



Science and Theory

Historically, Acceptance and Commitment Therapy (ACT) is known as a bottom-up approach, a therapy built on basic science with each of its processes validated and controlled in mediational analysis before being rolled out as a treatment package (Villatte, Villatte, & Hayes, 2015). ACT's long history dates back to conceptualization in the late 1970s and an early version in 1982 referred to at the time as "comprehensive distancing." Between 1985 and 1999, it went through a development period in which relational frame theory (RFT), the theory that underpins ACT, was presented (Zettle, 2011). Since 1999, ACT is in a new period and is no longer a bottom-up approach; instead, it is a reticulated model of science in which research informs practice and practice informs research.

Understanding the basic science may seem like a purely academic pursuit, but knowing the basic science creates a foundational understanding of the ACT approach so that when things go wrong—when a client does not respond to a technique or skill the way a client did in a book, or when you start feeling stuck and have that "I don't know what I'm doing" moment—you can let the *approach* guide you by providing a safe space to experiment, grow, and get creative with the model. The interventions we give as examples in this book provide only a sample of how one could do ACT. There is no one way to do ACT, nor does any one set of techniques or method work for all clinical situations. Instead, understanding how the processes make the interventions work is far more helpful for tracking the function of clients' behaviors and creating interventions on the spot that facilitate change in a powerful and long-lasting way that beneficially impacts their quality of life.

LEARNING, LANGUAGE, AND COGNITION

Many people are shocked when they hear ACT is a modern approach to applied behavior analysis. Typically, we associate behaviorism with laboratory experiments involving pigeons pecking buttons not as conversations about acceptance, personal values, self-compassion, and practices designed to help us commit to a meaningful life or develop mindfulness. Thankfully, behaviorism has come a long way from the pigeon-pecking days (though weren't those experiments cool?). As a science, it has evolved to understand our most private experiences (thoughts, feelings, memories, sensations) as behaviors and the ways in which they shape who we are today.

An early part of this evolution is Skinner's breakout *Verbal Behavior* (1957), which was a theoretical book about applying the scientific program behaviorists had been using with animals to humans as well as to human language and cognition. Language means our words, the things we say, but Skinner also uses it to refer to cognition, the things we think and feel. Cognition includes all of our private experiences including memories and sensations and thinking about thinking, which may be referred to as metacognition. Metacognition is also included as a private experience that is game for a scientific behavioral analysis. Essentially, whether observable aspects such as walking and talking or those known only to the person experiencing them (e.g., thinking and feeling), they are all things people do. For example, right now you may be having the thought, "How is this relevant to ACT?" Modern-day behaviorists would consider that a private behavior is just that: a behavior, even though only you can observe it (and we promise it's relevant).

Language and cognition are considered private behaviors, a classification of behavior that only the individual can observe. ACT has a special focus on private behaviors, and we would argue that contextual behavioral science, the program supporting ACT, has the most robust scientific understanding of the role of acceptance in our private experiences thanks to the experimental research on relational frame theory that undergirds ACT. Contextual behavioral science offers widespread applicability to the clinical work you do in your practice.

RELATIONAL FRAME THEORY (RFT)

In order to understand ACT and its theory, relational frame theory (RFT), we need to situate RFT historically in its evolution from behavioral approaches. Early behaviorists Pavlov and Watson developed respondent learning (or conditioning) and identified that we learn through associations. Think of Pavlov's early experiments pairing the sound of a bell with food to create an explicit relationship between bell and food such that dogs in this experiment soon salivated at the sound of the bell without food being presented. Skinner's work, operant learning (or conditioning), demonstrates that our behavior is shaped by our environment. We learn based on the consequences (what happens as a result of) our actions (Skinner, 1971). As a quick note, learning by consequences might be confusing to you if, like us, culturally the word *consequence* was typically associated with punishment. In behavioral science, consequence means *anything* that happens as a result of a behavior; and *anything* could be as complex as an infant crying and then winning the attention of a parent who changes the infant's diaper or as simple as an early-morning commuter feeling a little more energized after a morning cup of coffee.

The newest behavioral approach on which RFT is built, relational learning (or conditioning, sometimes called "derived relational responding"), gives evidence that humans, unlike the dogs in Pavlov's experiments, can make connections that are not easily perceived or apparent. These connections are, in fact, private. Steven Hayes and many other colleagues, including Barnes-Holmes, Brownstein, and Zettle, pioneered RFT's focus on how language, thoughts, and all other private experiences (cognitive content) are something that someone does, and therefore are behaviors (Dymond & Roche, 2013; Hayes, Barnes-Holmes, & Roche, 2001). Relational learning shows how humans relate events in combination with one another. For example, when children are learning the names of animals, if you (A) say "cow" and then (B) point at a picture of the cow, they may learn that when you (B) point at a picture of the cow to (A) say "cow." This basic training is reinforced by your smiling or touching the child and saying, "Yes! Good job." If you later (A) say "cow" and (C) write the letters C-O-W, they would derive that (C) the letters C-O-W are the same as the (B) picture of the cow without the two ever being shown together. It sounds relatively simple to our adult human minds because all things we interact with have many symbolic meanings, but for other animal species, these tasks are incredibly difficult if not outright impossible.

More so, these relationships between events are not solely based on its stimulus properties (form or topography, how something is perceived publicly). Take for example a diamond and a boulder. Both are considered rocks: one is shiny and one is large. If we look at the physical properties of each it may seem weird that anyone would pick the diamond over the boulder, because the boulder is larger and can be used to smash things or hold something in place while a diamond may have little utility in the heavy-lifting and smashing department. However, if you ask anyone who speaks English and is familiar with both a diamond and a boulder which they would choose, most if not all would select the diamond because it is worth a lot more. We have applied an arbitrary meaning to the diamond; the meaning or value of the diamond is not based on any objective, observable, topographical elements, but rather on the symbol it represents.

Being able to create symbolic representations of objects, including our private experiences, allows us to hand someone a piece of green, crumpled, stained paper and receive a latte or slice of pizza in return. If aliens landed on Earth and observed such a transaction, they might think the person who accepted the paper was not very bright. If, however, they were similar to humans and could learn an arbitrary relationship between the paper

and the idea of currency, and they calculated how much we paid for a single latte, they would realize that we likely have a slight caffeine addiction.

Relational framing helps us understand how humans bring thoughts, memories, sensations, and feelings that we are not directly presented with into our present-moment experiencing. This process is arbitrary, meaning it is socially constructed. Humans constantly derive arbitrarily applicable relationships between things, even things you've never before considered. Take for example, in what ways is the United States of America larger than Canada? Based on stimulus properties alone, we know this is not true: Canada is a larger country than the United States in physical size, but one could say the United States is larger based on population. The 300 million U.S. citizens clearly outnumber the 36 million Canadians. One could also say the United States is larger because of its more varied regions—it has 50 states and one federal district whereas Canada has ten provinces and three territories. This is simply one example of our ability to derive arbitrarily derived applicable relationships between things, in this case countries. Let's look at some more examples.

As you read the words on this page you may not be presented with a large, ice-cold glass of water right in front of you, however you can begin to relate to it as we describe it. The large glass filled with water is so cold the clear glass has become clouded with condensation. What are you noticing right now? You may be having the thought, "I could go for a glass of water right now," or an image may be forming in your mind of ice-cold water in a glass that you have in your kitchen cabinet. Without the physical object in front of you, your mind can come up with many private experiences related to the representation of that physical object as described. This skill is unique to humans and has been helpful in learning from others' experiences and making decisions based on past precedent or predictions for the future.

Imagine living in a world where you actually had to interact with bad-tempered bosses to learn what mood they were in rather than asking your coworker who already met with them earlier that day; we are guessing you would have a lot more unpleasant experiences. However, the ability to construct these relational frames in our minds can come at a cost: We can respond the same way to private experiences as we do to the external event or object. Take for example a person who responds to the thought of a terrible interview as if it were an actual interview gone wrong. That person may be less likely to work on a resume, apply for a challenging job, or work toward advancing a career all in an effort to avoid an imagined outcome. This ability alone can cost people a lot, limiting possibilities, creating rigid rules, avoiding potentially painful but meaningful situations all because of these relational responses that cannot be shut off or pruned. This distinction is important because other orientations often support changing or eliminating certain private experiences deemed "negative" or unhelpful.

The science of relational frame theory proves that once these relational frames are constructed, they cannot be eliminated or deleted. Relational frames are additive not subtractive, which means that when working with our clients, the focus is on expanding their behavioral repertoire or broadening their relational frames rather than trying to remove or change any private experiences. **The science shows that removing private experiences cannot be done.** Instead of focusing on whether thoughts are "good" or "bad," we turn back to the functional contextual philosophy of science and look at the function of a behavior (including private behaviors) in a given context—or more simply, how a behavior works.

FUNCTION OVER FORM

In our introduction, we told you that ACT is based on a philosophy of science called functional contextualism. When it comes to identifying client problems and how to target them in clinical settings, this science is extremely helpful. Focusing on how the behavior works (functions) in a given situation (context), rather than simply saying a form of a behavior is wrong, bad, or maladaptive, enables a richer understanding of client problems with more accuracy in how to assist clients in growing and shaping different behaviors. This functional contextual view of clients and their behavior is also helpful because even behaviors that do not topographically seem to make sense have a function—the behavior will serve some purpose—and this analysis

in our experience allows for clients to be pulled out of the “something’s wrong with you” conversation into a more useful conversation about how a behavior they are doing is not effective in helping them live the kind of life they want or would choose to live, this problematic behavior is in fact creating more difficulties for them. For example, clients with substance use disorders often face criticism from themselves (shame, guilt, etc.), their families, and their providers (especially questions about why they would continue to use or abuse a substance). However, if we look at it from a functional standpoint, we come to see that a substance, let’s say alcohol, is an effective way to avoid painful private events, such as thoughts, memories, feelings, and sensations in the short-term.

Those who struggle with alcohol abuse or misuse will often mention the “numbing” effect alcohol has and frequently report struggling with abstaining from alcohol without replacing it as a coping strategy with another avoidance coping strategy that is once again perceived as harmful. From the ACT perspective, we validate attempts to numb and describe how alcohol has been successful at doing so; however, we illuminate the long-term unworkability of this pattern and instead motivate coping strategies that promote contact with the unpleasant private events and move them in the direction of long-term benefits: connecting with who and what matter most to them. And depending on the client, this move can come in many forms. For a client using alcohol to avoid thinking about past traumatic memories, using ACT to address symptoms of posttraumatic stress disorder is demonstrably effective, whereas a client with chronic pain may use alcohol to numb sensations, and so working to address chronic pain may be the way forward. **In either case, looking at the function of the behavior rather than the form or topography—what the behavior looks like—can be an extremely meaningful intervention for both you and your client.**

This issue of the function of behavior begs an important philosophical discussion for clinicians that is best not left to the pages of obscure philosophy textbooks: Our criteria for knowing the “truth” in our clinical practice is strictly practical. In other words, we focus only on what works in a given situation. Our analysis and assessments target how client behaviors work in a certain situation to achieve a specified goal, outcome, or valued direction. That last part is important: we don’t mark behavior as good, bad, true, or false. We seek a truth that answers how effective a behavior is in achieving the desired outcome.

Diagnostic systems that favor the form of behavior, its topography, or what a behavior looks like rather than how a behavior functions (e.g., syndromes defined by the *Diagnostic and Statistical Manual of Mental Disorders* [DSM]) can help us talk about patterns of client behavior as an organizing title, but the helpfulness of that classification (depression, anxiety, posttraumatic stress, and the like) typically ends there. A DSM diagnosis does not include a functional analysis, how a behavior works (see Chapter 4 for a robust application to clinical problems). The function of behavior—whether it is workable in a given context—is the focus of our analysis in ACT. **This focus also means that ACT is a transdiagnostic approach because we are not looking only at symptomatology, but rather function. More important, it is a functional contextual approach, which means you can apply ACT to any presenting problem.** It is a bold statement, we know. At the time this book was written, more than 100 randomized controlled trials included applications of ACT to various clinical populations (A-Tjak, Davis, Morina, Powers, Smits, & Emmelkamp, 2015):

- Aggressive behavior
- Agoraphobia
- Alcohol use disorder
- Anxiety
- Behavioral problems in children with cerebral palsy
- Borderline personality disorder
- Chronic pain
- Depression in adults and adolescents

- Eating pathology
- Generalized anxiety disorder
- Medical problems
- Obesity
- Obsessive-compulsive disorder
- Panic disorder
- Posttraumatic stress disorder
- Psychosis
- Social phobia
- Substance abuse
- Stress
- Treatment-resistant populations with various diagnoses
- Trichotillomania

ACT has also been applied to nonclinical populations for other problems:

- Classroom collaboration and conflict
- Eating and weight concerns
- Emotional burnout
- Enhancing psychological health of students abroad
- Health behavior with cancer patients
- Mathematics anxiety
- Parenting
- Procrastination
- Psychological well-being
- Public speaking anxiety
- Smoking
- Test anxiety
- Tinnitus distress
- Workplace stress

This list is not exhaustive—ACT has been applied to many more populations and problems. If you are curious about ACT's empirical basis and wish to better understand the many interesting research projects supporting ACT, we recommend exploring the book, *The Research Journey of Acceptance and Commitment Therapy* (Hooper & Larsson, 2015), which covers all research conducted in English over the past 30 years.

RADICAL BEHAVIORISM BASICS

We realize that, in picking up this book with an aim to learn about ACT, you may have got more than you bargained for: a philosophy of science, relational frame theory, functional analysis, and all of this behavioral jargon! All when you simply wanted to learn how to add acceptance and mindfulness to your work. Bear with us, we're going to introduce you to a few of the behavior analysis concepts that we will use throughout this book. We use the scientific terminology and jargon because we hope this scientific perspective empowers you in your practice to adapt and use ACT in the different practice settings or clinical populations you may work with. We also hope it provides a basis to communicate through a common language with others who share or are interested in this perspective.

Reinforcement

Behaviors, the things people do, are more likely to recur as a result of a desired or reinforcing consequence that follows the behavior. Said more scientifically, behaviors are operant responses. In ACT, we spend a lot of time analyzing and generally attempting to understand patterns of reinforcement. This analysis helps answer the questions concerning why people do what they do, what is reinforcing to a certain person, and how that specific reinforcer maintains a behavior for them. We emphasize understanding what is reinforcing to a certain person because again what provides reinforcement to one person may not do the same for another, it depends on the context.

We want to make a specific note about types of reinforcement in session. Therapists from our functional contextualist view of the world have the ability to reinforce client behavior in session by paying attention, empathizing, making eye contact, and asking clarifying questions. Throughout this book we will challenge you to become somewhat directive or intentional in using ACT and to pay careful attention to what client behaviors you reinforce in session. Even without your direct awareness you are reinforcing behaviors. Through the intentional practice of discriminating between behaviors to reinforce and behaviors to not reinforce, you create another tool in helping to shape client behavior. In this way, you set the culture in session to one of vulnerability and moving toward a meaningful life rather than staying stuck in stories or holding fast to an eliminative agenda.

In ACT, we have interventions that focus on a person's unique reinforcers, we just call them values or more simply use the names of the people they most care about, the qualities that they most wish to live, and describe what they care about the most. As you expand your awareness in therapy, notice when clients begin to talk about their values or actions that are a step toward their values. In those moments make a special effort to reinforce: smile, ask a follow-up question, make eye contact, nod your head, appear engaged, or comment on what you are noticing and thank them for sharing it with you. Over time you will begin to notice a shift in language used in therapy that aligns with your shared mission to help them struggle less and live more.

Stimulus

A stimulus is anything that happens in the environment that triggers a behavior. This first term is particularly important because the process of evaluating the function of a behavior starts with how a stimulus works in a certain situation for someone, as in what they do when something shows up. Let's take something innocuous as an example, a phone ringing. When a phone rings, sending a loud ringtone, it might be a *stimulus* for one person to pick up the phone and say hello. In a different context or situation, let's say a movie theatre, a phone ringing might be a stimulus event for someone to quickly search their pockets or bag for their phone to turn it off. In one last situation, an anxious parent waiting up for their adolescent to return home after midnight may be holding their phone in their hand willing it to ring, and when the phone finally does ring it's a stimulus for them to pick it up and immediately say, "Are you okay?" or "Where are you?" In these three examples the same stimulus, a phone ringing, functions in different ways based on the context or situation.

This concept is important in our functional contextual view of the world because we cannot begin to understand how our clients are interacting with and reacting to their environment without understanding how a stimulus functions for that person in a specific context. For example, the feeling of sadness may function differently for one person than the next. A passing feeling of sadness may serve as a stimulus event for one person to pause and reflect on a recent loss in their life and what that person meant to them, while it may elicit a crippling reaction from another resulting in a day spent at home, in bed, hiding from their experiences.

Aversive Stimulus

Simply said an aversive stimulus is any experience public or private that someone may work to avoid, escape, or control (Catania, 1998). Think of *aversive* as something that is unpleasant, an experience that one would

dislike. Remember, we are referring to a stimulus (see earlier definition), so what one person may find aversive may function differently for someone else. For example, the sight of a large black dog reminds us, the authors, of our childhood dogs. You would see us smiling and reminiscing about playing with Bart and Bear as children, whereas, for a colleague of ours, a large black dog is scary and something he would cross the street to avoid. Same form, same stimulus, but different functions.

Appetitive Stimulus

Appetitive stimulus is the opposite of aversive. It is any experience that someone may work to gain or receive. Think of appetitive as something that is pleasurable or enjoyable. Expanding on the previous example, seeing a large black dog is an appetitive stimulus for us, the authors, and triggers memories from childhood that are pleasurable to us.

Discrimination of Stimuli

In ACT we seek to help clients learn how to tell the difference between the outcomes of different contexts. People can become insensitive to context, the situations they find themselves in, including mental contexts such as thinking, feeling, sensing, and remembering.

A failure to discriminate between different situations and their outcomes can create problems where an experience generalizes to another in an unhelpful way. Such situations may arise when people respond to private events as if they are actually happening or when people make decisions on how to act next based on rigid rules they have created that are not sensitive to the actual situation. Said technically, problematic stimulus generalization happens when contexts fail to produce discriminative operant responding. Because of humans' unique ability to respond arbitrarily, that is, they can react to a stimulus not based on its formal properties but rather socially constructed ones (see relational frame theory earlier in this chapter for more), they may experience difficulties in this discrimination task.

Take for example a person with a trauma history who is standing in line at a coffee shop when someone else stands too close in line. For this person who has suffered a trauma the awareness of their body in relation to the other person triggers some implicit trauma reaction in which they are unable to discriminate between trauma memory and standing in line at a coffee shop, in a safe environment, far away from their attacker and not currently presented with their trauma. The outcome here could be dire for this person, experiencing many painful private experiences, but what's more is there could be no foreseeable end to the suffering; perhaps this person decides the coffee shop is no longer a safe place to go due to their unwillingness to experience another traumatic reaction.

As we mentioned at the beginning of this section, helping clients to discriminate between outcomes in different contexts creates space between stimulus and response in which the client can begin to notice contextual factors, which allows a moment to pause and choose how to respond. With the example just mentioned, the ability to notice the difference in context between the trauma memory and the current coffee shop, such as the smells, the details of the building, the purpose of going to the coffee shop, the sounds of the other customers, allows the person to discriminate between their memory and where they are in this moment and choose to behave in accordance with their values based on the situation they are actually in (the coffee shop) even in the presence of unpleasant internal stuff.

Stimulus Control

When something happens in a person's environment, when presented with a stimulus event, we know that discrimination is important because it changes what the person might do in the presence of that stimulus. How a person behaves in response to a stimulus is based on the reinforcement (consequence) that follows that behavior. When a learned history exists between stimulus and response, the stimulus is labeled a discriminative

stimulus, meaning when this specific stimulus occurs in this specific context this specific response happens. For example, hearing “time for dinner” (discriminative stimulus) when you are visiting your mom’s house (context) may elicit feelings of excitement, getting up and going to the dining room table, and salivating (response) because you have learned that your mom is a really good cook and often makes your favorite meals when you are visiting. On the other hand, if you hear “time for dinner” (discriminative stimulus) when you are home (context) you may put a smile on your face, and say “you shouldn’t have,” and have the thought “seriously you really shouldn’t have” (response) because you have learned that your spouse, who decided to surprise you with dinner, tends to burn food. Similarly, a child in a grocery store with one parent may start crying, fall to the ground, and yell when that parent says, “no, you can’t have a candy bar” because the child has learned that throwing a fit leads to them getting a candy bar whereas when at the grocery store with the other parent who says, “no, you can’t have a candy bar,” the child stays quiet because no matter how loud the child got, that parent did not relent.

Here is the heart of Skinner’s operant conditioning mentioned earlier in this chapter: **Learning happens through consequences.** Clients’ repertoires of behavior, the many things they could do like laugh, sing, dance, create, and talk, typically narrow when under the control of an aversive stimulus event; they can do relatively little when presented with a painful experience except in instances where the outcome of their behavior is about escaping, eliminating, controlling, or avoiding the aversive stimulus. When a behavior is under the control of an aversive stimulus, people tend to be insensitive to the long-term outcomes of attempting to escape, eliminate, control, or avoid their experience because they are focused on immediate short-term relief. This mind-set is helpful when a person is crossing a street and a car is zooming down the road not paying attention because we want that person to react and jump out of the way rather than stand around and think about what is the right thing to do in this situation. Clients get into trouble and find aversive control problematic or unhelpful when, for example, they curse at or hit their partner during an argument to avoid an unpleasant interaction without pausing to consider the long-term consequences of that behavior. Notice how aversive control is neither “good” nor “bad” but rather functions in different ways based on the context.

In this book we will encourage you as therapists to treat the contexts of therapy, your presence in the therapeutic relationship, your time together with clients, and the space in which you practice as the opportunity to apply stimulus control in favor of promoting psychological flexibility. This opportunity means paying attention to the instances of unhelpful aversive stimulus events that a client may be experiencing in session or are reporting as happening outside of sessions as well as other situations such as when a client’s behavior is guided by consequences, the outcome of the client’s responses. Stimulus control in those instances is constantly in flux, and your ability to bring a client’s attention to what may be happening is an incredible strength. This focusing attention and encouraging noticing what is happening will increase your ability to practice stimulus control in your sessions and offer your clients insight into their own stimulus control problems inside the therapy room and outside in the real world.

PUTTING ACT IN CONTEXT

We are often asked in workshops and supervision how ACT applies to physical, real-world problems such as homelessness, poverty, abusive spouses, or a tangible aversive experience (e.g., the fear of having an allergic reaction when environmental cues trigger anaphylactic shock), the list goes on; functional contextualism works just the same. **Function** describes how a behavior works in a given situation. **Context** needs to be broken down further: there are physical, real-world contexts such as your office, a geographical location like the city a client lives in, or one’s genetic makeup—these are all examples of independent variables. They are a context. There are other kinds of contexts too: social contexts or private contexts—one’s thoughts, memories, sensations, and feelings. Experiences that happen in a private context can influence behavior both publicly, in the observable realm, what you see someone do, as well as in private, what someone thinks, feels, senses, and remembers.

Functional contextualism seeks to analyze how a behavior works in a given situation: when a child has a history of allergic reactions to peanuts and has been traumatized by a near-death experience of anaphylactic shock, it is workable for that child to fear and avoid places or people that could trigger an allergic reaction. For example, avoiding a child on the playground known to disregard the peanut-free policy at school functions in that context to keep the child with the allergy safe from someone who brings peanuts to school. However, this functional behavior can become problematic or unhelpful if that peanut-bearing child on the playground happens to have blond hair, and the child begins to avoid all blond children, even those in completely different contexts such as daycare or a local park, due to the derived relationship between blond hair and fear of peanut contamination. In that example, the fear towards a peanut allergy and the derived relationship between blond hair and peanut contamination are enough to make this young person insensitive to the context (child at school who does not listen to peanut-free policy versus all other children) and avoid thereby costing them the ability to play with other children and make friends. We have shown you how this ability can go awry, but it is important to remember that this ability to create relationships between seemingly disparate events, people, objects, and things serves a purpose, it is a part of human evolution.

EVOLUTION SCIENCE

The basic science you have been reading about in this chapter emerged from evolutionary approaches. Behavior scientist B. F. Skinner greatly influenced the contextual behavioral science movement and was interested in how biology and physiology linked learning principles of behavior to evolution (Skinner, 1984). Radical behavioral approaches are a great example of that linkage. For example, Skinner described selection by consequences such that behaviors that reoccur are a product of being reinforced. And what of the behaviors that do not get reinforced operantly? They become extinct—the behaviors don't persist because they haven't been reinforced.

Contextual behavioral science is a form of modern evolutionary science (Hayes, Barnes-Holmes, & Roche, 2001). All behaviors that exist, even ones we label problematic such as the substance use example mentioned earlier, persist because something in the context of that behavior reinforced it. A person with persistent anxiety in the face of enclosed places, for example, will be reinforced with a decrease in anxiety every time they avoid an enclosed space, which creates an immediate sense of relief and an increase in anxiety the next time the person faces an enclosed space. The only way to extinguish or make extinct the private behavior of anxiety in the context of enclosed spaces is to remove the reinforcer, which oftentimes is an avoidance behavior.

Functional contextualism is a good fit with modern evolution science, because the contextual view of the world focuses on behaviors in a certain situation. Context includes everything that influences a behavior from its current situation to historical factors such as development and learning history, social and cultural variables, and even biological factors. Epigenetics, a modern evolutionary science, has considerably advanced the understanding of deoxyribonucleic acid (DNA)—the chemistry inside all living organisms that is codified and associated with the transmission of genetic information. Epigenetics demonstrate that contextual factors and different experiences in the environment alter genetic expression in considerable ways with long-lasting impact (Jablonka & Lamb, 2014). This point is important for our clinical practices and is not merely relevant to the world of experimental research. We can use evolution science and, specifically, epigenetics to understand that the world our clients live in and their reactions to that world based on their learning history affects them not only by shaping their behavior but also by shaping their biology. This shaping happens as the result of doing what works in a given context.

The fascinating part is that evolution does not end there. It can also include social learning and cultural practices as they too are based on reinforcement contingencies. Researchers such as David Sloan Wilson, author of *The Neighborhood Project*, are learning how to shift environments and reinforcers in those environments to alter behaviors through providing a new context and function, **and why we, as clinicians, withhold judgment from our clients as we understand that given their context, their world, and their history they have come to this moment with you by doing the best they can: doing what works** (Wilson, 2011).

ACT's Six Core Processes

A number of things make ACT unique among therapies and approaches. One of ACT's differences stands out: **It is based on a scientific program that does not simply theorize what helps; rather, each component of ACT is analyzed and presented separately to explicitly detail how it helps people live a richer, more vital life.** ACT is composed of six such components that we refer to as the six core processes. Each of the processes is individual but not mutually exclusive. This means that each one of the processes works with the others. When combined, the six core processes form a circular model that represents psychological flexibility.

The six core processes of ACT can be viewed separately and defined individually. In this chapter, we look at each process in detail, which will be helpful to you in learning ACT as you will see how each process makes ACT work. Furthermore, each process is individually mediated to be a valid mechanism of change. That means if you successfully focus on any one of these processes in your clinical work, you should see an improvement in psychological flexibility. This last term, *psychological flexibility*, represents the whole ACT model of health. All six processes seek to increase psychological flexibility or coming in full contact with painful experiences and with uniquely chosen values, while consciously choosing the actions to engage in a meaningful life. Notice from this description that psychological flexibility does not prescribe one's attempts to escape or avoid painful experiences but instead invites experiencing them. To work with our pain where painful experiences do not exclusively govern our behavior. That is what ACT's six processes are about. **The six processes include acceptance, defusion, present moment, self-as-context, values, and commitment.**

ACCEPTANCE

Acceptance is practicing openness to private events (thoughts, feelings, sensations, memories). We often focus on our clients' most difficult private events (e.g., anxiety, sadness, physical pain, etc.) as targets for therapy. In ACT, individuals are encouraged to be accepting of their experience, rather than avoiding private events such as anxiety, sadness, or physical pain. Because the term *acceptance* can have different meanings to others, it is important to note that **in ACT, acceptance means a willingness to come into contact with a person's whole experience**, including the unpleasant internal stuff that shows up. Acceptance is *not* liking or wanting these experiences, is *not* begrudgingly or angrily saying they exist, and is *not* giving up and not doing anything; rather we encourage a willingness to notice those difficult private events, to allow them to be there as part of your experience.

Now, because unpleasant private events can be painful, we do not encourage this contact with private experiences without a function. The function of acceptance is to further the goal of working toward a meaningful life. Often when we experience unpleasant internal events we tend to work hard to escape or avoid those private events and anything that may evoke those experiences. The problem with this is that the things that cause us pain often point us in the direction of what is important to us. We would not have the thoughts, "everyone will hate this book, we have nothing original to say," if doing a good job, helping others, and furthering professional development were not important to us. If we exert all our effort trying to distract, ignore, or avoid unpleasant internal experiences, we are not moving toward who or what matter most to us. We

will talk more in this book about how a control or eliminative agenda is not a functional or workable solution and actually can lead to greater distress over time. Note that acceptance is not an end in itself; it is one part of the larger whole, increasing psychological flexibility.

ACCEPTANCE IN PRACTICE

Take a moment to pause and notice the thoughts and feelings that show up while reading this book. Maybe you have sounds or other people in your environment distracting you from reading; maybe you are feeling rushed or frustrated and thinking, "I don't have time for this." Maybe your mind keeps wandering off to all of the things you have to do today or trying to make connections between what you are reading and the therapy session you had last week. As you notice these private events, rather than trying to avoid or escape or ignore them, instead try to allow yourself to experience and notice them.

Begin to practice opening up to these experiences and develop a willingness to sit with frustration or difficult thoughts as you turn your attention back to the book. Would you be willing to have these thoughts and feelings if it meant staying committed to learning or professional growth?

DEFUSION

Defusion is a made-up word that places focus on a cognitive component encouraging awareness of private experiences (thoughts, feelings, sensations, memories), the response to them, and the consequence (what happens as a result) of that response. Defusing creates space to pause and notice the effectiveness of a response to a private experience and an awareness that we have the flexibility to choose how we respond to private experiences rather than being reactive or automatically trying to eliminate or avoid them with poor results. For example, imagine that every time you are presented with the opportunity to go to a party and meet new people you have the thought, "I'm going to make a fool of myself and everyone will laugh at me," the feeling of anxiety, the sensation of your heart pounding and palms sweating, and the memory of saying or doing something embarrassing at a party. Now imagine that you were so caught up in those sensations, as if you wrapped that feeling of anxiety around you like a blanket and you began to believe that those thoughts were the only option, were inevitable. If you believed those thoughts were the truth, would you go to the party? The answer, we're guessing, is no. **If we buy into our thoughts and private experiences to the point where we believe they are literally true, it is likely we will react automatically and attempt to avoid or escape a situation.**

Now, imagine that same scenario, but instead of being caught up in those private events, like standing in the inside of a tornado, we are on the outside seeing the swirling cone and feeling the wind whipping by, but also able to see the whole scene in front of us. Defusion is similar—still experiencing our private events, but having the ability to pause, take a step back, and notice that, for example, the thought, "I'm going to make a fool of myself and everyone will laugh at me," is just that: a thought. Creating space allows us to recognize that escaping that anxiety and not attending the party might provide relief in the short-term, but it is only increasing our anxiety of interacting with others and working against our goal of having meaningful relationships in the long-term. When we take a step back to see the whole picture, we are able to see that an alternative is to acknowledge that going to the party means that we will likely feel an increase in anxiety and be bombarded with many similar thoughts, but we will also be taking steps to work closer to the life we want to live. **Defusion creates choice.**

DEFUSION IN PRACTICE

Pause and notice any thoughts that you're having about reading this book right now. Maybe you are having the thought "this doesn't make any sense to me, maybe I just can't learn this" or "there are so many technical terms that I don't understand, maybe ACT isn't for me" or "I don't remember struggling so much when I was learning [different therapy], maybe I'm not as sharp as I used to be."

Notice any urges following that thought to close the book and stay within your comfort zone or any conversations your mind is having trying to rationalize why it would be a good idea to stick with what you already know. Notice also how those behaviors are not working toward your goal of learning ACT. Notice what your options are when those thoughts pop up and choose what is more helpful for you—to continue reading?

PRESENT MOMENT

ACT orients people to the *present moment*, encouraging their awareness of their experience here and now. Inside us exists a rich and complex private world, and although it can be helpful to get caught up in that world, ACT encourages awareness of private experiences (thoughts, feelings, sensations, memories) and an acknowledgment of how in this moment these private experiences influence you. One of us, Jessica, is a daydreamer. She has spent many hours caught up in the imaginary world in her mind. She is creative and enjoys coming up with stories, characters and faraway places, and taking the time every once in a while to spend an evening caught up in those worlds helps feed her creativity. It serves a function. But sometimes getting caught up in her mind and not paying attention to the world around her can become problematic: crossing a busy street, sitting across from a client in therapy, writing an ACT book. Most activities that are meaningful for life require some degree of present-moment awareness, but staying in the present moment when there is no immediate threat or crisis can be difficult because our minds can come up with endless "pay attention to me!" "look out!" "danger ahead!" situations.

Take a client with generalized anxiety disorder who spends all of their time planning their life to avoid danger, catastrophes, or simply messing up. While on the surface it may not seem like it, planning requires taking ourselves out of the present so that we can think about a future potential experience. Although planning is an excellent skill to have, when we look at the function of the behavior, rather than the observable movement of the behavior, we can begin to notice situations in which a lack of present-moment awareness can work against us. This client may benefit from sitting down to write out a five-year plan for saving up for a down payment on a house, or a plan for how to complete the degree or certificate needed to begin their dream job. However, when they are spending all of their time planning, it can be helpful to pause and notice the cost. Clients may actively avoid being in the present moment for fear of unpleasant internal experiences popping up or to ignore unpleasant situations in their environment.

Working with clients to clarify what is important to them and whether spending time in their minds focused on the past or future "what if" alternative realities is helping them move closer to what is important. Also, creating a greater awareness of their experience here and now may help them identify problematic patterns of behaviors or responses to internal stimuli that they were otherwise blind to. **We cannot work to modify our behavior if we are not aware of how behaviors are problematic or unworkable.** Building a practice of present-moment awareness into every session can be a good way to model the importance of noticing. We like to begin every session after the initial session with a brief present-moment activity. In Chapter 6 we offer a few examples of what these exercises may look like.

PRESENT MOMENT IN PRACTICE

Take a moment to notice your experience here and now. Notice the feel of the book in your hands, the texture of the pages or the coolness of the device it is displayed on. Pause to notice where you are right now as you read this sentence. Is the environment quiet or noisy? Are you cold or warm or just right? Notice the places where your body meets the chair or couch where you are sitting, or the places where your feet touch the ground if you are standing. See if you notice anything in your environment or inside your mind that surprises you, that you didn't realize was there.

SELF-AS-CONTEXT

Self-as-context is a way of experiencing oneself. It invites people to see themselves as separate from their private experiences (the opposite would be seeing oneself as their content or self-as-content). This is a unique way of viewing our experience. It is in this way that self-as-context allows a person to see themselves as a stable entity and the experienced content (private and public behaviors, contextual stimuli, etc.) as changing. From this perspective, a person is seen as the observer of their own experience, rather than saying they are their experience. From this perspective in any given context it is the experiences that change, not the self who is observing. The observing self is constant and is the same self that existed in the past and the same self who will exist in the future. The part that changes is what the self is observing in any given moment. This concept can be a difficult one for clients, and for clinicians, to grasp, but it need not be complicated or involve any spiritual view of the self. It is simply the idea that our selves are the observer of our experiences and not the content we notice and interact with; the self interacts with experiences both private and observable, but is separate from them.

SELF-AS-CONTEXT IN PRACTICE

Pause and notice you, the person behind your eyes, observing the words on the page and noticing the thoughts your mind generates. Notice that this you, this observer self, is the same you that first purchased this book and the same you that sits across from your clients. Regardless of the roles you don or the time that passes, the you looking out of your eyes noticing is the same you that has always been there.

VALUES

Values are the who and what that personally matter to an individual and are uniquely chosen principles or standards. For example, being a loving partner may matter to one person who also states that their partner is important to them. Another person may state that athleticism is important to them, that taking care of their body and increasing their skill level are what they value. In both examples, the value of who or what is important has been clarified. Values go beyond goals, not simply professing love to your partner or performing well at an athletic event; you can't check a value off a list and call it done. Values are a sort of beacon that guides how we live our lives based on what creates a meaningful life to us. In that sense, there are no right or wrong values, only who and what is important to us now with the understanding that as we grow and change, so too may our values. In the therapy room, it is important to be aware of both what the client's values are as well as what your values as a therapist are. Values will be the guiding force of therapy, helping to outline what success looks like for this client. We can evaluate the function of clients' behaviors in terms of whether the behaviors work to take them closer to or further from their values.

VALUES IN PRACTICE

Take a moment and explore what is it that's important to you about reading this book? What do you hope to get out of reading this book? What qualities do you want to be about in reading this book? Are you hoping to challenge yourself to learn about a different therapy, looking to harvest new techniques for your clients, wanting to develop a new perspective, or creating a context for professional and personal growth? What about this moment and this behavior is meaningful to you?

COMMITMENT

Commitment is about doing the observable behaviors or engaging in activities in the service of one's values (the who and what that are important). Examples of committed actions will look topographically different for all people: taking time out of the day to have a nap or go to bed early may be a committed action for one person, pursuant to values such as sleep management, sleep hygiene, or taking care of oneself, whereas for another person, sleeping may be functionally about avoiding unpleasant private experiences: "I'm feeling down and hate this feeling. I'm going to go to bed and just sleep the day away." As with private experiences, observable behaviors are neither good nor bad, but rather are dependent on their function: does the behavior move me closer to whom and what matters most to me (committed action)? **If values are true north, then commitment can be viewed as the mile markers along the way.** They are observable behaviors that can be checked off as complete.

There is often the misconception that engaging in committed actions leads to happiness. However, depending on where the client is in their own journey, sometimes engaging in behaviors consistent with their values can cause an increase in unpleasant internal experiences. Take for example a client who values having a family and being a loving father, but is in a marriage with a woman he is not close to and who refuses to have children. A committed action for this client may be getting divorced and dating again or even adopting on his own. Even though these behaviors certainly function to take him closer to his values and the life he wants to live, they are in no way easy or even pleasant. Again, the focus is on the function of behavior rather than the removal or elimination of unpleasant internal experiences.

COMMITMENT IN PRACTICE

Building on the activity for values, what is something you can commit to today that will bring you closer to the qualities you want to be about? Can you make a commitment to devote time to reading this book and developing your practice? What would that look like? Picture yourself doing those behaviors, engaging in each of the small tasks that make up this larger commitment.

ACT IS A CIRCULAR MODEL

The following illustration depicts the six core processes as a circular model in which the processes are connected. Although we began the list of six core processes with acceptance, and acceptance is also the first word in the acronym of ACT, we wish to be explicit that the circular model means you can begin with or target any process at any time in any order in your work; you do not have to begin with acceptance or touch on only one process at a time. You are free to weave different processes into a single session or begin with any process you please while being consistent with the model. Whichever process you focus on depends largely on what your client presents with and what would be most beneficial for that client in that moment.