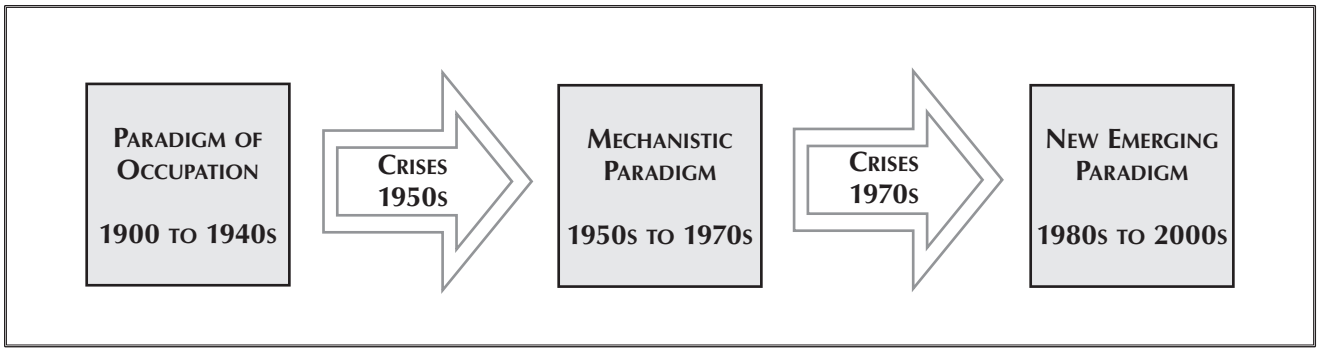


Figure 1-2. Major paradigm shifts in the occupational therapy profession. (Adapted from Kielhofner, G. [2004]. *Conceptual foundations of occupational therapy* [3rd ed.]. Philadelphia: F. A. Davis.)

by accurately identifying the broken parts (diagnosis) and fixing them (prescription). The medical model is further defined in Chapter 2.

A second crisis happened to occupational therapy's practice within the medical model. The profession's development became excessively caught up in the scientific movement of the mid-20th century, and by the 1970s, so many occupational therapy specializations existed that we could no longer see the forest through the trees. Psychiatric occupational therapy, physical disabilities occupational therapy, pediatrics, hand therapy, geriatric occupational therapy, and school-based occupational therapy are some of the many specializations of the 1970s. In the 1980s, managed care began using these narrow and limited definitions of occupational therapy's role in rehabilitation as a basis of reimbursement, creating a huge problem with the old paradigm. A broader definition of occupational therapy's domain of concern was clearly needed for our profession to remain relevant and valued in the new millennium.

THEORETICAL HISTORY OF OCCUPATIONAL THERAPY

In this section, we will briefly examine each decade, noting the health care trends, historical context, and specific theories in occupational therapy that emerged and prevailed in each. Each era/decade from 1900 to 2020 is outlined in Table 1-3. In a project done for the AOTA Representative Assembly, the members of an ad hoc committee on historical foundations identified nine themes that contributed to the foundations of occupational therapy:

1. Economics
2. Education
3. Health and medicine
4. Philosophy
5. Politics and government
6. Professions
7. Psychology
8. Religion and spirituality
9. Social movements (Reed & Peters, 2006)

Reports of this project's findings have been published in *OT Practice* and are available on AOTA's website. Figure 1-3 shows a visual perspective of the roots and theoretical history of occupational therapy during the 20th century (informed by these reports and by Kathryn Reed [2008, personal communication]).

The 1920s: Habit Training and Reconstruction

Most people associate the Roaring Twenties with a booming post-WWI economy; a preoccupation with music, dance, fashion, and style; and an optimistic outlook that ended abruptly with the stock market crash of 1929. In the realm of health care, United States society put its faith in medicine and science to provide remedies for everything from insanity to chronic disease. Between 1917 and 1920, the number of hospitals in the United States more than doubled, and occupational therapists became a part of the medical services offered there. This decade saw a rapid growth in training programs for occupational therapists and a vast increase in our numbers.

Eleanor Clarke Slagle, working with psychiatrist Adolph Meyer, developed the *habit training approach,* which offered a full schedule of ordinary daily activities, including crafts, work tasks, and group recreations, in order to promote both mental and physical health for patients institutionalized for mental illness. Meyer and Slagle both viewed habit training as a holistic approach using the principles of humanistic philosophy (Meyer, 1921). Hall contributed to this theory in his view of crafts as a means of restoring "authentic living" to persons with disabilities (1916).

The *Reconstructionist Movement* also began holistically. For soldiers returning from war, broken bodies had to be "reconstructed," a task that included physical reconditioning through occupations such as handcrafts and manual labor and the mental incentives provided by their wives and sweethearts who were taught to encourage

Table 1-3

History of Occupational Therapy Theory: Socioeconomic and Political Influences

Years	Occupational Therapy Theories and Theorists	Historical Events	Health Care Trends
1900s, 1910s	• Paradigm of occupation created by founders and others • Occupational therapy founded in 1917 • Training of reconstruction aides	• Industrial Revolution • World War I (WWI) • Time and motion studies • Women's right to vote	• Many immigrants in "insane asylums" • Humanitarian influence • "Work cure" replaced "rest cure" for chronic illness
1920s	• Eleanor Clarke Slagle: habit training, arts and crafts, biomechanical • Adolph Meyer: philosophy of occupational therapy	• Post-WWI: age of inventions • Booming economy • Silent movies and radio	• Long-term institutionalization for chronic health conditions
1930s	• National registration for occupational therapists began • B. F. Skinner, behaviorism • Behavior modification • Biomechanical frame of reference prominent	• The Great Depression • Prohibition • Growth of organized crime	• Pre-World War II (WWII), political unrest regarding poverty and unemployment
1940s	• Advances in physical rehabilitation • Psychoanalysis prominent in mental health settings	• WWII • The Holocaust • Golden age of jazz • Color movies and television • Baby boom begins	• Vocational rehabilitation movement • Retraining of returning soldiers
1950s	• Curative workshop: Helen Willard and Claire Spackman • Bobath's neurodevelopmental approach • World Federation of Occupational Therapists (WFOT) founded in 1952	• Communism rise • Cold War begins • Advent of rock 'n' roll	• Antipsychotic medications • Neurological breakthroughs • Vaccines developed for polio and other diseases
1960s	• Group dynamics • Fidler's task-oriented approach • Mosey's three frames (psychoanalytic, acquisitional, and developmental) • Llorens' growth and development • Motor control approaches	• Social consciousness regarding civil rights • Sexual revolution • Vietnam war protests • 1964: baby boom ends	• Widespread deinstitutionalization • Shift to community programs and agencies (but without sufficient funding)
1970s	• A. Jean Ayres, sensory integration • Lorna Jean King, growth of cognitive behaviorism • Llorens' ego adaptive and growth and development approaches	• Energy shortage • Runaway inflation	• Occupational therapy in school systems • Education of children with disabilities
1980s	• Model of Human Occupation (MOHO) • Allen's cognitive disabilities • Toglia and Abreu's cognitive perceptual approach	• Fall of communism • End of Cold War	• Omnibus Budget Reconciliation Act (OBRA) of 1990 provides standards of care and cost containment
1990s	• Motor learning • Trombly's task-oriented approach • Toglia's multicontextual approach • Schkade and Shultz, occupational adaptation • Law and Baptiste's client-centered approach • Dunn's Ecology of Human Performance	• Operation Desert Storm • Growth of computers and communication technology • World Wide Web • Booming economy	• Diagnosis-related groups' criteria limit health care costs • Growth of health maintenance organizations (HMOs; managed care) • Growth of client-centered care • Americans with Disabilities Act

continued

Table 1-3

History of Occupational Therapy Theory: Socioeconomic and Political Influences (continued)

Years	Occupational Therapy Theories and Theorists	Historical Events	Health Care Trends
2000s	• Occupational Therapy Practice Framework (OTPF) • World Health Organization's International Classification of Functioning, Disability, and Health (ICF) • Systems approaches • Global perspectives	• Recession • Terrorism (9/11) • War in Iraq • Hurricane Katrina and other natural disasters	• Growth of community-based programs, wellness programs, and family-centered care
2010s	• Complexity theories • Transactional theory • Occupation-based model revisions • Therapeutic use of self and humanism • Self-management • Evidence-based practice • Group interventions • Occupational therapy advocacy	• Great recession • Unemployment • Global markets • Arab Spring • President Donald Trump's election and policy changes	• Social cognitive theory • Focus on social networks and contexts • Recovery model • Affordable Care Act and its revision or replacement

the men in their lives "not to lose hope" (Quiroga, 1995). Reconstruction also extended to those factory workers who fell victim to industrial accidents, common in a time when productivity took precedence over safety in the workplace. The overall goal of rehabilitation involved retraining, reeducating, and restoring physical and mental functions that enabled persons with disability to reenter the work force. However, occupational reconstruction aides quickly learned that as therapists working in health care settings under a doctor's supervision, they were both more highly respected and better paid. By the end of the decade, occupational therapy was clearly identified as a health care profession, working hand in hand with medical practitioners.

The *biomechanical approach* began during the industrial revolution. Efficiency experts studied human movements, endurance, fatigue, and other effects on the body as an attempt to make factory workers more efficient and their output more productive. The biomechanical model, using scientific evidence from time and motion studies in the 1920s, became the basis for activity analysis in occupational therapy and, applied to ADL, has become the preferred frame of reference for the treatment of physical disabilities—a trend that continues to the present.

The 1930s: Biomechanical and Behavior Modification Frames of Reference

In the 1930s, the scientific movement continued through the use of adapted crafts such as weighted sanders for woodworking and floor looms with weights attached to provide muscle training while performing the steps of the handcraft. During the economic depression of the 1930s, occupational therapists continued to work in convalescent hospitals, sanatoriums, and retreats, where patients with chronic mental illness or incurable diseases such as tuberculosis and polio sometimes stayed for several years. People with other incurable conditions, such as mental retardation or developmental disabilities, were also institutionalized. These institutions provided the most scientific and modern treatment available at that time, and occupational therapists considered themselves fortunate to be a part of such highly respected medical care.

Behaviorists such as Watson, Skinner, and Pavlov became well-known in the 1930s. These early learning theorists used the scientific method to study human behavior, making breakthrough discoveries about how people learn and why they behave as they do. Behavior modification was first used as a therapeutic approach in institutions to reinforce desirable behaviors while using negative reinforcement to extinguish undesirable behaviors.

Psychoanalytic theorists such as Freud, Jung, and Erikson also published during the 1930s, but their therapeutic application became more commonly known in later decades.

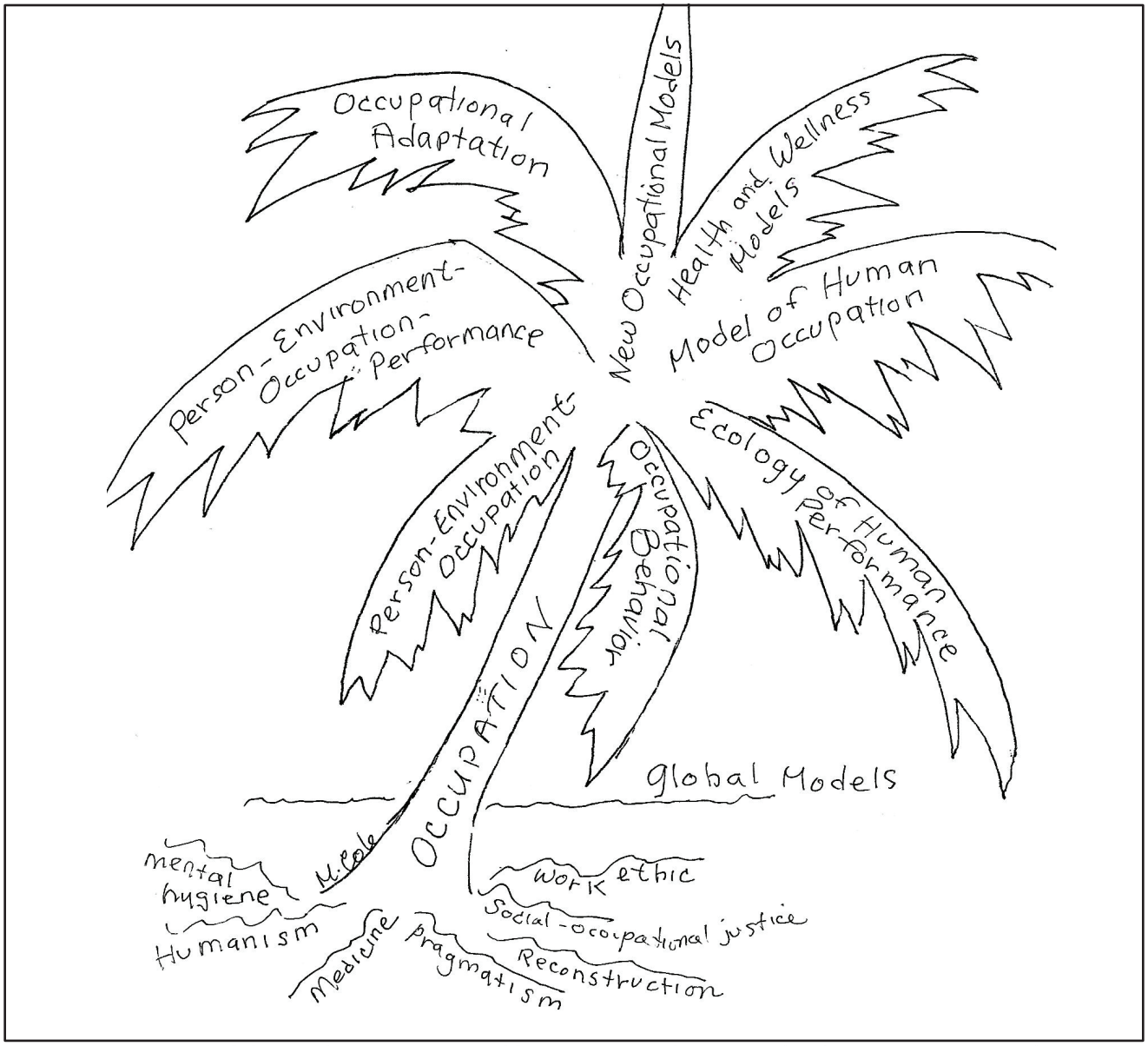


Figure 1-3. Occupational therapy theory tree. (Created by Marilyn B. Cole. Reprinted with permission.) (Note: The previous theory tree drawing was quite complex, including both OT models and frames of reference. This one is simplified, denoting the current trend toward placing occupation at the center of all professional theories. Frames of reference are used within the occupation-based theories as needed when addressing specific disabilities.)

The 1940s: Vocational Training, Activity Analysis, and Rehabilitation Models

World War II (WWII) brought the focus of health care back to vocational rehabilitation and the need to retrain returning soldiers with a variety of disabilities for occupations suitable for the home front. Several changes in social policy had occurred since WWI, including the New Deal (providing Social Security income for persons with disabilities) and the GI Bill (providing funding for vocational retraining), which facilitated the payment for occupational therapy services in physical rehabilitation and prevocational training programs. The vocational training programs extended to both physical and mental health settings, which often led to supervised work placements within the hospital itself. For others with special needs, sheltered workshops were set up where persons with disabilities could earn modest wages by doing contract work in an adapted and carefully supervised environment.

The Kinetic Model

The *kinetic model*, published by Sidney Licht in 1947, provided a scientific basis for the analysis of activities using a *biomechanical* frame of reference. Claire Spackman inter-

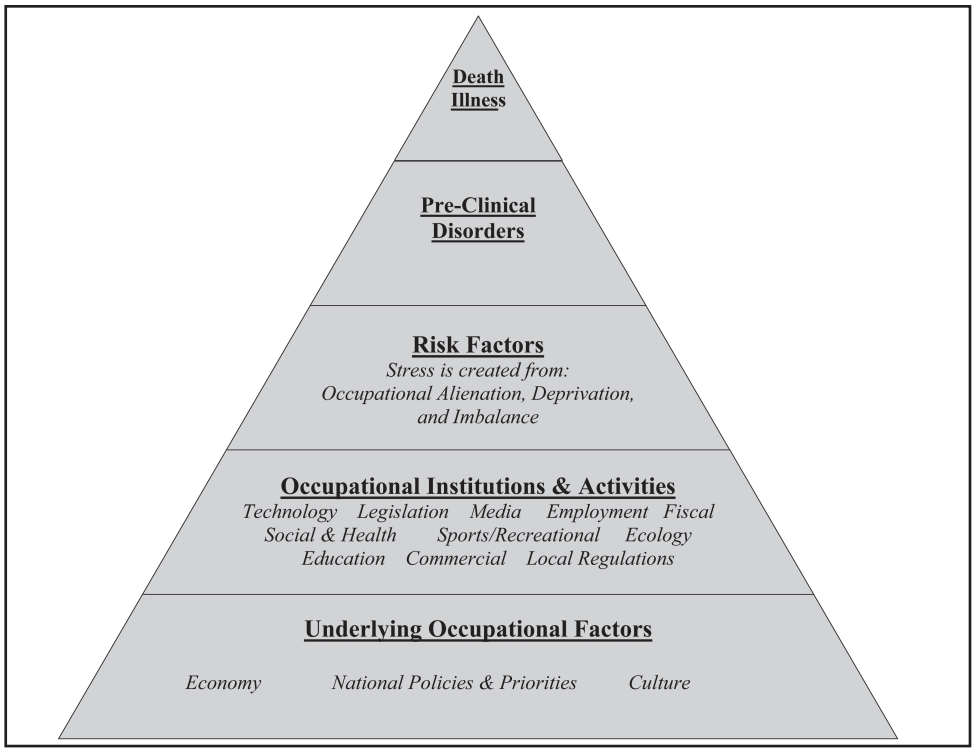


Figure 2-3. Engagement in occupation to support participation in contexts. (Adapted from Better Health Commission. [1986]. *Looking forward to better health*. [Vols 1-3.]. Canberra, Australia: Australian Government Publishing Service.)

Case Example

The following is an example of how an occupational therapist might incorporate data and the objectives from public health within a community practice setting.

An occupational therapist who works in an elementary school completes an assessment on an 8-year-old female named Ariana who shows some difficulty in academic performance and possibly developmental delays. Following an occupational therapy assessment, the occupational therapist creates an integrated intervention plan that recommends that Ariana engage in active, physical occupations such as organized sports teams or dance three times per week to promote physical, mental, and social well-being. The therapist recognizes that among various issues of concern, this child is starting to develop secondary health issues related to being overweight and sedentary with poor nutrition habits.

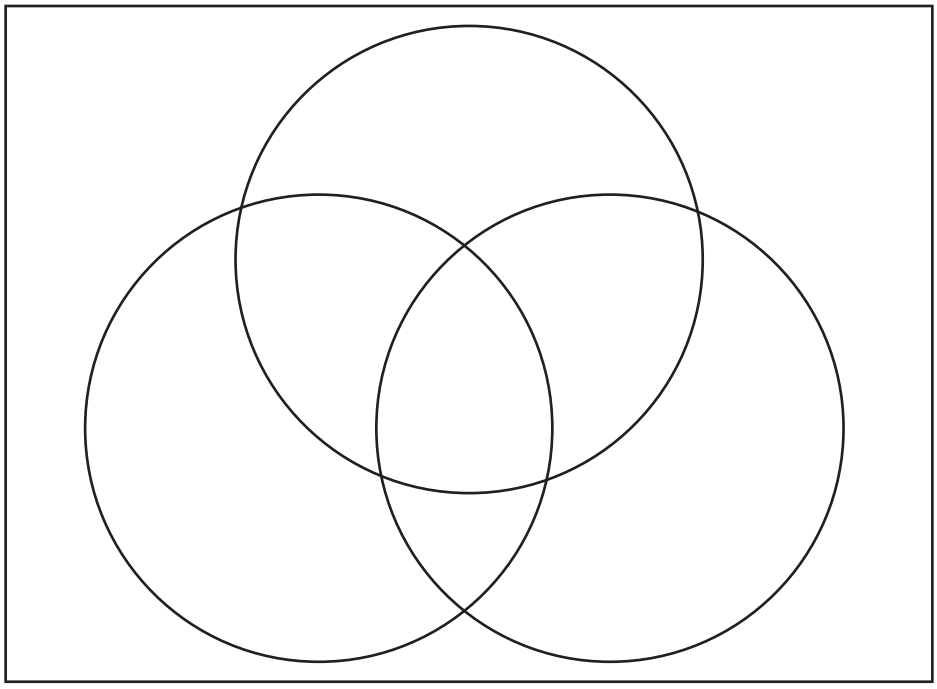
This intervention is an example of a preventive strategy that is meant to diminish the *incidence* of health issues and conditions for this client (e.g., obesity, early-onset diabetes, fatigue, physical injuries and strains, poor body image, social withdrawal, low self-esteem) while also decreasing the overall *prevalence* of children who develop secondary health problems related to obesity in that particular community. In effect, this therapist is also attempting to modify this child's *risk factors,* which may be defined as those variables that increase a person's vulnerability to developing an injury or condition (Scaffa, 2001).

Scaffa defines risk factors as physical, behavioral, genetic, social, economic, political, or environmental in nature. In Ariana's case, examples of risk factors for this child may include low tone (physical), sedentary play activities like watching television (behavioral), and a predisposition to weight gain (genetic). Perhaps she lives in a social community where it is unsafe to go outside or her family lives in an apartment complex with no backyard (social). Economically, her family may be on state assistance, and therefore, food selection tends to include lots of carbohydrates with high fat content due to limited funds. Politically, this child may be at risk for developing future health conditions but may not have a specific diagnosis that could warrant occupational therapy services at this time according to our current health care codes for reimbursement. Environmentally, this child may not appear different from other peers within her culture or among her school mates. It is possible that her habits and routines are typical and reinforced by other children who are like her. If this is an impoverished neighborhood (environment), the school may lack resources that could minimize the risk factors described in this child, such as organized after-school activities, alternative and healthy food options, active play equipment, and alternative learning tools and strategies.

WILCOCK'S OCCUPATIONAL PERSPECTIVE OF HEALTH

All people are occupational beings, according to Wilcock (2006). For thousands of years, people engaged in occupations to ensure their survival, such as hunting and gather-

Figure 4-4. Model and frame of reference analysis worksheet.



1. What is the focus or central organizing idea of the theory? This may be thought of as the goal of occupational therapy intervention. Write this concept at the center of a Venn diagram like the one in Figure 4-4 (where all three circles intersect)
2. Identify the three most important concepts of the theory that, taken together, will produce the outcome represented at the center. Write these in the three circles of the diagram
3. Define each concept you have written according to the chosen model or frame (Table 4-5). Explain how these factors produce the outcome represented in the center (intersection)

Additional Learning Strategies

Directions: to help you think about the usefulness of a model or frame of reference, answer the following.

1. Focus: how broad a focus does this theory have? What areas of the occupational therapy practice domain are involved? Does it apply only to one age group? Primarily one type of disability? List the health conditions that might benefit from this approach
2. Theorists: who are the theorists, researchers, or authors who have contributed to this theory? From what disciplines (occupational therapy or others) do these concepts originate? To what extent are the concepts compatible, or do they contradict each other?
3. Function–Dysfunction Continuum: how does this theory apply to individual client functioning? What disabilities might a client have that prevent him or her from achieving the desired outcome? In the example of habit training, dysfunction might be defined as having no habits or routines, and function might be defined as having a daily structure of normal daily activities that include a balance of work, play, rest, and sleep. Create a continuum for the theory you have chosen. Define the worst possible dysfunction on one end of the continuum and the best possible functioning at the other end
4. Change and Motivation: what does this theory tell you about how change occurs for clients? What kinds of things can influence the client's occupational performance in a positive direction? List three strategies that could influence a client's functioning in the focus area defined in the center of your diagram
5. Assessment: how could you learn more about a client's functioning in the focus area of this theory? What are some questions you could ask? What might be some ways you could observe occupational performance? What assessment tools are currently available that help occupational therapists evaluate different aspects of human functioning using this theory?
6. Intervention: what methods or techniques for intervention are defined by this theory? How could you put the postulates of change into action in occupational therapy? Give two examples
7. Research: what studies provide evidence for this theory? Summarize three studies

- ✦ Occupation as a core concept
  - ✧ Defining occupation
  - ✧ Concept vs construct
  - ✧ Occupation-centered education
- ✦ Complex systems theory
  - ✧ Evolution of systems theory
  - ✧ General vs complex systems
  - ✧ Clinical and professional reasoning in occupational therapy
- ✦ Social cognitive theory
  - ✧ Bandura's agentic perspective
  - ✧ Neuroscience brain research
  - ✧ Social reasoning in occupational therapy
  - ✧ Emotional reasoning in occupational therapy
  - ✧ Balancing multiple intelligences
- ✦ Future directions for occupational therapy
  - ✧ Proposed paradigm shift toward wellness and prevention
  - ✧ Interdisciplinary team collaboration
  - ✧ AOTA's emerging practice areas

In particular, complex systems and social cognitive theories, although interdisciplinary, have profoundly influenced the occupation-based models and occupational therapy frames of reference, with implications for needed changes to the clinical and professional reasoning processes occupational therapists use for current practice. We will discuss how each of these areas of research has impacted and will likely continue to influence the future development of our profession.

Occupation as a Core Concept

According to the AOTA's OTPF3 (2014), occupations are "various kinds of life activities in which individuals, groups, or populations engage" (p. S19). However, myriad definitions exist across the occupational therapy literature attesting to the complexity of occupation. Please refer to Table 3-1 for a sampling of the multiple definitions of occupation that the occupational therapy profession has developed over the past 100 years.

Issues With Defining Occupation

There is not one accepted definition worldwide to describe the core concept of occupation (Hinojosa et al., 2017). As definitions have evolved throughout our profession's history, scholars have observed that "the complex use of the construct occupation has led to some confusion about its meaning and the role of this construct in different frames of reference and theoretical perspectives" (Hinojosa et al., 2017). Watson (2004) viewed occupation as transformative. She writes that "occupation, as separate but integrally bound to therapy, is a complex domain of study because its multifaceted and intricate nature makes it difficult to define and describe" (2004, p. 3). Occupations, as a basic human need, have the "transformational power to bring about development and maturation across multiple transitions when the choices and processes are personally meaningful" (Watson & Fourie, 2004, p. 19). Mitcham credits the academic field of occupational science for expanding the field's understanding of the form, function, and meaning of occupation. She states, "Now we know more about occupation as an active multidimensional construct with its physiological, neurological, psychological, cognitive and social components" (Mitcham, 2014, p. 642).

Creek (2010) describes how a group of European occupational therapy educators, as part of the European Network of Occupational Therapy in Higher Education (ENOTHE), took on the daunting task of defining occupational therapy's key occupational therapy terms and translating them into the various languages spoken throughout Europe. The terms they chose to represent the core of occupational therapy were activity, function, occupation, occupational performance, and occupational therapy. Not surprisingly, they found multiple definitions for each of these terms, with little agreement in the professional literature. The group's further efforts extended beyond identifying the words representing core concepts to also defining the interconnections among the concepts and how they related to and influenced each other. Eventually, they identified 25 words that formed eight clusters of words representing similar or related concepts. It also became clear that the relationships between concepts was not fixed, but dynamic, context bound, and dependent upon the perspective of the participant or observer. What began as simple translation of words ended with the building of a common conceptual framework for occupational therapy based on complexity theory. Complexity theory "provides a way of understanding and articulating the nature of the interactions between concepts so that they can be seen as a whole, complex system" (Creek, 2010, p. 47). Complexity theory and its meaning with regard to occupational therapy's applied theories is further defined later in this chapter.

Concept Versus Construct

It is reassuring to learn that occupation, the founding concept for our profession, has stood the test of time. However, some scholars refer to occupation as a concept, whereas others prefer the term *construct*. According to OTPF3 (AOTA, 2014), occupation "refers to the daily life activities in which people engage" (p. S6). Within this definition, occupation could be considered a *concept* because daily life activities are easily observable and identified by others. Even with the addition of conditions such

Table 3-1

The Changing Definitions of Occupation in Occupational Therapy

Occupational Term	Definition	Reference
Occupation	Work as a therapeutic measure	Dunton, 1915, p.11
Occupation	Refers to both work and leisure	Meyer, 1921
Occupation	"A dynamic relationship among an occupational form, a person with a unique developmental structure, subjective meanings and purpose, and the resulting occupational performance"	Nelson & Jepson-Thomas, 2003, p. 90
Occupation	"All the things people want, need, or have to do, whether physical, mental, social, sexual, political, or spiritual nature and is inclusive of sleep and rest"	Wilcock & Townsend, 2014, p. 542
Purposeful activity	Used interchangeably with occupation during mid-1900s, now identified as a part of the broader concept of occupation	Hinojosa et al., 2017
Goal-directed activity	Personally important action to realize a goal	Radomski & Latham, 2014
Occupations	Central to a client's (person's, group's, or population's) identity and sense of competence and have particular meaning and value to that client	AOTA, 2014a, p. S5
Occupations	The things people do that occupy their time and attention; meaningful, purposeful activity; the personal activities that individuals choose or need to engage in and the ways in which each individual actually experiences them	Schell, Gillen, & Scaffa, 2014, p. 548
Occupations	Refer to the everyday activities that people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. "Occupations include things people need to, want to, and are expected to do."	World Federation of Occupational Therapists (WFOT), 2010
Occupations	"Ordinary and familiar things that people do every day"	Christiansen et al., 1995, p. 1015
Occupation as means	Therapeutic means of bringing about change by the client's participation in activities	Trombly, 1995; Radomski & Latham, 2014
Occupation as end	Occupational participation as the outcome of the therapeutic process	Trombly, 1995; Radomski & Latham, 2014
Activities and participation	The performance of meaningful activities and participation in life are the overall goals of health care for all peoples. (Daily life arena domains: Learning, task demands, communication, mobility, self-care, domestic life, relationships, major life areas, community/social/civic life)	World Health Organization, 2001
Occupation, common usage	Jobs people do to earn an income or a living	Hinojosa et al., 2017
Human occupation	Occupations begin with survival in infancy and expand and change as people age	Hinojosa et al., 2017
Occupational performance	Active participation in an activity, which may also be the observable outcome of an occupational intervention or engagement	Reed, Hocking, & Smythe, 2011
Occupational performance	"The accomplishment of the selected occupation resulting from the dynamic transaction among the client, the context and environment, and the activity or occupation"	AOTA, 2014a, p. S14

Adapted from Hinojosa, J., Kramer, P., Royeen, C., & Luebben, A. [2017]. The core concept of occupation. In J. Hinojosa, P. Kramer, & C. Royeen [Eds.], *Perspectives on human occupation: Theories underlying practice* [2nd ed.]. Philadelphia, PA: F. A. Davis.

as, "occupations occur in context and are influenced by the interplay among client factors, performance skills, and performance patterns" (AOTA, 2014, p. S6), occupations can still be understood as shared experience. The OTPF3 identifies the following occupations: activities of daily living (ADL), instrumental ADL (IADL), rest and sleep, education, work, play, leisure, and social participation (AOTA, 2014). However, consider the following alternate definition of occupation:

> … refers to all aspects of actual human doing, being, becoming, and belonging. The practical, everyday medium of self-expression or of making or experiencing meaning, occupation is the activist element of human existence whether occupations are contemplative, reflective, and meditative or action based. (Wilcock & Townsend, 2014, p. 542)

This view of occupation might best be considered a construct because "contemplative, reflective, and meditative" occupations are not directly observable.

Explaining Occupational Therapy

Because occupation is defined more broadly by occupational therapy professionals (all daily activities) rather than what common usage indicates (one's job or work role), practitioners must constantly explain to clients and others what occupational therapists actually do. This has led some educators to require occupational therapy students to prepare and practice a "15-second elevator speech on *'what is occupational therapy?'*" forcing them to convey only a partial understanding of the complex construct of occupation (Hooper et al., 2015). The AOTA has provided some key phrases, branding, and slogans to help promote the profession's holistic approach to the general public. Some examples are as follows:

- Occupational therapy makes good sense (1984)
- Occupational therapy makes learning possible (1983)
- Occupational therapy helps make doing possible
- Occupational therapy: skills for the job of living (1990s)
- Pack it light, wear it right (from Backpack Awareness school programs)
- Occupational therapy: living life to its fullest (2007) (Jacobs, 2012)

Most professionals would agree that these are oversimplifications. Although these phrases might make good conversation starters, none fully convey the complexity of occupation or how it is used as a therapeutic medium to promote healing and wellness. In fairness, none of these phrases were intended to define occupational therapy in its entirety, but rather to promote the profession to people outside the profession. Which of these would you prefer to use when asked to define occupational therapy for a lay audience? What examples could you cite to more fully convey the unique contribution of occupational therapy to health and well-being?

In 2007, the AOTA set forth its Centennial Vision to be accomplished by occupational therapy's 100th anniversary in 2017. It read as follows: "We envision that occupational therapy is a powerful, widely recognized, science-driven, and evidence-based profession with a globally connected and diverse workforce meeting society's occupational challenges" (AOTA, 2007). This vision called for all occupational therapists to contribute to realizing these inherent goals. At AOTA's Centennial Celebration in 2017, a subsequent vision was introduced to move the profession toward even greater recognition and maturity. The AOTA Vision 2025 states: "Occupational therapy maximizes health, well-being, and quality of life for all people, populations, and communities through effective solutions that facilitate participation in everyday living" (AOTA, 2017). Although these statements are intended to guide and promote the profession as a whole, their realization requires that each student, practitioner, and educator learn to see, listen, and think through a uniquely occupational lens (Mitcham, 2014).

Occupation as a Core Subject in Professional Education

A core subject "focuses on the central concerns or concept around which a professional community is formed and that defines the community's knowledge and service" (Hooper et al., 2014). Therefore, in a professional curriculum that includes the study of interdisciplinary fields, these topics must be reformulated in relation to the profession's core subject (Sullivan, 2005). For occupational therapy educational programs, this method of curriculum design is known as *occupation-centered education* (Hooper et al., 2015). Dr. Mitcham, in her Slagle lecture (2014), suggests, "First, [occupational therapy student] learners must practice seeing through an occupational lens" and next "listening through their occupational ears," and finally, "develop reasoning through [their] occupational mind" (p. 642). Only in this way will occupational therapy students fully grasp occupation as our core body of knowledge, predicated on the profession's philosophic belief that "humans are occupational beings, neurologically wired to explore and master their environments" (Wilcock, 2006).

Hooper et al. (2015) propose three ways for occupational therapy educators to establish occupation as the center of student learning: (1) make classes subject centered, (2) create instructional processes that link course topics to occupation, and (3) promote "complex ways of knowing needed for learning occupation" (p. 1). For example, a class in neuroscience can be reformulated for occupational therapy students by focusing on the neuroscience of occupation. Each class lecture then gives examples of how the brain affects a person's ability and motivation to engage in occupations. In this way, the class can integrate occupation into its basic teachings, making it occupation centered. In addressing

instructional methods, the course objectives, assignments, and learning activities can be written with an occupational focus, helping students to link neuroscientific knowledge and theory to occupational therapy. Asking students to apply principles from neuroscience when addressing hypothetical client problems with occupational performance is another way to encourage or assess a student's ability to think with an occupational lens.

Complex ways of knowing illustrates the infusion of complex systems theory into the occupational therapy reasoning processes. For example, most occupational therapy students take a course in mental and physical health conditions, often including criteria for a medical diagnoses. The integration of occupation into such a course could begin with reviewing how each health condition might interfere with a person's ability to work, to learn, to socialize, and to perform self-care. Going one step further, occupational therapy students might be asked to consider how a person's health condition might be viewed from different perspectives. For example, a 15-year-old boy with attention deficit hyperactivity disorder (ADHD) wishes to learn to ride a motorcycle so he can be more independent. How would this new *occupation* be viewed differently by his doctor, his parents, his teachers, his peers, or a girl he wishes to date? What internal and environmental conditions might facilitate or create barriers to occupational performance? Asking students to consider multiple viewpoints and situational parameters when dealing with a potential client with a health condition helps them to understand the meaning of "contextual knowing," or "the belief that knowledge is multifaceted and is dependent on and crafted within situations" (Hooper et al., 2015, p. 3). Students learn to apply complex occupational reasoning when they are asked to compare conflicting positions and sources, to continually revise their ideas based on new information, and to justify their selected positions relative to specific practice situations. More on complex clinical and professional reasoning is discussed in the next section of this chapter.

SYSTEMS THEORY

Systems theory helps us to understand how things interact. In reviewing the changing trends in health care generally, we noted in Chapter 1 that although biomedicine dominated health care for most of the 20th century, some theorists challenged the narrow scope required by the scientific method. The biopsychosocial (BPS) perspective represents one such attempt to move medical practice toward a more holistic and systems-oriented approach. For occupational therapy, general systems theory, while broadening our understanding of occupational performance by considering the interactions of person, environment, and occupation, made sense as a first step, but it failed to fully account for the broad variations in outcomes of occupational therapy interventions in practice.

Looking at research in the basic sciences, the introduction of complex systems theory, chaos theory, and nonlinear science represents a major paradigm shift that impacts all aspects of research and has enabled theory development in fields such as quantum physics, molecular biology, neuroscience, and social psychology to move forward exponentially. Part of the reason scientific disciplines have been able to research complex interrelationships of concepts is the technology that has become available to them. Computer programs have the capability to analyze exceedingly complex sets of data, which was nearly impossible before recent technological advances.

Evolution of Systems Theory

Ludwig von Bertalanffy, a Hungarian biologist, founded the science of general systems theory (1968). This theory represented a paradigm shift in science, for von Bertalanffy reacted strongly to the reductionistic thinking of his day. Although he had constructed his theory about systems as early as 1936, he hesitated to publicly present it until 1948. As with the introduction of any new theory, von Bertalanffy recognized that his thinking would be met with a good degree of skepticism. Therefore, he waited for the political climate to be more receptive to his different views. Until this point in time, scientists had tried to understand the human body by analyzing its parts or elements (e.g., cells, organs, molecules). In effect, the human body was reduced into its component parts or units for scientific study, like one would view a machine (i.e., find the part that is broken [diagnosis] and fix it [treatment]). In health sciences, this is known as *reductionism*.

Von Bertalanffy opposed the idea of reductionism. Contrary to his colleagues at the time, his thinking focused on the relations between the parts that connect into a whole (1968) rather than the separate parts themselves. His systems theory included the view of holism, which is the antithesis of reductionism. Holism reflects the idea that entities cannot be explained nor understood from their separate parts or properties but only when regarded as an entire configuration. Holism offered an appreciation of human beings, focusing on their interdependency with one another and with the environment. One of the principles of general systems theory is that we can only understand the *whole* by regarding the links, interactions, and processes among the parts that make up the entire system. In effect, systems theorists expanded on the notion begun by Aristotle, who originally proposed a systems view of life.

In occupational therapy, systems theory was also initially met with resistance. In Kielhofner's 1978 article, "General Systems Theory: Implications for Theory and Action in Occupational Therapy," he wrote that systems theory "represents a new conceptual structuring of reality; it is an emerging paradigm of all science that will transform the former paradigm of reductionism" (p. 637). Two years later, Kielhofner and his colleagues published MOHO (Kielhofner

& McClung, 2001). Occupational adaptation theory not only highlights factors that comprise a person's internal capacity to generate an adaptive response but also emphasizes the significance of measuring one's effectiveness, efficiency, and satisfaction relative to performance (Schkade & Schultz, 2003).

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Occupational adaptation is applicable to populations across the developmental lifespan. Everyone needs to adapt in order to survive. The occupational adaptation model proposes a holistic perspective and is therefore suitable for therapeutic needs across multiple settings and ages. Occupational adaptation focuses on the (a) interactive process between a person and his or her environment and (b) internal adaptive process that occurs when we engage in occupations (Schultz, 2014). It is critical to understand the fundamental concepts and key terms found within this model. The founding authors are clearly scholars and promote a theoretical framework for practice. An occupational therapist comes to understand a client's internal adaptation response through continuous observation and analysis. How a person responds when completing a task (occupation) and the manner in which he or she attempts to solve problems within the specific environment lead to a subsequent outcome. Occupations are the intervention tool that a practitioner uses to promote the adaptive process (Schultz, 2014, p. 533). Of central importance to this theory is the premise that as a person becomes more adaptive, he or she will become more functional (Schultz, 2014). Therefore, the ultimate goal of occupational therapy within this framework is to promote a person's "effectiveness in using his/her own ability to be adaptive" (Schultz, 2014, p. 533). This former statement is unique among the occupation-based models. Whereas other occupation-based models focus on promoting occupational performance and enhancing skills (therapeutic outcomes), occupational adaptation practitioners believe that the focus for therapeutic change should be directed on the adaptation process itself. A person cannot perform occupations satisfactorily if he or she does not know how to adapt his or her response according to the demands of self, occupation, and the environment (Figure 8-1).

THEORETICAL BASE

The following is a summary list of founding theoretical assumptions for the occupational adaptation model. This list is based on various resources and interpretations (Grajo, 2017; Kramer, Hinojosa, & Royeen, 2003, pp. 185-186; Schkade & McClung, 2001; Schultz, 2014; Schultz & Schkade, 2003, pp. 220-223; Stein & Cutler, 2002, pp. 166-167). The authors of this textbook have added practice-based examples to assist the reader to understand how these assumptions relate to practice situations. Figure 8-1 gives an overview of the occupational adaptation model in its entirety. Although the model is very comprehensive, the authors of this text have attempted to explain each level of this dynamic process with definitions of key concepts and terms.

Basic Assumptions

It is critical to understand the assumptions of this model in order to apply occupational adaptation theory to practice. All assumptions are normative and therefore applicable for persons of all abilities across the lifespan. Central to each of the assumptions is the belief that adaptation is essential for overall occupational functioning. As a person becomes more adaptive, he or she will become more functional overall (Schultz, 2014, p. 528).

- Occupations provide a natural developmental opportunity for adaptation. "Competence in occupation is a lifelong process of adaptation to internal and external demands to perform" (Schultz, 2014, p. 529). Every time a person attempts to meet the changing demands created by various tasks/activities within related contexts (external demands), there is a chance for the adaptation process to ensue. Every person has an innate desire to master his or her environment; this includes a person's own set of internal demands (Reilly, 1962). The client's innate drive to master tasks and his or her environment activates the adaptation cycle. A person's level of motivation is observed by his or her desire to succeed at a task within a given context
  - *Practice application*: occupational functioning is viewed as an external behavioral outcome that directly results from a person's adaptation process (internal). Occupational therapists use a theoretical framework, proposed by occupational adaptation theory, to understand the complex relationship among one's internal capacity and external demands that lead to positive and satisfying responses. Interventions that target one's internal adaptive capacity will ultimately increase one's overall performance and functioning (Schkade & McClung, 2001)
- Occupational roles inherently include demands and expectations for performance including context specific criteria. Role behaviors and expectations are shaped by both a person's subjective (internal) values and social standards (external) that can be observed, determined, and measured. Healthy role functioning reflects one's internal capacity to meet self-expectations and societal standards in a satisfying manner (Schultz & Schkade, 2003; Schultz 2014)

- ✧ *Practice application*: life roles have inherent demands and expectations that are influenced by both a person's internal perspective as well as external standards (social norms). Occupational therapists are interested to learn about the roles that a client seeks, desires, and holds in life. An occupational therapy evaluation includes data-gathering attempts to understand the tasks, activities, and subjective views that constitute and fulfill role obligations in a satisfying and competent manner. Role functioning is a natural phenomenon that encompasses a person's motivation, skills, and behaviors. Persons will be more inclined to be adaptive in their occupational behaviors if they find the tasks/occupations to be personally meaningful (Schultz, 2014)

✦ When a person is not able to meet the demands of person, task, or environment in a satisfying manner, a disruption in occupational adaptation occurs. Dysfunction is evident when a person is unable to adapt to the challenges that naturally occur when doing occupations (Schultz, 2014)

- ✧ *Practice application*: occupational challenges occur naturally whenever a person engages in a task within a specific context. Dysfunction is evident when the person's ability to adapt has been compromised in some way. Occupational therapists seek to understand the contributing factors that disrupt one's adaptation ability by analyzing the person, the tasks, and the environmental features as an interdependent process

✦ A person's adaptive capacity is impacted by impairment, physical or emotional disability, and stressful life transitions that may take place at any point in his or her life (Schultz, 2014)

- ✧ *Practice application*: occupational therapists consider and assess the impact of health conditions, developmental growth, and environmental demands on every person. Any number of internal and external factors can change a person's adaptive capacity either positively or negatively. Dysadaptation can result from disruptions that are internal to a person (illness) or that result from a faulty environment

✦ There is a direct correlation between a person's level of dysfunction and the need for change in a person's adaptive process. A person's inability to adapt with sufficient mastery will lead to ineffective occupational performance (Schultz, 2014)

- ✧ *Practical application*: occupational adaptation theory is applicable for persons of all adaptive capacities. The founding authors believe that the greater a person's inability to adapt, the more he or she can benefit from interventions based on this theory.

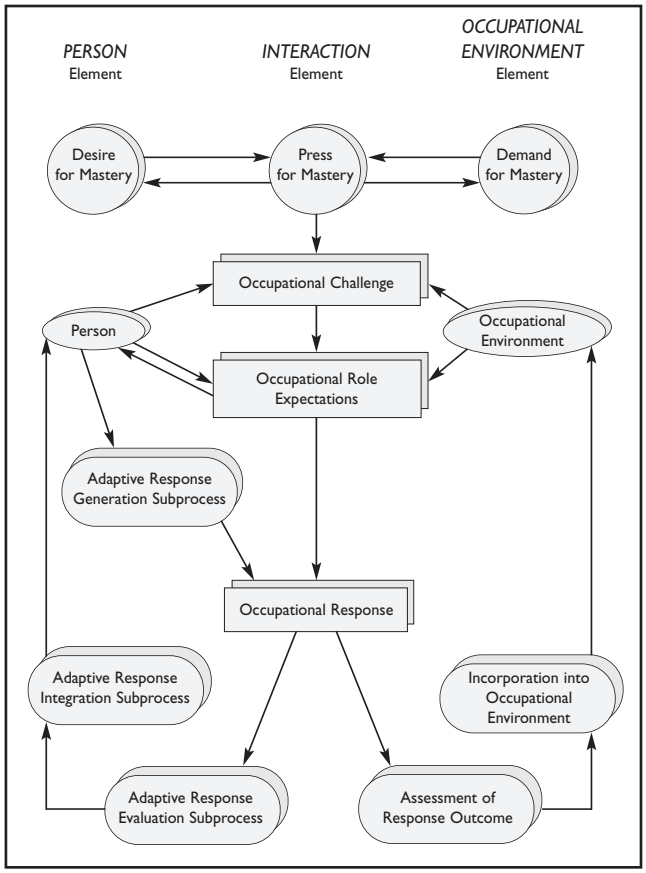

Figure 8-1. The occupational adaptation process. (Reprinted with permission from the American Occupational Therapy Association. In Schkade, J. K., & McClung, M. [Eds.]. *Occupational adaptation in practice: Concepts and cases.* Thorofare, NJ: SLACK Incorporated.)

An occupational therapist is not expected to adapt a task for a client but rather to increase the client's adaptive ability which has long-lasting effects. During initial stages of therapy, occupational therapy may teach methods, skills, or introduce assistive devices as a means to get started. These interventions are incorporated to increase a client's occupational readiness for change. Ultimately, the occupational therapist intervenes as little as possible and ideally promotes a client's own internal resources for lasting change (Schultz, 2014)

✦ When a person's ability to adapt reaches sufficient mastery of the self and society, he or she will experience successful occupational performance (Schultz, 2014)

- ✧ *Practice application*: the internal adaptation cycle is an ongoing lifetime event that activates whenever a person faces an occupational challenge. Every opportunity for occupational engagement is unique with inherent demands for competency and mastery. Change (modification, alteration, refinement) in a person's response level is a normal