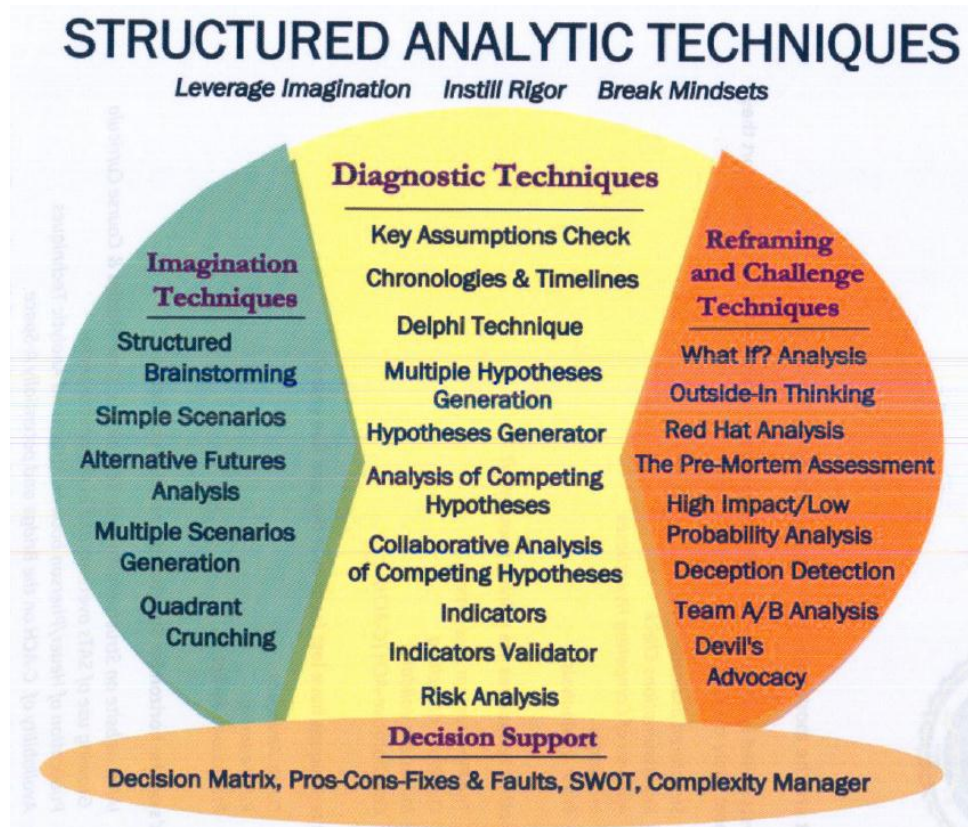


## Introduction

Successful hazard identification requires creative thinking. The Tradecraft Primer's structured analytic techniques offer strategies for groups to creatively evaluate difficult questions.



Since there are many sources of potential hazards, including natural systems (“acts of god”) and human systems (“man made”), this is important for risk analysis. Human system hazards may either be unintentional (human error), or intentional (enemy actor). Unintentional hazards are numerous and often difficult to anticipate, while intentional acts may be hidden by deception.

Analysts must make sense from volumes of data, including data that is ambiguous, contradictory, and misleading. Analysts must overcome common thinking limitations from cognitive and perceptual bias, and inappropriate use of mental models. It is not uncommon for analysts to only “see what was expected,” and resist change even when provided new information.

Systematic approaches are needed to carefully consider a wide range of alternatives. In particular, it is important to not overlook low probability, high impact hazards.

## Techniques

The twelve techniques described in the Tradecraft Primer are grouped by primary function, although many actually overlap. Further, techniques may be combined as needed. The three primary functions are Diagnostic, Contrarian (“reframing”), and Imaginative Thinking.

- **Diagnostic Techniques:** Confirm and challenge current beliefs (i.e., make analytic arguments, assumptions, or intelligence gaps more transparent)
- **Contrarian “Reframing” Techniques:** Challenge current thinking, such as appropriateness of the problem statement
- **Imaginative Thinking Techniques:** Develop creative and non-obvious insights (i.e., different perspectives and/or alternative outcomes)

Note that the use of these techniques does not guarantee successful analysis! The analyst is ultimately responsible for improving sophistication and credibility. Experienced analysts have to balance not repeating mistakes, or ignoring new hazards.

## Examples

Some techniques are fairly simple to understand and employ—such as **Brainstorming** and **Devil’s Advocacy**.

### Brainstorming (Imaginative Thinking Technique, p. 27)

Brainstorming is a structured two-step “divergent and convergent” process to stimulate new thinking in a wide variety of circumstances.

- **Divergent Phase:** No more than a dozen members respond to a guiding question for about one hour in a freeform fashion. Ideally all members can directly post his or her idea without constraints of a single note taker. It is important that the ideas are not evaluated or criticized during this stage. The goal is to generate as many ideas, including crazy ones, as possible.
- **Convergent Phase:** In this phase, members first group, and then rank, the ideas developed from the divergent phase. Members vote to identify priorities.

### Devil’s Advocacy (Contrarian Technique, p. 17)

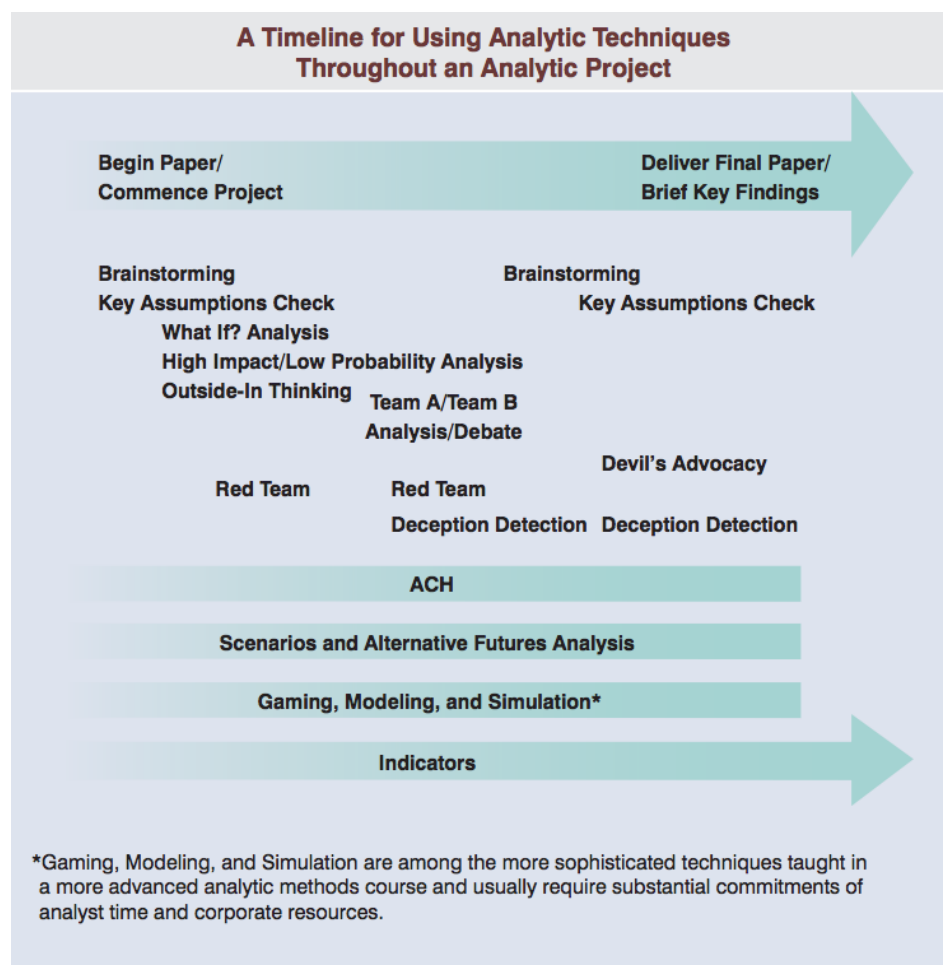
The April 1961 *Bay of Pigs Invasion* was an unsuccessful CIA mission of Cuban exiles to invade southern Cuba. “**Groupthink**” was cited as a problem that led to a “failure to

realistically assess risks.” Groupthink refers to team member desire for harmony, even if that means ignoring critical alternative viewpoints.

This technique requires one or more team members to act as “devil’s advocate.” The advocate is responsible to provide alternative and contradicting viewpoints of stated and unstated assumptions. Defending the challenges requires the group to be more critical and thorough in its analysis.

## Technique Timing

As shown in the image below, various techniques can provide value at different times during an analysis project.



Creative thinking (e.g., brainstorming) is useful at the beginning and the end of the project. Contrarian techniques are useful at the beginning to analyze the problem statement and related assumptions, as well as at the end to scrutinize key findings.

## Questions

1. Who decides which structured analytic technique should be used?
2. Can only one structured analytic technique be used on a project?
3. Which technique is useful to make sure the original analysis problem, as stated, is not wrong or misleading?
4. How can experience both help and hinder an analyst?
5. Can an analyst ever have too much information?
6. How could the same technique provide value at different times during an analysis project?