



lessons in **DECISION MAKING**

by Deborah Mackin

Incredible achievement and great tragedy unfolded on the treacherous slopes of Everest on May 10, 1996. Twenty-three people reached the summit, including Rob Hall and Scott Fischer, two of the worlds most skilled and experienced climbers. Unfortunately, Hall, Fischer, and three members of their expedition died as a storm enveloped the mountain during their descent. Hall was the leader of the expedition, having established an impressive track record of guiding climbers to the summit over the previous six years.

Since then, many have sought to understand what happened and have cited a number of possible causes of the tragedy. While some blame the tragedy on the weather, one accomplished guide put it bluntly: “The events of May 10 were not an accident, not an act of God. They were the end result of people who were making decisions about how and whether to proceed.” Those decisions turned out to be deadly.

In 1986, experts agreed that the space shuttle *Challenger* would explode if it was launched in very cold weather. It was 36 degrees Fahrenheit when the *Challenger* took off on January 28. Why did NASA launch anyway? The day before the launch, Roger Boisjoly and his O-ring improvement team delivered fourteen viewgraphs in a presentation to NASA executives, detailing their concern about the risks of launching at low temperatures. The only quantifiable data the group had to prove their concern was outdated. They ended their presentation with the recommendation not to launch below 53 degrees. The NASA group did not receive the news well. They deliberated briefly and came back with the news that they intended to launch. Their expert argued that launching in cold weather could be a nonissue. Although Roger and his teammate, Arnie, argued vehemently not to launch, four executives from his company held a closed-door discussion and returned to the NASA meeting with a recommendation to launch. When asked by Stanley Reinhartz of NASA if anyone had anything else to say during the teleconference, Roger and his team, upset over the decision, chose to be silent and not respond to their superiors.

Seventeen years after the *Challenger* disaster, the *Columbia* space shuttle was lost as it reentered the atmosphere. An important cause of the crash, cited by the Columbia Accident Investigation Board, was the decision making at NASA. After

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the *Columbia* shuttle was launched, dangerous foam debris was identified that would jeopardize its ability to land safely. Engineering teams responded to cost and schedule demands over safety concerns. They suggested potential ways for landing the shuttle, rather than plans for a rescue mission. The report cited that NASA was blinded by a “Can-Do” attitude that was inappropriate for a space shuttle program so strapped by schedule pressures and shortages that spare parts had to be cannibalized from one vehicle to launch another.

One explanation for these decision errors is that cognitive biases — errors in the way the mind processes information — may have impaired judgment. Cognitive biases include such things as overconfidence, a failure to ignore sunk costs, and a tendency to overestimate the probability of recent events.

Behavioral decision theory has shown that systematic biases often impair judgment and the choices that individuals make. The **sunk cost effect** refers to the tendency of people to increase their commitment to a course of action in which they have made substantial prior investment of time, money and other resources. They throw “good money after bad.” In the Everest expedition, Hall and Fischer often spoke about the need to establish a predetermined turn-around time on summit day and abiding by it no matter how close they were to the top. Unfortunately, Hall never made it clear whether climbers should turn around at one or two o’clock. During the final push to the summit, only four individuals adhered to the turnaround time philosophy, losing \$70,000 and weeks of agony, but ultimately saving their lives. In the *Challenger* tragedy, NASA had already delayed the launch several times. The resulting bad press put added pressure on the need to make a pro-launch decision.

Researchers have found that people typically are **overconfident in their judgment** when it comes to decision making. Fischer often dismissed those who pressed him about the risks associated with climbing Everest by saying, “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.” This overconfidence contributed to the lapses in judgment that took place on May 10. When this type of overconfidence exists on a team, it’s called **groupthink**, a term coined by Irving Janis in 1972. Janis examined the errors made in decision making during Kennedy’s Bay of Pigs fiasco and determined that eight factors negatively influenced their decision making:

As you examine these tragedies, what are the common errors in decision making that were made by highly intelligent, skilled individuals? What could have prevented these errors from happening? Are there lessons in decision making to be learned here?

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1. Having an illusion that they were invulnerable and would not make mistakes, called the planning fallacy.
2. Collective rationalization of poor decisions.
3. Unquestioned belief in the inherent morality of the group.
4. Sharing stereotypes, particularly of opponents, which guide the decision making.
5. Exercising direct pressure on others to conform.
6. Self-censorship by withholding criticisms and true feelings.
7. Maintaining an illusion of unanimity (false consensus).
8. Self-appointed “mindguards” to protect the group from negative information.

In the Bay of Pigs situation, the decision makers were a highly cohesive, homogeneous group very insulated from others; leadership was very directive. There was a lack of norms requiring methodical decision making procedures and a high degree of stress from external threats with low hope of a better solution than the one offered by the leaders. The same could be said of the *Columbia* decision makers.

Scholars have shown that decision makers also tend to place too much emphasis on information and evidence that is most readily available to them, known as the **recency effect**. There is a tendency to pay too much attention to recent events and allow them to overshadow previous experience. The Everest climbers had enjoyed remarkably good weather on Everest in recent years, causing them to underestimate the likelihood of dangerous storms.

Other factors that influenced decision making in all these cases include **team effectiveness** and **complex systems theory**. The climbers and NASA executives apparently did not perform effectively as teams. At critical junctures, the teams did not discuss mistakes openly, exchange information freely, or challenge prevailing views and assumptions. In particular, the lack of open and candid discussion made it difficult for the teams to identify and address the cognitive biases that impaired individual decision making.

First hand accounts indicate that a lack of *team psychological safety* diminished the team’s learning and performance. Team psychological safety has been defined as “the shared belief that the team is safe from interpersonal risk taking.” Several conditions tend to undermine the development of team psychological safety including: perceived status differences within the team, the style of the leader, and a lack of familiarity among group members. According to one member of the Everest expedition, Rob Hall addressed a team meeting at the base camp, and he made the

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following statement: “I will tolerate no dissension up there. My word will be absolute law, beyond appeal.” Ironically, on summit day, Hall should have turned around, but his team did not question his decision to proceed.

Complex systems theory suggests there is no single cause for any of the tragedies. Scholars argue that two system characteristics — **complex interactions** and **tight coupling** — tend to enhance the likelihood of serious errors in decision making. First, the risk of an accident increases if different elements of a system interact in ways that are unexpected and difficult to understand. Second, tight coupling exists if there is very little slack available in the system such that a problem in one area quickly triggers failures in other aspects of the system. In the case of the Everest expedition, Fischer had run into flight delays in Russia, rain in Nepal, pay hike requests by Nepali porters, and a custom’s problem at the border that left inadequate time for planning and high-altitude adjustment routine. All of these logistical problems interacted to create a systems problem. Tight coupling, on the other hand, has four characteristics: time-dependent processes, a fairly rigid sequence of activities, one dominant path to achieving the goal, and very little slack.

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The Decision Litmus Test

Scholars now have considerable evidence showing that a small set of process traits is closely linked with superior decision making.

Inquiry vs. Advocacy: The importance of asking positive, provocative questions rather than taking sides or defending a position. Irving Janis encouraged leaders to remain impartial, especially in the beginning of discussion, so as not to position a group too quickly.

Multiple Alternatives: Avoid settling too quickly on the easy, obvious answer. Use point-counterpoint debates and require groups to generate at least two alternatives.

Assumption Testing: Facts come in two varieties: those that have been carefully tested and those that have been merely asserted or assumed. Utilizing an outside expert can help bring new facts to the table. The group also benefits from taking time to surface the prevailing assumptions.

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Well-Defined Criteria: Prior to making the decision, it's important to define the criteria that will be used to determine which decision is best. Avoid compromising or adjusting criteria originally created for judging a decision as it gets closer to the deadline.

Dissent and Debate: Measure the health of the debate based on the kinds of questions asked and the level of listening. Contrary hypothetical questions (“what if...”) usually trigger healthy debate. It helps to divide into groups and discuss differences or discuss within sub-groups and report out key points. Other groups utilize a “Devil’s Advocate” to question all the group’s ideas.

Perceived Fairness: Fairness is measured by the level of participation that is maintained after a key midpoint or milestone is reached. Watch for people voting with their feet. Hold a “second chance” meeting to offer one last opportunity to choose another course of action in order to increase the perception of fairness.

An Effective Decision Process

➔ Step 1: AGREE TO AGREE

The first step in effective decision making is to “Agree to Agree.” Agreeing to agree suggests that we will make a deliberate decision to work together to reach agreement on a decision. The important question becomes: Do you agree to put forth the effort required to reach agreement on this? Agreeing to Agree includes the following steps:

1. Clarifying the “what,” “who,” and “how” before launching into decision making.
 - a. Is this an important decision? Will it have significant impact?
 - b. Do we have the knowledge and information needed to make a good decision?
 - c. Is this a routine decision, one where the process for making it is clear and understood? If not, what process do we need?
 - d. Is acceptance and support of the decision critical to implementation? If yes, how will that affect our approach?
 - e. If a team member were to make the decision alone, would those involved in carrying it out accept the decision?
 - f. Do the people involved in the decision making share the same goal?
 - g. Are members likely to have conflicts with how the decision will be implemented?

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2. Exploring options for “how” and “who” will make the decision. Here the group may want to apply the AICD model as shown in the table below:

Decision Making Options (AICD)

Type of Decision	Who Decides	Information & Process
Alone-I	Person authorized	Makes decision alone with own information.
Alone-II	Person authorized	Makes decision alone after reviewing information from others.
Input-I	Person authorized	Shares decision-making by asking for one-on-one input before making own decision.
Input-II	Person authorized	Shares decision-making by asking for group input before making own decision.
Consensus-I	Person authorized and one other	Shares decision-making by achieving consensus with one other person.
Consensus-II	Person involved and group assembled	Shares decision-making by achieving consensus with the group.
Delegate-I	Person authorized	Delegates decision to more knowledgeable person and accepts decision.
Delegate-II	Group authorized	Delegates decision to a group and accepts their decision.

3. Gaining agreement on the decision making process. The classic decision making model includes the following steps:
- a. State the decision to be made and who should make it (AICD).
 - b. Assemble the decision makers and designate a facilitator, scribe, timekeeper and process observer.
 - c. State again the decision to be made and explore the context:
 - Identify the goal or objective the decision is designed to achieve
 - Collect relevant information, including the causes for why the decision needs to be made
 - Determine the impact of not deciding
 - Specify the criteria for evaluating the decision
 - d. Identify at least three feasible options. DO NOT allow one decision making option.
 - e. Describe the effects of each option and select the best option utilizing a decision making matrix.
 - f. Plan implementation of the decision.
 - g. Plan communication of the decision to those not present who need to know.

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- h. Plan review of the decision at a future date in which you will apply the criteria.
- i. Review the process used to make the decision.

The above list mentions establishing agreed upon criteria for the decision making. The group should list no more than 5–7 criteria. The criteria can be treated equally, or they can be weighted relative to their importance. Some typical decision criteria include:

- Control (Is this solution within our control?)
- Time (How much time will it take? Is that acceptable?)
- Upper management support
- Ease of implementation (difficulty)
- Cost
- Return on Investment
- Resources required
- Supports the big picture
- Acceptable risk level
- Affects desired groups
- Enhances visibility



➔ Step 2: FOCUSING ON UNDERSTANDING BEFORE AGREEMENT

Dialogue is a core component of all effective decisions. People are able to demonstrate communication *patience*. They work hard to understand one another and to be clearly understood. Listening is a critical skill. They do not blame each other when misunderstandings occur, nor do they insist on their own solutions while allowing others to sit back passively. They are able to handle the “noise” including time pressures, interruptions, biases and attitudes and not let those negatively influence the decision process. Here are some important questions to ask to check for understanding:

- Does everyone understand all the items to be considered?
- Which of these should be clarified before we move on?
- What part of this would you like to know more about?
- Which parts of this are most open to different interpretation and misunderstandings?

This dialoguing process used in effective decision making is called inquiry rather than advocacy. In the advocacy approach, decision making is a contest with winners and losers; the purpose is to persuade and lobby for one’s position. Advocates defend

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their position and downplay weaknesses in it. Minority viewpoints are discouraged or dismissed. In the inquiry approach, decision making is seen as collaborative problem solving. The purpose of the discussion is to test and evaluate different perspectives. People present balanced arguments, accept constructive criticism, and remain open to alternatives. Minority views are cultivated and valued.

During this second step in the decision making process, it is important to identify the support needed for the decision and how gaining the support will be done. Building support is a process of communicating with other individuals to inform them and gain their commitment. It is a two-way process: the team influences and is influenced by others. Utilize these steps when attempting to build support for the decision:

- a. Brainstorm a list of key people whose support and/or involvement is needed.
- b. Identify what you need from each of them.
- c. Assign responsibilities for communicating with each person.
- d. Communicate to gain input and commitment.
- e. Evaluate results and follow up as needed.

➔ Step 3: FOCUS ON AGREEMENT IN GENERAL BEFORE AGREEMENT IN SPECIFIC

Often in decision making discussions, people quickly begin to “drill down” into specifics and then argue whether the specifics are correct. In order to prevent this type of discussion, focus on developing **agreement in general**. Here are some questions to aid that process:



- As we look at these alternatives, which strike you as being a good idea in general?
- Setting aside the specifics of this idea, do you agree with the general approach?
- What about this idea do you like?
- If we could eliminate the problems you pointed out, would you agree on the general idea?

This process keeps the group focused on what it can agree on, not on its differences. Once general agreement has been achieved, the group can work on the specifics. In order to find points of **agreement on the specifics**:

- Clearly state the various positions being taken.
- Require each member to “walk in the shoes” of the other position and articulate the needs, wants and desires of each position.

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- Look for points of common ground, particularly in areas of communication, process or result.
- Press the group to look for alternatives acceptable to each person. Consider short-term focus, broader/narrower scope, fewer/more people, combining/separating.
- Watch for members changing their minds simply to avoid conflict.
- Avoid conflict-reducing techniques such as majority vote, averaging, bargaining, coin flipping, and the like.
- Treat differences of opinion as indicative of an incomplete sharing of relevant information and press for additional sharing, either about task or emotional data.
- View differences of opinion as both natural and helpful rather than as a hindrance to decision making.
- View initial agreement as suspect. Explore the reasons underlying the apparent quick agreement.
- Assess the adverse consequences of a tentative decision.
- Control the effects of the final decision by preventing adverse consequences and by follow-up.

It's important for us to see that decision making is often a series of little decisions that lead up to a final decision, or what was earlier labeled a complex system of decisions. Any of the little decisions along the way can derail the process. In teams, we encourage the creation of a decision making protocol to guide the entire process.

When we piece the decision making process together, a chain of activities emerges:



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In addition to the decision process, a series of corresponding personal behaviors are needed from decision makers:

1. When you are recommending a course of action, take responsibility for making a proposal and offering alternatives.
2. Notice when your conclusions are based on your assumptions and inferences, and recognize that they may not be based on facts.
3. Assume that your reasoning process can have gaps or errors that you do not see.
4. Use examples to illustrate the data you selected that led to your conclusions.
5. Paraphrase out loud the meanings you hear in what others say, so that you can check if you are understood correctly.
6. Explain steps in your thinking that take you from the data you selected and the meanings you paraphrased, to the conclusions you reached.
7. Ask others if they have other ways of interpreting the data or if they see gaps in your thinking.
8. Assume that others may reach different conclusions because they have their own ways of interpreting information with a logic that makes sense to them.
9. Ask others to explain the steps in their thinking.

In a recent study of 350 global companies, only 15% said they have an organization that outperforms competitors. What set those top performers apart was the quality, speed and execution of their decision making. When debriefing on the quality of your most recent decisions, score yourself or your group on the following:

- Were the decisions right?
- Were they made with appropriate speed?
- Were they executed well?
- Were the right people involved in the right way?
- Was it clear for each decision?
 - who could recommend solutions?
 - who could provide input?
 - who would have the final say?
 - who would be responsible for follow through?
- Were the decision roles, process and timeframe respected?
- Were the decisions based on appropriate facts?
- Were the decision makers at the appropriate level?
- Do the support systems and measures within the organization encourage the people involved to make the right decisions?

Every success or mistake, every opportunity seized or missed, is the result of a decision that someone made or failed to make.

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When decision making is effective, managers spend less time in meetings wondering why they are there and more time building their action plans. They actively utilize decision questions and tools; they minimize the effects of groupthink, sunk costs and complex system constraints. They listen to and explore best solutions in an atmosphere of inquiry. They take the time to evaluate their decisions and determine how the process can be improved for next time. By taking some very practical steps, decision makers can become more effective, beginning with their next decision.

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