken by the leaders of the temporary organisations to keep pursuing their objective, even though an alarm flag mechanism signalling imminent risk (turn-around time rule) had been deployed. Based on the framework applied we found the four existing types of determinants of commitment present in the 1996 Mt Everest case 1) project, 2) psychological, 3) social and 4) organisational, and in each one of them at least two factors that contributed to the escalating commitment situation that affected the two temporary organisations present that year on the mountain. Figure 10 summarizes the categories and factors contributing to escalation in temporary organisations found in this study.

**Figure 10. Summary model of determinants that promoted escalation**

*We found that the determinants in the Everest case, as opposed to the framework do not follow a temporal model with an established order of appearance through time, on the contrary they are present with no predictable order within the four identified phases of the project, supporting the findings of Mahring et.al., (2004) and Newman and (*) Indicates determinants that has not been broadly examined in the escalation literature.*
Sabherwahl (1996) which indicate that determinants of commitment may be present through all stages of the project, influencing key decision makers indistinctly throughout the time frame of the project. In the Everest case we find a strong presence of almost all determinants in phases 2 and 3 of the expedition, from this we can conclude that a strong influence of the factors found might have been exercised in the decisions taken during those stages. The escalation processes involved in those decisions is affected by determinants of commitment in three main elements: 1) the re-examination of current course of action, 2) the perceived utility of continuing the project and 3) the perceived utility of terminating the project. *(See Figure 8)*

The application of the framework yielded as result the emergence of a new proposed organisational determinant not present in the framework: the *pursuit of enterprise growth*. We found this organisational factor has several links and interactions related to other determinants of commitment and to different categories as well; consequently there is strong evidence that suggests that the *pursuit of enterprise growth* might have been an exceptionally powerful organisational determinant of commitment for the temporary organisations at hand to engage in a escalation of commitment situation. *(See Table 9)* These findings are extremely important since they lead us to answer our research question in a conclusive manner. The determinants of commitment related to the *pursuit of enterprise growth* can be grouped in four aspects present in the Everest case that give insight in how escalation was promoted in the temporary organisations, these four aspects are:

**Economic aspect**: Involving the leaders’ quest for profit making and increasing market share. Related directly to *project determinants*.

**Human aspect**: An entrepreneurial leader of an enterprise that also leads a for-profit temporary organisation set up within his company may be prone to escalate due to psychological and social determinants of commitment. Related indirectly to *psychological determinants*.

**Environmental aspect**: Involving competitive rivalry, competitors and market knowledge of threats and opportunities, based on previous experience of operating in such environment. Related directly to *social determinants*.

**Organisational aspect**: A temporary organisation that is set up to achieve the company’s mission has embedded values and norms that derive in actions taken for granted which can lead to escalation. Related directly to *organisational determinants*.

7.1 Theoretical implications

The analysis of the empirical data yielded as result the emergence of a new proposed organisational determinant not present in the Staw and Ross (1987a) framework: the
pursuit of enterprise growth. This determinant has not been widely discussed in escalation literature, thus we believe a contribution to the body of knowledge of escalation has been made regarding organisational factors that may be closely related to temporary organisations assembled as enterprise vehicles for profit making, organisational mission statement achievement or attainment of economic objectives.

The theoretical implications are linked to the direction future research, the findings suggest that the pursuit of enterprise growth is an organisational determinant, nevertheless it has many factors of the four types of determinants of commitment interacting with it directly or indirectly and influencing its strength on the aspects that promote escalation in the temporary organisations studied in this research. Therefore it its worthwhile considering that there might be another type of composite categories of escalation determinants that could be added to the existing theoretical framework of escalation.

The results of this research add to the dimension on how to better understand the behaviour of temporary organisations in extreme settings through the analysis of four different aspects (economic, human, environmental and organisational, see Table 10 related to the pursuit of enterprise growth and how certain circumstances developing or already present within those aspects could contribute to escalating commitment to a failing course of action in which they are involved. This proves useful since there is a growing use of temporary teams in several industries (Tempest et al., 2007).

These aspects present in the 1996 Mt Everest case indicate that there might be implications for temporary organisations effected at least by these four aspects, which could have a tendency to be immersed in escalating situations. This implications concern the transferability of this research to other temporary organisations and not only mountain climbing expeditions. Since temporary teams are being used more and more in many industries to achieve organisational objectives that deal with profit making, economic objectives and mission statement achievement, the findings of this research prove useful to further explore escalation within temporary organisations in organisational settings that differ from the mountain climbing scenario investigated in this case study.

7.2 Managerial Implications

The following key point addresses the managerial implications pertinent for small and young companies which may have entrepreneurial leaders in managing the company as well as in charge of the setting up and leadership of temporary organisations which sole purpose is to attain business plan objectives related to the economic aspects of the company such as profit making and seeking increased market share, consequently working toward the pursuit of enterprise growth. The practical implications of this study point to safeguarding the integrity of a temporary organisation. This could be achieved by analysis of different aspects that could lead to promote escalation and
spotting the possibility of diminishing the forces of commitment or intensifying the
tendencies of withdrawal from an escalating commitment situation that may ail a
temporary organisation. For example by not having entrepreneurial leaders conduct
temporary organisations within their own company in such a direct way or creating
mechanisms to relay or transfer decision making responsibilities to other leaders
within the organisation.

These findings may lead to raise awareness in practicing managers and entrepreneurs
about setting up temporary organisations with the soul purpose of achieving enterprise
growth. As an important practical implication we may conclude that it could be
healthy to separate lines command between enterprise and crucial temporary
organisations designed to pursue company growth, in order to diminish the effects of
forces of commitment to failing courses of action that may lead to escalation and
disaster like the tragic events of the Everest case.

7.3 Limitations of this research

In order to ensure a certain validity of this research it is essential to state its
limitations. One of the main concerns regarding the limitations of this research relates
to the generalizations that may be made in relation to the applicability of its results to
all temporary organisations. In this research the subjects studied were temporary
organisations in an extreme setting represented by the expeditions in the tragic events
of the 1996 Mt Everest disaster. As mentioned before this is an exploratory study,
which aimed to shed, some insight into some fundamental aspects that may have
contributed to escalation of commitment in the temporary organisations assembled for
reaching the summit of Mt Everest in 1996.

Based on the insight given by the results it may be possible to further direct research
on the field of escalation in temporary organisations to widen the knowledge on these
to subjects and establish some more conclusive generalization that could lead to a
theory of escalation for temporary organisations. Another critical limitation is the fact
that this research is based on first hand biographical accounts of the survivors and
observers present on the mountain that year that can not be free from bias themselves,
additionally the qualitative nature of this research that conducted us to a subjective
way of analysis and understanding of the results that can not be exempt from bias,
despite this issues we are confident that the on level of analysis (setting, context and
background content) performed the personal bias that the accounts may suffer may
not have a significant impact on the results.

7.4 Suggestions for future research

Given that no previous field-based research of escalation has been performed on
temporary organisations in extreme settings per se, there are a number of areas that
with an interesting outlook for future research. Among those areas lies the further research ahead on the organisational determinant found on this study. The pursuit of enterprise growth needs to be further examined to establish if indeed it is a determinant factor of commitment in escalation situations thus expanding the theoretical framework of escalation. This area of research may also lead to explore different kinds of determinant types. Given the noted interaction of the pursuit of enterprise growth with another types of factor and determinant types it could be of interest for researchers to explore and expand escalation literature in a type of composite categories of determinants that have a interlinked nature among the human, environmental, economic and organisational aspects that promoted escalation in the Mt Everest case.

Another area that may be of interest and importance not only for researchers but also for practitioners is the use of temporary organisations as a vehicle to pursue company growth and how prone to escalation this vehicle for delivering a project might be under certain settings that could be called “extreme” by noting the limited resources and unpredictability of forces in the environment (e.g. the storm that hit Mt. Everest in May 10th, 1996 was unpredictable).

And last by not least; a future research area could focus on entrepreneurial leadership and how it is related with escalation in projects. Clearly, entrepreneurial leaders have certain personality traits that seem to be quite well related to the four aspects that could promote escalation in temporary organisations as yielded by the results of the study. Therefore this exploratory study has undoubtedly contributed new ideas and insights on the further paths that escalating commitment research on temporary teams might undertake regarding the areas proposed above involving escalation theory, temporary organisations, and entrepreneurial leadership.
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