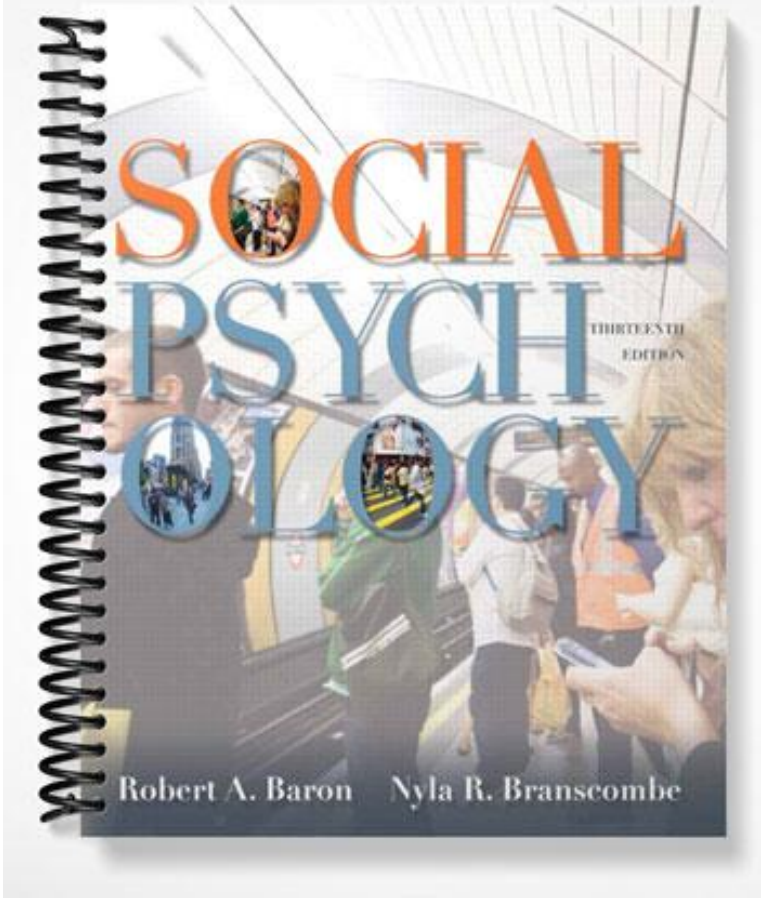
SOLUTIONS MANUAL



CHAPTER 2

Social Cognition: How We Think About the Social World

CHAPTER-AT-A-GLANCE

BRIEF OUTLINE	INSTRUCTOR'S RESOURCES	TEST BANK	POWERPOINT PRESENTATION	MYPSYCHLAB
Heuristics: How We Reduce Our Effort in Social Cognition p. 37 Learning Objectives: 2.1 & 2.6	**Lecture Launchers:** 2A, 2B **In-Class Activities:** A2.5, A2.6, A2.7 **Out-of-Class Activities:** "Influence of Drastic Cases in the News"	MC 1-17 FI 1-4 SA 1 ES 1 ***MPL Feature Essay*** WATCH: "Attention Test"	Slides 3-8	**Watch:** Attention Test
Schemas: Mental Frameworks for Organizing Social Information p. 43 Learning Objectives: 2.2-2.5	**Lecture Launcher:** 2A, 2B, **In-Class Activities:** A2.1, A2.2, A2.3, A2.4,	MC 18-13 FI 5-7 SA 2-4	Slides 9-13	**Watch:** Self-fulfilling Prophecies
Automatic and Controlled Processing: Two Basic Modes of Social Thought p. 48 Learning Objectives: 2.7-2.8	**Lecture Launchers:** 2C	MC 44-52 FI 8-9 SA 5 ES 2	Slides 14-18	
Potential Sources of Error in Social Cognition: Why Total Rationality Is Rarer Than You Think p. 52 Learning Objectives: 2.9-2.14	**Lecture Launchers:** 2D, 2E, 2F **In-Class Activities:** A2.8, A2.9, A2.10 **Out-of-Class Activities:** "Differentiating between Errors in Cognition"	MC 53-77 FI 10 SA 6-8 ES 3	Slides 19-24	**Watch:** Wellness Study
Affect and Cognition: How Feelings Shape Thought and Thought Shapes Feelings p. 59 Learning Objectives: 2.12-2.14	**Lecture Launchers:** 2G **In-Class Activities:** A2.11	MC 78-90 FI 10 SA 6-8 ES 3	Slides 25-31	

KEY TERMS

affect (p. 37)
affective forecasts (p. 63)
anchoring and adjustment heuristic (p. 41)
automatic processing (p. 48)
availability heuristic (p. 40)
counterfactual thinking (p. 56)
conditions of uncertainty (p. 38)
heuristics (p. 37)
information overload (p. 38)
magical thinking (p. 58)
metaphor (p. 46)
mood congruence effects (p. 60)
mood dependent memory (p. 60)
optimistic bias (p. 53)
overconfidence barrier (p. 53)
perseverance effect (p. 46)
planning fallacy (p. 54)
priming (p. 45)
prototype (p.38)
representativeness heuristic (p. 38)
schemas (p. 44)
social cognition (p. 36)
terror management (p. 58)
unpriming (p. 45)

LEARNING OBJECTIVES (LO)

After studying Chapter 2, students should be able to:

2.1 Discuss what is meant by "social cognition" and list the basic assumptions that most social psychologists have with respect to cognitive processes.
2.2 State the basic purpose and function of schemas, as well as the three basic processes that they influence.
2.3 Explain the role of priming and unpriming in the activation and persistence of schemas.
2.4 Consider how our schemas may (or may not) be altered in the face of new information.
2.5 Discuss how the self-fulfilling prophecy may operate in certain applied settings, such as classroom environments.
2.6 Explain why we often use heuristics and the consequences of their use. Contrast two different types of heuristics.
2.7 Compare and contrast automatic and controlled processing in social thought.
2.8 Discuss the benefits of automatic processing in social thought and how automatic thought can influence our behavior.
2.9 Discuss the optimistic bias and its specific forms the overconfidence barrier and the planning fallacy.
2.10 Identify the effects that counterfactual thinking may have on our mood and general well-being.
2.11 State the meaning of "magical thinking," as well as the principles that pertain to this pattern of cognition.
2.12 Consider how affect can influence cognition by discussing mood-dependent memory, mood congruence effects, and the effects of mood on creativity and use of heuristics.
2.13 List the ways that cognition can influence affect.
2.14 Discuss the evidence for social neuroscience in two separate systems for the processing of social information.

CHAPTER 2 OUTLINE

SOCIAL COGNITION: HOW WE THINK ABOUT THE SOCIAL WORLD

I. **Social Cognition:** How we think about the social world, try to understand it, and understand ourselves and our place in it. **(LO 2.1)**

A. Much of social thought is automatic—occurs without effort.

B. Sometimes social thought is controlled. That is, sometimes we think very carefully in an effortful manner.

C. Much of our quick thinking occurs through the use of **heuristics** – simple rules for making complex decision or drawing inferences in a rapid manner and seemingly effortless manner.

II. Heuristics: How We Reduce Our Effort in Social Cognition **(LO 2.6)**

A. We can only process a certain amount of information at any given time. Additional information can put us into a state of **information overload**—the demands on our cognitive system are so great that we can no longer handle it and our ability to process information is exceeded.

B. We use many **heuristics** (or mental shortcuts) to deal with large amounts of information quickly avoiding information overload, especially under **conditions of uncertainty** – where the "correct" answer is difficult to know or would take a great deal of effort to determine.

C. Representativeness: Judging by Resemblance

1. The **representativeness heuristic** refers to making a judgment about another person based on the following rule: "The more alike a person is to a typical member of a certain group (**Prototype**), the more likely he or she belongs to that group."
2. For example, if we find out someone likes math puzzles and has no interest in social issues, we may be more likely to guess that the person is an engineer rather than a lawyer (Tversky & Kahneman, 1973).
3. This heuristic will not always lead us to the right conclusions, as we sometimes disregard base rates.

D. Availability: If I can retrieve instances, they must be frequent

1. The **availability heuristic** refers to making judgments based on how easily we can bring information to mind.
2. The easier it is to bring instances of an event, group, or category to mind, the more frequent or important we believe it to be.
3. This can also lead to errors, in that we may overestimate the likelihood of events that are powerful, but occur relatively infrequently. For example, many people think it is more dangerous to fly than drive—when the reverse is actually true—because plane crashes receive more coverage in the media than car crashes. This helps make information about plane crashes more available and leads one to believe that they are more frequent.

E. Anchoring and Adjustment: Where You Begin Makes a Difference

1. When using the **anchoring and adjustment heuristic**, we tend to have a number that we use as a "starting point" and we then make adjustments.
2. The anchoring and adjustment heuristic is powerful, it can even influence highly trained legal experts, and such experts were more likely to give harsher sentences when presented with harsh recommendations (anchors) regardless of where these anchors came from (Englich, Mussweiler, and Strack, 2006).

F. Status Quo Heuristic: What is, is good

1. Status quo heuristic – objects and options that are more easily retrieved from memory may be judged in a heuristic fashion as "good," and as better than objects and options that are new, rarely encountered, or represent a change from the status quo.

III. Schemas: Mental Frameworks for Organizing—and Using—Social Information **(LO 2.2)**

A. **Schemas** are mental frameworks that aid in the organization of social information.

1. Schemas guide the processing of social information.
2. Schemas are built through experience and relied upon when we encounter a new social situation.
3. Schemas are shaped by our culture, but can be useful in understanding the customs in a different culture.
4. Schemas help us make sense of a complex social world.

IV. The Impact of Schemas on Social Cognition: Attention, Encoding, Retrieval **(LO 2.2)**

A. Schemas affect three basic cognitive processes:

1. *Attention*: The information that we detect.
    a) Schemas act to filter our attention.
    b) If we are in a state of cognitive overload, we will rely more heavily on schemas, as they help reduce cognitive effort.
    c) Information related to a schema is more likely to be noticed.
    d) Information inconsistent with a schema may be ignored or discounted.
2. *Encoding*: A process by which the information we have detected is placed in our memory.
    a) Information that agrees with our schemas is encoded.
    b) Information that is in stark contrast with our schemas captures our attention so much that it may be saved in a separate, unique memory file.
3. *Retrieval*: The process of recovering information from memory so that we may use it.
    a) In general, people tend to easily recognize information consistent with existing schemas.
    b) However, when individuals are asked to actually recall information rather than indicate whether they recognize it a strong tendency to remember information that is incongruent with schemas appears.

V. Priming: Which Schemas Guide Our Thought? **(LO 2.3)**

A. The stronger and more well-developed schemas are, the more likely they are to influence our thinking.

B. Schemas can also be temporarily activated by what is known as **priming**—when recent experiences make some schemas more active than they would otherwise be, and as a result, they exert stronger effects on our current thinking (e.g., hearing the word bread, make us think about the word butter).

1. Recent evidence suggests that priming effects are more powerful than once believed, some studies showing the effect lasting a full seventeen years.
2. Evidence suggests that primes can be deactivated through a process known as **unpriming**.
    a) Priming only persists until it somehow finds expression. Once it does, the effect dissipates or is unprimed.

VI. Schema Persistence: Why Even Discredited Schemas Can Sometimes Influence Our Thoughts and Behaviors **(LO 2.4)**

A. The disadvantages of schemas:

1. Schemas can lead to distortions in our understanding of the environment and form the bases for many stereotypes.
2. Schemas show a strong **perseverance effect** a tendency to stay unchanged despite contradictory information.
3. Schemas can sometimes lead to **self-fulfilling prophecies**—influencing our responses to the social world in ways that make it consistent with the schema. **(LO 2.5)**

a) A classic study by Rosenthal and Jacobson (1968) confirmed the existence of the self-fulfilling prophecy. They administered IQ tests to elementary school students. They randomly chose some students and informed the teachers that those students would "bloom" academically that year. When the researchers returned eight months later, they found that, indeed, the students who were expected to "bloom" that year actually did. This was due to the *expectations* of the teachers more than actual ability. The students that were expected to "bloom" received more attention, praise, and feedback from the teachers. The *behavior* of the teachers toward the students actually made their expectations a reality.

B. Thus, schemas are like a double-edged sword: They help us process vast amounts of information quickly, but sometimes lead us to perceive the world in ways that are not accurate.

VII. Reasoning by Metaphor: How Social Attitudes and Behavior are Affected by Figures of Speech

A. **Metaphor** – a linguistic device that relates or draws a comparison between one abstract concept and another dissimilar concept.

B. As shown in Table 2.1 metaphors can have an impact of social judgments.

VIII. Automatic and Controlled Processing: Two basic Modes of Social Thought

A. Social thought can occur in either of two distinctly different ways. **(LO 2.7)**

1. **Automatic processing** occurs when, after a substantial amount of experience with a task or type of information, we can carry out the task or process the information in what seems to be an effortless, automatic, and nonconscious way.
2. **Controlled processing** occurs when we carry out the task or process the information in a systematic, logical, careful and highly-effortful manner.
3. Research has shown that when we are evaluating various aspects of the social world, different parts of the brain are involved with controlled versus automatic reactions/judgments.

B. Automatic processing and automatic social behavior **(LO 2.8)**

1. Schemas, because they are so well-learned, have the ability to shape our behavior automatically even without conscious awareness.
    a) Priming rudeness, for example, can make participants behave in a rude manner (Bargh, Chen, and Burrows, 1996).
2. Automatic processes not only have the ability to trigger particular behaviors (rudeness), but also seems to prepare people for future interaction with the persons or groups who are the focus of this automatic processing.

C. The benefits of automatic processing: Beyond mere efficiency **(LO 2.8)**

1. In addition to automatic processing being quick and efficient, one additional benefit is that it may produce decisions we are more satisfied with.
2. This may occur because the unconscious mind has greater capacity to weigh our many preferences than does the conscious mind.

IX. Potential Sources of Error in Social Cognition: Why Total Rationality Is Rarer Than You Think

A. Humans are not computers; sometimes the way in which we process information can be biased.

B. A basic tilt in social thought : Our powerful tendency to be overly optimistic

1. The **optimistic bias**: Our tendency to see the world through rose-colored glasses. **(LO 2.9)**
    a) A tendency to expect that things will turn out well.

b) Most people believe that they are *more* likely to experience positive outcomes in their lives and *less* likely to experience negative outcomes (Shepperd, Ouellette, & Fernandez, 1996).

2. Similar to the optimistic bias, we often have greater confidence in our beliefs or judgments than is justified – an effect known as the **overconfidence barrier**.

a) One important reason we display overconfidence is that we lack the relevant feedback that would help moderate our confidence.

3. The rocky past versus the golden future: when we think about the past, we often recognize that our past was a mix of good times and bad times. However, when we forecast the future, we only think about the good times ahead.

4. **The planning fallacy:** An aspect of the optimistic bias, this refers to our propensity to make optimistic predictions about how long it may take to complete a certain task.

a) For example, writing a paper tends to take quite a bit longer than we originally think it will.

b) This occurs because we tend to look to the future when we are planning, and so we do not look back and remember how long it took us to complete a similar task in the past.

5. When we do recall past experiences, we tend to attribute taking longer than expected to complete a task to external factors (ones that were beyond our control). We then tend to overlook obstacles that we encountered in the past and that we may very well encounter again.

C. Situation-Specific sources of error in social cognition: Counterfactual thinking, thought suppression, and magical thinking.

1. **Counterfactual thinking:** A tendency to visualize alternative outcomes in a situation other than the outcomes that actually occurred (i.e., thinking about "what might have been"). **(LO 2.10)**

a) We use counterfactual thinking to imagine better outcomes (e.g., we would have done better on a test if we had studied more) or worse outcomes (e.g., we would have been in a car accident if we had not noticed a car swerving into our lane).

b) When we imagine better outcomes (upward counterfactuals), we experience dissatisfaction. We may continue to focus on missed opportunities.

c) Alternatively, if individuals compare their current outcomes with less favorable ones, they may experience positive feelings of satisfaction.

d) If we view negative outcomes as unavoidable, this tends to protect our well-being. For example, if someone suddenly dies, but nothing could be done to save them, it makes the death a little bit easier to accept.

2. **Magical thinking:** Assumptions that do not hold up under rational scrutiny. **(LO 2.11)**

a) Principles of magical thinking:

(1) We assume that our thoughts can affect the physical world in ways not controlled by the laws of physics (e.g., if we think about a professor calling on us, it will influence the likelihood that he or she will call on us).

(2) *Law of similarity*: Objects that are similar to one another share basic properties (e.g., we would not want to eat a piece of chocolate in the shape of a spider).

b) Magical thinking is similar to a lot of the superstitious beliefs that we have (e.g., that the number thirteen is unlucky). They do not hold up to logic and reason, but they still may exert a powerful influence on us.

3. **Terror management:** efforts to come to terms with our eventual death.

a) When we come face-to-face with the certainty of our own deaths, we try to manage the strong reactions this produces, and one way of doing this is to engage in irrational thinking.

X. Affect and Cognition: How Feelings Shape Thought and Thought Shapes Feelings **(LO 2.12)**

A. The term **affect** refers to our current moods or feelings.

B. It appears that our feelings influence our thoughts (cognitions) and our thoughts can influence our feelings.

1. The Influence of Affect on Cognition

a) When we are in any situation, we almost cannot help that our mood will influence our perception of others and the world around us (e.g., a job interviewer is likely to rate a candidate higher if they are in a good mood).

b) Our mood can affect memory as well:

(1) **Mood-dependent memory:** refers to the fact that what we tend to remember while in a certain mood is partly influenced by what we learned when we were previously in that mood. *Here the nature of the information does **not** matter*. (For example, if we store information in long-term memory when we are in a good mood, we are more likely to remember that information when we are in a similar mood.)

(2) **Mood congruence effects:** We tend to store, or remember, positive information when we are in a positive mood and negative information when in a negative mood. In other words, according to Blaney (1986), we remember information that is *congruent* with our current mood state. *Here the nature of the information (positive versus negative) matters*.

c) Our mood can influence our creativity.

(1) The results of several studies suggest that being in a happy mood can increase creativity.

d) Our moods can also influence the extent to which we rely on heuristics.

(1) Persons experiencing positive affect are more likely than persons experiencing negative affect to engage in heuristic thought.

2. The Influence of Cognition on Affect **(LO 2.13)**

a) Schachter (1964) suggested that we often do not have direct knowledge of our feelings or attitudes. Therefore, we infer their nature from cues in the outside world. For example, if we feel an increase in arousal while almost colliding with a reckless driver, we would conclude that we are feeling anger.

b) If we activate schemas with a strong affective component, we not only may label another person, but a schema may tell us how to *feel* about that person.

c) Cognition and the regulation of affective states: Since negative events in life are unavoidable, we must learn to cope with negative emotions. We make use of our thoughts in the emotion regulation process.

(1) For example, if we make ourselves believe that we "never had a chance" to make it to the store to take advantage of a big sale, we decrease the unpleasantness of disappointment. In sum, we have regulated our affective states.

(2) In times of personal distress, we may also make a strategic decision to engage in a temptation that makes us feel better in the short term (e.g., eating an unhealthy snack), but is not good for us in the long run. So we must be careful when using this strategy to reduce negative affect.

C. Affect and cognition: Social neuroscience evidence for two separate systems **(LO 2.14)**

1. Recent evidence suggests that two distinct systems for processing social information may exist in the human brain.

a) One system is concerned with reason or logical thought.
b) The other system deals primarily with affect or emotion.

LECTURE LAUNCHERS

2A: Not Knowing Why We Do What We Do
Nisbett and Wilson (1977) provide great examples demonstrating that we often do things without really knowing why. Sure, we devise complex explanations for our behavior based on implicit theories, but often we are unaware of the true cause. To give your students a preview of things to come, you can discuss the following:

- In dissonance studies, no subjects reported experiencing dissonance prior to changing their attitudes. In fact, most were unaware that attitude change took place.
- In helping studies, people are much less likely to help in the presence of others, yet not one subject said the presence of others would influence them. Many felt the plight of the victim—not how many people are present—is what influenced their decision to help or not.

Nisbett, R.E., & Wilson, T.D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84,* 231-259.

2B: Information Overload (LO 2.1-2.2)
Social cognition is greatly influenced by information overload. Because we are bombarded with thousands of stimuli, it is argued, we need to be efficient in screening, sorting, and storing social information. But an alternative view is that humans simply are not very good at remembering the content of information that is presented to them. Jacoby and Hoyer (1982) had subjects view a thirty-second videotape in U.S. shopping malls and then had them answer twelve true/false questions pertaining to the videotape. Despite the facts that (a) the videotape was viewed under ideal conditions, (b) the tape was of short duration, and (c) the testing was done immediately after viewing, only 3.5 percent of the respondents answered all twelve questions correctly. Could it be that what we remember is simply not an accurate representation of what we see?

Jacoby, J., & Hoyer, W.D. (1982). Viewer miscomprehension of televised communication: Selected findings. *Journal of Marketing, 46,* 12-26.

2C: Differentiating between Automatic and Conscious Processing (LO 2.7)
In small groups, have students come up with examples of tasks that are well-learned for them now (automatic), but required a great deal of effort when they were first learning them (e.g., driving a car).

2D: False Consensus Effect and Risky Behaviors (LO 2.9)
Although the false consensus effect was not discussed in the book, it is yet another type of bias in judgments and the following information may be used to kick off talking about biases in judgment and how they affect behavior.

Researchers have reported that students often overestimate the number of their peers who engage in risky behaviors such as binge-drinking, smoking, drug use, and unprotected sex. This overestimation or misconception, in turn, may cause some people to take part in risky behaviors because they are under the false assumption that "everyone else is doing it."

To investigate how student perceptions of binge-drinking may influence actual binge-drinking on college campuses, Haines (1994) asked college students to estimate the number of their peers who binge-drink on campus. Not surprisingly, he found that students consistently overestimated the number of heavy drinkers.

Following this finding, Haines devised an intervention strategy that involved showing (and hopefully convincing) students that their peers do not binge-drink as much as they believe. Several years after the intervention began, estimates of binge-drinking dropped from 70% to 54% and the percentage of actual reported binge-drinking dropped from 45% to 33%.

Haines believes that showing students their peers don't drink as much as they think helped to create an environment that allows students who would rather not drink, but think everyone else does, to operate according to their own values and not succumb to their distorted perceptions of reality. Ask your students to discuss whether they think this intervention would work on their campus.

Haines, M.P. (1994, Dec.). *APA Monitor*.

2E: Identifying the Planning Fallacy (LO 2.10)
Have students recall the last time they worked on a major project (e.g., a paper for a class). Have students remember, to the best of their ability, whether the project took longer to complete than they had anticipated *and* what kind of plans they made to avoid any delays in the future. Have them particularly focus on what they attributed delays to (e.g., busy time in the semester).

2F: Counterfactual Thinking that Protects (LO 2.10)

Have students think about the last time they experienced regret. What was the context? Did they have thoughts of "what might have been?" Did they help themselves feel better by imagining a worse scenario or did they feel worse by imagining a better scenario?

2G: Affect and Cognition (LO 2.13)

Folk wisdom suggests that when someone smiles at us we smile back, but when someone frowns we do not reciprocate the frown. To test this, Hinsz and Tomhave (1991) had a confederate smile or frown at people passing by while another person determined their facial reactions. They found that over half the subjects responded to a smile with a smile, whereas very few subjects responded to a frown with a frown.

Hinsz, V., & Tomhave, J. (1991). Smile and (half) the world smiles with you, frown and you frown alone. *Personality and Social Psychology Bulletin, 17,* 586-592.

IN-CLASS ACTIVITIES AND DEMONSTRATIONS

A2.1: Schemas Can Influence Our Encoding and Perception of Information (LO 2.2)

The following exercise can be used to show how schemas can influence how we perceive and encode information. First explain to the class that a schema is like an expectation. When activated, schemas make ambiguous information fit our expectations.

Procedure

1. Go to following Web site in class (note you will need to have audio and visual capabilities in the class room): http://jeffmilner.com/backmasking.htm
2. Tell the class you are going to play some music clips backwards and they are to listen for the hidden message. For half of the class, set up an expectation of what it is they are supposed to hear (activate a sort of schema) by displaying the reserve lyrics. For example, when you play "Another One Bites the Dust" by Queen backwards, you are supposed to hear "it is fun to smoke marijuana." Do not let the other half of the class see these lyrics.
3. Play the Clip
4. Ask the class how many people heard the reverse message.

Results

The people who had an expectation of what to hear will hear the "hidden message," those without an expectation will hear indistinguishable noise. In reality there are no real hidden messages in these songs. But when you have an expectation of what it is you are supposed to hear, your perception bends to conform to this expectation.

A2.2: Schemas Can Influence Our Retrieval of Information (LO 2.2)
The following exercise can be used to show how schemas can influence our retrial of information—making us remember things that did not happen (false memories).

Procedure

1. Read the class the following list of words:

1. Bed	6. Toss	11. Dark
2. Silence	7. Slumber	12. Clock
3. Snore	8. Fatigue	13. Comfort
4. Tired	9. Turn	14. Rest
5. Awake	10.Night	15. Dream

2. Give the class about a minute to recall as many words as possible.
3. Ask them to tell you some of the words they recalled—usually a large number of people in the class will recall the word sleep even though it was not said.

Results & Discussion
Discuss how schemas can influence retrial of information.

A2.3: Schemas and Eyewitness Testimony (*see Handout 2-1*) (LO 2.2)
A study by Tuckey and Brewer (2003) examined the use of schemas in recalling different aspects of a crime. You can examine this with your students by having them read an account of a crime (Tuckey and Brewer used a bank robbery; you may want to vary the type of crime). Then you can discuss the scenario with your students to see how much they recall. See the handout for a sample scenario.

Tuckey, M.R., & Brewer, N. (2003). The influence of schemas, stimulus ambiguity, and interview schedule on eyewitness memory over time. *Journal of Experimental Psychology, 9,* 101-118.

A2.4: Belief Perseverance (LO 2.4)
One reason why false beliefs persist is belief perseverance—persistence of one's beliefs even when discredited. For example, Anderson et al. (1980) had one group of participants read a scenario depicting a risk-prone person as a better firefighter, while another group considered a scenario depicting a cautious person as the better firefighter. Both groups were then asked to give evidence supporting the case they read about. For example, the risk-prone group might think risky firefighters are braver, while the cautious group might believe that cautious firefighters are more careful. Interestingly, when the researchers later discredited the information, the participants still held their self-generated beliefs. To demonstrate belief perseverance, try the following exercise:

Procedure

1. At the beginning of class, ask your students to copy down a statement and write it ten times. For example, "The professor's spouse's favorite color is purple."
2. At the end of class, mention in passing, "The statements you had copied were not true—the professor's spouse's favorite color is blue."
3. A week or so later, ask the class to write down what the professor's spouse's favorite color was.

Results & Discussion

- If belief perseverance results, many students' initial beliefs should prevail. Discuss why beliefs persevere in the presence of discredited information.

Anderson, C.A., Lepper, M.R., & Ross, L. (1980). Perseverance of social theories: The role of explanation in the persistence of discredited information. *Journal of Personality and Social Psychology, 39,* 1037-1049.

A2.5: Representative and Availability Heuristics (*see Handout 2-2*) (LO 2.6)
The following exercise can be used to show how we often use mental shortcuts when making social judgments. For example, we often judge things by how well they match the typical case (*representativeness heuristic*). We also judge things by how quickly examples come to mind (*availability heuristic*). On *Handout 2-2,* items 1–3 address the representative bias, and items 4–6 address the availability heuristic.

Procedure
1. Make an overhead of *Handout 2-2*.

Results & Discussion
- The correct answer and the typical response many students will give are:

i)	Item	Correct Response	Typical Incorrect Response
	1	p= .3	>50%
	2	all equally likely	c
	3	all equally likely	a
	4	stroke (4:1)	car accidents
		heart attacks (30:1)	murder
	5	11% are violent	much higher
		<1% plead insanity	much higher
	6	k as third letter (3:1)	k as first letter

- When giving the answers, discuss why heuristics occur. For example, the representativeness bias occurs because we often ignore information about how prevalent some pattern is in the population (base-rate fallacy), and we process information based on how much it resembles the typical example (e.g., typical coin toss, typical six-person family). For the availability examples, we tend to over-recall vivid information (e.g., car accidents), and highly accessible information comes to mind quicker.

Adapted from Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology, 5,* 207-232.

A2.6: Availability Heuristic and Assertiveness (*see Handouts 2-3a, 2-3b*) (LO 2.6)
In another example demonstrating the availability heuristic, Schwartz et al. (1991) found that people asked to think of 6 instances of their assertiveness rated themselves as more assertive compared to people asked to think of 12 instances of assertiveness.

Procedure
1. Distribute *Handout 2-3a* to half the class and *Handout 2-3b* to the other half. *(Note: Be sure the students know the difference between assertive actions and aggressive actions.)*

Results & Discussion
- Theoretically, those asked to generate 12 instances of assertiveness should rate themselves as less assertive, because it is harder to come up with 12 examples.
  Personal Note (G. Schreer): I have not been able to replicate this finding.

Schwartz et al. (1991). *Teaching of Psychology, 18.*

A2.7: Representative Heuristic: "Gray Elephant from Denmark" (LO 2.6)
The Internet is filled with mind tricks and brainteasers that can provide quick and easy illustrations of the availability heuristic. One popular example is given below.

Procedure

Read the following instructions to your students step-by-step:

1. pick a number from 1-9
2. subtract 5
3. multiply by 3
4. square the number (multiply by the same number – not square root)
5. add the digits until you get only one digit (i.e., 64=6+4=10=1+0=1)
6. if the number is less than 5, add five, otherwise subtract 4
7. multiply by 2
8. subtract 6
9. map the digit to a letter in the alphabet 1=A, 2=B, 3=C, etc.
10. pick a name of a country that begins with that letter
11. take the second letter in the country name and think of a mammal that begins with that letter
12. think of the color of that mammal

Results & Discussion

- Next, tell the class "most of you are thinking of a gray elephant from Denmark." Of course most students will be amazed by your unbelievable psychic powers; however, discuss with them how these examples utilize the availability heuristic by causing them to respond with information that is most accessible in their minds.

A2.8: Using Projective Techniques to Illustrate the Confirmation Bias *(see Handouts 2-4a and 2-4b)* (LO 2.9)
Although the confirmation bias was not discussed in the book, it is yet another type of bias in judgments and the following demonstration may be used to kick off talking about biases in judgment and how they affect behavior.

Although this exercise developed by Wiederman (1999) was originally designed for examining the subjectivity of projective tests in psychological assessment courses, it can easily be used to illustrate the confirmation bias—the tendency to search for information that confirms our beliefs (rather than disconfirm).

Procedure

1. Make an overhead containing *Handouts 2-4a* and *2-4b*.
2. Have half of the class read the description of Jeff A. (depressed, alienated) and half read the description of Jeff B. (aggressive).
3. After the students read the brief description, show them a few projective test stimuli (e.g., Rorschach Cards and TAT), while simultaneously reading them Jeff's responses to the stimuli. You can generate your own ambiguous responses or see Wiederman (1999) for an example.
4. After reading Jeff's responses, ask the students to write down the one or two most salient responses Jeff made regarding the projective stimuli.

Results & Discussion

- Wiederman (1999) found that 95% of the subjects who received the description of Jeff B. emphasized aggressive content in the TAT compared to 38% of the students who received the description of Jeff A. Similarly, subjects who received Jeff A. were more likely to emphasize depressive content as compared to subjects exposed to Jeff B. (56% vs. 16%, respectively).
- Discuss how this demonstration illustrates how previous expectations (aggressive vs. depressed) often lead us to search for information that confirms our beliefs.

Wiederman, M.W. (1999). A classroom demonstration of potential biases in the subjective interpretation of projective tests. *Teaching of Psychology, 26,* 37-39.

A2.9: Using Astrological Signs to Illustrate the Confirmation Bias *(see Handouts 2-5a, 2-5b, and 2-5c)* (LO 2.9)

To give students the opportunity to experience confirmation bias firsthand, Munro and Munro (2000) suggest using personality descriptors associated with each of the zodiacal signs to demonstrate expectancy confirmation.

Procedure:

1. Show *Handout 2-5a*, which shows 4 trait descriptors characteristic of each zodiacal sign (this provides students with expectations). Ask the students to select the zodiacal sign that best describes their personality. By show of hands, ask the students to raise their hands if they thought the personality descriptors also happened to be their zodiacal sign (calculate a %, see below).
2. Then show *Handout 2-5b,* which shows 4 different trait descriptors, labeled with letters only (i.e., without the zodiacal sign) and ask the students to select the letter that best describes their personality. Then put up *Handout 2-5c* and ask students to raise their hands if they selected their actual zodiacal sign (calculate a %, see below).

Results & Discussion

- To calculate a %, divide the number of matches by the total number of students in the class and compare that to chance (8.3% or 1/12). If the percentage of matches is greater than chance for Handout 1 compared to Handout 2, the confirmation bias has been supported. To determine significance, calculate a χ^2 where the expected frequencies are 1 match for every 11 mismatches.
- Discuss how this demonstration provides evidence that prior expectations can lead people to process information in a biased way, such that their expectations are confirmed. More specifically, discuss how the confirmation bias may affect scientific research and everyday judgments.

Munro, G.D., & Munro, J.E. (2000). Using daily horoscopes to demonstrate expectancy confirmation. *Teaching of Psychology, 27,* 114-116.

A2.10: Suppressing Unwanted Thoughts *(see Handouts 2-6a and 2-6b)* (LO 2.12)

Researchers have found that the harder we try to suppress unwanted thoughts, the more they persist (cf. Macrae et al. 1994; Wegner & Erber, 1992).

Procedure

1. To demonstrate the hyperaccessibility of suppressed thoughts, distribute *Handouts 2-6a* or *2-6b*, which asks the students to avoid thinking about a white bear.
2. During this time, they are instructed to write down each time they think of the unwanted bear.

Results & Discussion

- Typically, people have a hard time not thinking about the taboo thought.

Macrae, C.N., Bodenhausen, G.V., Milne, A.B., & Jetten, J. (1994). Out of mind but back in sight: Stereotypes on the rebound. *Journal of Personality and Social Psychology, 67,* 808-817.

Wegner, D.M., & Erber, R. (1992). The hyperaccessibility of suppressed thoughts. *Journal of Personality and Social Psychology, 63,* 903-912.

A2.11: Mood and Memory (LO 2.12)
Have students debate the issue of mood impacting what we remember. Have students list some occupations in which a person must be especially careful in not letting their mood affect their judgments (e.g., teachers).

OUT-OF-CLASS ASSIGNMENTS

Influence of Drastic Cases in the News (LO 2.6)
Ask the students to watch the news for reports of extreme cases of behavior in order to find evidence that news analysts overemphasize drastic cases in reporting the news. Does reporting acts of terrorism, for instance, lead us to a distorted perception of the views of the average resident of the terrorists' home countries (e.g., Arabs, Muslims, Serbs, etc.)? Have students discuss the role the media plays in representative and availability heuristics.

Differentiating between Errors in Cognition (*see Handout 2-7*) (LO 2.9)
Since there are a number of potential errors in social cognition, have students practice differentiating between them by identifying which error is present in the example given.

VIDEO AND FILM RESOURCES

Are We Scaring Ourselves to Death? (1994, 55 minutes, ABC).

- This 20-20 report shows how biased media coverage (e.g., plane crashes) can lead to overestimation of certain events (availability heuristic).

Communication: Social Cognition and Attribution (29 minutes, Allyn & Bacon).

- A dramatization is used to generate an exchange between Robert A. Baron and Margaret Clark on the principles of social cognition.

Discovering Psychology: Constructing Social Reality (1990, 30 minutes, ANN/CPB).

- Explores the factors that contribute to our interpretation of reality, including the self-fulfilling prophecy.

Discovering Psychology: Judgment and Decision Making (1990, 30 minutes, ANN/CPB).

- Examines the errors that contaminate individual and group decision making (e.g., availability, representativeness, and anchoring heuristics; risky choices; and groupthink).

Information Processing (1971, 29 minutes, CRM).

- Provides a humorous look at the basic principles and far-reaching ramifications of human information processing.

Productivity and the Self-Fulfilling Prophecy: The Pygmalion Effect (1987, 28 minutes, CRM).
- Demonstrates the self-fulfilling prophecy in a work environment.

Wired Science: Episode 101 (2007, 15 minutes, PBS*)*
- The face reader segment of this episode a new MIT media lab device that reads facial expressions helps children with Asperger's Syndrome. You can stream the video from the following Web site: http://www.pbs.org/kcet/wiredscience/episode

RELEVANT SOURCES

Fiske, S. T., & Taylor, S. E. (2008). *Social Cognition: From Brains to Culture*. Boston, MA: McGraw-Hill.
- Highlights the cutting-edge research in social neuropsychology, mainstream experimental social-cognitive psychology, and cultural psychology.

Bless, H., & Forgas, J.P. (Eds.). (2000). *The message within: The role of subjective experience in social cognition and behavior.* Florence, KY: Psychology Press.
- Provides an overview of the role of various subjective experiences (e.g., affective states, metacognitive feelings, etc.) in social cognition.

Chang, E.C., Asakawa, K., & Sanna, L.J. (2001). Cultural variations in optimistic and pessimistic bias: Do easterners really expect the worst and westerners really expect the best when predicting future life events? *Journal of Personality and Social Psychology, 81,* 476-491.
- Provides evidence for a cultural difference in the optimistic and the pessimistic bias between participants of European-American descent and participants of Japanese descent.

Einstein, D.A., & Menzies, R.G. (2004). The presence of magical thinking in obsessive compulsive disorder. *Behavior Research and Therapy, 42,* 539-549.
- Extends the literature on the link between magical thinking and superstitious behavior to obsessive compulsive disorder.

Knight, B.G., Maines, M.L., & Robinson, G.S. (2002). The effects of sad mood on memory in older adults: A test of the mood congruence effect. *Psychology and Aging, 17,* 653-661.
- Expands the literature on mood congruence effects to include a sample of older adults as well as younger adults.

Roese, N.J., Olson, J.M. (Eds.). *What might have been: The Social Psychology of counterfactual thinking.* Hillsdale, NJ: Erlbaum.
- Examines the mechanisms underlying counterfactual thinking and the consequences it has on the individual.

Ruby, C.L., & Brigham., J.C. (1996). A criminal schema: The role of chronicity, race, and socioeconomic status in law enforcement officials' perceptions of others. *Journal of Applied Social Psychology, 26,* 95-111.

- Investigates the extent to which law enforcement officials' perceptions of criminality bias their cognitive schemas of the typical criminal.

Slovic, P., Fischhoff, B., & Lichtenstein, S. (1980, June). Risky assumptions. *Psychology Today, 4*, pp. 44-48.

- Presents examples of how errors in human thinking get us into trouble (e.g., over-confidence phenomenon and vividness effects).

Tenenbaum, H.R., & Leaper, C. (2002) Are parents' gender schemas related to their children's gender-related cognitions? A meta-analysis. *Developmental Psychology, 38,* 615-630.

- Reviews 43 articles and concludes that there is a significant relationship between the gender schemas of parents and the gender-related ideas of their children.