# Adolescent Suicide and Self-Injury

Mentalizing Theory and Treatment

Laurel L. Williams Owen Muir Editors



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What Is Mentalizing?

#### Veronica McLaren and Carla Sharp

#### Introduction

Mentalizing is a deceptively simple concept. In short, to mentalize is to reflect on mental states in oneself and in others [1]. Mentalizing is akin to the concept called Theory of Mind, as in a person's theory about what is in someone's mind. To provide a more practical example of what is meant by this, imagine a friend calls to cancel plans abruptly for the second time in a row. We might first assume that they decided that they don't like us and don't want to see us after all. We might notice that they seem stressed. We could consider that they might have had a rough week and needed a night off. Perhaps an emergency came up and they no longer have time to go out. This example leads to two important observations: First, we notice that we are uncertain about the exact intentions behind these actions. This stance of uncertainty is characteristic of mentalizing. Importantly, because we cannot know for sure another's mental state, mentalizing is an inherently *imaginative* activity. Second, mentalizing involves ascribing intentional mental states based on cues. This means that when we mentalize, we recognize autonomy. We acknowledge that a person's actions can be explained by their internal state. As we will see, there is quite a bit of complexity to the way we conceptualize mentalizing today. But first it is important to understand how our current understanding came about.

This chapter will discuss the following:

- 1. Brief history of the term mentalization
- 2. Understanding of the four dimensions of mentalizing
- 3. Development of typical mentalizing
- 4. Importance of parenting and attachment in mentalizing
- 5. Development of atypical mentalizing

V. McLaren · C. Sharp (⋈)

#### **Brief History**

The term "mentalize" was first recorded in writing in 1807 and made it into the Oxford English Dictionary in 1906. In the 1960s, the concept of mentalizing was brought into the psychological world by psychoanalytic theorists. Freud's concepts of binding and physical working out set the stage for the appearance of mentalization [2]. These concepts involve "the transformation of physical quantity into psychical quality" and "the setting up of associative pathways" [3]—in other words, turning something physical (i.e., an observed cue) into something psychological (i.e., a mental state). The word mentalization first appeared in the psychological literature in the writings of French psychoanalysts [4]. In 1997, Lecours and Bouchard developed a model for mentalization based on this tradition.

In the 1980s, the term "Theory of Mind" (ToM) gained traction in the psychological realm. When coined by primatologists Premack and Woodruff, ToM was described as an individual's ability to attribute mental states to themselves and to others [5]. This coining was prompted by the discovery that chimpanzees can in fact infer the mental states of humans; when presented with a human struggling with a problem and given several photographs, one of which contained a solution to the problem, the chimpanzees consistently chose the correct photograph. In essence, in order to choose the correct solution, the chimpanzees had to recognize the intentions of the other. Shortly thereafter, work on ToM began in humans.

Much work on ToM in humans has been based on the concept of false belief. In short, a scenario is presented to a subject in which a character comes to believe something that the subject knows to be false. In order to arrive at the correct conclusions about the character's beliefs, the subject must be able to decouple mental states from reality. In other words, they must recognize that what is in their mind is not the same as what as in the minds of others. A wide range of research using this sort of task has revealed that we are not born with this understanding; rather, this ability develops between ages three and four [6]. Thus far, we have only looked at ToM as it develops naturally; studying the impact of nurture on mentalizing brought it into the realm of attachment.

Mentalization, as it is used in mentalization-based treatment (MBT), developed when it was adopted by attachment theorists. Fonagy found that infant attachment could be predicted by a parent's "predisposition to see relationships in terms of mental content" [7]. In other words, the better a parent could mentalize their baby's mind, the more likely the child was to have secure attachment. These findings sparked a boom of literature related to mentalizing, beginning in the 1990s, resulting in more than 4000 scientific studies published on the topic by 2014 [8]. Since then, mentalization has been studied developmentally [9], biologically [10], and even musically [11]. In particular, neuroscience has made major contributions to our understanding of mentalizing. In addition to providing support for the importance of attachment in mentalizing capacity, neuroscientific studies have identified dissociable neural networks for mentalizing [8]. This means that not only is mentalizing an observable phenomenon via neural activity, but also we now know

through brain sciences the distinct dimensions underlying the capacity to mentalize (see the section on The Four Dimensions).

As evidenced by its rich history, mentalizing encompasses diverse approaches and facets. It becomes necessary to have an organized understanding of how the process of mentalizing can be broken down. Thus, four dimensions of mentalization have been identified—corresponding to the previously mentioned dissociable neural networks—which give meaning to particular instances of mentalization.

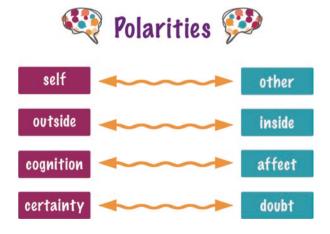
#### The Four Dimensions

The definition of mentalizing we gave earlier leaves many questions unanswered. We might think of the dimensions—or, as Fonagy and Bateman would have it, "polarities" (Fig. 1.1)—of mentalizing as the answers to questions we could ask about a particular instance of mentalizing. Recall that any instance of mentalizing represents a reflection on the mental states in oneself or others. The first question we might ask is:

#### Whose Mental State? Self Versus Other

The self versus other dimension is just what it seems: it refers to whether the mental state being considered is in *oneself* or in *another*. Despite its apparent simplicity, it is not especially easy in practice. Consider from the beginning of the chapter our friend who has just canceled plans with us. If you go back and read everything we considered about the situation, you will find that none of them related to our own mental state. We often neglect to consider our own mental state because we assume that we already know it; however, in the same way that we cannot know the contents of someone else's mind, the contents of our own minds are not as available to us as we might think.

Fig. 1.1 Polarities



This is not to say that mentalizing the self is always the challenge. We might just as easily have focused only on our own mental states—we are hurt; we were looking forward to the night out; we are mad that we wasted all that time planning for the outing; we wanted to be better friends with this person. The challenge is finding the balance between mentalizing self and other, and arriving at an integrated understanding of how they interact with one another. When it comes to the self–other polarity, it is really the ability to move smoothly back and forth between these perspectives that is characteristic of good mentalizing. Getting stuck on one perspective, either self or other, is a characteristic of poor mentalizing. When you ask a youth arguing about your intentions "What were you thinking?" and the answer is "I don't know!" this is self–other mentalizing that is stuck and thus leading to characteristic difficulties.

Once we know whose mental state we are talking about, the next important question we might ask is:

#### **What Kind of Mental State? Affective Versus Cognitive**

Affective versus cognitive refers to the nature of the mental state. *Affective* mentalizing is of feelings, while *cognitive* mentalizing is of thoughts. This distinction refers to not only the characteristics of the mental state we consider for an individual, but also the nature of our understanding of the mental state. Thus, affective mentalizing is more similar to empathy or emotional contagion, while cognitive mentalizing is rooted in reasoning and perspective-taking. This distinction is made clear in the differences between the Theory of Mind Mechanism and the Empathizing System [12].

The Theory of Mind Mechanism corresponds to cognitive mentalizing and processes metarepresentations, or M-representations. M-representations were defined by Alan Leslie as consisting of an agent, an information relation, and an expression [13]. Baron-Cohen redefines these elements as an agent, an attitude, and a proposition [12]—in other words, a person, a type of mental state (e.g., believes, thinks, wants), and the content of that mental state. For example, when we consider our friend who canceled on us, we might create the M-representation "Our friend does not know that I went out of my way to plan for our outing" or "Our friend wanted to cancel our plans when we first made them." Importantly, each of these is a representation of what is in our friend's mind and thus a representation of a representation—a metarepresentation. Although we might not always recognize that these are representations and not reality, they are in fact always representational in nature. By making use of metarepresentations, we are able to denote that something is not necessarily real, but that we think it may be—decoupling the mind from physical reality.

Affective mentalizing corresponds to the Empathizing System, which processes E-representations. E-representations consist of the self, an affective state, and an affective state proposition. For example, when our friend cancels on us, we might notice that they are stressed and create the E-representation "We are sorry that they are stressed." While an M-representation might contain an emotion ("We see that

our friend is stressed"), it does not include an impact of the emotion on the self. This means that a representation regarding an emotion is only an E-representation when the affective state has an effect on the self. Similarly, an instance of mentalizing regarding an emotion is only affective mentalizing when the emotion impacts the self; thus, affective mentalizing is quite similar to empathy.

Now that we understand the kind of mental state we are working with, we might wonder:

#### What Kind of Cues Are Used? Internal Versus External

When we mentalize, we must base our representation on something. The internal versus external dimension refers to the nature of the cues that are used to inform the representation of a mental state. Mentalizing might be based on observable features, meaning the things a person says or does—this would denote mentalization of external features. These can be things like facial expression, tone of voice, or even the words that are used. When we notice that our friend seems stressed, we likely use external cues. Perhaps their voice sounds rushed, or perhaps they say, "Things have been crazy this week."

In contrast, mentalizing that is based on internal cues relies on an understanding of internal experiences, such as thoughts and feelings. Internal mentalizing requires an initial hypothesis. For example, once we notice that our friend is stressed, we are able to use internal mentalizing to go deeper. Based on the external cue that their tone of voice sounds stressed, we might now think things like "They wish they could hang out with us but they don't have the time."

Now that we have answered all of those questions, we might still be wondering how it all comes together. The final question we ask is:

## How Does the Awareness Come About? Automatic Versus Controlled

Perhaps the most important dimension to consider is automatic versus controlled—alternatively called the implicit versus explicit dimension. This is the polarity we are trying to "lubricate" the most with MBT, to allow the kids and families we are working with to be able to transition deftly from implicit mentalizing to slower, more controlled, and more explicit mentalizing that allows them to understand their way out of a misunderstanding!

Automatic, or implicit, mentalizing happens when we are not thinking about it. You might think of it as your intuition. In automatic mentalizing, multiple cues are processed simultaneously; thus, automatic mentalizing is fast and does not require attention or effort [14]. In order to process so much information so quickly, we rely on heuristics, or mental shortcuts. If you were to think deeply about the inner worlds of every stranger you passed on the street, you would barely make it a block without mental exhaustion! It is important to have heuristics to save time and energy as we

go through our day in a sea of minds—most of which don't actually matter to us! These heuristics are learned through exposure and repetition; when a certain event has the same outcome over and over, our brains come to expect that outcome once the event occurs. When things go smoothly, automatic mentalizing is sufficient; thus, most day-to-day mentalizing is automatic [15]. For example, if our friend had not canceled on us and we had gotten to see them as we had planned, we would likely not have thought about their motivation. Instead, we would have trusted our intuition to interpret their thoughts and feelings. However, in the unexpected situation where our friend cancels on us, relying on our intuition gets us in trouble. Recall that our first thought was that they didn't want to see us in the first place. Even though there is no reason for us to think this, our mental heuristics have pieced together an explanation based on cognitive biases. This does not seem to be a good strategy for the situation. What might we have done instead?

When something out of the ordinary happens, good mentalizers can shift to controlled, or explicit, mentalizing. Controlled mentalizing is a much slower and deliberate process. In contrast to automatic mentalizing, controlled mentalizing requires that things be processed one at a time [14]. Just like it sounds, we are in control of this process; thus, it requires attention, effort, and intention. For example, when our friend cancels on us, we can slow down and acknowledge that we feel hurt but recognize that we don't know what is inside their mind. We then can share these concerns and ask them for clarification. When we do this, we have changed not only the way we interpret the situation, but also the way we interact with it. It is clear that in this situation, controlled mentalizing is necessary, while using automatic mentalizing gets us in trouble. However, using controlled mentalizing when the situation does not call for it can also be bad. Let us return to the situation in which we ended up on this outing with our friend. If we are stopping to think the whole time about what they think of us or whether they are having a good time, we waste mental energy on working through these thoughts rather than enjoying our time with our friend. We are also likely making our friend feel awkward, as if they are under a magnifying glass or as if we don't trust them. This kind of overthinking is called hypermentalizing and can be counterproductive in most interactions, as it leads to overattribution of mental states beyond what there is evidence for [16].

We can see that neither implicit nor explicit mentalizing is inherently indicative of bad mentalizing, but a good mentalizer is one who can identify which is appropriate for the situation. Next, we will examine how our mentalizing ability develops and the things that contribute to making us good mentalizers.

#### The Development of Typical Mentalizing

Although mentalizing is a seemingly natural process, we are not born with an understanding of the mind. Kim [17] compares this concept to our linguistic ability; just as we are not born knowing language but are equipped to acquire it, given sufficient input, we seem to be equipped to learn to mentalize, given enough exposure to mental states. In this section, we will discuss the acquisition of our mentalizing ability, first by examining the normative timeline of mentalizing development and then by

looking at the processes by which we are exposed to the mind and that promote this successful development of mentalizing ability.

#### The Normative Timeline

Development of mentalizing ability is generally organized into four stages. Each stage is marked by the acquisition of a new mentalizing-related ability and is thus characterized by distinct ways of thinking about mental states. We will survey each of these four stages and the associated mentalizing capabilities, beginning with infancy.

Infancy Infancy, encompassing birth to age one, is characterized by the development of what is known as teleological thinking. This teleological stance refers to the rational construal of perceived actions; in other words, infants come to expect others' actions to be directed at achieving a goal in the most efficient way possible, within the constraints of reality [18]. In teleological thinking, everything is constrained to the physical realm and mental states are not yet considered; goals and actions taken to achieve those goals consist only of things that are directly observable. Thus, over the first year of life, the infant comes to understand that actions are goal directed and they expect others to act rationally given their goals. In this way, the infant can, without any understanding of unobservable mental states, make sense of current actions and make predictions about future actions [17].

Infants also begin to recognize themselves as teleological agents, both physically and socially. In other words, they learn that their actions can bring about changes in the physical world, like making a ball move, and the social world, like when smiling at Mom leads to Mom smiling back [1]. This allows the infant to begin to develop a foundation for later emotional understanding.

**Toddlerhood** During toddlerhood, which encompasses ages two and three, the child develops what is called the intentional stance. In contrast to the teleological stance, the intentional stance recognizes that actions are caused by prior unobservable states of mind [19]. This is the first hint of attention to mental states; in this stage, children can understand goals and actions in a more mentalistic frame. They can conceptualize things like desires, wants, and intentions [20]. Further, children begin to develop an understanding of emotions and a capacity for empathy. The toddler's empathy and other mentalizing instances are all considered to consist only of implicit mentalizing, as explicit mentalizing has not yet developed [17].

Importantly, the child's thinking during toddlerhood is marked by psychic equivalence. Psychic equivalence is the lack of a separation between mental states and reality, or the idea that what is in the child's mind is real. This is especially apparent in the pretend play characteristic of this age group. Toddlers' pretend play can feel very real and they can get lost in magical thinking, like the child who believes there is a monster under the bed. Thus, while the toddler can now conceptualize mental states, the separation between internal and external events is still blurred.

**Early childhood** In early childhood, children aged four and five begin understanding that actions result from beliefs. This is accompanied by the monumental achievement of passing the false-belief task, described earlier in the chapter. Passing this task requires the use of explicit mentalizing as well as the separation of mental states from reality. This means that in early childhood, children are able to deliberately and consciously consider mental states and can fully understand that reality does not necessarily correspond with the said mental states. With this decoupling comes the ability to deceive, tell jokes, and play tricks [21].

Further, the child can now grasp the idea that mental states are transient and that action is informed both by these transient states and by stable characteristics [22]. In other words, temporary mental states like thoughts and emotions interact with permanent traits like personality to inform behavior. These ideas provide the foundation for an emerging sense of identity.

Middle childhood Middle childhood comprises ages six to eleven and gives way to more complex mentalizing abilities. In this age range, children can organize their memories into a causal–temporal framework [23]. This means they can begin forming narrative, autobiographical understandings of themselves and their experiences, leading to a coherent and consistent self across time, although at this stage these ideas are still rather concrete and unintegrated. Children also gain higher-order mentalizing abilities—an ability to think about what one person thinks is in another person's mind—and the ability to consider mixed emotions. Despite these important gains, children in this stage still lack authenticity when talking about mental states. This lack of authenticity is referred to as *pretend mode* and is due to a developing sense of morality and societal values; mental state reasoning is heavily influenced by ideas about what one *should* think and feel. Nevertheless, the gains made in middle childhood pave the way for identity consolidation and social thinking in adolescence.

Adolescence Adolescence is characterized by incredible expansion of the social world as well as the social brain. Not only are adolescents' brains equipped for sophisticated and complicated perspective-taking, but also their interest and capacity for novelty-seeking experiences expands. This is necessary for them to become autonomous; however, the increased reward and amygdala sensitivity underlying this expansion is not matched with increased prefrontal cortex development and adolescents continue to need the support of caregivers to scaffold the development of mentalizing abilities. An important aspect during this period is the beginning of the development of mature self-reflective capacities. Adolescents begin to mentalize the self in a very active way and are charged with integrating multiple selfhypotheses with feedback from parents, peers, teachers, and the environment. They are now beginning the process of consolidating their identities. This is a complex task, and it does not go equally smoothly for all adolescents. It is therefore no surprise that adolescence is the developmental period of onset for most psychiatric disorders, particularly personality disorders, which are of course highly associated with self-harm and suicidality—the foci of this book.

#### The Importance of Parenting and Attachment

As stated previously, although we are equipped (hard wired) to learn to mentalize, we are not born knowing how. In order to become true mentalizers, we must be taught. Thus, the development of mentalizing is hugely reliant on caregiving and, in particular, attachment. In this section, we will examine the relationship between caregiving, attachment, and mentalizing more closely, and see how the interplay between the three fosters one's own mentalizing ability.

**Emotion regulation** As we have just discussed, in infancy children are unable to understand internal states and rely solely on external stimuli to construct an understanding of the world. This includes their own emotional states. They are thus reliant on the outside world to help them make sense of emotions. Parents are vital to this understanding by way of affect mirroring; when a parent notices a child's distress, the parent is naturally inclined to mirror the affect in order to soothe or downregulate the infant's arousal [24]. This is called *marked mirroring*. In order for marked mirroring to be successful, it must have two vital characteristics.

First, a caregiver's response must be congruent with the internal state of the infant. The parent's ability to create a congruent affect is largely dependent on their own mentalizing ability. The mental state of the infant must be correctly identified in order to create a response that matches. This requires the parent to accurately mentalize the child. If identified incorrectly and internalized by the infant, the cue will lead to a fragmented sense of self known as the *alien self* (which is discussed further in the following section). As a brief example, if a child is crying, a congruent response would be the mother making a sad face.

Second, the response must be marked; the parent must indicate that the emotion is not their own but that they are aware of the baby's internal states. This is done by modifying the emotion such that it is distinguishable from the parent's own affect. For example, a parent may mix the congruent emotion with an incongruent one, such as concern, or they might exaggerate or slow down the emotional expression. In any case, in order to present a marked response, the parent must be able to regulate their own emotions. If the parent is unable to modify the emotion and instead becomes distressed themselves, the infant learns that their own negative internal experiences have negative consequences in the external world and are dangerous. The sad face from the prior example would have to be a bit exaggerated to be marked; for the sad child's crying to be met with the mother's own weeping is congruent but not at all marked and doesn't allow for self-other differentiation.

When a caregiver's response is both marked and congruent, it both teaches the infant to associate this representation with their emotional state and helps to regulate the emotion [25]. Thus, the mirroring not only helps the infant learn to recognize emotions but also lays the foundation for emotional self-regulation.

**Pedagogical interactions** We must rely on ostensive cueing when it comes to learning about emotions. Ostensive cueing signals to the child that the adult is about to communicate something that is worth learning. Because observational learning