PEARSON NEW INTERNATIONAL EDITION

# Critical Thinking: Tools for Taking Charge of Your Learning and Your Life

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Third Edition

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The three categories of questions are:

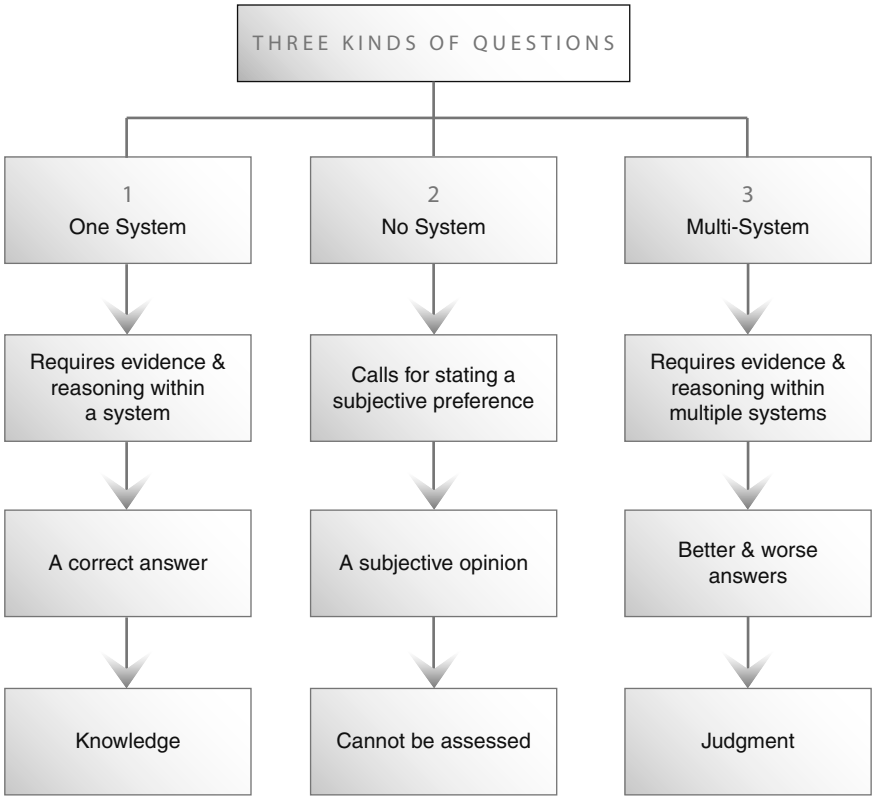
**1. Questions of fact.** Questions with one right answer (Factual questions fall into this category.)

- What is the boiling point of lead?
- What is the size of this room?
- What is the differential of this equation?
- How does the hard drive on a computer operate?

**2. Questions of preference.** Questions with as many answers as there are different human preferences (a category in which mere subjective opinion rules). These questions ask you to express a preference.

- Which would you prefer, a vacation in the mountains or one at the seashore?
- How do you like to wear your hair?

**EXHIBIT 1** *In approaching a question, it is useful to figure out what type it is. Is it a question with one definitive answer? Is it a question that calls for a subjective choice? Or does the question require you to consider competing answers?*



- Do you like to go to the opera?
- What is your favorite type of food?

**3. Questions of judgment.** Questions requiring reasoning but with more than one defensible answer. These are questions that make sense to debate, questions with better-or-worse answers (well-reasoned or poorly reasoned answers). Here we are seeking the best possible answer given the range of possibilities.

- How can we best address the most basic and significant economic problems of the nation today?
- What can be done to significantly reduce the number of people who become addicted to illegal drugs?
- What is the best thing we can do to save the earth?
- Is abortion morally justifiable?
- Should capital punishment be abolished?

Only the second kind of question (a question of preference) calls for sheer subjective opinion. The third kind is a matter of reasoned judgment. We should rationally evaluate answers to the question by using universal intellectual standards—such as clarity, depth, consistency, and so forth. Some people think of all judgments as either fact or subjective preference. They ask questions that elicit either a factual response or an opinion. Yet, the kind of judgment most important to educated people—and the kind we most want to be good at—falls into the third, now almost totally ignored, category: reasoned judgment.

A judge in a court of law is expected to engage in reasoned judgment. He or she is expected to render a judgment and to base that judgment on sound, relevant evidence and valid legal reasoning. A judge is under the ethical and legal obligation not to base his or her judgments on subjective preferences or on personal opinions.

Judgment based on sound reasoning goes beyond, and is never to be equated with, fact alone or mere opinion alone. Facts are typically used in reasoning, but good reasoning does more than state facts. Furthermore, a position that is well reasoned is not to be described as simply "opinion." Of course, we sometimes call the judge's verdict an "opinion," but we not only expect but *demand* that it be based on relevant and sound reasoning.

When questions that require reasoned judgment are treated as matters of preference, counterfeit critical thinking occurs. In that case, some people come to uncritically assume that everyone's subjective opinion is of equal value. Their capacity to appreciate the importance of intellectual standards diminishes, and we can expect to hear questions such as these: What if I don't like these standards? Why shouldn't I use my own standards? Don't I have a right to my own opinion? What if I'm just an emotional person? What if I like to follow my intuition? What if I think spirituality is more important than reason? What if I don't believe in being "rational"? When people reject questions that call for reasoned judgment and deep thought, they fail to see the difference between offering legitimate reasons and evidence in support of a view and simply asserting the view as true.

Intellectually responsible people, by contrast, recognize questions of judgment for what they are: questions that require the consideration of alternative

ways of reasoning. Put another way, intellectually responsible people recognize when a question calls for good reasoning, and they behave in accordance with that responsibility. This means that they realize when a question can be answered in more than one reasonable way. Moreover, they appreciate the responsibility they have to consider alternative ways of looking at the problem, of entering *in good faith* viewpoints that oppose their own before coming to final judgments.

To summarize, we all need to recognize that questions call on us to do one of three things:

1. To express a subjective preference
2. To establish an objective fact (within a well-defined system)
3. To come up with the best of competing answers (generated by competing systems)

We do not fully understand the task we are faced with until we know which of these three is called for in our thinking. Is the question calling for a subjective or personal choice? If so, let's make that choice in terms of our personal preferences. If not, is there a way to come up with one correct answer to this question (a definite system in which to find the answer)? Or, finally, are we dealing with a question that could reasonably be answered differently within different points of view? In other words, is it debatable? If the last, what is the best answer to the question, all things considered?

## 4 *Think for Yourself*

### DISTINGUISHING TYPES OF QUESTIONS I

Make a random list of clear and precise questions. Then decide which questions are factual (with a definite right or wrong answer), which questions are matters of subjective preference, and which questions require reasoning and judgment (within multiple perspectives). To make these determinations, you might think through each question in the following way:

1. Ask, "Are there any facts that a reasonable person would have to consider to answer this question?" (If there are some facts you need to consider, the question is not purely a matter of subjective preference.)
2. If any facts are relevant to the question, would all reasonable persons interpret the fact in the same way? If so, it is a question of fact. If not, the facts presumably can be rationally interpreted differently from competing, reasonable perspectives. It is therefore a question of judgment.

As you study a subject, distinguish among the three types of questions. Look for the questions that have definitive or correct answers. These will be matters settled by definition or fixed, established, and recognized procedures. Identify those questions that are ultimately a matter of personal choice. And, most important, identify those questions that can be legitimately, or at least arguably, approached from more than one point of view. These latter will arise most commonly when there are competing traditions or schools or theories within the discipline. For

example, psychology incorporates many competing schools: Freudian, Jungian, Adlerian, rational–emotive, Gestalt, and so on. Many issues in psychology will be reasoned through differently, depending on the reasoner's academic allegiance. These issues will call for considering argumentation from a variety of perspectives and will result in different reasoned judgments.

## 5 *Think for Yourself*

### DISTINGUISHING TYPES OF QUESTIONS 2

Identify at least one subject you have studied in school that involves competing traditions or schools of thought. Then identify some questions that would be answered differently, depending on the school of thought used to think through the question. Which of the schools of thought do you best understand or most identify with? How might this school of thought be questioned from the perspective of a competing school of thought?

## BECOME A SOCRATIC QUESTIONER

Now that you are beginning to understand how to categorize questions, let us discuss how we can approach questions in general so our questions will lead us to better thinking. As critical thinkers, we want to go beyond questions that are undisciplined, questions that go in multiple directions with neither rhyme nor reason. Therefore, we turn from merely questioning to what might be termed *Socratic questioning*. The word *Socratic* adds systematicity, depth, and a keen interest in assessing the truth or plausibility of things to ordinary questioning.

One of the primary goals of critical thinking is to establish a disciplined, "executive" component of thinking in our thinking, a powerful inner voice of reason, to monitor, assess, and repair—in a more rational direction—our thinking, feelings, and action. Socratic questioning provides that inner voice. Here are some of the fundamentals of Socratic questioning, followed by examples of questions you might ask in Socratic dialogue to probe deeply the thinking of another person.

- Seek to understand—when possible—the ultimate foundations for what is said or believed and follow the implications of those foundations through further questions. (You might ask, for example, "On what do you base your beliefs? Could you explain your reasoning to me in more detail so I can more fully understand your position?")
- Recognize that any thought can exist fully only in a network of connected thoughts. Therefore, treat all assertions as connecting points to further thoughts. Pursue those connections. (You might ask, for example, "If what you say is true, wouldn't X or Y also be so?")
- Treat all thoughts as in need of development. (You might ask: "Could you elaborate on what you are saying so I can understand you better?")

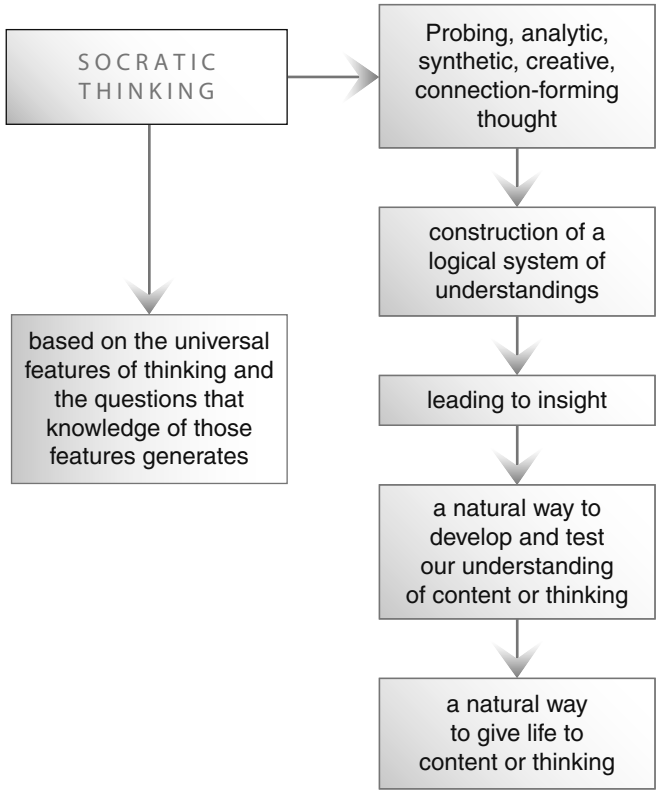
- Recognize that all questions presuppose prior questions, and all thinking presupposes prior thinking. When raising questions, be open to the questions they presuppose. (You might ask, for example, "To answer this complex question, what other questions do we need to answer?")

## 6 *Think for Yourself*

### PRACTICING SOCRATIC QUESTIONING

When you become a Socratic questioner, a systematic questioner, you can question anyone about anything—effectively! Try out your questioning skills by questioning someone you know as systematically and as deeply as you can about something he or she deeply believes. Record the discussion. Follow the suggestions given here. When finished, replay the tape and analyze your Socratic questioning abilities. Did you probe beneath the surface of the other person's thinking? Did you ask for elaboration when needed? Did you pursue connections? Overall, how you would rate yourself as a Socratic questioner?

**EXHIBIT 2** *Socratic thinking is an integrated, disciplined approach to thinking.*



To take your thinking to the level of disciplined questioning, to think or question Socratically, you can go in several directions:

1. You can focus your questions on types of question (fact, preference, or judgment).
2. You can focus your questions on assessment by targeting intellectual standards.
3. You can focus your questions on analysis by targeting the elements of reasoning.
4. You can learn to "unpack" complex questions by developing questions one would have to answer prior to answering the lead question.
5. You can learn to determine the domains of questions inherent in a complex question.

In the following discussion, we will elaborate on these forms of Socratic questioning. Of course, the questions you would ask in a given situation will be determined by the context within which you are thinking. When you become skilled at using these questions, you will see the powerful role they can play in your thinking. With practice, they eventually will become intuitive to you. You will naturally ask questions of clarification when you are unclear and ask questions focused on *information* when the data seem to be inaccurate or otherwise questionable. You will recognize intuitively when people are mistakenly answering questions of judgment with their subjective preference, and so on. Again, intuitive ability comes only after a lot of practice.

## Focus Your Thinking on the Type of Question Being Asked

In pursuing questions, Charles Darwin relied on perseverance and continual reflection: "I have never been able to remember for more than a few days a single date or line of poetry."

As discussed earlier in this chapter, when you approach questions systematically, you are able to recognize that all thought has three possible functions: to express a subjective preference, to establish an objective fact (within a well-defined system), or to come up with the best of competing answers (generated by competing systems). Assume that you do not fully understand thinking until you know which type of thinking the question is focused on.

Here are questions you can ask that focus on getting at the type of question you are dealing with:

- Is the question calling for a subjective or personal choice? If so, let's make that choice in terms of our personal preferences.
- If not, is this a question that has one correct answer or a definite system in which to find the answer?
- Or are we dealing with a question that would be answered differently within different points of view?