

# Student Activities, Exercises and Discussion Topics

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## General Note

In our experience, students get a lot out of this material if they apply the concepts of the book to their own big life decisions (e.g., decisions concerning their careers or education, lifestyle, relationships, or major purchases). In our own classes, we encourage students to work on their own decisions whenever possible, while emphasizing that they only share with their classmates whatever they feel comfortable sharing. In discussions or group exercises, students may always choose to simulate somebody else's decision and apply the concepts in a role-play activity, rather than discuss their personal decision.

## Chapter 1: Courage, Creativity and Balance

### 1. Characteristics of Difficult Decisions

Break-out activity: What kinds of decisions have the students experienced as particularly difficult in their lives? Have them write down and present what characteristics make a decision difficult (e.g.: high risks? Moral dilemmas? Conflicts of interest? etc.).

Likely, they will come up with characteristics that can be categorized into the dimensions of *Importance* and *Uncertainty*.

### 2. What Makes a Good or Bad Decision?

Have students pair up and discuss specific examples of making good decisions and bad decisions. Aside from compulsion and/or drugs, what characterized bad decisions? What characterized good decisions?

### 3. Observing Warning Signs

Have students discuss irrational decisions they have been able to observe in themselves and others. What warning signs have they been able to observe for:

- a. Lack of courage to be rational?
- b. Lack of creativity?
- c. Lack of balanced judgment?

### 4. Correctives

Based on the previous discussion about warning signs and the book's suggestions for correctives, have students come up with possible correctives for each of the warning signs they identified.

## 5. Information Overload (Barry Schwartz TED talk)

Show [Barry Schwartz's TED video on the paradox of choice](#). Discuss how students are experiencing information overload in their own lives.

Discuss to what extent decision techniques and skills may help dealing with information overload.

## 6. Cognitive conflict

Group discussion: what types of decision problems in other's lives...

- result in boredom and consequential inaction? For example:
  - Dishes, bathroom, household activities
  - Laundry
  - Choosing courses
  - Homework
- result in panic/paralysis and consequential inaction? For example:
  - Taxes FAFSA
  - Emergency Flight
  - Changing jobs
  - Exams
  - Group Decisions w/ no formal responsibility
  - Retirement savings

Why? Discuss for each item what might cause the inaction:

- Too much or too little importance?
- Too much or too little uncertainty?

## 7. Example: Retirement Planning as a Not-Warm-Enough Decision?

- Discuss why people have so much trouble saving enough for retirement. Isn't there plenty of uncertainty and importance?
  - Discuss how the distance in time makes it difficult for us to feel the importance. (A good video to illustrate this is [Daniel Goldstein's TED talk about the battle between our present and future selves](#)).
  - Public Policy: what could be done to "turn up the heat" on retirement planning decisions?
- Show some ad videos, for example [Dan Gilbert's appearance in Prudential Ads](#): how do these ads attempt to increase the "heat" in the decision to start saving for retirement?

# Chapter 2: Problem Structuring

## 1. Video Warm-up Example: Money Ball

Show a [brief sequence of the movie Money Ball](#) that is used as an example in the book.

Discuss to the coach's redefinition of the problem statement. What would be other ways to redefine the problem and ask an open-ended question? How does this change the problem space (and the space where we can find solutions)?

## 2. Revise the problem statement

Example decisions: How can you turn the following into open-ended statements?

1. Should I get married or stay single?
  - a. "What type of relationship is best for my health, sense of security, and feelings of connection?"
2. Should I move out of my parent's house or not?
  - a. "What type of living arrangement gives me the most independence and financial stability?"
3. Should I go to Vegas or stay home for my spring break?
  - a. "What can I do over spring break to have a lot of fun, meet new people, and save money?"

## 3. Discussion: Listing Pros and Cons as a Decision Aiding Technique?

Discuss the common use of pros and cons lists. They are often mentioned as an everyday technique by people facing difficult decisions: "Just write down the pros and cons".

### What are the problems with this technique?

- The main answer in the context of this chapter: pros and cons lists only let us think about two options – or worse: only one option that we're contrasting with the status quo.
- Furthermore: pros and cons lists don't allow for a systematic comparison (This can be used as a teaser. Decision tables, which we will cover later, do a much better job at this, allowing for a systematic comparison of an unlimited number of options.)

# Chapter 3: Values and Decision-making

## 1. Class Discussion and Intro to Values Exploration

Ask the class some introductory questions, such as:

- Who are the people you admire the most, and why?
- If you could do anything in your life, what would it be?
- What is your big dream?
- What have been the best and worst events of your life?

The answers to those questions say something about our values. Explore this together with the class: use examples from the students to help them uncover underlying values.

These sorts of questions can be nice icebreakers at the beginning of class. After discussing a few initial examples with the entire class to demonstrate the process, this exercise can be continued in break-out groups or pairs.

## 2. Exploration of Values

Have students first individually work through the questions for “Initial Collection of Values” in the book for one of their own decisions, then have them work through parts of all of the “Value Checklist” sections. Have each student create a list of values for themselves. If you’re planning on having them construct a value tree next, have them write those initial values on sticky notes already (one sticky-note per value). Make clear that redundancy is ok at this stage. The more values the merrier.

*Note: if they don’t have a current decision they want to work on, these questions also apply to life in general, so they are a good place to start for everybody.*

After the initial silent work that each student does on their own, have them discuss their values in pairs or small groups:

- What did the different questions bring up?
- Consider whether values that the other students uncovered might also be values for you to include in your list.

## 3. Instrumental or Fundamental Values and WITI

Individual work or pair discussion: Which of these values are fundamental for you, which are instrumental?

A comfortable life	Family security	Mature love
A sense of accomplishment	Forgiving	National security
A world at peace	Freedom	Obedient
A world of beauty	Happiness	Pleasure
Ambitious	Helpful	Polite
An exciting life	Honest	Responsible
Broadminded	Imaginative	Salvation
Capable	Independent	Self-controlled
Cheerful	Inner harmony	Self-respect
Clean	Intellectual	Social recognition
Courageous	Logical	True friendship
Equality	Loving	Wisdom

Ask: “Why is this important?” for each of the items.

- If the answer is “it just is”, it’s a fundamental value.
- If there is another answer (e.g., “it’s important in order to...”; “it’s important because otherwise ...”), what is the fundamental value instead?
  - Once you’re found a more fundamental value, ask “why is this important” again, until the final answer is “it just is”.

#### 4. Value Tree for a Personal Decision

Have each students construct a value tree for their own decisions with sticky notes.

#### 5. Role Play: Value Tree for a Couple's Decision: Moving to Another City

Have students work in pairs to simulate a typical couple (or family) decision: whether to move to a different city, and if so, which one.

Give students specific roles and criteria to work with. As an example: the husband has seasonal affective disorder, so they have been considering sunny climates. He is a software developer. The wife is a trained chef and is considering opening her own coffee shop, food cart, or catering business.

For uneven numbers of students: consider an additional family role (teenage daughter) or the role of a counselor/ decision analyst who helps them make a decision.

#### 6. Role Play: Value Tree for a Work Team

Role play: A start-up team creates a value tree as a part of their first annual strategic planning retreat. Ensure the group uses the time to clarify the organization's core values.

#### 7. Quantification of Values

Give students examples of values, such as:

- Independence at work
- Leadership
- Work-life balance
- Challenge

Ask students to come up with different possible units of measure to describe each value in quantitative terms.

#### 8. Role Plays: Determining Value Sets

Have students work in pairs or small groups to simulate typical personal decision, such as:

- Buying a house
- Buying a car
- Choosing a living situation (buying vs renting, roommates)
- Choosing a grad school program or non-academic career
- Getting a dog for a family
- Planning a vacation

Have them create a well-structured value set for any of those typical decisions, based on what they would care about in that situation.

*Variation:* have them start out by creating a value tree first, then distilling a well-structured set of values based on their tree.

#### 9. Determining a Value Set for a Personal Decision

Have each student determine a final value set for their own decision by working through the criteria in the book.

We recommend guiding the class down the list of criteria one by one: for each one, illustrate the criterion first by working with examples (ideally from students who are willing to share), then give students time to revise their value set individually while giving clarifications and offering help. Then move on to the next criterion.

## 10. Revising Poorly Structured Value Sets

Give students examples of poorly structured value sets, for example involving redundancy, dependency, irrelevant values, etc. Have the students discuss and revise them. This can be done in small groups or individually, then discussed with the whole group.

# Chapter 4: Generating Alternatives

## 1. Warm up

As a quick 5 minute warm up, have students come up with multiple uses for ordinary objects, e.g., crayons, paper, cat hair.

## 2. General Creativity Techniques

Show [the video of John Cleese's lecture on creativity](#). Discuss which of these techniques the students have already experienced, and whether and how they have found them helpful.

## 3. Homework or Field Assignment: Testing Stimulus Variation Techniques.

Give students a specific problem to work on for this exercise, or let them work on their own decision. Send them out on a field trip or give them the homework to test some creativity techniques that the book describes about their problem, such as:

- *Mood*
- *Observation*
- *Different kinds of creative conversation*
- *Taking breaks*
- *Play*

Discuss how they applied the techniques.

- What insights did they gain from this process?
- Which technique were favorites and why?

## 4. Reversals

Examples: How can the doctor cure the patient? Vs. How can the patient cure the doctor?  
How can the student afford to travel? Vs. How can travel afford the student?  
How can I find a job Vs. How can a job find me?

Discuss: how did thinking backward provide different information than thinking forward?

## 5. Force-Fit Game

A playful illustration of the creative power of stimulus variation and force-fit:

(source: [http://www.mycoted.com/Force-Fit\\_Game](http://www.mycoted.com/Force-Fit_Game))

1. Divide the students in two groups. State a creative task or problem, such as: “Organize a memorable party”. This is followed by the basic round, which consists of steps 2 – 4.
2. Group A proposes an idea as distant as possible to the problem. Record the idea on a flipchart.
3. Group B spends 2 minutes developing a realistic solution founded on this remote idea. Record the solution on the flip-chart.
4. If Group B’s solution is plausible they gain a point in this round, if not the Group A obtains the point. (This appraisal should be kept light-hearted to avoid creating an atmosphere that is too competitive).
5. Although the groups can alternate roles after every round (steps 2-4), it is quicker if they swap every say, 3 rounds, this way Group A can contemplate their next remote idea while B are solving their previous one.
6. After a predefined period of time has lapsed (say 30 minutes), or a pre-agreed number of rounds, the game concludes and whichever Group has the most points wins.

## 6. Force-fit for a Personal Decision

Ask for a “show-and-tell” volunteer: Is one of the students willing to share a current problem or dilemma that they have in their own life, and that they would like to tackle with a creativity technique? Apply Barry’s “worst creative thinking technique” to this problem. Discuss the process – did it bring up any new or useful ideas?

## 7. Pair Exercise: Value Focused Search for Additional Alternatives

Have each student pick one of his or her most important values. They should pick one that is specific enough, not too broad. (If they did the value tree exercise, pick a value from the lower branches.) Have then rephrase that value as:

***“In what ways could I...”***

***or***

***“In what ways could we...”***

Together with another student, have them brainstorm about options that would fulfill this one value, regardless of all other values.

Make a (long!) list of all ideas, regardless of how crazy.

Ask them to switch roles after 5-10 minutes to work on the other student’s values.

As a next step, have them add a second value and search for options that would fulfill both values, then 3 values, etc.

Note: The steps after the first, where they think about more than one value at a time, can be used as a buffer. The exercise can take more or less time, depending on how many values you have them include eventually.

After the pair exercise, give each student a few minutes individually to go over their list of new ideas and think about which part of the ideas they would like to follow up on.

## 8. Group Exercise: Value Focused Search for Additional Alternatives

This exercise is similar to the first part of the pair exercise above, but works in groups of 4-6 students. In larger class sizes, make sure to have a bell or loud enough voice to give signals for each change in roles.

Have the students take turns:

- One minute for one person to present their most important value, rephrased as:  
***“In what ways could I....”***
- Three to five minutes for the others to come up with ideas, write each idea down.  
Give ideas in the format:  
***“In what ways could you...”***  
Somebody else needs to be the note-taker, NOT the person who is being gifted with ideas (no editing/censuring ideas at this stage!).
- Switch roles

After the group exercise, give the students a few minutes to go over the list of ideas they received and think about which part of the ideas they would like to follow up on. Encourage them to implement one of the ideas during the coming week.

## 9. Criteria for a Well-Structured Set of Alternatives

Give students a set of alternatives to review: does it fulfill the criteria for a well-structured set? If not, what would be examples of better sets?

Example sets that don't fulfill all criteria:

### Set 1 (only two alternatives):

**Alternative A:** Move to Paris

**Alternative B:** Stay here

### Set 2 (alternatives are not mutually exclusive courses of action):

**Alternative A:** Take a part time (10h per week) job

**Alternative B:** Do volunteer work

**Alternative C:** Take a full-time job

**Alternative D:** Start a part-time business

## 10. Personal Decision: Finalize Your Well-Structured Alternative Set

If students have been working on their own decisions, have them apply the criteria from the book to revise their own list of alternatives.

Have them discuss their final list with one other student or in small groups.

- Does everybody's set meet all the criteria?
- Did applying the criteria help narrow down the choices?



## Chapter 5: The Decision Ladder

### 1. Discussion: Which Ladder Rung is Appropriate?

Have students think about different types of decisions (examples of e.g., major life choices, career decisions, public policy decisions, team decisions, conflict resolution, business strategies, government processes, everyday decisions).

Which rung of the decision ladder would be appropriate for difference types of decisions?

### 2. Discussion: Own Experience with Group Decisions

Have the students experienced group decisions like the one described on page 154? Would a simple list of options have enabled a better process?

### 3. Personal Decision: Basic Structure of a Decision Table

If students have been working on their own decisions, have them draw a basic (empty) decision table with their own values as column headers and options as rows. Make sure they all have a good understanding of this before moving on to the Fact Table as the next exercise.

### 4. Personal Decision: Fact Table

After the previous activity, ask students to fill their table with facts, to the extent that they know them. This will usually cause some necessary rethinking of the values in order to make them quantifiable and meaningful enough for this purpose.

If the facts are unknown for some of the cells, can this information be gathered somehow? (This can be homework.)

### 5. Detecting dominance with Plus/Minus Tables

Have students quiz each other: one student draws a quick (hand-drawn) abstract plus-minus tables, in the format of the example below, but with their own arbitrary assignments of plusses and minuses. The other student finds any dominance relationships in the table. They should not only look for alternatives that may dominate or be dominated by the entire table, but also for dominance relationships between a subset of alternatives, by comparing alternatives pairwise (For example, Alternative 3 dominates Alternative 4 in the table below, even though there is no overall dominating or dominated alternative).

Have them switch roles after each table and do several rounds of this.

	Value A	Value B	Value C	Value D	Value E
Alternative 1	+	+	-	+	+
Alternative 2	-	+	+	-	-
Alternative 3	-	+	0	+	0
Alternative 4	-	+	0	+	-

## 6. Detecting Irrelevant Values with Plus/Minus Tables

Same as the previous exercise, but ask students to detect irrelevant values (Value B in the above example).

*Note:* Irrelevant values are much easier to detect than dominance relationships. This exercise could therefore simply be added as a quick follow-up exercise after the previous one, with both students looking over all their tables together and marking irrelevant values. It is an easy exercise but gives the instructor a good idea of whether all the students understood the concept of irrelevance in this context.

## 7. Pair Exercise with a Personal Decision: Using a Plus/Minus Table to Search for Win-Win Alternatives

Each student first draws a plus minus table of their own personal decision and explains the situation to another student. Together, they think about whether it would be possible to create a new alternative that might dominate all others.

Discuss the process with the whole class. How often was it possible to create better alternatives, if not dominating ones?

## 8. Personal Decision: Determining Weights with Pairwise Comparison of Values

Have students write the values of their personal decision on sticky notes and, by way of pairwise comparisons, put them into a rank order of most to least important. It's ok to have ties in that rank order. Then ask them to decide on the exact weights, which should add up to 100%.

*Note:* Establishing a rank order is easier than assigning exact percentages, so it can be a helpful first step.

Also, this exercise overall is easier than working with extremes tables. Working with Extremes Tables could be offered as an alternative exercise for those who feel comfortable with the material and are motivated to practice this step.

## 9. Personal Decision: Weighted Table in Spreadsheets

Have students create a weighted table of their own decision in a spreadsheet. Usually some students need help with building formula (multiplication and addition) in excel or similar software, while others are comfortable with it. Have students work in pairs to help each other with that exercise.

## 10. Pair Exercise: Discuss the Weighted Table

Following the previous activity, have students discuss their decision table in pairs.

- How did they determine the weights?
- Does everything look ok in the table? (Have them double-check the formula for each other.)
- Which option is the winner?
- Is there a close second?
- Does the outcome match their intuition? If not, why not? Are there any values that were overlooked?

## 11. Pair Exercise: Barry's Speed Shopping

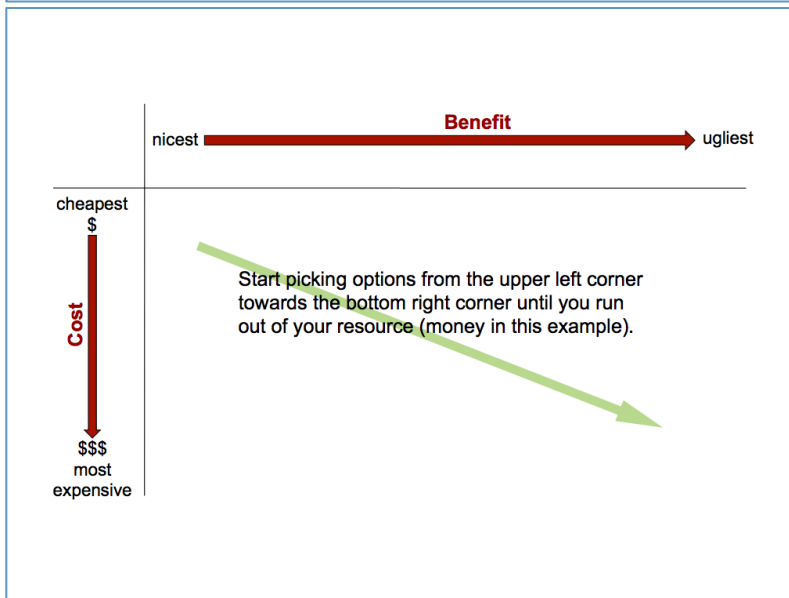
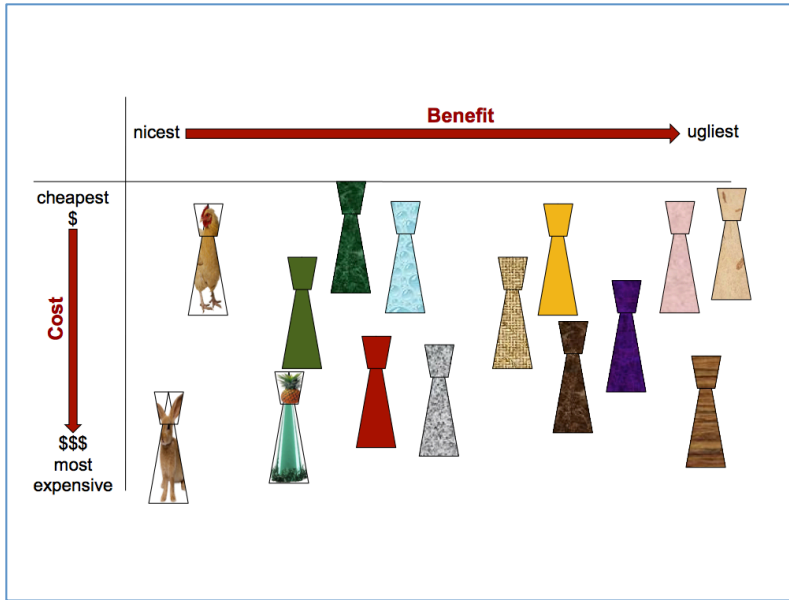
Using the procedure of Barry's Speed-Shopping for Ties, have students pick the best items out of an array of at least 10 small "shopping" items with price tags, such as

- pens, paperclips, or whatever they have lying around
- small trinkets that you bring in
- as a substitute: sticky notes as placeholders, labeled with a product name

One student (the "shop-keeper") puts together the array of objects and assigns an arbitrary price to each item. The other student ("shopper") has a budget that should be higher than the most expensive item. The shopper arranges the items according to Barry's Speed-Shopping strategy, taking into account the price ("cost") and their own personal preference of each item ("benefit"). Based on that layout, the shopper picks the items with the best cost-benefit. The shoppers can pick as many items as their budget allows.

Switch roles.

*Variation:* Instead of working with a budget, just have them pick the top three items with the best cost-benefit ratio.



## Chapter 6: Uncertainty

### 1. Discussion: Regret

Ask about students' own experience with regret in decisions.

- Have they experienced irrational forms of regret for previous decisions?
- Have they made truly bad decisions where regret is appropriate?
- Can inoculation against regret help them with their current decision?

Show [Kathryn Schulz's TED video on regret](#) as a basis for further discussion.

- When does regret make sense, maybe leading to better decisions in the future?

## 2. Pair Exercise: Uncertainty Proofing for the Personal Decision

Ask students to consider ways in which they could uncertainty proof against their most important uncertainty by:

- Obtaining information
- Keeping options open
- Diversifying
- Sharing risk

Not every method will necessarily apply to every alternative. Different methods can apply to different alternatives.

## 3. Discussion: Keeping Options Open

Have students discuss how they could keep their options open for their own current decisions by having:

- Fall-back plans
- Reserve
- Reversibility

How do those concepts apply to their career decisions? How could they apply them to personal future planning and investment strategies (including education, assets, e.g., house they are owning or planning to buy at some point in their future, retirement savings, etc)?

## 4. Which Cells Need to be Tested in a Sensitivity Analysis?

If the students have previously created spreadsheets for their personal decision, take some of their tables as examples. Otherwise, create random examples of weighted tables. For this exercise, the content of the decision doesn't matter, so you could use placeholders for the values and alternatives to protect students' privacies if sharing their tables with the whole class.

Question to be discussed: **Just looking at the numbers, without knowing anything about the content of the decision, which cells of the table should be focused on for a sensitivity analysis?**

Display each table for a while and have students discuss this question in groups, then talk about it with the whole class. Change the suggested cells in the table to demonstrate whether and how the change affects the rank order of the alternatives.

Repeat this process with several example tables, some more and some less robust, until you get the sense that the students have understood the process well.

## 5. Pair Exercise with Personal Decision: Which Cells Need to be Tested in a Sensitivity Analysis?

This pair exercise can in part be a follow-up to the previous group discussion, but it includes more content discussion.

Have students look at each other's decision tables.

- Have them explain to each other which parts of the table are most uncertain. For this, have them cover the questions listed in the book to raise awareness about uncertainty:
  - What alternative is riskiest?
  - What value am I the least certain about?
  - What cell entries, either in the fact or value table, am I the least certain about?

- Based on this information and the numbers, have them figure out for the *other* person's table which cells would be most important to focus on in a sensitivity analysis. (For this part, it is helpful to have done the previous exercise with the whole class.)
- Give them time to play around with their tables to explore which changes affect the rank order of the alternatives (in particular the rank order of the top two or three alternatives, if there are many alternatives).

## 6. Scenario Method for a Personal Decision

Ask for a "show-and-tell" volunteer: Is one of the students willing to share their weighted decision table with the class? It should be a decision involving a considerable amount of uncertainty (most important decisions do). Demonstrate the scenario method on their example:

- Have the volunteer student explain their decision to the class while displaying their weighted table.
- With the help of the class, construct two extreme scenarios by placing all positive outcomes of key uncertainties in one scenario and all negative outcomes in the other.
- Based on these two extreme scenarios, collect ideas about how to prepare for uncertainty (go through some of the book's suggestions of uncertainty-proofing).

## 7. Uncertainty about Values

Show [Dan Gilbert's TED talk on happiness](#). Discuss the application of this research on uncertainty.

- How certain can we be that we're including the right values in our analysis, and that we're giving them the right weight?
- Should this research make us more risk-tolerant?
- Should this research make us care less about making smart decisions?

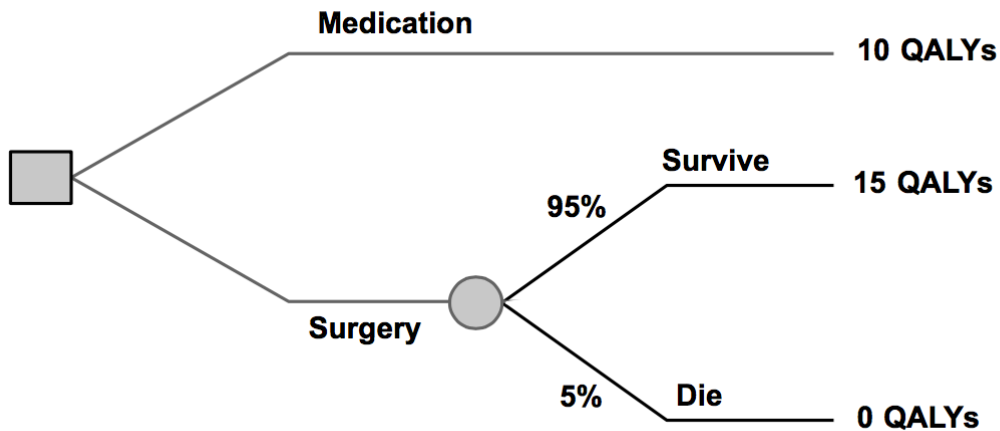
## 8. Decision Trees: Practice on Simple Examples

Have students practice drawing decision trees with hypothetical medical decisions.

For example:

*"Your 60 year old uncle has a disease for which a surgery can provide a cure, but it is a surgery with a 5% chance of mortality due to complications. If he doesn't have the surgery, he can continue to live on medication, which will give him an estimated lower-quality and shorter life expectancy. [The expected value in medical decisions is often measured in with "Quality Adjusted Life Years" (QALYs).]*

*How can you help your uncle decide? Draw a decisions tree (as in the example below) and calculate the expected QALY's per option." (Here: 10 QALY's for medication, and  $95\% \times 15 + 5\% \times 0 = 14.25$  QALYs for surgery.)*



*Variation:* Instead of medical decisions, use examples of legal decisions with the same tree structure, where the option to settle would be the safe branch of the tree, whereas the option to sue would be the risky branch.

## Review

### 1. Practice with Peers:

Have students work in pairs: Student A describes a real decision he or she is facing (or simulates a decision as a role play). Student B is the “decision analyst” and will guide Student A through different decision aiding techniques to help with the decision (e.g., revising the problem statement, creating a value tree, revising the value set, applying focused creativity techniques, creating decision tables with excel, etc.).

Have the students work through several techniques in the same role, then switch roles.

*Variation:* This exercise could take the form of a bigger project that they document by writing a report about it or presenting elements to the class.