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## **THE SCENARIO APPROACH: GAINING ACCEPTANCE OF THE FORECAST**

In 1872, there was a German invasion of Britain. The British armies and Fleet, it will be remembered, were at that time scattered across the world – putting down mutiny in India, protecting Canada from the United States, and guarding Ireland against Emperor Napoleon III. As a result, the home defenses were minimal on that morning in March when the German boats set out across the North Sea. What Royal Navy was left in British waters soon succumbed to the German mines and torpedoes – weapons that had been developed in secrecy. British land forces suffered not only from lack of numbers, but also from inadequate training and discipline, combined with an outdated philosophy of warfare. The great stand at the Battle of Dorking failed: the Germans conquered the British.

This story is completely false. It was written by G. T. Chesney, a historian of the future and was published in *Blackwood's Magazine* in 1871. At that time, it was a plausible forecast. The publication of “The Battle of Dorking” created a political sensation. Prime Minister Gladstone attacked both the plausibility of the forecast and the wisdom of publishing such an alarmist view. A wide-ranging debate followed, and some changes took place as a result. (The story has been passed along by Encel, Marstrand, and Page, 1975, pp. 68-64.)

The earlier discussion in this chapter concerned the introduction of new methods into an organization; however, the Battle of Dorking raises a new issue. How does one persuade people to use the forecasts? Three issues are described here: (1) prior commitment, (2) scenarios, and (3) presentation strategies.

### **Prior Commitment**

Prior commitment should be used to gain acceptance of forecasts. This advice is simple. The clients are asked (1) what forecasts they expect? and (2) what decisions will be made given various possible forecasts? If the decisions do not vary when the forecasts vary, then there is no need to spend the money on forecasting.

Formal questionnaires can be administered to the clients, asking them to record their forecasts and confidence intervals. Also, the questionnaire could sketch out possible forecasts and ask the clients what decisions they would make. As an alternative to questionnaires, the process might be conducted in structured meetings.

Prior commitment to the forecasting process is also important. If the stakeholders feel that the process is rational and fair, then they are more likely to accept the forecasts.

Forecasts are most likely to be useful when they are surprising. Yet without prior commitment, the forecast is unlikely to be regarded as different or surprising, as shown in the “hindsight studies” (Fischhoff, 1975; Fischhoff and Beyth, 1975; Slovic and Fischhoff, 1979; Arkes, 1981). People rationalize that the forecast provides nothing new and so no action is needed. The rationalization may be that they knew-it-all-along [Wood, 1978] or it may be that they do not believe the forecast.

## Scenarios

Forecasts with unpleasant consequences often create problems. Rather than changing the plans, attempts are often made to change the forecasts (as was done by Gladstone in the Battle of Dorking). It is like changing the reading on your thermometer in an attempt to improve the weather. Unfortunately, this type of irrational behavior occurs often. Examples include the U.S. government’s failure to use forecasts that indicated bombing North Vietnam would be ineffective; the Boeing Aerospace Company’s refusal to accept forecasts that the U.S. public would tire of the space program; and the Ford Motor Company’s ignoring unfavorable forecasts of the economy at the time it introduced the Edsel.

Unpleasant forecasts are ignored even though they have potential usefulness. For example, Baker (1979) found that valid hurricane warnings are frequently ignored. Griffith and Wellman (1979) found that hospitals purchased forecasts and then ignored those with pessimistic outcomes.

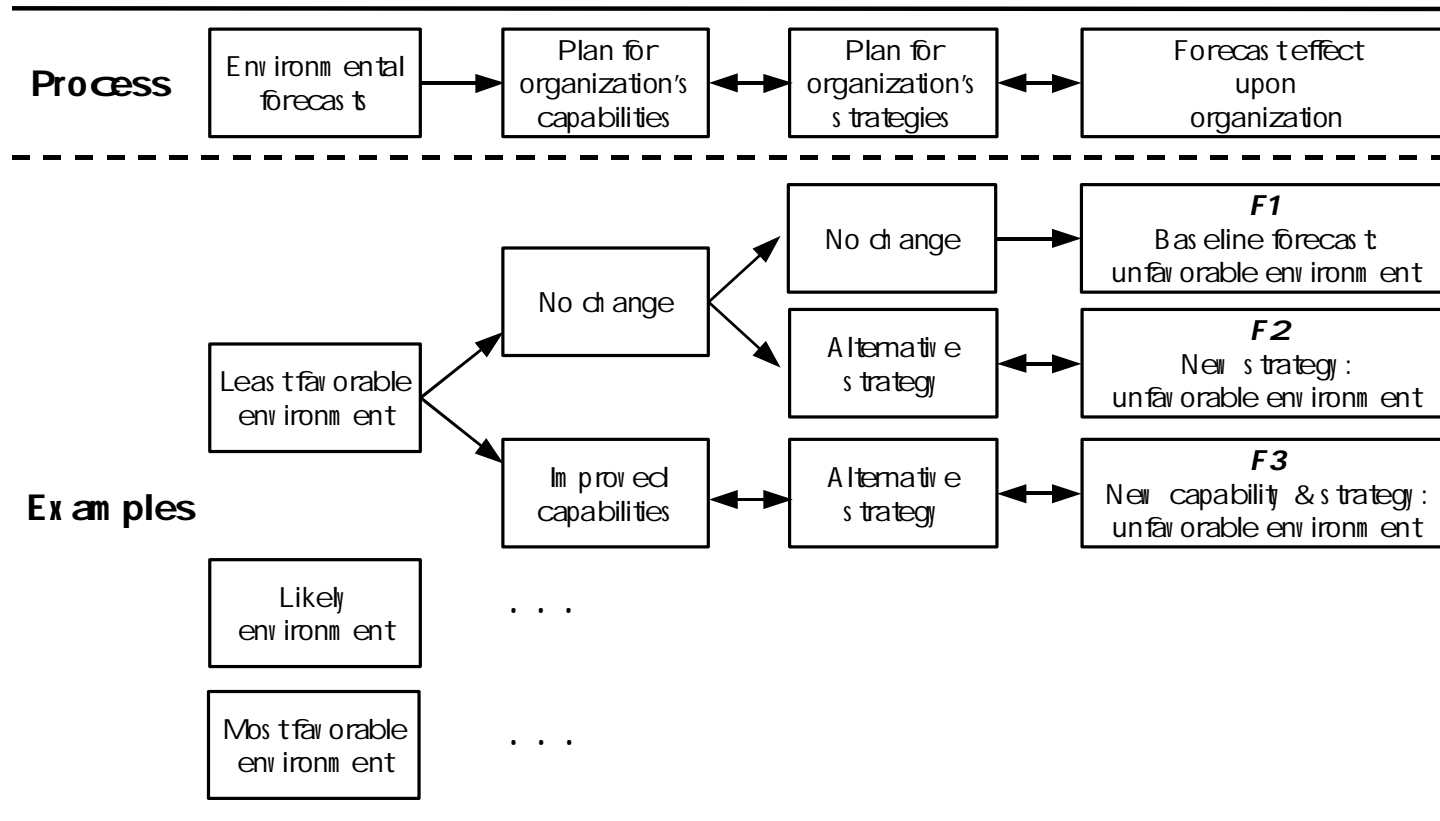
The scenario technique is useful in helping people to confront unpleasant forecasts. A scenario is a story about the future. It can integrate a number of different forecasts about a situation and present them in an interesting and comprehensible manner. The Battle of Dorking is an example of a scenario.

The scenario-writing process described here calls for an initial suspension of evaluation so that the group members may discuss the unthinkable. It requires a well-defined structure, acceptance by the group, and a group leader. Scenarios may be used not only to examine what will happen, but also to consider what might be done by the organization. The idea may be expressed this way (adapted from George Bernard Shaw):

Some see the world as it is and ask, “Why?” Some see the world as it could be and ask, “Why not?”

My structure for scenario writing is presented in Exhibit 1. This was used extensively by one organization, and it led to worthwhile changes. The basic building blocks for the scenario process are presented above the dashed line. Examples are presented below the dashed line. The example was expanded for the least favorable environmental forecast, but a similar process could be used for the most likely environment and for the most favorable environment.

**Exhibit 1: Building Blocks for Scenario Writing**



Considering the forecast of the least favorable environment, the analyst can prepare descriptions of the organization's expected capabilities and expected strategies. From this, a forecast, *F1*, can be prepared; this is called a "baseline projection" or a "surprise-free projection." Members of the scenario-writing group, which include the major stakeholders, can then brainstorm alternative strategies under the assumption that the organization's capabilities are fixed. They should be encouraged to freewheel and to develop wild and provocative ideas. These changes are then translated by the analyst or by a forecasting model into a revised forecast, *F2*. The scenario group also brainstorms to consider what changes might be made in the capabilities of the organization. The result can be used to develop new strategies, leading to forecast *F3*.

The arrows running from right to left in Exhibit 1 suggest another approach: the scenario group can imagine a forecast (e.g., *F3*) that its members consider to be ideal. They then work backward to brainstorm changes in strategies that could yield such a forecast, and then to brainstorm the changes in capabilities that would be required to carry out these strategies. This use of the scenario process helps the group to forget about constraints in creating the type of future it wants.

The scenario process should help the members to use information that is contrary to their current views of the world. This procedure gives them control over the change process and allows them to discuss the unthinkable in a context that is socially approved by the group.

The difference between the scenario process suggested here and that used in the Battle of Dorking is that the latter stressed confrontation. In my opinion, the participative approach is more effective and less expensive.

The original edition of *Long-Range Forecasting* stated that little research had been done on scenarios. Things have changed since then. Some relevant research has been done, and the scenario has been shown to be effective as a technique for gaining acceptance. For example, the research implies that the impact of the scenario can be heightened by the following techniques:

1. Use *concrete examples* (Read, 1983; Anderson, 1983)
2. Make the description *vivid* (Hamill, Wilson and Nisbett, 1980)
3. Include events that will seem *representative* of the situation, even if they are irrelevant (Tversky and Kahneman, 1982)
4. Include events that will make it easy for the decision makers to recall *available supporting evidence* (Tversky and Kahneman, 1973)
5. *Link the events by showing causality* in a plausible manner (Kahneman and Tversky, 1979; Tversky and Kahneman, 1983)
6. Include *commensurate measures* across alternative scenarios, even if these measures are irrelevant (Slovic and McPhillamy, 1974)

7. Ask the decision makers to *project themselves* into the situation (Anderson, 1983)
8. Ask the decision makers to *predict how they would act* in the scenarios (Sherman, 1980)

These techniques can make a scenario more plausible, increasing its chances of being taken seriously and perhaps leading the organization to develop contingency plans.

Note the dangers of the scenario, however. Scenarios could seriously distort judgmental forecasts (Gregory, Cialdini, and Carpenter, 1982). Furthermore, the experiment by Anderson (1983) suggests that the scenario will unduly increase perceived probabilities even in cases where the forecaster is provided with information that the situation is unlikely. It would be easy to “lie with scenarios” – easier, perhaps, than lying with statistics:

**Gregory, Cialdini, and Carpenter (1982)** conducted four experiments on scenarios. In this context, scenarios meant short stories, written by the experimenters, where the subjects were asked to imagine that the events were actually happening to them. It was hypothesized that subsequent predictions of the likelihood of the event will be increased because knowledge of the event is more easily *available*. Here is a brief overview of the results of the four experiments where the scenario groups imagined the event happening to them, but the control groups did not:

Ex perim ents	Su bjects	Predicted Likelihood	
		Control %	Scenario %
1. "How likely is it that you might someday be arrested for armed robbery regardless of whether you are innocent or guilty?"	48 college psychology students	9	18
2. "What is the perceived probability that you will die in a vacation trip?"	100 high school psychology students	23	38
3. "How likely is it that you might be arrested for shoplifting or petty theft?"	39 college psychology students	2	16
4. Percent of subjects who actually subscribed to cable TV within six weeks	79 residents of the middle class neighborhood	20	47

Alternative explanations were examined in the four studies, but the “availability” hypothesis held up well. In my opinion, however, experiment four expands the notion of availability to include saliency. This was the only experiment in which the information was the same for both experimental and control groups (thus it was equally available), The experimental group, however, imagined themselves to be experiencing the benefits of cable TV. This increased saliency had a substantial effect. The practical implications are important. By putting information in the form of a plausible story, you can increase a person’s perceived probability that the event will occur. The likelihood can be increased even more if the person will imagine that the event is actually happening. The latter implication is relevant not only for planning but for practical marketing problems, as shown by the cable **TV** study. In that study, the subscription rates were about double those that had been experienced in the area by the cable TV company.

In **Anderson (1983)**, subjects were presented with evidence that a fire fighter trainee’s preference for risk is predictive of his subsequent success. Half were told high risk taking leads to success and the other half were told it leads to failure. This “evidence” was presented in two ways, either as two concrete examples, or as abstract statistical data on 20 trainees. The subjects were then told that the evidence was bogus and were asked what they thought to be the true relationship. Interestingly, the bogus information had a strong effect both when asked immediately and when asked a week later. If told that risk aids success, then told to ignore the statement, the subject continued to believe it, and vice versa, The concrete examples (sample of 2 cases) showed a much stronger impact than the statistical data (sample of 20 cases), and this effect was just as strong one week later. The study has implications for the presentation of forecasts. Concrete examples have a stronger impact than do statistical data, apparently because it is easier for readers to construct causal explanations to support the prediction. Perhaps J. B. Watson knew this in the early 1900s. He built his fame as a psychologist with a study on conditioning that used one subject, a baby known as Little Albert. Watson’s fame continued to grow over the years despite evidence that there was no Little Albert study [Samelson, 1980]. An interesting extension of Anderson’s study would be to see if the effect holds if the subjects were told in advance (as we do in scenarios) that the predictions are hypothetical.

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