

## Who Are the Critical Thinkers?



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When characterizing people who work in health care, we usually focus on what they do, not how they think. However, people in the health professions, especially nurses, are some of the best critical thinkers in the world. Nurses have a wide breadth and deep depth of knowledge; they must apply that

knowledge in a huge variety of contexts; and they must recognize and evaluate variations from the norm in every patient. As health care becomes increasingly complex, the thinking needed becomes even more sophisticated. Those who do the thinking must become even more cognizant of the thinking they employ to do the work of health care.

*Who are you?* Most of you are probably nurses or nursing students, but because these ideas are relevant to all healthcare providers, some of you may be from other disciplines. We hope so, because, as we will discuss later, we are big believers in the necessity of interdisciplinary practice. Are you a clinician or an educator, or does your position combine both roles? Perhaps you are a researcher, a manager, or an administrator in a practice setting. Nurses' roles and positions are often complex because they embrace multiple thinking tasks throughout the day.

We needed to develop an organized way to address you that also fits with our critical thinking–enhancing TACTICS. As we see it, you want to improve your critical thinking (CT) or help others improve theirs; therefore, we classified you as being in one of two categories: clinicians or educators. For clinicians, much of what we say focuses on how you can improve your CT; for educators, the focus is on strategies to promote CT in others. We're aware that in the real world, these two roles are not mutually exclusive. Clinicians often try to help others improve CT, and educators often work to improve their personal CT. Still, for ease of communication, we have divided you, our readers, into two groups: clinicians and educators.

A major reason we've chosen to write to this audience is that we want to promote a unified view of CT as a vital but complex clinical and educational issue. We are quite aware that the literature on CT in nursing is primarily oriented toward those in academic settings: students and teachers. Indeed, most things we've written are academically slanted. However, the bottom line is that we all want to improve CT in clinical practice. If we don't start viewing this from both perspectives simultaneously, we'll be building an ivory tower version and a digging-out-a-trench version. Neither will be adequate to meet the thinking demands of health care today or tomorrow.

## **Clinicians**

We envision clinicians at multiple points in their professional practice careers and in a variety of healthcare settings. Those multiple career points span from that of a novice who is learning in the clinical setting (i.e., nursing students or orientees) to that of a nurse who is considered an expert in practice. Many challenges tax your thinking skills in the practice arena, not least of which is the seemingly constant change in the demands and responsibilities of your positions. Complex changes are occurring in all healthcare delivery systems (Erickson, Ditomassi, & Jones, 2008; Falise, 2007; Institute of Medicine, 2011; Redman, 2006; Rossen, Bartlett, & Herrick, 2008). Kelly-Thomas (1998) referred to the “re-do” words typically heard in healthcare environments these days—reengineering, restructuring, retooling, revisioning. These

re-do issues require, above all else, nurses to be *confident*, *contextual*, *creative*, *open-minded*, and *flexible* in their thinking strategies. We will return often to the subject of complex change.

## Educators

We envision educators in various settings as well, primarily as service based (staff development specialists, preceptors, continuing education directors, and so on) or academic based (nursing school faculty). We expect that some of our clinicians and educators are graduate students pursuing one or both roles. Whichever kind of educator you are, you deal with many complex problems that affect how you see yourself as a thinker and how you'll be able to promote CT in your students and staff. Academic-based educators may be more familiar with CT language because much of what has been written about CT has been for traditional educational settings. We hope you will find this text to be helpful because it presents a practical view of CT, not just an academic view.

## Other Thinkers Who Interact with Clinicians and Educators

Although for this discussion we've delineated two *who* groups and acknowledged that all people are thinkers, here is an important point: no one of us thinks in isolation. To view CT as an individual process will take us down a disastrous path where we waste time and money and possibly do harm. Other thinkers must also be considered, including patients, patients' significant others, and additional members of the healthcare team. Remember that everything we say about CT applies to all the thinkers around you—other nurses, students, healthcare providers, patients and their significant others, administrators, politicians, and many others. The thinking of stakeholders also has an impact.

## Selected Factors That Affect Critical Thinkers

Many factors influence us as thinkers. For example, clinicians may be viewed as facing enormous challenges because their work is traditionally action oriented, taking place in settings that rarely sanction thinking time. Educators, on the other hand, are usually viewed as actively working when they sit with furrowed brows. In addition to these environmental factors, many other things influence one's thinking—genetics; self-concept; feelings, especially anxiety; generation or age; knowledge; and personal and organizational culture. See **Box 3-1** for a synopsis of these factors.

### *Genetics as an Influence on CT*

Let's look at genetics, or basic wiring, first. No two people think in the same way. (That's great, isn't it?) Whether those differences stem from genetics or one's upbringing is frequently debated. In reality, it's both, but we do know that some differences are

**Box 3-1** Selected Factors Influencing Critical Thinkers

<b>Factor</b>	<b>Key Issue</b>
Genetics	Your brain's hard wiring. Some adjustments over time, but if you are a right-brain thinker it is very challenging to think like a left-brain thinker.
Self-concept	Appears to be a direct relationship between self-concept and critical thinking. The CT habit of the mind <i>confidence</i> comes into play here.
Feelings (especially anxiety)	Very strong inverse relationship between anxiety and critical thinking. The higher the anxiety, the lower the critical thinking.
Generation or age	Values, work ethic, and communication style vary by generation.
Knowledge	You need knowledge to apply critical thinking habits and skills. You can't think in a vacuum! Knowledge is complex, contextual, and constructed, and it may help or hinder CT.
Culture (personal)	
■ Communication style	■ Verbal, nonverbal, and written styles impact thinking and vice versa
■ Time orientation	■ Past, present, future, mixed viewpoints may guide thinking
Culture (organizational)	This is the context in which thinking occurs. It can be supportive or toxic to critical thinking.

inborn. Some people have the ability to remember numerous esoteric facts but can't figure out how to solve simple everyday problems such as how to boil water! Others never seem flustered when things go wrong but can't remember when they last went to the bathroom. Acknowledging differences in thinking without judging that one way is better than another is a challenge, but a necessary one, especially for educators who are trying to individualize teaching strategies to nurture thinking.

If you haven't thought about your natural, inborn thinking abilities, do that now. If you can articulate your personal hard wiring, it will make you a better learner. Are you a visual thinker? (You need to see it to understand it.) Are you an auditory thinker? (Once you hear it, you remember it.) Do you have to do something with information—perform an action—before it stays in your brain? If you can describe to a teacher what works best for you, you will be a better learner. You will also be more sensitive to the learning and thinking styles of others and therefore be a better educator. Keep in mind that it is rare to have only one of these learning styles; most of us have combinations but find one that is our preferred style.

Consider this example from an author–educator:

*My son has attention deficit disorder, and although his intelligence test results showed him to be above average, he could not learn how to add columns of numbers. When given a fourth-grade assignment to copy a list of numbers and add them, he would write the numbers in what seemed to be a random pattern so the tens or hundreds were never above and below each other. I kept saying to him, “Line them up!” and he would repeatedly do this random thing. Finally, in total frustration, I drew lines on the sheet of paper. Then he had no trouble at all. It made me realize that he has no patterning ability in his mind remotely close to what I have in mine. Once we moved to graph paper with big squares, he was fine with addition of long sets of numbers. (By the way, this boy moved to the advanced math classes in high school.)*

This boy’s situation, in addition to illustrating how vastly different thinking styles can be, shows us that intelligence is not a simple construct. Howard Gardner deftly illustrated thinking complexity in his description of multiple intelligences (1983, 1993, 1999, 2006). Refer to Gardner’s list in **Box 3-2**. Can you relate to some of

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### Box 3-2 Gardner’s Multiple Intelligences

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- **Spatial:** the mind’s eye: preference for use of images, pictures, graphical representations
- **Logical-Mathematical:** use of an entire range of reasoning skills, preference for factual data, and both inductive and deductive reasoning
- **Linguistic:** embracing speaking and listening, reading, writing, and other forms of communication
- **Musical:** patterned rhythms of the mind, learning and knowing by sharing, expressing, perceiving, and creating pitch and patterns
- **Bodily-Kinesthetic:** using the body as a conduit for the mind, using action and motion
- **Interpersonal:** using the give and take of communication with intonation and punctuation with a goal of understanding, empathy, and learning from one another
- **Intrapersonal:** focusing on knowing self with a goal of internalizing learning through thoughtful connections and transformation of knowledge into meaning
- **Naturalist:** the ability to recognize and differentiate characteristics and phenomena of the plant and animal world as well as inorganic material immersion in a work of art

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*Source: Frames of Mind: The Theory of Multiple Intelligences by Howard Gardner, Copyright (c) 1983 by Howard Gardner. Reprinted by permission of Basic Books, a member of The Perseus Books Group.*

those intelligences more than others? We'd guess yes. Gardner believed that we have varying proportions of each of these intelligences but that some of them come more naturally to us than others. That may be due to genetics or because some groups and cultures value some traits over others. Our self-concept of our thinking style is largely based on our dominant intelligences.

### ***Self-Concept as an Influence on CT***

Think about this statement: I am a great thinker. Do you believe it? If yes, why? If no, why? You can probably imagine a philosophy professor saying this. That's because we traditionally associate great thinking with fields such as philosophy. Nursing is traditionally associated with doing and actions. Both of these traditional associations are too limited, especially the nursing one. Expert nursing care requires expert levels of thinking for actions to be safe.

Obviously, culture influences self-concept, but there's more to it than that, such as life circumstances and how much positive (or negative) feedback you get for your thinking ability. If your 10th-grade math teacher told you that girls are never any good at math (and yes, teachers still say such things), the girls in that class would need some other equally dramatic evaluation of their math skills to counter that attitude and develop a positive concept of themselves as mathematical thinkers. If you were always praised for your problem-solving abilities, you'd be proud of your analytical skills, thereby promoting a positive self-concept in that CT dimension.

The math example speaks to a very important point about the differences in how women and men think. Women and men are socialized differently, especially in relation to self-concept and thinking ability. This is not an all-or-nothing interpretation, however. Excellent research has been done on female thinking (Belenky, Clinchy, Goldberger, & Tarule, 1986; Gilligan, 1982), and there are many helpful suggestions for addressing gender differences in classrooms (Brookfield & Preskill, 1999). Though gender has a significant influence on self-concept and is definitely a force to be reckoned with in nursing, with its lopsided ratio of women to men, even the experts caution us not to assume that gender is the only factor that affects how we think.

Unfortunately, women are still trying to escape the negative connotations of descriptions like "she's really smart," which cause most of us to flash back to high school where that meant "she's not pretty." The implication was that looks were more important than brains. Think of how women are described in the media even today, and then consider how men are described; inevitably, women are described in terms of appearance, and men are described in terms of intelligence and accomplishments.

Although women have quite a few stereotypes working against them, men in nursing don't fare much better in how society views their thinking abilities. Because these men are nurses and not, for example, engineers, their thinking is considered less sophisticated. Unfortunately, people often judge a nontraditional career decision negatively, especially with respect to thinking ability. Why would a man be a nurse (when he could have been an engineer or a doctor)?

Sometimes the world doesn't view nurses as great thinkers and sees nurses through gender-biased eyes. Let's stop buying into those notions and work on what we do have control over—our self-concept as great thinkers. Simply reflecting on your thinking can help you improve your self-concept. After completing such *reflection* assignments, our students have said, "We never thought about our thinking before. We really do think a lot, don't we?" If we accept the stereotypical beliefs that we're not great thinkers, is it any wonder that we have self-concept problems about our thinking?



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Suzanne Gordon (2005, 2010), a reporter who has studied nursing extensively, made some interesting comments about our image. Her contention is that the usual descriptions of nursing as a calling and as a caring profession do us more harm than good. Such descriptions emphasize virtue and devalue our skill, knowledge, and thinking ability. "Updating the image of nursing will involve applying some critical thinking to the sentimentalized virtue script that nurses so often rely on today" (2005, p. 440).

We need to value our brains and define ourselves as knowledge workers, not production workers. Kaeding and Rambur (2004) described knowledge work as

based on assessment, judgment, problem-solving, and the generation of ideas. It is nonrepetitive, nonroutine, and dependent on cognitive activity. Manual work is integral but not dominant. Gender is valued equally. Professional knowledge is not hierarchical, and evidence of learning is important to safe and effective job performance. (p. 137)

Seago (2008) described how healthcare organizations are beginning to use the term *knowledge worker* as a new descriptor for healthcare providers to conceptualize the culture change needed for the 21st century. Maybe we should go back to wearing nursing caps, but this time we should make them in the shape of mortarboards representing the knowledge gleaned through education and experience.

### ***Feelings, Especially Anxiety, as Influences on CT***

Another major factor that influences thinking involves emotions. Intense feelings—love, hate, depression, elation—will always be factors shaping our cognitive skills. When we did our Delphi study to find consensus on CT, we specifically asked about habits of the mind in addition to cognitive skills. Most people, at least in nursing, acknowledge that CT has both affective (habits of the mind) and cognitive (skills) components. Those two components exist in tandem all the time. But when we add an extreme emotional response to a situation, affective components of CT exert a stronger influence.

Many mood states affect thinking, but anxiety is particularly important in the healthcare sector, which has more than its share of anxiety-producing situations. Most older nurses (age 50 and older) can tell horror stories about how they were so terrified by nursing school teachers that they couldn't think at all. Hart (1983) called that "reptilian" brain functioning, meaning that the higher-order thinking skills of mammals shuts down, and only basic survival thinking takes over. Teaching through terror, we hope, has gone the way of our nursing caps. Nevertheless, doing a nursing task for the first time, even with a nurturing teacher to help, still makes our hearts race and our palms dampen. And some nursing tasks continue to make us anxious even after we've done them many times.

There are many self-help books on how to deal with anxiety, so we're not going to give a short course here. However, we do encourage you to consider what happens to your thinking when you're anxious and what circumstances, in particular, make you anxious. Also, consider what Margaret Carson (2003) called the "emotional burden" of nursing. Carson studied nurses who had been in combat situations, but she also cautioned nurses to consider the psychological toll of other high-stress nursing situations. In our experience, nurses do not do a good job of taking care of themselves; we need to think about our emotional responses more, value things like lunch and bathroom breaks, and consider the importance of decreasing anxiety to sharpen our thinking skills.

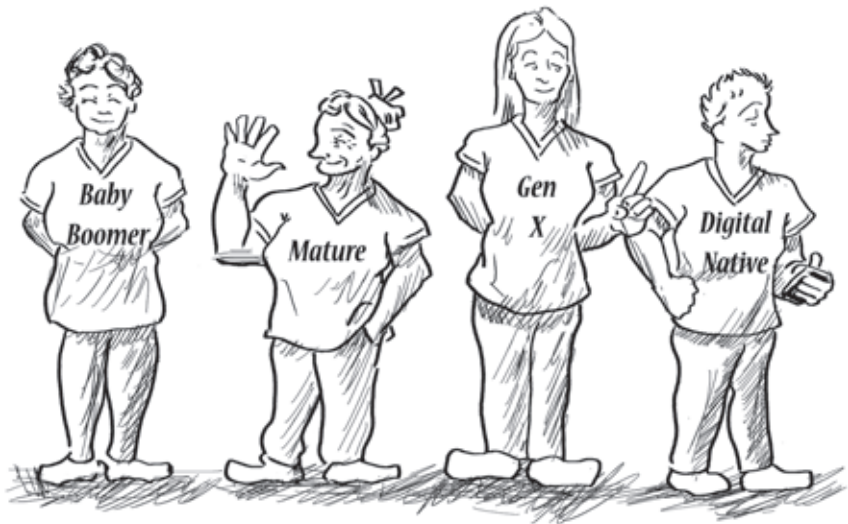
If you teach others, orient new staff, or function as a preceptor, we have a special message for you: if you expect your students and staff to be good thinkers, you must guide them gently, acknowledge their anxiety, and employ teaching and mentoring strategies, such as humor, that reduce anxiety. It is both humbling and helpful to remember your first lecture or your first attempt to catheterize an uncooperative patient. Telling students about your fears or relating to new staff how you botched simple jobs in your first weeks on the unit can do wonders to help them relax and



reassure them that they also will gain mastery. Most of all, we must approach teaching as a collaborative effort, not a game of one-upmanship in which you are the all-knowing expert and your students have blank slates for brains. Anxiety is a day-to-day reality of nursing. We need to acknowledge it, remember its influence on thinking, and constantly work to lessen it to help ourselves and others.

### ***Generational and Age Influences on CT***

The nursing profession contains five generations of workers; those age-related differences affect many important attributes—attitudes, beliefs, communication, work style, and, of course, thinking. There are several classifications of generations. Oblinger and Oblinger (2005) described them this way: “Matures,” born between 1900 and 1945; “Baby Boomers,” born between 1946 and 1964; “Generation X,” born between 1965 and 1981; and the “Net Generation,” born between 1982 and 1991. The newest generation, born in the 1990s, have been called the “Digital Natives” (Prensky, 2001) or “Shallows” (Carr, 2011); technology use has become natural for them. It seems their brains are physically changing, perhaps because of the constant use of modern information processing technology. Having five generations working together is a new phenomenon because nurses now remain in the workplace longer than they once did (Sherman, 2006). It behooves clinicians and educators to reflect on the significance of generational differences to avoid conflict and misunderstanding.



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Some believe that generational differences are more related to technology exposure than to age itself, so when reflecting on implications of those differences, an open mind is crucial. Although any generalizations will inevitably be incorrect in

specific instances, it is helpful to consider how these generalizations could affect thinking. (See **Box 3-3**.) Continuing with Oblinger and Oblinger's (2005) descriptions, Matures were described as self-sacrificing, respectful of authority, and intolerant of waste and technology. Putting that in a thinking frame of reference, we might expect our older nurses' *information-seeking* and *applying-standards* CT skills to be manifested as seeking answers from authorities whom they respect. They may have less *flexibility* in their thinking, but they will have *perseverance*. They will not be *confident* when dealing with technology, but from their years of experience, they may have a larger *contextual perspective* and will likely be strong on *intuition* and *confident* in their *logical reasoning* in a wide range of situations.

### Box 3-3 Generational Influences

<b>Born Between</b>	<b>Label</b>	<b>Characteristics</b>	<b>Likely Key CT Habits of the Mind and Skills</b>
1900 and 1945	Matures	Self-sacrificing, respectful of authority, intolerant of waste and technology	<i>Information seeking</i> <i>Applying standards</i> <i>Perseverance</i> <i>Contextual perspective</i> <i>Intuition</i> <i>Confidence</i>
1946 and 1964	Baby Boomers	Optimistic workaholics, strong work ethic and sense of responsibility, intolerant of laziness	<i>Confidence</i> <i>Predicting</i> <i>Discriminating</i> <i>Transforming knowledge</i>
1965 and 1981	Generation X	Independent, free, skeptical, multitaskers who value a balanced lifestyle; intolerant of red tape	<i>Flexibility</i> <i>Open-mindedness</i> <i>Information seeking</i> <i>Inquisitiveness</i> <i>Applying standards</i>
1982 and 1991	Net Generation/ Millennials	Hopeful, determined, use latest technology, intolerant of slowness	<i>Information seeking</i> <i>Creativity</i> <i>Contextual perspective</i>
1992 and the present	Digital Natives/ Shallows	Fast, parallel information processors, multitaskers, prefer graphics over text, thrive on instant gratification and frequent rewards	<i>Contextual perspective</i> <i>Creativity</i> <i>Intuition</i> <i>Transforming knowledge</i>

Baby Boomers were seen as optimistic workaholics with a strong work ethic and sense of responsibility; they are intolerant of laziness and believe they can do most things well (Oblinger & Oblinger, 2005). We might expect them to be *confident* in their thinking and have strong *predicting* and *discriminating* abilities. Like the Matures, they have years of experience to draw on as they think through situations and may do well with *transforming knowledge*. They may be less *open-minded* in their thinking, especially when they deal with Generation Xers, who are not workaholics.

Generation X was characterized as independent, free, skeptical, and comfortable with multitasking and as valuing a balance of life and work. They are intolerant of red tape and hype (Oblinger & Oblinger, 2005). They may be more *flexible* in their thinking and *open-minded* to divergent views as long as those views aren't seen as restrictive. They will likely *seek information* from a variety of sources, not necessarily from authorities. Because they are skeptical, they may be more independently *inquisitive*. When *applying standards*, they may use more personal standards than work-related standards.

The Net Generation, also called Millennials, are hopeful, determined, into the latest technology, and intolerant of anything slow (Oblinger & Oblinger, 2005). They don't know a world without the Internet, so their *information-seeking* skills are first and foremost oriented there. They may be impatient with older workers who are less adept at surfing, but they may work and think well in teams because they are used to networking. They are likely *creative* in their thinking, seeking their own approaches to knowledge rather than doing what they're told. They may have a wider *contextual perspective* because they are used to visual communication and experiential learning, but they may miss things that are not of interest to them.

The new generation, who have not known a world without the Internet, iPhones, instant messaging, and texting, have been called the Shallows by Carr (2011) and Digital Natives by Prensky (2001, 2012). These folks are so used to instant information that they can't imagine a world without it. It seems their brains, through neuroplasticity, are changing due to persistent digital input (Carr, 2011; Prensky, 2001, 2012). Their evolving brains process information in small chunks very quickly; they are used to reading snippets of information and do not like long passages of text. They are used to visual images in their digital world. Their brains have become trained to process information in parallel streams as opposed to a sequential flow. Carr's description captures these changes:

With writing on the screen, we're still able to decode text quickly—we read, if anything faster than ever—but we're no longer guided toward a deep, personally constructed understanding of the text's connotations. Instead, we're hurried off toward another bit of related information, and then another, and another. The strip-mining of 'relevant content' replaces the slow excavation of meaning. (p. 166)

Although these labels seem negative at first glance, what we oldsters have to remember is that this new generation has assets to offer that we have yet to appreciate.

Obviously these generalizations are simplistic, but what is important to consider is that we cannot expect a young, recently graduated nurse to think in the same way that the older nurse would. Weston (2006) called this the generational “mental model.” “Based upon world events that framed their youth and initial work experiences, members of each generation have develop [sic] somewhat unique mental models . . . logical and consistent with their lived experience” (“Sources of Multi-generational Misunderstandings,” para. 1). We must promote tolerance of the differences among us and tailor teamwork and teaching and learning to the thinking style of each person. In the practice arena, we must acknowledge the strengths and contributions of each generation and link people together based on how they can help one another (Sherman, 2006).

Teaching and learning issues are especially challenging; because teachers, both in academia and in clinical settings, are primarily Baby Boomers, the teaching approaches that fit with their characteristics are a misfit for the learning needs of Generation X, the Net Generation, and the Digital Natives. Faculty who are used to sequential knowledge building, recall of information, and repetition must learn to appreciate the new generation of learners who are used to digital, interactive, and fast-paced learning (Skiba & Barton, 2006).

### ***Knowledge Influences on CT***

Just how important is a nurse’s knowledge to CT? Well for starters, people in general and nurses specifically do not think in a vacuum. We need something to think about. So is it simply a matter of absorbing enough information and nursing content knowledge, and then nurses can be good critical thinkers? This idea is way oversimplified. Thus, the issue of knowledge bears exploration. Just how does knowledge influence CT? And how do we conceptualize that knowledge and its influence?

Lechasseur, Lazure, and Guilbert (2011), using a grounded theory approach, studied knowledge as used by students of nursing in Canada. As a rationalization for their study, the authors stated that “the various types of knowledge involved must be better defined, as should the factors influencing their selection and mobilization” (p. 1931). Whereas eight types of knowledge (intrapersonal, interpersonal, perceptual, moral–ethical, scientific, practical, experiential, and contextual) identified in prior literature, starting with Carper’s ways of knowing (1978), were identified, another type emerged. That was a contextualized type of knowledge. They coined a term for this new type as “combinational constructive knowledge” (p. 1930). It was difficult for students to verbalize the complexity of this knowledge that called for a higher level of critical thinking, including *creativity*, and a focus on the uniqueness of the patient situation.

This combinational constructive knowledge is quite intriguing. It resonates with the complex type of knowledge that we have gained in our many nursing years. Consider how complex our nursing knowledge base is the longer we practice. Bits and pieces of information are put together into lumps, patterns, schemes, and blobs in our

minds. What do we do with that mixture of knowledge? Well, consider something as banal as constipation, a health issue nurses own for their patients' comfort. Think of the knowledge that constitutes constipation: Well, there's basic anatomy and physiology of the gut. Ah, but we know that varies by individuals, diet, time of the month, age, fluid intake, mobility, ethnicity, medications . . . shall we keep going? You get the idea, right? Even something as simple as taking care of constipation is based on combinational constructive knowledge if your aim is a patient's comfortable bowel elimination.

Although consideration of combinational constructive knowledge seems to help with our understanding of the influence of knowledge on CT, another study posed the question of whether knowledge could interfere with CT. The relationship between CT and knowledge emerged as a theme in the qualitative study of Chinese students by Chan (2012). That relationship was polarized as being a partnership or rivalry. "Some participants found knowledge a prerequisite for making a sound judgement [sic], while others argued that believing in established knowledge could prevent one from questioning the validity of arguments" (p. 563).

Aha, so is knowledge a good or bad influence on CT? Hmmm. We will let you ponder that some more. Consider your knowledge base. Is it fluid enough to be combined and reconstructed, or is it so standardized that it might interfere with your thinking? You might want to stop and reflect on your *intellectual integrity*. Can you reflect on your existing knowledge and reconstruct it if another piece of the knowledge picture seems contrary to your previous assumptions or beliefs?

### ***Cultural Influences on CT***

Unquestionably, we are influenced by our native culture and by the culture in which we live and work. Depending on your level of ethnocentrism or your exposure to different cultures, you may not realize how deeply societal and cultural norms affect your thinking and that of people around you.

Culture, as defined by Rose (2013), is "an integrated pattern of learned beliefs and behaviors that can be shared among groups, including thoughts, styles of communicating, ways of interacting, views on roles and relationships, values, practices, and customs" (p. 203). Culture is not static; it changes with time as cultural groups change the definitions of their parameters. Although we can trace almost everything we think and do back to some cultural influence, there are some aspects of culture that are especially relevant when it comes to CT, particularly communication and time orientation. We will also discuss the organizational culture of the healthcare work environment and how it affects CT.

### **Communication, Culture, and CT**

Communication is the most obvious area where culture could affect CT. The term *communication* covers a broad range of topics about which numerous books are written. In this section, we focus on two: language and translation of meaning across cultures, and one's style for communicating thinking.

First, consider what language a person speaks. Is it the language of the majority? If not, consider what implications translation can have on the various components of CT. Words to describe thinking are complex and abstract and often have no direct translation in other languages. On a trip to Japan to present a paper on CT, we found that the phrase *habits of the mind* caused the most complex translation problem. There was no direct translation, so we tried to think of a synonym. In our research, we chose that phrase—*habits of the mind*—deliberately because we wanted to get across these finer points: The word *traits* often connotes static qualities, and we wanted to stay away from that. *Characteristics* was too broad, and *dispositions* was closely aligned with *traits*. As the translator tried these and other words, she became very frustrated. *Tendencies toward* seemed to work, as did *affinity for*, but ultimately, the complete meaning of *habits of the mind* was probably never effectively translated.

What did this do to our discussion about CT? In this case, the idea that habits of the mind can be enhanced and our suggestions on how to do that may literally have gotten lost in translation. Because language is the basis of understanding, the very words used to describe CT and its dimensions need to be clarified at the outset of any discussion. If we aren't using the same descriptors, we may not be talking about the same thing.

Second, consider the different styles of communication that exist among cultural groups. To study CT requires questioning, but how is questioning viewed in other cultures? Is it considered an impolite or a desirable activity? Group activities to enhance CT usually involve sharing thoughts about thinking style; such sharing can be seen as a very intimate process. Do some cultures have rules that prohibit such personal exchanges?

I (Gaie) will switch to singular first-person writing here for a moment because this observation is personal. I can think of two extremes to illustrate the differences in communication style among cultures. One occurred in my native Newfoundland, a small maritime province in Canada. The other occurred in Japan, where I recently did the presentation on CT to which I referred earlier. I have not lived in Newfoundland for many years, but I visit frequently. It seems that there is open debate on everything in my home province. I have never seen a place with so many radio talk shows! Everyone has an opinion on everything, and people freely express their opinions through whatever medium is available. Several people talking at once, using emphatic gestures, is more the norm than the exception. While doing a presentation on CT to nurses there several years ago, I had to stop frequently for discussion and questions from the audience. To someone unfamiliar with the culture, the questions might have seemed confrontational. I felt right at home!

In Japan, on the other hand, the large audience of nurses was extremely quiet. I was a bit intimidated when I walked into the auditorium to find 3000 nurses who were so silent. It reminded me of how the room sounded the day before while I rehearsed—but then it was completely empty. I'm used to the din that American and Canadian audiences make as they wait for programs to begin. In Japan, when I asked

for questions, there were few. Those who spoke did not use hand gestures and began each interaction with a deferential comment, such as “excuse me.” Japanese nursing faculty, who are very interested in promoting CT, told me they have to repeatedly encourage students to discuss issues and ask questions; students there are much more comfortable with lectures.

Extremes such as these, and all kinds of examples in between, occur in nursing practice and schools throughout North America as well. What do such differences mean to the educator or clinician? Because questioning is considered a desirable part of CT, the tendency is to believe that the assertive communicator is a better critical thinker. However, we must consider just what it is that we most value. Is it the communication of questions or the questioning itself that is important? Perhaps we need to think of ways beyond verbal means to encourage questioning. Perhaps quiet people are more comfortable sharing their questions in writing. Smaller group discussions that are not teacher led or Web caucuses might be more appropriate for those from cultures in which open questioning is seen as impolite.

Even words within the same language can assume different meanings and connotations (the underlying meanings). For example, some geographic regions have different meanings for the same word. In some parts of the United States, the word *dinner* means the noon meal, while in other parts of the United States it means the third meal of the day. Think about the teaching implications for patients learning about diabetic eating patterns. You have to consider where you are when you interpret words. Then, to make matters even more challenging, consider how some words have acquired stronger values than other words. Think about how those values have an impact on how all the healthcare stakeholders think and interact with each other. Have some fun with **TACTICS 3-1** to see how the value meaning attached to words cannot only vary but also impact your thinking and the thinking of other stakeholders.



### **TACTICS 3-1: What’s the Value Meaning Attached to These Words?**

1. Read the following list of words one by one.
2. On a scale of 1–10, with 1 being the most negative value and 10 being the most positive value, rank each of these 10 words.

Critical thinking	Bias
Judgment	Nonjudgmental
Frequent flyer	Medicine
Children	Nursing
Noncompliant	Elderly

3. Compare your value ranking with a peer.
4. Discuss similarities and differences *and* propose how your values might impact both your thinking and your care.



### Discussion

Which words had the highest values? Why do you think they did? Which words had the lowest values? How do you see your value (liking or disliking) of the word having an impact on how you think and how you practice nursing? Did you tend to give *judgment* and *bias* and *noncompliant* lower values? If so, why? Are there situations in which judgment and bias might be highly valued? And is *noncompliant* a useful label? Does it help in thinking and planning care or simply blame the patient? Share with your peer what you can do to look more deeply into the value behind words and become aware of how that value may impact both your thinking and your care.

### Time Orientation, Culture, and CT

If communication styles seem culturally bound, what about other things, such as the cultural influence on time orientation? There is a certain expectation of a futuristic view in nursing descriptions of CT. Speaking generally, certain groups have one of three dominant time perspectives: past, present, or future. Of course, there are many exceptions to these broad generalizations, but we usually view Eastern cultures as more focused on the past, Hispanic and Native American or Aboriginal cultures as more focused on the present, and European American cultures as more focused on the future.

A Hispanic nurse once told us that he asks Hispanic patients if they'd like him to record appointment times on their cards half an hour earlier so they'd be on time for their appointments. He initiates that question with a comment about his own tendency for tardiness because he's not very future oriented.

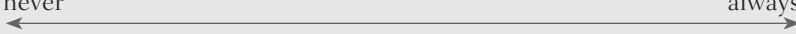
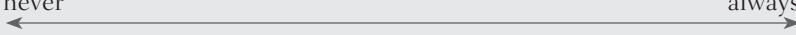
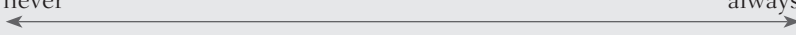
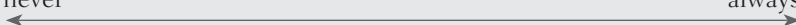
Another example from Gaie: A friend and I stopped to visit a basket maker on a Mi'kmaq reservation in Cape Breton, Nova Scotia, a couple years ago. We were so fascinated with her exquisite weaving of a quill basket that we stayed longer than planned. Upon realizing the time, we jumped up, saying, "We'll be late getting to our friend's house. We need to get going." The basket maker looked at us, smiled, and said, "Just tell them you were on the res' and you're on Indian time." Clearly, her present-oriented perspective was so much a part of her culture that she was very comfortable making humorous references to it. Later I thought about what it would be like if she were a student in my CT class. What would she think when I stressed the importance of *predicting* (one of the CT skills we identified in our study) as part of CT? Would she adopt a futuristic thinking mode because it was expected? How would that affect other parts of her thinking, honed by years of her own culture's influence?

Another issue relative to time is the predominant U.S. value that time is money and its companion, time equals action. For vivid examples of this in health care, we only have to look at managed care approaches in which nurse practitioners and physicians are required to see large numbers of patients each hour to meet income quotas. Home healthcare nurses are given similar quota directives—ones that make quality care difficult. What happens to CT in a culture that clearly values the tangible results of work but not the process of improving quality through thinking? It takes time to think; some things take longer to think about than others, and some people think faster or slower than others. (See **TACTICS 3-2**.)





**Box 3-4 Cultural Influences on Thinking Habits of the Mind** (*continued*)

- be sensitive to my gut feelings  
 never always  

- reflect on my biases  
 never always  

- stick to something until I accomplish it  
 never always  

- spend time reflecting on my thinking and actions  
 never always  


**Discussion**

Did you learn anything about your culture? Other people's cultures? You've probably considered such things before, but have you put them into a CT frame of reference? We tend to think of cultural norms in terms of such things as eating, holidays, and dress, but we don't often associate them with our thinking.

**Organizational Culture and CT**

This brings us to a significant cultural influence on you as a thinker—the organizational culture of your work environment. Here we consider how much your employment environment defines you as a thinker. Much has been written about the influence of work environment on thinking (e.g., Chan, 2001; Senge, 1990; Senge, Smith, Kruschwitz, Laur, & Schley, 2010). In her study of nursing preceptorship, Myrick (2002) identified the work climate or environment as a key variable enabling CT.

Organizational cultures can be very powerful. There is a strong tendency to assume that behaving in accordance with one's organizational culture is the correct way to do things and avoid role conflicts. Such assumptions generally lead to a status quo environment that precludes thinking. After all, it's easy. Status quo thinking, however, is not healthy and eventually leads to the decline, entropy, and ultimate demise of the organization (Higgins, 1995).

Organizational cultures that promote a status quo existence are potentially dangerous to critical thinkers. Brookfield (1993) recognized this situation and warned critically thinking nurses about "cultural suicide" (being ostracized by coworkers as a result of challenging the status quo). Many critically thinking nurses are thought of as being on the fringes of mainstream thinking because they question, challenge, and annoy those who prefer to keep things the same.

Although few would admit to this, today's complex systems of healthcare practice and education often blatantly discourage CT. Mohr, Deatrck, Richmond, and Mahon (2001) addressed organizational values conflicts, painting a picture of troubled organizations. Some unhealthy traits they mentioned were excessive control, distraction with

minutiae, repression, intolerance for new members and diversity, territorial behaviors, depression, submissiveness, and horizontal violence (passive–aggressive behavior). This is a culture that will certainly not contribute to the growth of its members' CT.

Organizational cultures that encourage CT and acknowledge the inevitability of change are called *learning organizations*, and they use *systems thinking* (Chan, 2001; Senge, 1990). Or, as Senge et al. (2010) said in their later writing, “learning journeys” are necessary for organizational growth. Members of these cultures that encourage CT exhibit traits of trustworthiness, autonomy, responsibility, and *reflection* (Mohr et al., 2001). They rely on resources such as books, computers, links to libraries, and librarians. They provide think time and emphasize language and description and share thinking. They give verbal credit and reward the thinking process, not just the end product. They welcome debate. If you are fortunate enough to work in that kind of environment, it is bound to positively influence you as a thinker. People like us, who spend a lot of time thinking about thinking, define such places as heaven, nirvana; we dream about such organizational cultures and hope to see them as the norm in nursing. (See **TACTICS 3-3**.)



### **TACTICS 3-3: Environmental Factors Influencing Thinkers**

#### *Clinicians*

Think about your environment. Generally speaking:

1. Where does it fall on the continuum from status quo thinking to our description of thinking heaven?
2. What is your position in that environment?
3. Can you influence the working culture?
4. How could you influence it?
5. Make a list of things you can influence in your environment that would make it more thinking-friendly.

#### *Educators*

Think about your teaching style.

1. Complete the checklist in **Box 3-5**.
2. How would you rate yourself as a positive influence on the thinking of your learners?
3. Review one of your teaching plans; do you see evidence of strategies that promote thinking?
4. Can you or should you change anything in your plan?

#### *Discussion*

How does your environmental culture stack up? Are you doing a good job of promoting CT in your organization? Cultures that promote CT have members who think individually and collectively. Such organizations are not neat; indeed, they appear rather chaotic. They are in a constant state of change. Think about what kind of

**Box 3-5 Thought-Promoting Teaching Style Checklist**

In my teaching I:

- Evaluate and give credit for thinking processes (e.g., “good thinking!”)
- Use multisensory techniques
- Encourage lots of questions
- Do not get defensive when questioned or challenged
- Help students find information resources
- Describe to students how I think
- Model my thinking
- Use deliberate methods to decrease anxiety
- Develop teaching objectives or expected competencies that go beyond recall of information and require transforming information into usable knowledge
- Use humor
- Create a thinking-friendly environmental culture that accepts mistakes as opportunities to grow
- Vary teaching methods and strategies throughout each session
- Engage students in peer review activities
- Provide written *reflection* time in class
- Ask students to expand on their answers (e.g., “tell me more”)
- Promote students’ positive self-concepts
- Emphasize collaborative learning between teacher and student (as opposed to authoritarian style)
- Allow or encourage the student to be the teacher

thinker you are and how much that part of you is defined by your work culture. What can you do to make your environment more conducive to CT?

This *reflection* process helps to identify who in your organization are potential CT mentors. Not all members of an organization strive to be great thinkers. The larger the numbers of critical thinkers in an organization, the better the quality of health care.



### **PAUSE and Ponder**

#### *Defining Ourselves as Critical Thinkers*

In this chapter, we have focused on clinicians and educators who are the keys to promoting CT in nursing. Once again, let us caution you: CT is not just an individual phenomenon. Our CT is influenced by all the thinkers around us, and we influence their thinking, too. Repeatedly throughout this text, we assert the

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importance of this point. Today's healthcare delivery and educational systems are enormously complex. If clinicians and educators don't define themselves as critical thinkers, we will have unsolvable problems.

## **REFLECTION CUES**

- This chapter specifically speaks to clinicians and educators about their identities as thinkers.
- Clinicians include everyone from beginning nursing students to expert nurses in the practice arena.
- Educators include everyone in all areas of teaching, from staff development to continuing education to the academic settings.
- Many factors influence one's development as a critical thinker.
- Genetics, or your natural thinking processes, influences *who* you are as a thinker.
- Gardner's multiple intelligences increase our awareness of different styles of thinking and processing information.
- Self-concept as an influence on CT is shaped by many factors, such as gender and social mores.
- Nurses are great thinkers, even though the world doesn't always see them as such or acknowledge their thinking as essential to their actions.
- Nurses are knowledge workers, not production workers.
- All emotions, especially anxiety, exert a huge influence on one's CT.
- The values, attitudes, and beliefs of different generations impact the teaching, learning, and thinking of healthcare providers.
- Knowledge influences CT in complex ways that could be both positive and negative.
- Both our native cultures and the cultures in which we live and work influence us as thinkers.
- Cultural differences in communication and time orientation affect *who* we become as thinkers.
- Cultures that discourage CT have traits such as intolerance, territorial behaviors, and repression.
- Organizational cultures that promote CT are called learning environments and use more systems thinking.
- We need to reflect on *who* we are as thinkers and how we promote a culture of thinking.

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