# SOCIAL WORK PRACTICE

## A CRITICAL THINKER'S GUIDE

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CHAPTER 17

# Putting It All Together

## OVERVIEW

This chapter offers guidelines for organizing and interpreting data and selecting outcomes. Errors that may occur and guidelines for avoiding them are described. A key question is, Does your problem definition provide guidelines for achieving valued outcomes? Helping clients is a cumulative process. Success in earlier phases sets the stage for success in later ones. Disappointing results in later stages may require circling back to earlier phases.

### *You Will Learn About*

- Choosing among causes as problem definition.
- Thinking about causes.
- Guidelines for discovering causes.
- Reviewing your inferences.
- Ideals and actualities.
- Using tests to make decisions.
- Ethical issues in selecting outcomes.
- The value of records.

## ORGANIZING AND INTERPRETING DATA

Problem-solving requires making decisions about how to organize and interpret data. What does it add up to? Is there a problem? What kind of a problem is it? You will think about concerns as you work with clients (see Exhibit 17.1). Your beliefs about behavior and its causes will influence what data you collect and how you organize it. This in turn influences selection of objectives (outcomes to pursue), change agents (whom to involve), and settings (where to intervene). The criteria you use to

**EXHIBIT 17.1**
**Thinking About Problems: Mrs. Ryan and the Greens**

> I think this family could learn to live together and have a more enjoyable family life. I think it's premature to place Mrs. Ryan in an old-age home, and from what I can see, the Greens are not ready for this, nor is Mrs. Ryan. I think we should work on the problems they've mentioned and see if this improves the situation. But what if I'm wrong? Maybe the family will break down if Mrs. Ryan is not moved. The marriage could become strained. The children could start to act out. But I don't think that will happen. The Greens seem to love each other and to love Mrs. Ryan. The children's concerns seem typical for their age. If problems start, we can catch them at an early point.

evaluate claims and arguments will influence what data you search for and when you stop searching. Your task environment (e.g., time pressures) also will affect the search.

The data collected should indicate the probable difficulty of achieving outcomes that clients value and the feasibility and likely effectiveness of different approaches. Discovering all influential factors is not necessary and usually impossible. What you need is information that decreases uncertainty about how to help clients or to determine that little or no help is possible. Information about resources will indicate whether obstacles can be overcome and, if so, how and to what degree. Reviewing resources and obstacles will offer information about

- Who should and can be involved (including other service providers).
- Who has access to behaviors of concern and is willing and able to support desired behaviors.
- Whether clients will participate in helpful ways.
- Whether obstacles can be overcome.

### If You Get Stuck

If you have difficulty clarifying problems and discovering related factors, use this as a cue to gather additional data, unless a crisis is at hand and you have to act quickly despite having little information. Assessment may be incomplete (see Exhibit 17.2). You may have to observe clients in real-life, problem-relevant contexts in order to clarify complaints and discover related contingencies (see Chapter 15). Helpful questions include the following:

- Have I listened carefully to clients about what they want?
- Have I discussed clients' concerns about the helping process?
- Have I ignored important contingencies?
- Have I overlooked helpful sources of information?
- Can the practice-related scientific literature help me?
- Am I doing the best that can be done under the circumstances?
- Have I overlooked benefits clients gain from complaints?

**EXHIBIT 17.2**
**Examples of Incomplete Assessment**

- Problem-related behaviors are not clearly described.
- The functions (meaning) of behaviors of concern are unknown.
- Cultural factors are overlooked.
- Clients' assets (strengths) are overlooked.
- Positive alternative behaviors to undesired behaviors are not identified.
- Baseline data are not available (i.e., description of the frequency/duration of behaviors, thoughts, or feelings before intervention).
- The cause of behavior (e.g., aggression) is assumed to be another behavior (e.g., low self-esteem).
- Higher-level contingencies are overlooked (e.g., loss of welfare payments).

- Are my feelings about the clients and/or significant others getting in the way? (Am I over- or underinvolved?)
- Have I made a process error (e.g., tried to move too fast)?
- Have I considered cultural differences in values, norms, and preferred communication styles?

## CHOOSING AMONG CAUSES AS PROBLEM DEFINITION

Problem-solving requires making inferences about causes. Just as the expert detective searches for clues, you and your clients also do so. Questions include:

- What are possible causes?
- What's the most likely account?
- Can I make a sound argument for my theory?
- Is my view compatible with what is known about behavior?
- Have I considered the problem-related scientific literature?
- Have I left out anything important? (Is my view incomplete?)
- Does my account provide service guidelines?
- Does my view account for all the information at hand?
- Can you make a stronger argument for an alternative view?

The particular causes focused on depend partly on how advanced knowledge is in an area. Few, if any helpers today would rely on examination of the bumps on someone's head as Lombroso did long ago. Choosing among different views involves reviewing data collected and considering alternative accounts in the light of these data. Both a microscopic and wide angle lens will be useful. Observation in real-life settings may be needed to identify behaviors of concern and related antecedents and consequences. Two questions should be asked about any view: 1) does it offer leverage in re-

**EXHIBIT 17.3**
**Reviewing Alternative Accounts: The Lakeland Family**

Brian's parents believed that his behavior resulted from epilepsy and that if the epilepsy could be controlled, the problem behaviors would disappear. What evidence do they have for this conclusion? How complete is this view? Are alternative accounts more likely? Perhaps Brian has problems at school that have caused his problems at home. Negative interactions with teachers and other students can serve as "setting events" that increase the likelihood of aggressive behaviors at home. Data suggesting that Brian's parents reinforce behaviors they do not like and ignore behaviors they do like suggest that Brian's epilepsy is not the sole cause. Brian may have low self-esteem because of past childhood experiences. Here, too, we should ask, Have we overlooked important causes? Does this view provide intervention guidelines? Are there other factors that we should consider?

Perhaps the Lakelands' problems with Brian are due to marital problems that Mr. and Mrs. Lakeland have hidden from the social worker. Some family systems theories assume that if there is a problem in one subsystem (between parents and child), there must be problems in others as well. No such assumption is made in other family system approaches, such as behavioral perspectives. It is assumed that only through assessment can you discover who is involved and in what way. There were no indications that there were problems in the marriage. Mr. and Mrs. Lakeland seemed to work well together to raise their family on a modest income.

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solving problems?; and (2) would an alternative account offer more? Consider the Lakeland family. You could suggest that problems are related to Brian's characteristics, his parents' reactions or characteristics, experiences in other settings (e.g., school), interactions between Brian and his parents, economic stresses on the family, or a mix of these possibilities (see Exhibit 17.3).

Reviewing assessment data with clients provides an opportunity to involve them in making decisions about outcomes and how to pursue them. Be selective to highlight key points and use language that is intelligible to clients. Illustrate your points using examples related to clients' lives. Encourage positive expectations as appropriate, and note the clients' assets and environmental resources that can be put to good use. Exhibit 17.4 gives examples of "putting it all together."

## THINKING ABOUT CAUSES

Identifying the causes of behavior is difficult because (1) they may be unknown, (2) they occur at different levels (e.g., physiological, psychological, sociological), (3) they interact in complex or simple ways, (4) they change over time, and (5) they are influenced by chance occurrences (Haynes, 1992). A given cause may affect behavior differently at different times and places. The organization of knowledge by discipline and profession encourages a fragmented view. The glossary in Exhibit 17.5 shows the complexity of causes.

### Clues to Causality

Clues to causality include the following:

- Contiguity (events occur close together).

**EXHIBIT 17.4**
**Case Examples**

## MRS. RYAN AND THE GREENS

### Developmental Considerations

The Greens' initial interest was to discuss the possibility of finding other living accommodations for Mrs. Ryan. There was a span of 74 years between Mrs. Ryan and the Greens' youngest daughter, who was 15. As Mrs. Ryan grew older, the relationship between her and her daughter and son-in-law changed. They assumed the role of provider. This required adjustments for all of them. The children, too, were experiencing many changes in their lives. Jean, the daughter, was having difficulty freeing herself from her mother's control in order to be able to go out with boys. After the family's move to the suburbs where no transportation was available except by car, Jean spent most of her time watching television, gaining a great deal of weight in the process. She and Mrs. Ryan had many clashes. Mrs. Ryan could not become accustomed to what she considered vast differences in how children were raised today compared with how she was raised almost 80 years ago. Mrs. Ryan also was confronted by her own increasing age and feeling of helplessness and uselessness.

### A Review of Contingencies and Related Effects

Based on the information she collected in interviews, in structured role plays in the office, and by observing the family at home, Mrs. Slater, the social worker, arrived at the following views. In the past, her daughter and son-in-law considered Mrs. Ryan to be an independent, self-sufficient woman and a pleasant companion. Indeed, it was they who insisted that she live with them after Mrs. Ryan's

(*continued*)

**EXHIBIT 17.4** (*continued*)

husband died, and they bought a house that was large enough for Mrs. Ryan to have her own bedroom. But this move made a drastic change in her life: Mrs. Ryan never replaced the valuable social contacts in her life when she moved in with the Greens, and she now found herself stranded in the suburbs and dependent on others for transportation. This was quite different from her previous home, which was just half a block away from the main street of a small town filled with friends. Thus Mrs. Ryan lost many of her reinforcers. She also developed a serious heart condition a year after she moved in with the Greens and was told that she must severely limit her activities, in order to decrease the likelihood of another heart attack. Many friends with whom she had corresponded had died. These losses resulted in a depression of varying intensity that was influenced by how much attention she received from her daughter, son-in-law, and their children. In turn, Mrs. Ryan's behavior influenced how her relatives responded to her.

As Mrs. Ryan offered fewer positive events to the Greens, they offered fewer to her. As the children grew older, the differences in their way of life from Mrs. Ryan's caused further conflict. She began to spend more and more time alone in her room and developed the habit of sleeping most of the day and staying up at night doing chores such as the dishes, which kept the family awake. Not Mr. or Mrs. Green or Mrs. Ryan had effective communication skills for discussing and resolving their differences. Mrs. Green was a classic negative thinker: "Nothing can be done"; "Things won't change, but if they do, it will be for the worse"; "What can we do? This is a terrible situation"; and so on. Mrs. Ryan was overly sensitive to criticism, interpreting requests for behavior changes as slaps in the face, no matter how carefully they were worded. Family members offered too lean a schedule of positive reinforcement to one another and too many aversive events.

A review of desired outcomes indicated that many were interrelated: The Greens' wish to have more time alone was related to Mrs. Ryan's interest in being more active outside the house. Deciding where Mrs. Ryan would live involved many steps, including sharing feelings and getting information about Medicare and aging.

**In Summary**

The Greens are considering having Mrs. Ryan move because of a decrease in shared positive events and increase in unpleasant exchanges. This change is related to the family members' lack of communication skills and Mrs. Ryan's failing to replace lost sources of enjoyment with new ones. Mrs. Slater reframed the presenting concern from making a decision about where Mrs. Ryan would live to gathering information to make this decision. The question now was, could positive events be increased. A review of the resources available to Mrs. Ryan and the Greens revealed many, perhaps the most important being that Mrs. Ryan, the Greens, and their teenaged children liked one another. This increased their willingness to participate in case plans. Community resources such as a local senior center were available. Although the Greens and Mrs. Ryan had to budget their money carefully, they did have enough to get along on, especially if they took advantage of Medicare.

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### Intermediate Steps

Almost all outcomes of interest to these clients were intermediate steps to deciding where Mrs. Ryan would live. Mrs. Slater discussed the relationship of these steps to this decision and suggested that discussion of that decision be temporarily put aside until the desired changes were perused over a 2-month period. They identified outcomes related to each area. Baseline data made it possible to select appropriate intermediate steps. One of Mrs. Ryan's goals was to increase her contacts with other people. Other than going to a lunch meeting of retired civil servants twice a year, she saw only her relatives. Assessment information indicated that she did have skills for meeting and talking to other people; she had had many friends in the community where she had lived. Mrs. Slater joined Mrs. Ryan on a brief walk one day and had an enjoyable conversation with her. She was interested in current events and liked talking about a variety of topics.

Mrs. Ryan's reluctance to participate in the activities at the local senior center was partly due to her reluctant to trouble anyone to drive her there. She refused to allow this, even when she learned that the center had a van and would pick up people at their homes. (It was too far for her to walk there.) As a first step, Mrs. Slater suggested that they visit the center together and get a monthly bulletin describing its activities. After some hesitation, Mrs. Ryan agreed. Other intermediate steps included the following:

- Review the monthly bulletin and select two activities each month that you might enjoy.
- Read the description of the transportation service and arrange for the van to pick you up to attend two events.
- Initiate one conversation at each meeting.
- Obtain the telephone numbers of people you want to contact.
- Telephone one person each week.
- Attend three activities each month at the center.
- Telephone two people each week.
- Invite one person over every other week for tea, or arrange a brief outing such as a shopping trip or lunch.

Intermediate objectives were set for other outcomes as well.

## BRIAN AND THE LAKELANDS

### Developmental Considerations

The Lakelands were a family shifting from raising small children to learning how to handle adolescents. Some of their current difficulties were related to Brian's desire for greater independence. Even though he was 14 and their daughter Joan was only 11, the Lakelands were looking forward to an easing of child-rearing responsibilities.

### A Review of Contingencies and Related Effects

This family was typical of many families experiencing parent–child problems: Undesired behaviors were reinforced and desired behaviors were ignored. The Lakelands' lack of positive parenting skills resulted in an escalation of aversive exchanges. Brian and his parents had fallen into the habit of looking for disliked behaviors rather than reinforcing one another for valued behaviors.

(*continued*)

**EXHIBIT 17.4** *(continued)*

Mrs. and Mrs. Lakeland used threats that they did not enforce and that were either too severe and/or threatened positive activities, such as Brian's paper route. They nagged Brian to try to get him to comply with their requests, repeating their requests over and over, but often they just gave in to his wishes. They offered reinforcers noncontingently rather than contingent on desired behaviors. For example, Brian's allowance was not contingent on any specific behaviors. Contributing factors included both parents' working too much, so they were tired and more vulnerable to stress. Family members did not have negotiation skills to resolve conflicts. Mr. Colvine, their social worker, had looked into the possible relationship between epilepsy and the behaviors Brian displayed and found that there was no evidence that they resulted from the epilepsy per se. This conclusion was supported by a conversation with the family doctor.

**In Summary**

Brian's inappropriate behavior was maintained by attention from parents and siblings. Desired behaviors were not reinforced. Family members exchanged few positive events, such as outings together, and did not possess effective problem-solving skills. Brian had no study schedule, so his homework often remained undone, which contributed to his poor grades. It also seemed that he could use tutorial help in mathematics and a more suitable place to study. Contingencies would have to be rearranged and constructive problem-solving skills increased.

**JULIE**

**Developmental Considerations**

Julie was in a stage of rebellion against her parents, who were very strict. She felt overwhelmed by the pressures that seemed suddenly to descend on her, such as deciding what to do about sex, how far she should push her parents, and what she wanted to do with her life.

**A Review of Contingencies and Related Effects**

Julie's decision was easy for her to put off, since the ultimate aversive consequences were distant. These would have to be made more current through identification of alternatives and the advantages and disadvantages of each. Her stress interfered with careful considerations of different options. This would have to be decreased. This stress also interfered with Julie's enjoyment of her everyday life. Assessment indicated that Julie had inferiority feelings about her looks, was easily pressured into sexual intercourse even though she did not want it, had little information about birth control, and had ambivalent feelings about having sex.

- Temporal order (the presumed cause occurs before the presumed effect).
- Covariation (as one changes, the other changes).
- Alternative explanations can be ruled out.
- There is a logical connection between the variables; a sound argument can be made for the link.

Attention to only one of the conditions may result in the incorrect belief that because an event follows another, it is caused by it. Haynes (1992) argues that *constant conjunction* (two events always occurring together) is not applicable to the social sciences because of the complexity of causes related to behavior.

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**EXHIBIT 17.5**
**Glossary Related to Concepts of Causality**

**Causal model:** Assumptions about the cause(s) of behavior.
**Critical periods:** The effects of a variable depend on age or developmental stage.
**Equilibrium time:** Time required for the effects of a causal variable to stabilize.
**Latency of causal effects:** How long it takes for a cause to affect behavior.
**Mediating variable:** A variable that can strengthen or weaken the relationship between two other variables.
**Necessary cause:** Y never occurs without X.
**Necessary and sufficient cause:** Y occurs whenever X occurs, and Y never occurs without X.
**Parameter:** Dimensions of a variable (e.g., depression) that can be measured (e.g., magnitude or duration). This term also is used to describe the characteristics of a population, in contrast to the characteristics of a sample.
**Probabilistic nature of prediction:** Predictions are always imperfect, some are more probable than others.
**Sufficient cause:** Y occurs whenever X occurs.
**Temporal precedence:** X must precede Y if X is a cause of Y.
**Vulnerability:** The probability that a causal variable will result in a behavior; the magnitude of the variable that is necessary to create the behavior (p. 123).

*Source: Based on S. N. Haynes (1992).* Models of causality in psychopathology: Toward dynamic, synthetic and nonlinear models of behavior disorders. *New York: Macmillan.*

### Necessary and Sufficient Causes

Variables related to problems may be *necessary* (a condition that must be present if the effect occurs), *sufficient* (a condition that by itself will bring about change), or *necessary* and *sufficient* (a condition that must be present for an effect to occur and one that by itself will bring about an effect). Rarely can we point to necessary and sufficient conditions related to problems.

### Interrelated Causes

Explanations differ in the system level(s) to which they appeal (e.g., biological, psychological, sociological) and how integrative they are (the extent to which relationships among different causes are recognized). Contributory causes often come into play that help to create the total set of conditions necessary and sufficient for an effect. Social problems are usually related to factors at many interconnected system levels. For example, poor funding of schools, combined with modest or low income, influences students' opportunities to do well academically. These opportunities, in turn, affect other outcomes such as employability. Consider Brian and his parents. If more money were available for special-education programs and related assessment services, smaller classes, and better preparation of teachers, Brian's grades might be better. Temperamental dispositions may increase the likelihood of certain kinds of behavior, which in turn influence how others respond. A contextual framework will help you avoid incomplete accounts that recognize only one cause of a problem.

### Individual Differences in the Strength of Causal Variables

The strength of causal variables differs among individuals with the same problem-related behaviors. People differ on

- The number of variables of which their behavior is a function.

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- Which variables influence the onset, magnitude, and duration of behavior.
- The relative strength of individual causal variables.
- The role of mediating variables.
- Predispositions and vulnerability to particular events.
- The setting generality of causal relationships.
- The paths through which causal effects occur. (Haynes, 1992, p. 108)

The variation in causal relationships highlights the importance of a contextual, multifocused assessment. Ideally, intervention should focus on the key causal variables. This requires estimating the weights of different variables before intervening (Haynes, 1992, p. 109).

### Causes and Explanations

Causes differ in their explanatory completeness. Identification of causes is not necessarily explanatory. For example, the cause of an illness (such as cancer) and its symptoms and associated pathology may be known, but the etiology may not be understood. People use different criteria to decide when an explanation is at hand (e.g., it allows accurate prediction, it "makes sense"). What's best depends on your purpose. The goal of helping clients highlights the value of explanations that yield intervention guidelines.

### Compatibility with What Is Known About Behavior

Beliefs about causes differ in the extent to which they are compatible with what is known about behavior; for instance, claims of "levitation" (the ability to float in the air) are not compatible with the laws of gravity. Lack of generalization of positive outcomes over settings and time is a major problem in helping clients. Thus, a plan that does not take this into account is not compatible with what is known about behavior.

### The Fallacy of False Cause

In the *fallacy of false cause*, we inaccurately assume that one or more events cause another. Consider Clever Hans, the wonder horse. Clever Hans supposedly could solve mathematical problems. When presented with a problem by his trainer, he would tap out the answers with his hoof. Many testimonials were offered in support of his amazing ability. But then a psychologist, Oskar Pfungst, decided to study the horse's ability. He systematically altered conditions to search for alternative explanations. This exploration revealed that Clever Hans was an astute observer of human behavior. He watched the head of his trainer as he tapped out his answer: His trainer would tilt his head slightly as Hans approached the correct number, and Clever Hans would then stop (reported in Stanovich, 1992). *Confounding factors* (variables that are related to both some characteristic and an outcome) are one reason for the spurious appearances of causation.

***Underestimating Coincidences and the Play of Chance.*** We tend to underestimate the frequency of chance events. What do you think the odds are that in a class of 23 people, two will have their birthday on the same day? The odds are over 50–50. One reason behavior is so difficult to predict is that chance (accidental events) plays a role in our lives. That is, the occurrence of important causal events may not be predictable because such events may not be under our control and may be unexpected. Consider fires, earthquakes, and many illnesses. One of the subjects of great literature are the ways in which individual lives are affected by historical events (wars, famines). Unexpected deaths or meetings may change our lives dramatically.

***Mistaking Causes and Their Effects.*** Is depression a cause of marital conflict, or is marital conflict a cause of depression? Is cognitive disorientation a result of being homeless, or does being homeless cause cognitive disorientation? Tavris (1992) argues that the depression that many women complain of is often a result of gender role expectations (e.g., that women be the major caretaker of children) that limit women's opportunities for well-paid work. Can you think of any other examples?

The fundamental attribution error may result in

mistaking effects for causes. Consider for example, Jimmy, a 12-year-old black student, who was referred because of apathy, indifference, and inattentiveness to classroom activities (Sue & Sue, 1990, p. 44). The counselor believed that Jimmy harbored repressed rage that needed to be ventilated and dealt with. He believed that Jimmy's inability to express his anger led him to adopt a passive–aggressive means of expressing hostility (i.e., inattentiveness, daydreaming, falling asleep) and recommended that Jimmy be seen for intensive counseling to discover the basis of his anger. After 6 months of counseling, the counselor realized the basis of Jimmy's problems. He came from a home of extreme poverty, where hunger, lack of sleep, and overcrowding sapped his energy and motivation. That is, his fatigue, passivity, and fatalism were more a result of poverty than some innate characteristic.

***Mistaking Correlations and Causation.*** The fallacy of false cause may occur because correlations are mistaken for causes. We may assume that because two variables (brain and foot size) covary, one causes the other. Although we may scoff at the idea that brain size causes foot size, other mistaken assumptions based on confusions between correlations and causation may not be so obvious. The history of the professions provides many illustrations of the confusion between correlation and causation. For example, people used to think that tuberculosis was inherited because people who lived together often got it. Consider also the common assumption that low self-esteem causes problems such as depression. In fact, both low self-esteem and depression may be related to other variables (e.g., a high frequency of punishing experiences and a low frequency of positive feedback in the past and the present). Our tendency to overestimate correlations heightens our susceptibility to this error.

## Dead-End and Incomplete Accounts

*Dead-end accounts* are those that do not provide guidelines for achieving valued outcomes. They may get in the way of discovering promising options. "After-the-fact" accounts describing what people did (and why) may sound profound but may not provide "before-the-fact" information that help you and your clients select effective plans. Dead-end accounts may be incomplete (omit crucial causes). *Incomplete accounts* include only some pieces of a puzzle. They may focus on thoughts without relating them to what people do in specific situations. Another kind of incomplete account is assuming that behavior causes another behavior without asking about the causes of both. For example, self-esteem is often accepted as a cause of behavior. But where does self-esteem come from? You may assume that your success in a job interview is due to high self-efficacy (an expectation that you will succeed). A more complete account would include information about your history in related situations. Rather than self-efficacy (or self-esteem) being the cause of doing well, it may be a product of past successful experiences. We feel confident in situations in which we do well.

***Confusing Form and Function.*** Focusing on the form of behavior (hitting) and overlooking its function (removing demands) may result in incomplete accounts. This error is less likely if practice theories emphasize the distinction between form (the typology of behavior) and function (what maintains the behavior—why it occurs). Simply describing behavior does not provide information about its function (why it occurs). The context in which behavior occurs must also be explored. If you know the circumstances in which a client is likely to engage in certain behaviors, you have information about how you might alter the environment to influence these behaviors. Ignoring the context encourages excessive focus on psychological causes. For example, individual counseling may be recommended for an adolescent having problems at school that are related to the reactions of her peers and teachers as well as to the economic stress experienced by her single parent. A problem-oriented curricular design (e.g., aging, health, family) may encourage the confusion of form and function. It may discourage recognition of similar kinds of contingencies of reinforcement that apply to different problems.

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## GUIDELINES FOR DISCOVERING CAUSES

The following guidelines should help you avoid common errors in thinking about causes such as the confirmatory bias. Many errors involve partiality in the use of evidence (looking at only part of the picture) (see Exhibit 17.6). The "shortcuts" we use to make decisions (e.g., relying on what's available, such as a familiar practice theory) may lead us astray. Once we have accepted a view, it may bias our subsequent search (what we look for and discover). Overlooking the inaccuracy of data may result in unwise practice decisions.

### Clearly Describe Problems and Related Factors

Vague descriptions of problems make it difficult (or impossible) to discover related factors. Another way to get bogged down is to focus on problems rather than related factors. Rather than focusing on elder or child abuse per se, identify factors related to the abuse and address them.

### Watch Out for the Fundamental Attribution Error

We tend to focus on attributes of the person and to overlook environmental variables (i.e., fall into the fundamental attribution error). This, combined with the greater vividness of negative behaviors, often results in pathologizing clients. To avoid doing this, be sure to consider the context in which the behaviors or conditions of concern occur. The more clearly you describe this, the more information you will have about problems and related factors. You may overlook environmental influences because you focus on psychological characteristics and rely solely on self-report data that may not reflect what is really happening. Our thoughts and feelings in problem-related situations are often more vivid than associated environmental contingencies, and so it is easy to focus on them as causes and to overlook environmental influences.

### Be Data Focused

Speculative thinking may be relied on "to solve problems which can only be solved by the observation and interpretation of facts. . . . The belief that one can find out something about real things by speculation alone is one of the most long-lived delusions in human thought" (Thouless, 1974, p. 78). We often are guilty of the contrary-to-fact hypothesis in which we state "with an unreasonable degree of certainty the results of events that might have occurred that did not" (Seech, 1993, p. 131). An example is, "She felt sad because of her neighbor's family problems. If only she hadn't gotten married at such an early age, she would be a happier woman today" (p. 131). Speculation is valuable in discovering new possibilities but, it does not offer information about whether these insights are correct. What **is** cannot be deduced from what **ought** to be. Speculation is not without its effects, since theories influence what we look for.

Chapman and Chapman (1969) reviewed the reports of 32 practicing clinicians who analyzed the Rorschach protocols of homosexual men. These clinicians listed signs that had face validity but were empirically invalid as responses characteristic of homosexual men. They selected signs based on "what seemed to go together"—on what "ought" to exist—rather than on empirically determined associations between signs and criteria. Clinicians were more likely than naive observers to report illusory correlations. Such studies illustrate that expectations based on theories and semantic associations overwhelm the influence of data that do not match these expectations or even refute them. This tendency is encouraged by the **confirmatory bias** (seeking data that confirm our beliefs and overlooking data that do not). For example, we often attend to only the positive-positive cell of a four-cell contingency table (see later discussion in this chapter.

There is nothing odd or negative about weighing data in relation to available theories. The problem arises when we invent ad hoc accounts for the purpose at hand and overlook points-of-view (causes) that would have predicted other events or relationships and never reconsider them when our initial beliefs are shown to be incorrect (Einhorn, 1980). This tendency may be heightened in eclectic practice in which we use ad hoc theories or notions that may actually contradict each other.

## EXHIBIT 17.6
## Sources of Error That May Result In Inaccurate or Incomplete Problem Structuring

| Source | Description |
|---|---|
| 1. Partiality in the use of evidence. | Overlooking, distorting, or discounting contradictory evidence. Giving favored treatment to favored beliefs. (see for example items 2 to 7.) |
| 2. Rationalizing rather than reasoning (justifying rather than critiquing). | Focusing on building a case for a position rather than gathering information impartially. This is an example of item 1. |
| 3. Focusing on irrelevant or incorrect reasons (fallacy of false cause). | Selecting irrelevant or marginally relevant reasons or "evidence" to support beliefs or actions. The conclusion may have nothing to do with the reasons provided. |
| 4. Jumping to conclusions. | Failing to treat a belief or conclusion as a hypothesis requiring scrutiny. |
| 5. Unwarranted persistence. | Not changing your mind even when there is compelling evidence to do so. |
| 6. Categorical rather than probabilistic reasoning. | Reducing options to two possibilities (either _____ or _____). |
| 7. Confusing naming with explaining (e.g., "diagnosing" rather than contextually assessing). | Assuming that giving something a name (e.g., bipolar personality disorder) explains it and offers intervention leverage. |
| 8. Confusing correlation with causation. | Assuming that an association between two or more events indicates causation. |
| 9. Confusing shared with distinguishing characteristics. | Focusing on characteristics that may not distinguish among different groups/causes. |
| 10. Faulty generalization. | Relying on small or biased samples; assuming that what is true of the whole is true of the parts, or vice versa. |
| 11. Stereotyping. | Incorrectly estimating the degree of variability in a group. |
| 12. Influence by consistent data. | Being influenced by data that do not offer any new information but are merely consistent with data already available. |
| 13. Lack of domain-specific knowledge. | Not having information needed to clarify and understand problems (e.g., facts, concepts, theories). This source of error is related to many others in this list. |
| 14. Confusing form and function. | Mistakenly assuming that similar forms of behavior have similar functions and different forms of behavior reflect different functions. |
| 15. Simplistic accounts. | Relying on accounts that ignore important causes and/or overlook uncertainties. |
| 16. Vagueness. | Vaguely describing problems and/or causes. |
| 17. Uncritical acceptance of explanations. | Accepting explanations without evaluating them and comparing them with alternative accounts; not checking whether a belief is consistent with known facts; selecting untestable beliefs. |
| 18. Assuming that a weak argument is not true. | Assuming that because you cannot offer a convincing argument, a claim is false. |
| 19. Reliance on ad hoc explanations. | Making up explanations as you go along, even though they may contradict one another or be circular (explain nothing). |
| 20. Incorrect weighing of different contributors. | Not weighing contributing factors in relation to their importance. |
| 21. Misuse of speculation | Believing that you can find out what is going on just by thinking about it. |
| 22. Overcomplex accounts. | Relying on needlessly complicated accounts that obscure causes. |
| 23. Ecological fallacy. | Assuming that an association between two variables on a group level is also true on an individual level. |
| 24. Confusing correlations and baserates. | Incorrectly assuming that a correlation reflects the base rate. |
| 25. Relying on questionable criteria for evaluating the accuracy of claims. | Examples include consensus, authority, and tradition (see Exhibit 4.5) |
| 26. Using a general rule that is not applicable to a particular situation. | Assuming that because agency administrators are usually fair that a particular administrator was fair on a certain occasion. |

*Note:* The sources of error described may be (and usually are) not related to intentions. Caring about people is not enough to avoid them.

Being data focused rather than theory focused will help you to avoid premature and excessive reliance on dubious accounts (Einhorn, 1980). The more tenuous a theory is, the less you should rely on it when assessing data, and the more attention you should pay to the data. What exactly is the problem? Exactly how is it manifested? What factors have been observed to be associated with it?

### Focus on Informative Data

The data you have gathered could be (1) relevant (help you and your clients select effective intervention methods), (2) irrelevant, or (3) misleading. Focus on relevant data. Irrelevant data may lead you astray. A few worthless items can dilute the effect of one helpful item. Consider the study in which social work graduate students were asked to estimate the likelihood that some people were child abusers. Being told that the person "fixes cars in his spare time" and "once ran away from home as a boy" decreased the effects of the description of this man as having "sado masochistic sexual fantasies" (see Nisbett & Ross, 1980, p. 155). There is no research showing that people who fix cars in their spare time and once ran away from home as a boy are more (or less) likely to abuse their children. Irrelevant material about this person tended to make him less "similar" to someone who might abuse his child. When irrelevant data are given about a case, we often rely on this and ignore data describing what is "normative" (typical behavior) in a situation. That is, in thinking about what a particular person might do in a situation, we tend to disregard data that describe how people usually act (i.e., consensus data) even though this may help us predict what an individual would do. Ask: "Is this data relevant here?" How so?

We tend to focus on vivid events and to overlook those that are important but not vivid. We tend to recall vivid examples that may mislead us about factors related to a problem. In trying to explain why negative exchanges weigh so heavily in basically positive relationships (they may ruin a friendship), Rook (1984a) suggested that the positive behaviors exchanged became the expected background and so are less vivid than the rare negative events.

### Assess Rather Than Diagnose, or Explain Rather Than Name

Problem solving can be likened to walking along an unknown path with many dead ends. One kind of dead end is simply naming (e.g., labeling) something (a problem or behavior of interest). Suppose that you see a homeless person on the street gesturing oddly and talking to himself. You may think, "He is mentally ill." Is this label helpful? Does it decrease uncertainty about how you could help him? If behavior is multidetermined, using a vague label (e.g., depression, anxiety, attention deficit disorder) is of little or no value.

> Intervention programs cannot be based solely on a diagnostic or classification category such as "depression" or "attention-deficit disorder" because such topographically based [form] diagnoses do not identify which of many possible determinants are operational for a particular client. Diagnoses typically provide only an array of possible causal factors. The generalizability of the suggested variables and weights to a particular client cannot be presumed.
>
> Diagnosis can facilitate the design of intervention programs only if any of three conditions are met: (1) specific causal paths are invariably associated with specific diagnostic categories, (2) a hierarchy of the most probable paths or their weights is associated with specific diagnostic categories, and/or (3) effective interventions are available for specific diagnostic categories regardless of within-category variance in causality. These conditions are seldom met. (Haynes, 1992, p. 109)

Assessing rather than diagnosing will help you avoid explanatory fictions (terms that seem to offer information but do not). Pseudoexplanations (circular accounts) are prime examples. In a circular account, we use a behavior to infer an explanation and appeal to the same behavior to support our explanation (no additional information is provided). For example, a teacher may "explain" a student's hitting other children by stating that he is aggressive and, when asked how she knows, may say, "Because he hits other children." Failing to elaborate the "problem space" (to complete a contextual analysis) is a principal cause of ineffective

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problem solving (Nickerson, Perkins, & Smith, 1985).

### Avoid the Single-Cause Fallacy: Ask "What's Missing?"

Just as an explanation may be overly complex and obscure options, it also may be incomplete (overlook causes) and obscure options. We may assume (incorrectly) that different problems have one cause. Rarely is behavior related to one cause. For example, recent investigations of relapse in depression suggest many related factors, such as age, gender, past history of depression, current stresses, and availability of a social support (Krantz & Moos, 1988). Simplistic accounts in which the cause of complex problems such as family violence is attributed to one factor (e.g., past history of violence) can be misleading. Thinking in either/or terms and relying on the "best-guess strategy" (simplifying complex situations by ignoring or discounting uncertainties) encourage selection of simplistic accounts. Ask yourself, Does my account consider major influences? Have I left out important influences?

### Avoid Unnecessarily Complex Accounts

Just as an account may be overly simple (overlook causes related to a problem), it may be overly complex (unnecessary concepts may be used that get in the way of discovering causes). This is why parsimony is emphasized in science (see Chapter 4). Although general sensitizing concepts can be helpful in the exploratory stage of problem solving, they must be clarified to obtain a detailed understanding of problems and options for resolving them. We tend to believe that vague, jargon-filled accounts are more profound than clearly stated ones (Armstrong, 1980).

### Watch Out for Illusory Correlations

Mistaken assumptions about causes may be due to incorrect estimates of the degree to which two or more events covary. Covariations (and thus causal relationships) are often assumed between certain characteristics (e.g., personality traits or recent life changes) and problems or between certain symptoms and diagnostic categories (e.g., vigilance for danger and generalized anxiety disorder). "Everyone possesses what might be called 'data' on the degree of covariation between various socially relevant dimensions and behavior dimensions, but the data are usually skimpy, hit-or-miss, vague, and subject to bias and distortion in both encoding and recall" (Nisbett & Ross, 1980, p. 98). Covariations may be assumed on the basis of a belief that causes are similar to their effects (our old friend the representativeness heuristic). We tend to overestimate the size of correlations between factors that we believe "go together" and to underestimate the degree of covariation when we do not have any particular preconceptions about the relationship between two or more factors (Jennings, Amabile, & Ross, 1982). Incorrect estimates often persist despite disconfirming information. For example, a clinician may insist that a woman is schizophrenic because she was once labeled a schizophrenic, even though there is no current evidence to support this diagnosis.

Expectations of consistency encourage illusory correlations. We tend to assume that people behave in trait-consistent ways when, in fact, correlations between personality traits and behavior are often relatively low (e.g., Mischel, 1968). One reason for this is that "we tend to see most people in a limited number of roles and situations and thus are exposed to a more consistent sample of behavior than we would obtain from a true random sample of a person's behavioral repertoire" (Nisbett & Ross, 1980, p. 107). Apparent discrepancies are readily explained away. Subjective feelings of control are enhanced by the belief that other people are consistent in their traits and thus are predictable.

How do we get through a day if our power to deduct covariations is so poor? As Nisbett and Ross (1980) note, we may be better able to detect covariations in more specific domains. Consider the consequences of turning the steering wheel when driving a car: each movement has an immediate effect; that is, each change has an immediate feedback. Such direct experience offers an opportunity to correct misleading beliefs about what "ought" to

go together. However, if our preconceptions are rigid and the feedback is vague or irrelevant, experience may do little to alter incorrect beliefs.

***Examine All Four Cells.*** We tend to focus on our "hits" when estimating covariation. This encourages false estimates that may result in incorrect beliefs about causes. For example, parents often worry that their teenaged children will have a car accident. Let's say that a mother worries, and her son then is in an accident (Jensen, 1989). The parent may attribute this to "clairvoyance" or some other mystical power. Only the "hits" (worry followed by accident) receive attention; false alarms, misses, and correct rejections are ignored (see Exhibit 17.7). The tendency to ignore negative instances encourages beliefs in suspect causes such as psychic powers. People who say that their prayers are answered usually do not consider the times they prayed and their prayers were not answered. That is, they do not keep track of all the times they prayed, noting the outcome for each. "Answered prayers" are more vivid. The confirmatory bias (our tendency to search selectively for evidence that supports our preconceptions) encourages a focus on hits. We must examine all four cells in a 2 × 2 contingency table.

**EXHIBIT 17.7**
**Contingency Table**

| | | *Worry* | |
|---|---|---|---|
| | | Yes | No |
| *Accident* | Yes | Hit | Miss |
| | No | False Alarm | Correct Rejection |

Sometimes people make inferences based on only one row in a 2 × 2 table. Consider reports of being abused as a child and whether or not an individual was in fact abused. We must examine all four cells in a 2 × 2 table (Dawes, 1994). We must consider those who have and have not reported abuse and those who have actually been and those who have not been abused. In everyday practice, only one row of a four cell contingency table is available to counselors. Consider people who have or have not been caught for abuse and whether they are or are not abusers. We don't know who would be represented in the other row (not caught). As Dawes points out, often, we do not think in comparative terms. "We match (often from memory) rather than compare," (p. 4). Statements that sound convincing may in fact be quite inaccurate." The only way to avoid these kinds of errors, as Dawes notes, is to make it a habit to elaborate joint probabilities (i.e., draw a 2 × 2 contingency table). (See also, Dawes 1982, 1993.)

### Pay Attention to Base Rates

Base rates indicate the prevalence of a behavior or event in a population. Only some parents who were abused as children abuse their own children (estimates range from 40 to 60%). We tend to rely on data about a particular case and to ignore base rate probabilities. Imagine that you have just left a staff position in a shelter for battered women where 90% of the clients seeking services had been abused. You are now working in a community mental health center in which the base rate of battered women is much lower, say 10%. Ignoring these different base rates may result in incorrect assumptions that clients have been battered when they have not been. Base rate data are not as vivid as characteristics of the client whom you see during interviews. It thus is easy to overlook this information, even though it is important to consider when making decisions. If we rely on resemblance criteria (similarity) to evaluate probability, we may overlook prior probability (base rate data) (Tversky & Kahneman, 1974, p. 1124). We can use Bayes's

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theorem to consider base rate data (prior odds) (for further details, see Gibbs, 1991).

### Watch Out for Sample Bias

Practice decisions are made on the basis of samples of behavior or conditions. Helpers often make generalizations about what clients do in real-life contexts based on how they act during interviews. Inaccurate assumptions may result from **overgeneralizations** based on small, biased samples. We often overlook **selection bias.** Consider the assumption that since students' achievement in private—compared with public—schools is superior, private schools are better. What do you think?

### Watch Out for Anchoring Effects

We tend to be influenced by what we first see or think of. This influences later judgments. Make it a habit to question initial impressions.

### Search for Alternative Accounts

We tend to seek data that confirm our views and not to look for evidence against them. This is known as the *confirmatory bias* or *self-fulfilling prophecy*. This style of search often results in faulty judgments (Einhorn & Hogarth, 1978). Studies of medical decisions show that overinterpretation is a key source of error (contradictory evidence is ignored or is incorrectly assumed to support preferred views) (Elstein et al., 1978). We use different standards to criticize evidence against our views when we use to evaluate evidence that supports them. Evidence that is mixed (it provides some support for and some against favored views) increases the confidence of believers of both views (Lord, Ross, & Lepper, 1979). We readily think up causes. We have an investment in understanding and predicting what happens around us. A premature focus on one possibility will get in the way of considering alternative views. Unless your assumptions about causes provide guidelines for removing complaints or unless you must act quickly ("shoot from the hip"), you should consider alternative possibilities.

### Enhance Your Understanding of Probabilities

Misunderstanding regarding probabilities may result in faulty problem structuring. Different kinds of probabilities include: (1) *compound* (probability of X *and* Y), (2) *conditional* (probability of X *given* Y), and (3) *simple* (X). In the conjunction fallacy, we overlook the fact that the probabilities of A and B *both* occurring must be less than the simple probability of A or the simple probability of B. Consider the example given by Tversky and Kahneman (1983) in which subjects received the following facts about Linda, a 31-year-old single, outspoken, bright student who majored in philosophy. She was very concerned with issues regarding discrimination and social justice and took part in antinuclear demonstrations. Subjects were asked to evaluate the following:

a. Linda works in a bookstore and takes Yoga classes
b. Linda is active in the feminist movement
c. Linda is a psychiatric social worker
d. Linda is a bank teller
e. Linda is an insurance salesperson
f. Linda is a bank teller and is active in the feminist movement

Statement (f) is the conjunction of (b) and (d). The probability of (f) cannot be greater than either (b) or (d). However most subjects believe that (f) is more probable than (d) (perhaps because of the representative heuristic (see Chapter 5). Because we are influenced by representativeness (the similarity of events) we often make inferences with no reference to known or estimated base rates of the characteristic in question. Dawes (1988) gives the example of assuming that low self esteem (c) results in problems (P) because people who consult counselors regarding problems have low self-esteem. This confuses P (c|S)—the probability of low self-esteem given problems and (p S|c)—the probability of problems given low self-esteem. As Dawes points out, we do not know (p S|c) is high "because clients come to [counselors] because they

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have problems" (p. 76). The counselors' experience is conditional on S. Also, as Dawes points out, peoples' self-esteem may be poor *because* they have problems. (See also Appendix 5A illustrating that conditional probabilities are not symmetric.) Readers of books on sexual abuse are often asked to review a length list of symptoms to see if they have indicators of sexual abuse. One problem here is assuming that the probability of a symptom (e.g., suicidal thoughts) is the same as the probability of an underlying problem or experience (e.g., sexual abuse as a child) (Ofshe & Watters, 1994). Symptoms such as depression are much more common than any one underlying cause. When we do not consider this, we are subject to illusory correlations (e.g., between symptoms and presumed causes).

### Watch Your Language

The role of language is discussed at many points in this book. Language influences how successful we are in communicating with ourselves as well as with clients and colleagues. Some uses of language have an almost magical quality, as when we label a behavior and think that we have explained it when we have not (see the earlier discussion of naming versus explaining). It is easy to slip from describing someone (She complains about being lonely) to a causal inference that provides little or no intervention leverage (She has a dependent personality). We tend to convert trait names (e.g., aggressive) into presumed causes (e.g., aggressive personality) that get in the way of searching for problem-related factors. Psychobabble (vague, obscure, excessively abstract concepts) obscures rather than clarifies.

### Acquire Domain-Specific Knowledge and Skills

You may need domain-specific knowledge to understand and resolve a problem and so may have to read problem-related scientific literature. Many helpers are unaware of the influence of schedules of reinforcement on behavior and so mistakenly attribute the cause of problems to personal characteristics (low self-esteem), overlooking the role of scheduling effects (see Chapter 8). Lack of knowledge about the effects of certain physical illnesses or drugs may result in incorrect assumptions about the cause of an elderly client's "depression."

### Be Aware of What You Don't Know

Be honest about what you know and do not know. Knowledge about how to help clients is usually incomplete. Source of uncertainty include potential effectiveness of different methods, the accuracy of assessment and evaluation measures, and the future course of certain behavior patterns. Recognizing uncertainty in problem solving can help you avoid overconfidence and make better decisions. Witte, Witte, and Kerwin (1994) offer a course on medical ignorance at the University of Arizona School of Medicine to highlight the importance of knowing what is not known as well as what is.

### Watch Out for Redundant Data

Our tendency to collect redundant information encourages a false sense of overconfidence. You may, for example, ask a client who complains of depression about her past history of depression. In selectively scanning for depression, you may overlook periods of happiness and related factors.

### Take Advantage of Helpful Tools

Making practice decisions often requires combining different kinds of data (e.g., self-report and observational data). Let's say you have to decide whether to remove a child from his home. You may want to consider the probability of further abuse, steps that can be taken to avoid it, the safety provided in other settings (foster homes), and so on. Integrating different kinds of data is difficult. You should consider both new information and information you already have. Two kinds of odds should be considered: (1) prior odds (odds before additional material is available) and (2) posterior odds (odds after considering additional data). The addition of more information should change prior odds.

**EXHIBIT 17.8**
**Bayes's Theorem**

New information should be considered together with information you already have. Let's assume that you think there is a 90% probability that Brian's behavior is due to poor parenting skills but decide to check out your views by asking his parents to complete a test of parenting skills. What if they receive a high score on appropriate parenting behaviors? How will you combine this information with data already available (e.g., observation of family interaction)? You should consider two kinds of odds (Arkes, 1981). One kind is prior odds—odds before additional material is available. Obtaining more information (data that decrease uncertainty) should change these prior odds. Bayes's theorem can help you combine different sources of data (e.g., your observations and a score on a test) in a way that makes use of multiple sources of information. Without this, we tend to disregard information (e.g., beliefs based on observation of family interaction). We can use Bayes's theorem to consider base-rate data (prior odds) that we tend to ignore (see Gibbs & Gambrill, 1996). You may need to use both astute intuitive judgments and Bayes's theorem to make accurate estimates.

Bayes's theorem can help you combine different sources of data. Without this, we tend to disregard prior information (see Exhibit 17.8).

You could use computer programs that are based on practice-related research as a decision making tool (for example, to assess risk or allocate services such as homemaker chore time (Clark, Miller, & Pruger, 1980; Schuerman, 1995). Different weights could be assigned to different sources to reflect their importance. Using such programs can enhance both the accuracy and equity of decisions (clients with similar needs receive similar services). More than 100 studies show that empirically based actuarial methods are superior to clinical judgments in making decisions in a number of areas, including the diagnosis of medical and psychiatric disorders, the prediction of treatment outcome, and the length of hospitalization (Dawes, 1994a; Dawes, Faust, & Meehl, 1989). Statistical or actuarial judgment involves the systematic combination of data from many sources, including life history, test scores, ratings of behavior, and subjective judgments based on interviews. It draws on both expert opinion and empirical data describing the relationship between certain outcomes (e.g., hospitalization) and "predictors" (e.g., severity of diagnosis). Visual models such as flowcharts and decision trees may be useful (see Exhibit 17.9).

### Be Rational (Flexible)

One definition of rationality is changing your mind when the data indicate that you should. Our tendency to be overconfident of our judgments and to look for data that confirm our views (the confirmatory bias) encourages unwarranted persistence. Change your mind when you have good reason to do so.

### Avoid False Dilemmas

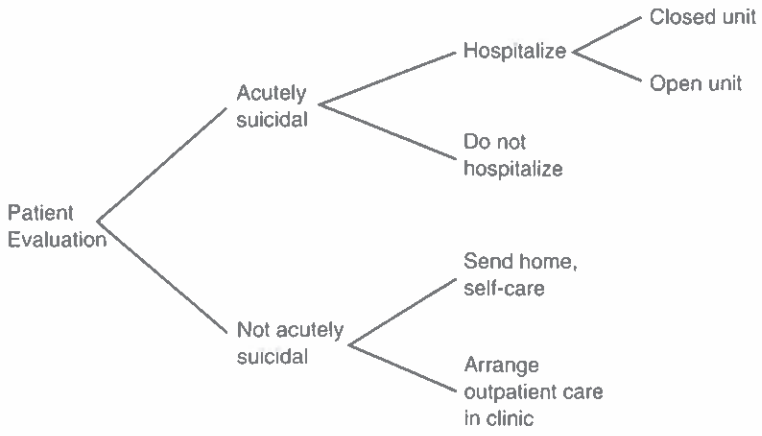
We often think in either/or terms when searching for causes and selecting service plans. We may think it must be either _____ or _____ when in fact there may be a number of possibilities.

## REVIEWING YOUR INFERENCES

Can you make a well-reasoned argument for your assumptions? Guidelines for presenting arguments are as follows:

- Clearly identify your conclusion and premises.
- Separate evidence and inferences.
- Use accurate premises.
- Avoid overstating inferences.

**EXHIBIT 17.9**
**Example of a Tree Diagram**




**Source:** T. G. Gutheil, H. J. Bursztajan, A. Brodsky, & V. Alexander (1991), *Decision making in psychiatry and the law* (p. 44). Baltimore: Williams & Wilkins.

- Review your argument for fallacies.
- Search for alternative accounts.

Can you make a well-reasoned argument that the objectives you and your clients have decided to pursue will resolve the problem? Is there a clear relationship between assumptions about causes and selection of outcomes? Is your account compatible with what is known about behavior and about this particular problem? Can a stronger argument be made for some other account?

The main point of critiquing an argument is to show that some inconsistency or implausibility is involved in accepting the premises and rejecting the conclusion (Scriven, 1976, p. 32). Focus on criticisms that are relevant to the main thrust of an argument (strong criticisms) rather than nitpick (use weak criticisms). Are there hidden assumptions? What are they? Consider both the factual soundness of an argument and its logical soundness. An argument can be logically sound but lead to false conclusions because of one or more false premises. The steps involved in getting from the premises to the conclusion may be obscure because steps have been left out. Inaccuracies are easier to spot if you put an argument into visual or diagrammatic form. Consider the argument that smoking marijuana implies with high probability using hard drugs such as heroin (see Chapter 5, Appendix A). This argument is an example of the confusion of the inverse (the confusion between the probability of using heroin if you smoke marijuana and the probability of smoking marijuana if you use hard drugs). The two probabilities are quite different.

### On the Use and Misuse of Intuition

Although intuition is an invaluable source of ideas about what may be true or false, it is not a sound guide for testing those beliefs, as discussed in Chapter 4. There are over 100 studies showing that actuarial methods are superior to intuition in making decisions in a variety of fields (Dawes, Faust, & Meehl, 1989). Jonathan Baron defines intuition as "an unanalyzed and unjustified belief" (1994, p. 26) and argues that because beliefs based on intuition may be either sound or unsound, basing beliefs on intuition may result in consequences that harm people. Attributing sound judgments to "intuition" decreases opportunities to teach helping skills (one has "it" but doesn't know how or why "it" works). Relying on intuition, or what "feels right," is not wise if it results in ignoring information about problems, causes, and remedies, including possible

consequences of given courses of action. There is no doubt that knowledge is fragmentary, forcing you to rely on questionable beliefs to fill in the gaps. What is ethically questionable is relying on intuition when other grounds—including a critical examination of intuitively held beliefs—will result in sounder decisions.

## IDEALS AND ACTUALITIES

The purpose of assessment is to find out what is needed and what can be offered. Think of a balance scale. The balance will often reveal many problems and few resources. An "impossible job" is one in which you do not have the resources (e.g., time) to solve the problems you confront or can only minimally address them. Case management, for example, will not substantially change structural and fiscal problems that limit the kinds of outcomes that can be achieved (Austin, 1992).

### When a Contextual Framework Is Not Preferred

Adequate assessment may not be possible because your supervisor or agency relies on practice frameworks that yield incomplete accounts of problems and related circumstances. Some of my students want to use effective methods but cannot do so. They may not be permitted (or may not have the time) to gather observational data needed to clarify problems, outcomes, and related factors. Their options for speaking up and changing inadequate and/or harmful practices and policies may be limited. Supervisors may favor an interview style emphasizing individual states and conditions and background information and inferences not closely tied to observational data.

### Contextual in Name Only

Practice may be contextual in name only. Staff may say they use a contextual approach but reveal by their actions that they do not. Multiple services may be offered with little integration to avoid duplication and working at cross-purposes.

### When a Contextual Approach Is Favored But Is Not Possible

A contextual approach may be preferred but not be possible. Obstacles include heavy caseloads, lack of resources, and time pressures. As resources shrink, "speed-ups" (having to cover more cases in the same amount of time) have become common. You may have neither time nor opportunity to clarify problems and discover related factors. You may have to make recommendations hastily, with little time for critical reflection. Required assessment skills may not be available.

### What Can You Do in Such Circumstances?

You can do whatever you can to address your clients' needs and explore what can be done to create additional resources. Dysfunctional responses to imbalances between ideals and actualities include focusing on areas of little interest to clients and becoming a natterer (merely complaining). You can be aware of the limitations of your assessment (what you know and don't know) (be your own best constructive critic). This will help you to accurately appraise the evidence on which you base your assumptions. If you accurately acknowledge the limitations of your assessment, you are more likely to avoid overconfidence (unwarranted belief in assumptions) and to keep your assessment skills well honed. Avoiding overconfidence does not mean that you do not act in spite of uncertainty; as Thouless (1974) points out, this would be the height of "crooked thinking." It means that you take what actions you must, bearing in mind associated uncertainty.

***Do What You Can.*** The concept of "successive approximations" is valuable not only in helping clients, but in helping you to focus on what can be done even in dismal circumstances. Perhaps you can complete some of the steps in a sound assessment. Do what you can. Complete the closest approximation to a contextual assessment.

***Keep Your Eye on the Gold Standard.*** The gold standard is that we have sufficient data to make sound decisions. It is not that assessment data be complete. This is usually impossible. Plans must

typically be made based on incomplete data. However, there are degrees of incompleteness, ranging from totally inadequate (no clear description of problems, outcomes, or related factors) to excellent (clear description of problems, outcomes, and related factors).

When we cannot do what we think we should do, we may change our mind about what is "best." Suppose that you work in an agency in which you have to make hasty decisions. You may gradually change your beliefs about what should be done. You could form a support group of colleagues with similar values to prevent drifting away from standards you value. Without this, ideals, possibilities, and actualities may be confused.

***Change Questionable Policies and Procedures.*** Talk to others who share your concerns, and work together to seek changes. Don't assume that policies and procedures that interfere with services cannot be changed.

## USING TESTS TO MAKE DECISIONS

Professionals often use tests to understand clients or problems or to predict how people are likely to respond in the future. Social workers often assess risks (e.g., of elder or child abuse). Thousands of children are on "at risk" registers on the assumption that they are at a continuing risk of abuse. Tests should be used to revise subjective estimates, to change a decision about what should be done. Otherwise, why bother? Let's say you suspect (based on an interview) that an elderly client has Alzheimer's disease and you obtain psychological test results as well. You should then use the test results to choose among different options in light of your new estimate based on the results. That is, you may revise your estimate of the probability that the client has Alzheimer's disease (see Exhibit 17.10). Clients should not be asked to take tests simply to satisfy the curiosity of professionals or because the tests are available. This wastes time and provides an illusion of "work being done." Inform clients about the costs and benefits of any recommended test so they can participate in a meaningful way in making decisions. A balance sheet describing benefits and risks, together with their likelihood (if known) and the subjective value for each, can help clients make decisions (Eddy, 1990). This sheet should include information about the accuracy of the test (e.g., false positive and false negative rates). Someone may request a test even though it is not very accurate and is costly in money, time, discomfort, likelihood of misdiagnosis (a false positive or a false negative), or harm from the test itself. We differ in the risks we are willing (or eager) to take.

The predictive accuracy of test results is often overestimated. Incorrect estimates of a test's predictive accuracy may result from confusing two different conditional probabilities. We tend to confuse **retrospective accuracy** (the probability of a positive test given that the person has a condition) and **predictive accuracy** (the probability of a condition given a positive test result). Retrospective accuracy is determined by reviewing test results after the true condition is known. For example, an autopsy may show that a woman who had a positive mammogram indeed did have breast cancer. Predictive accuracy refers to the probability of having a condition given a positive test result and the probability of not having a condition given a negative result. A physician may ask a patient to have a mammogram and, if it is positive, may infer that she has breast cancer and recommend a biopsy. It is predictive accuracy that is important when considering a test result for an individual (see Eddy, 1982).

Inaccurate estimates based on invalid tests may harm clients. Both test sensitivity and test specificity should be considered as well as prevalence (base rate) for the problem of concern. **Test sensitivity** refers to a test's accuracy in correctly identifying the proportion of people who have a problem or will engage in a certain behavior (see the Glossary in Exhibit 17.11). **Test specificity** refers to the accuracy of a test in correctly identifying the proportion of people who do not have a disorder (or will not engage in a behavior). Both are calculated by examining the columns in a $2 \times 2$ table as shown in Exhibit 17.12. Neither permit predictions about individuals. Test sensitivity is often incorrectly equated with the predictive value of a positive test result, and test specificity is often incorrectly equated with the predictive value of a negative test result resulting in gross overestimates of the predictive value. See Beck, Byyny, &

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**EXHIBIT 17.10**
**Should A Test Be Used?**

Suppose that the social worker seeing Mrs. Ryan and the Greens discusses this family at a staff conference and the attending psychologist suggests that Mrs. Ryan is in the beginning stages of dementia and wants to give her some tests. Ask him why he thinks this. What indicators is he using? What is the correlation between each indicator and an accurate diagnosis of dementia? Suppose that the psychologist believes that Mrs. Ryan has "loose associations" and that these are an indicator. Exactly what are "loose associations?" What are examples? What percentage of people her age have similar "loose associations"? That is, what is the base rate? What is the correlation between "loose associations" and dementia?

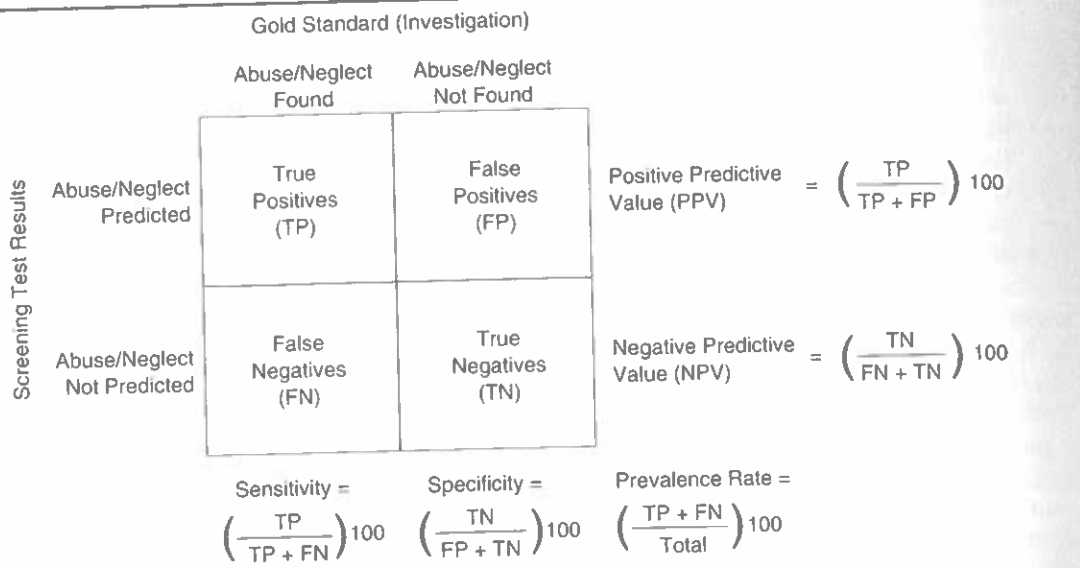
What is the probability that "loose associations" are predictive of dementia? And if they are, would this change what you would do now or in the future? What is the cost of the tests to the clients in money, possible anxiety, and stigma? Would family members start to pathologize Mrs. Ryan if additional assessments were recommended? Would positive results on additional "tests" give family members an excuse to "get rid" of Mrs. Ryan, even though they offer no additional information about whether her current complaints could be resolved and, if so, how?

Adams, 1981; Elstein, 1988, Dawes, 1988). The positive predictive value of a test depends on the prevalence rate, specificity, and sensitivity. The probability that a client with a positive (or negative) test result for dementia really has dementia depends on the prevalence (base rate) of dementia in the population from which the person was selected (on the pretest probability that the person has dementia). Because there is little appreciation of this point, predictive accuracy is often overestimated. Thus, test accuracy varies depending on whether a test is used as a screening device in which

**EXHIBIT 17.11**
**Glossary**

**False negative rate:** Percentage of persons incorrectly identified as not having a characteristic.
**False positive rate:** Percentage of persons inaccurately identified as having a characteristic.
**Predictive accuracy:** The probability of a condition given a positive test result.
**Predictive value of a negative test:** The proportion of those with a negative test result who do not have a problem.
**Predictive value of a positive test:** Proportion of those with a positive test result who actually have a problem.
**Prevalence rate (base rate, prior probability):** The frequency of a problem among a group of people. The best estimate of the probability of a problem before carrying out a test.
**Retrospective accuracy:** The probability of positive test, given that a person has a condition.
**Test sensitivity:** The proportion among those known to have a problem who test positive.
**Test specificity:** The proportion among those known to not have the problem who test negative.
**True negative rate:** Percentage of persons accurately identified as not having a characteristic.
**True positive rate:** Percentage of persons accurately identified as having a characteristic.

**EXHIBIT 17.12**
**Elements for Judging a Prediction Instrument's Value**




**Source:** L. Gibbs (1991). *Scientific reasoning for social workers* (p. 225). New York: Macmillan.

there are large numbers of people who do not have some condition of interest (e.g., depression) or whether it is used for clients with known signs or symptoms. In the latter case, the true positive and true negative rates are much higher, and so there will be fewer false positives and false negatives. Overlooking this difference results in overestimates of test accuracy in screening situations, resulting in a high percentage of false positives.

## ETHICAL ISSUES IN THE SELECTION OF OUTCOMES

Ethical practice requires involving clients in selecting outcomes, forming a clear agreement about what outcomes will be pursued, considering the interests of all involved parties, and focusing on functional objectives (those that are of value to clients in real-life environments). A clear service agreement highlights your responsibility to work toward agreed on objectives and decreases the likelihood of hidden agendas (goals you pursue but do not share with clients). The influence of professionals is often obscured by the vagueness of objectives pursued. Labeling may be used to obscure questionable decisions. For example, labeling a client mentally ill may legitimize the use of intrusive methods that would otherwise be considered unethical. The fuzzier the goal is, the greater the chance that an outcome will be pursued that is not of interest to clients.

You may help clients recognize the influence of social norms and values on their selection of outcomes and thus expand their options. For example, consumerism is a hallmark of American culture, but buying unnecessary consumer items may result in strained family relationships because of financial worries. Stereotypes and a lack of knowledge may result in incorrect assumptions that a particular problem is related to race, gender, sexual orientation, or age. Differences of opinion about objectives may concern who the target of change is to be, in addition to what is to be altered. Until fairly recently, seeking to change a homosexual orientation to a heterosexual one was readily accepted

as an outcome by many professionals (and still may be by some). Many now argue against this on the grounds that it reflects and supports societal biases and the resulting oppression of and discrimination against gay and lesbian people.

### Empowering Clients

Expanding freedom is a key criterion in selecting objectives. This includes freedom from restrictions that result from a lack of skills, freedom to gain outcomes that do not harm others, and freedom to avoid unfairly imposed or unnecessary negative consequences. You can expand clients' freedom by focusing on **functional objectives**: those that enhance opportunities for reinforcement in real-life settings. A focus on objectives that are valuable only in artificial contexts such as a day treatment center violates legal regulations intended to ensure effective services to persons with developmental disabilities (see for example Positive Behavioral Intervention Regulations, 1993). To arrive at ethical decisions, you must consider the interests of your clients and also those of involved others. When interests conflict, ethical practice calls for helping all parties to identify possible options and the advantages and disadvantages of each. Focusing on common goals will help you to identify mutually acceptable outcomes.

If you have authority over people in a supervisory or monitoring role (as in child welfare or correctional settings), you should be especially careful when selecting outcomes. Questions to ask yourself are (1) Is there a legitimate reason for intervening? Will the outcomes sought benefit both clients and significant others? Does the behavior occur often enough to justify intervening? (2) Are my judgments free of bias for example in relation to gender, sexual orientation, ethnicity, age, or race?

## THE VALUE OF RECORDS

Records can help you plan cases, think about the causes of problems, decide on intervention, and review your clients' progress. Records protect clients from unnecessarily repetitive questions and help you avoid mistakes based on faulty assumptions and recollections. They serve as a guide for others who take over a case and allow supervisors and administrators to review the quality of services provided. Review should be based on clear agreed-on criteria related to effective planning. Are objectives clearly defined? Do they address outcomes of concern to clients? Are service methods clearly described? Are records up-to-date? Asking "Is this material useful in planning what to do?" can help you decide what to record. You can save time by eliminating redundant forms and using standardized forms that allow easy recording and review. Common deficiencies of case records and psychological reports include missing data, overly general or unsupported speculations, and vague or overly technical language (Tallent, 1993). Writing tips include the following:

- Be precise.
- Get rid of unnecessary words.
- Never use a long word when a short one will do.
- Use active verbs.
- Clearly define key terms.
- Focus on main points.
- Clearly identify your conclusions and the premises on which you base them.
- Support your inferences with descriptive data.

Problem-oriented recording keeps the presenting problems in view. Try to record the problems in the client's (or referral source's) own words. A log of contacts noting the date, people present, purpose, and type of contact can save time when preparing court reports. Note the sources of data used (see Exhibit 17.13). Describing current and desired levels of behaviors and/or environmental conditions and intermediate steps provides an "agenda" for change tailored to each client. Clearly describe plans, including the settings that will be used, who will be involved, what they will do, and the reasons for selections made. Also describe progress indicators and plans for maintaining gains. Ethical issues regarding records include protecting clients' rights to confidentiality (e.g., not sharing

**EXHIBIT 17.13**
**Checklist for Reviewing Case Records**

| | Not at All | A little | Fair Amount | Ideal |
|---|---|---|---|---|
| 1. Route to agency is clearly noted. | 0 | 1 | 2 | 3 |
| 2. Presenting problems are described. | 0 | 1 | 2 | 3 |
| 3. A problem (outcome) profile is included. | 0 | 1 | 2 | 3 |
| 4. Demographic data are complete. | 0 | 1 | 2 | 3 |
| 5. Relevant historical data (e.g., work history) are included. | 0 | 1 | 2 | 3 |
| 6. Current life circumstances are clearly described | 0 | 1 | 2 | 3 |
| 7. Problem-related behaviors are clearly described. | 0 | 1 | 2 | 3 |
| 8. Sources of data relied on are noted. | 0 | 1 | 2 | 3 |
| 9. Valid assessment sources are used. | 0 | 1 | 2 | 3 |
| 10. Self-report data are supplemented by observational data. | 0 | 1 | 2 | 3 |
| 11. Baseline data are available. | 0 | 1 | 2 | 3 |
| 12. Contingencies related to behaviors of concern are clearly described. | 0 | 1 | 2 | 3 |
| 13. Client assets are noted. | 0 | 1 | 2 | 3 |
| 14. Relevant assets of significant others are noted. | 0 | 1 | 2 | 3 |
| 15. Environmental resources are described. | 0 | 1 | 2 | 3 |
| 16. Uninformative labels are avoided. | 0 | 1 | 2 | 3 |
| 17. Objectives, including intermediate steps, are clearly described. | 0 | 1 | 2 | 3 |
| 18. Inferences about the causes of problems are supported by evidence and are compatible with what is known about behavior. | 0 | 1 | 2 | 3 |
| 19. Meeting objectives will remove complaints. | 0 | 1 | 2 | 3 |
| 20. Intervention methods are clearly described. | 0 | 1 | 2 | 3 |
| 21. Plans selected have an empirically tested track record of success. | 0 | 1 | 2 | 3 |
| 22. Clear relevant progress indicators are noted. | 0 | 1 | 2 | 3 |
| 23. Graphs showing degree of progress are included and are up-to-date. | 0 | 1 | 2 | 3 |
| 24. There is little irrelevant material. | 0 | 1 | 2 | 3 |
| 25. A log of contacts is included. | | | | |

*Key:* 0 = not at all, 1 = a little, 2 = a fair amount, 3 = ideal. Total scores may range from 0 to 75.

records with other people unless you must because of legal regulations or you have the client's permission), avoiding irrelevant negative material, and using records as a tool in planning and evaluating services. For more discussion of case records, see Kagle, 1991.

## SUMMARY

Helping clients requires deciding how to organize and interpret data. You have to make guesses about how to help clients attain valued outcomes. Depending on the time available and the reasoning used, these guesses may be informed or off-the-cuff. Ideally, objectives are selected that involve a change in problem-related circumstances and build on personal assets and environmental resources. Common errors in this helping stage include acting on hasty assumptions, selecting vague objectives, overlooking the client's strengths, and offering incomplete accounts (ignoring environmental causes such as lack of jobs in the community). We tend to be overconfident of our beliefs, to focus on data that support them, and to ignore data that do not. Helpful rules-of-thumb for avoiding errors include searching for alternative accounts, questioning initial assumptions, and asking what is missing. Flowcharts and decision trees may be useful in organizing information and seeing what is missing.

## REVIEWING YOUR COMPETENCIES

### Reviewing What You Know

1. Recognize and give examples of incomplete assessment.
2. Give examples of common errors in organizing and interpreting data.
3. Give examples of naming rather than explaining.
4. Describe helpful rules for avoiding errors in organizing and integrating data.
5. Describe important questions to ask when deciding whether to use a test to make predictions.
6. Explain why it is important to consider base rate data when interpreting test results, and give an example.

### Reviewing What You Do

1. The inferences you make are compatible with what is known about behavior/problems.
2. Descriptions, causal analyses, and predictions are supported by evidence and suggest feasible plans.
3. The objectives you select are relevant to outcomes of most concern to your clients.
4. Given case examples, you can detect incomplete accounts and missing information.
5. Given case examples, you can spot faulty arguments and accurately describe why they are faulty.

### Reviewing Results

1. Plans selected are effective.
2. Situations in which there are no effective options are accurately identified.