



Understanding fear in therapeutic residential care

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ABSTRACT

In therapeutic residential care (TRC), both children and staff sometimes experience fear. Scholarship in our field can benefit from a more thorough integration of contemporary research literatures on fear as a biopsychosocial phenomenon. Attending to what is known about how fear works at the individual, organizational, and cultural levels is necessary to improve working conditions and quality of care in TRC. This article draws from neuroscience, psychology, and sociology to improve our biopsychosocial understanding of the experience and consequences of fear in TRC. These literatures demonstrate that: 1) Fear is a potentially adaptive response to threat involving conscious and nonconscious neural processes; 2) Fear (and all emotion categories) is shaped by culture and therefore varies; 3) Instances of fear are constructed based on our *predictions* about the future rather than being *reactions* to experience; 4) Individuals vary in their ability to experience fear and recognize it in others, and this variation is related to other capacities of great interest in child welfare; and 5) Children and staff learn to perform and experience emotions—including fear—through explicit and implicit education in the feeling rules of their organization and broader culture. We suggest actions organizations can take now to help children and staff better understand fear and develop more adaptive responses to it. We propose directions for future research on fear in TRC that can guide efforts to make child welfare involvement a less threatening experience for children, their families, and the people who care for them.

1. Introduction

Children and staff in therapeutic residential care (TRC) sometimes experience fear. Children face novel expectations, social situations, and environments that they may perceive as threatening. Staff, too, may find themselves faced with situations that trigger fear, such as children's dysregulated behavior, physical restraint, or accusations of abuse. Given the high stakes and many challenges of TRC, surprisingly, little research has addressed experiences of fear among care workers and the children they serve. Much of the existing literature on fear among human service workers has addressed triggers or objects of fear. For example, Smith et al. (2004) produced a catalog of 82 fears, (i.e., objects of fear) among a sample of 60 social workers practicing in the U.K. Among them were fear of being physically harmed or killed, being overwhelmed or out of control, and being sanctioned by supervisors. Certainly, it is important to understand the causes of fear in our field. However, a

shortcoming of the literature on fear in human services—including TRC—is its overfocus on exploration of feared stimuli or situations with limited attention to the substantial theoretical and research literatures on fear as an interior, individual experience with ecological causes and effects that transcend the individual. Attending to what is known about how fear works at the individual, organizational, and cultural levels—not only what youth and workers are afraid of—is necessary to frame future research efforts to improve working conditions (i.e., physical and psychological safety) and quality of care.

To that end, this article surveys relevant literatures from neuroscience, psychology, and sociology to improve our biopsychosocial understanding of the experience and consequences of fear for children in TRC and the adults who care for them. We begin by reviewing important established and emerging literatures on the social and neurobiological foundations of fear. We attend particularly to the challenge of defining fear and to clarifying important distinctions between fear and anxiety.

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We address fear as both a subjective individual experience and an emotion that operates within, shapes, and is shaped by social context. We bring these abstract ideas to bear on real world practice throughout, identifying fear as a contributor to children's pain-based behavior (Anglin, 2002; 2012) and suggesting new potential approaches to intervention. In closing, we identify directions for future research and highlight innovative studies on emotions in human service settings that may serve as useful models for further inquiry. It is our hope that a better understanding of innovations in the science of fear can inform program design, staff development, and responses to real-time situations with children experiencing fear, and minimize the potential of our own fear to compromise responsive, therapeutic practice.

2. Defining fear

For an emotion so widely recognized and seemingly self-evident as fear, much variation exists in how it has been conceptualized in the research literature. Fear was once understood as a universal emotion experienced similarly in every culture without the need for socialization to produce its unmistakable experience and expression (Ekman, 1977a, 1977b). As we will explore in this paper, significant challenges to that understanding of fear have emerged. The evolutionary value of fear is apparent: It signals danger, helping us avoid threat. But how we respond to perceived threat is complexly shaped by a range of biopsychosocial factors. What counts as a threat depends on our *perception* of stimuli as salient and the meaning we make of them (Naragon-Gainey in Grogans, et al., 2023). Therefore, in a given circumstance, fear may or may not be useful in increasing our well-being and evolutionary fitness. The adaptiveness of a particular instance of fear and its sequelae depends on how accurately the fearer's interpretation matches or predicts actual dangers in their environment.

Early theories attributed the fear experience to innate, dedicated fear circuits in the brain, which produce a signature pattern of behavior and subjective experience in response to the detection of threat (Panksepp, 2003). Contemporary neuroscience research suggests that fear is more accurately understood as a series of responses to perceived danger, some of which are hardwired, while others can show dramatic variability across individuals, circumstances, and cultures. At the forefront of this reformulation is Joseph LeDoux (2014, 2017), who demonstrates that our initial response to a threat is produced by hardwired, subcortical systems, which in a matter of milliseconds, orchestrate a burst of physiological and behavioral defense reactions, occurring mostly outside of awareness. Our *conscious* experience of fear is produced by slower cortical systems and may be understood as our brain's post-hoc interpretation of that initial defense reaction, along with the meaning a person makes of internal and external stimuli. The latter is heavily shaped by their unique life history, socialization, and present circumstances.

LeDoux (2014) argues that the term *fear* is best reserved for referring to the *subjective* experience of fear. He writes: "Fear is what happens when the sentient brain is aware that its personal well-being (physical, mental, social, cultural, existential) is challenged or may be at some point" (p. 2876). He differentiates this conscious experience and its associated neural processes from more immediate *defense reactions*, which are physiological and behavioral responses to the detection of threat and operate mostly outside of conscious awareness and through different neural processes (LeDoux, 2014). He argues that fear researchers (and consumers of their scientific reports) too often conflate these two processes, applying the term indiscriminately and mis-attributing subjective fear in situations where it cannot be assumed. We wish to recognize that uses of the term fear in the field of child welfare probably encompass both phenomena and may benefit from a more

careful parsing. This distinction is essential if we are to adequately understand and respond to the emotional experience of children and workers and address the effects of fear in the complex social environment of TRC.

In a further refinement, Dean Mobbs (2018) proposes a formulation of fear that mirrors LeDoux's dual process model, but adds an additional distinction based on the imminence of the threat being perceived. Mobbs argues that fear and anxiety are used in overlapping ways in the literature but should be distinguished by the imminence of the threat, reserving the term *fear* for actually-occurring triggers and *anxiety* for when a threat is predicted or imagined but is not physically present. Mobbs identifies four fear-related phenomena that are sometimes conflated: Reactive fear, cognitive fear, encounter anxiety, and anticipatory anxiety. (See Table, p.3).

Citing Critchley and Garfinkel (2017), Mobbs defines *reactive fear* as: "a quick, phasic, mostly unconsciously and loosely coordinated reaction in response to an imminent threat that is, or [is] perceived to be, directed toward the organism and where there is little time to cognitively comprehend the danger of the situation" (p. 34). The term "reactive fear," while not consistent with LeDoux's more restrictive use of the word "fear," is synonymous with the defensive reactions described in LeDoux (2014) and maintains the distinction between conscious and non-conscious aspects of fear. Reactive fear clearly occurs for children and workers in TRC (see also Smith, 2014 for application to crisis intervention in TRC) but does not account for the full range and duration of experiences we sometimes describe as fear.

Cognitive fear, writes Mobbs, is "evoked when the organism is under direct threat but has time to organize and strategize escape as well as subjectively contemplate the situation" (2018, p. 34). This facet of fear involves conscious awareness and subjective feelings of terror. This conception of cognitive fear corresponds, not only with LeDoux, but also with Feldman Barrett's broader theory of constructed emotion (2017) which we describe later, and with sociological and anthropological theories of emotion as being shaped by social and cultural meaning making of experience. Many situations in TRC present both an imminent threat and the time to think necessary for children or workers to experience cognitive fear.

According to Mobbs (2018), anxiety is differentiated from fear based on the imminence of the perceived threat. From an evolutionary perspective, anxiety serves to sensitize the experiencer, enhancing their ability to detect signs of possible dangers and reducing their likelihood of harm. Anxiety may also help the person prepare cognitively through planning and rehearsing hypothetical response options or other mental problem-solving activities. Therefore, the survival value of anxiety lies in reducing one's likelihood of encountering a threat, rather than avoiding one that is imminently present. Anxiety can occur even when a threat is not present but can be imagined (a "what-if" cognition), or when the threat is distant and "non-attacking" (e.g., a boy notices that an older and much larger boy who has bullied him in the past has entered the cottage, though the older boy is talking with a counselor and not paying attention to him). Mobbs further distinguishes two types of anxiety: Encounter anxiety and anticipatory anxiety. *Encounter anxiety*, he suggests, is the "apprehension of danger without direct threat, but the possibility of the threat directing its focus toward the organism" (Mobbs, 2018, p. 35), increasing the individual's motivation to avoid the threat. *Anticipatory anxiety*, then, is a response to a yet less imminent imagined threat or when there is uncertainty about whether a threat exists. Both types of anxiety are likely experienced by children and workers in TRC, but it is noteworthy that we may at times use the term fear to describe these situations that may be more accurately and usefully described as anxiety.

Although Mobbs's taxonomy seeks to clarify fear-related language in

neuroscience research, we find it useful for more carefully differentiating what may well be different varieties of threat response in TRC.

Emotion Construct	Fear	Imminence	
		Near	Less near
		Reactive Fear	Cognitive Fear
		• Threat of imminent “attack” perceived • Limited/no conscious awareness • Prompts “quick and dirty” survival responses (p. 34) • Goal is to protect from threat • Aligned with LeDoux’s defensive reactions	• Direct threat perceived as present • Time to strategize, contemplate • “Conscious feeling of terror” (p. 34) • Subject to interpretation through social/cultural systems of meaning • Goal is to avoid threat
	Anxiety	Encounter Anxiety	Anticipatory Anxiety
		• Apprehension of danger • Threat is in environment but not directed at person, but might be • Time to strategize • Subject to interpretation through social/cultural systems of meaning • Goal to reduce risk of threat exposure	• Uncertain whether threat exists • Imagined threat • Time to strategize or rehearse • Subject to interpretation through social/cultural systems of meaning • Goal is to reduce risk of threat exposure

Disambiguation of fear and anxiety, derived from (Mobbs, 2018)

3. Innovations in the science of fear

3.1. Fear (and all emotions) are socially constructed

Anthropology and sociology have long argued that emotional experience is profoundly shaped by culture (e.g., Hochschild, 1979, 1986, 2012; Lutz, 1986). Put another way, emotion categories are created and sustained within cultures, and we only come to recognize ourselves as “feeling” a certain emotion because that category is culturally available to us for making sense of what might otherwise be an undifferentiated part of the flow of real-time experience. Lutz also makes a yet more radical argument that the construct of emotion itself—as distinguished from thought and other highly naturalized Western categories of experience—is a “master Western cultural category” (p. 287). That is to say, the idea that some things are emotions while other things are, say, motivations or thoughts, is not universal. If the idea that emotion as a distinct category of human experience is socially constructed seems radical, consider how much psychoeducation cognitive behavioral psychotherapists must do to help individuals accurately classify certain experiences as emotions and others as thoughts. From this perspective, then, across cultures, experience may be coded by experiencers as a certain emotion (e.g., fear, joy, or love) or *not as emotion at all*, insofar as, from their cultural perspective, emotion is or is not a relevant category.

Sociologist Arlie Hochschild (1986, 2012) and followers in the emotional labor tradition (e.g., Bolton, 2004; Grandey, 2000) have demonstrated how the performance and subjective experience of emotion are shaped by institutions—meaning both organizations and cultural institutions like gender roles. Hochschild’s seminal study of the emotional labor of airline “stewardesses” and debt collectors in the 1980s shows how differently-gendered workers wield emotional performance to achieve the very different goals of each job. In both sites, gendered emotion rules govern not just how emotions are performed,

but also how they are subjectively felt. Hochschild refers to this as *emotional labor*, reflecting the deliberate practice of performing emotions in line with the expectations of the institution. For example, the Delta Airlines flight crew trainings Hochschild attended included significant discussion of how flight attendants should impute sympathetic causes (like fear of flying) to troublesome passengers’ aggressive, sexualizing, or irritating behavior so that they could not only impersonate a warm, calm, compassionate flight attendant but *actually feel* those emotions toward the problematic customer.

Studies of emotional labor in human service settings have further developed our understanding of how organizations shape the performance of emotions when goals are therapeutic rather than profit oriented. Bolton (2004) argues that the “prescriptive” form of emotion management characteristic of professional workers involves the internalization of a profession-specific regime of feeling rules, which can be displayed as evidence that the worker is indeed a professional. Winter et al. (2019), for example, demonstrate that family social workers in the UK perform professionalism through carefully titrating the level of emotional “connection” to display in interactions with their clients. Carder & Cook’s (2025) study of child and family social workers demonstrates that feeling rules operate even within the context of ostensibly supportive “backstage” supervision. They write: “While the [supervision] team was considered a place to process the emotional demands of practice, social workers also managed and performed their emotions to an audience of their peers and co-workers which, paradoxically, created an additional source of emotional labor” (p. 56). This finding both demonstrates the relevance of the emotional labor perspective in human service work and gives reason to think critically about how to preserve these spaces as a respite for workers to express “real” emotions.

Most immediately relevant to this article is Andersson’s (2020; 2022) study of staff in secure units for adolescents in Sweden. This study documents that, even in an organization where the threat of violence is omnipresent and risk management is an organizing ethos, feeling rules preclude staff from displaying fear. Andersson cautions that this regime of feeling rules, left implicit, may unintentionally contribute to further violence on the part of both children and staff. He writes, “Only when emotional rules are identified can staff develop strategies for dealing in a professional way with the violent incidents that come with their job” (p.408).

From a sociological perspective on emotion, we must acknowledge that even as neuroscience helps us understand the neural processes through which subjective emotional experience and nonconscious defense reactions occur within individuals, both how we perform and how we experience emotions are also shaped by our social environment. Emotions, including fear, are both an interior, subjective experience and a social currency of sorts, achieving specified social ends and indexing the kind of people we are or attempt to be (see Smith & Colletta, 2019). According to this literature, we must also question easy distinctions between so-called authentic or unmediated emotion and emotion that is shaped by institutional forces but experienced genuinely, nevertheless. The emotional labor perspective helps us see that a kind of “deep acting” occurs when we follow received social feeling rules while also experiencing the prescribed emotion. Workers in TRC and other child welfare settings are clearly doing emotional labor, responding to institutionally salient feeling rules about fear and other emotions, and performing desired emotional states in their everyday interactions with children (e.g., Buch, 2013; Hardesty, 2015). To the extent that we view the labor of childhood as the child’s own emotional development, children in care are likely doing the same.

3.2. The politics of emotion

Insofar as we understand emotions as socially constructed categories that we use to organize and make sense of otherwise undifferentiated affective experience, we must acknowledge that these categories and what we fit into them can vary greatly across cultures and historical eras.

The effects of these ways of constructing emotional experience vary, too. Sociologist Frank Furedi has forwarded the macrosociological argument that the U.S. and U.K. in late capitalism are increasingly characterized by what he calls a “culture of fear” (1997; 2018). He argues that fear has become a fundamental organizing logic of public and private discourse, constituting a “sensibility” and even an “obsession” (2018, p. 1). Fear, he argues, has become a free-floating entity, something to be reduced, avoided, and feared in its own right and a dominant political logic that replaces aspirations like bravery and grit with endless attempts to reduce risk.

We follow Tudor (2003) in suggesting that macrosociological claims about fear, like Furedi’s, might be productively integrated with a biopsychosocial perspective. Indeed, we may live in a time in which fear and its remediation are particularly ready and persuasive organizing logics and effective political tools. And we agree with Furedi’s assertion that *eliminating* fear is not possible or desirable. From a neurobiological perspective, we come hardwired for fear as an adaptive strategy for responding to threat. There is also evidence that child welfare has been shaped by an increasing risk-management orientation that may have unintended harmful consequences (Brown, Winter, & Carr, 2018; Smith & Colletta, 2019; Stanford, 2008).

Sara Ahmed’s influential work *The Cultural Politics of Emotion* (2004) seeks to show how the macrosociological effects of emotion are sustained through everyday affective experiences. She argues that emotion, experienced as it is by embodied individual people, is also a site in which social hierarchy, power, and authority are (re)produced. Exploring the political life of affect, she shows that fear (like all emotions) circulates between multiple individuals, even as it is experienced as an interior state. According to Ahmed, the objects of emotions (e.g., what is feared, what is loved) are the *effects* of the circulation of emotions between people. That is to say, fearing a certain person or situation creates and recreates the belief that those persons or situations are indeed threats to be feared. The affect theory perspective, then, leads to an understanding that institutions create and sustain distinctions between those who are deemed threats and those who are deemed to be threatened. And those distinctions are maintained by the emotions we experience in relation to one another. In therapeutic residential care, such distinctions are quite complex, as we view children as both vulnerable victims and potential threats to staff and to each other (Smith, Colletta, & Bender, 2017). Similarly, the youth care workforce is also viewed as both benevolent and vulnerable (Smith, Colletta, & Bender, 2019) and as a potential threat to those they serve (Smith & Colletta, 2019; Stanford, 2007, 2008; Whittaker & Havard, 2016).

Ahmed’s affect theory approach aligns in some ways with the theory of constructed emotion (Barrett, 2017a, 2017b; outlined below) in the sense that social/interpersonal experience shapes inchoate affect into specific culturally recognized emotion categories that the group then experiences as the same construct. Anthropology and sociology have long documented cultural variation in human emotional categories and the processes through which people come to experience and perform emotion in defined ways. These sociocultural conceptions of emotion, and particularly assertions that emotions and their forms of expression are not universal, were, for a time, impossible to square with the findings of Ekman and others in psychology that seemed to show that a subset of emotions—including fear—were universally experienced and expressed in signature patterns of facial expression (Ekman, 1977a, 1977b). At best, rapprochement came in the form of theories that held some emotional categories as universal but acknowledged that the same core emotion might be expressed differently among people of different cultures (e.g., Katz, 1999). But Ahmed, Hochschild, and, as we’ll address below, Feldman Barrett make a more radical critical and empirical observation that emotion categories and the very category of emotion itself (vs. other kinds of experience) are social constructs.

3.3. Neuropsychological evidence for the social construction of emotion

Recent psychological and neuroscience research has begun to provide robust empirical support for the theory that emotion categories, and therefore our experience of those states and the meaning we make of them, are socially constructed (Feldman Barrett, 2017a, 2017b). Also shaped by cultural experience are the facial expressions once thought to be universal markers of interior emotional experience (Barrett et al., 2019). From this perspective, emotions are emergent in social life, rather than pre-programmed scripts, and are shaped by culturally situated social learning. Even our emotional “granularity,” or the specificity with which we are able to identify certain combinations of positive and negative arousal states, is shaped by the cultural constructs available to us for making sense of internal experience (Tan et al., 2022; Barrett, 2004). Emotional granularity refers to “the specificity of one’s emotional experiences and representations or an individual’s ability to make fine-grained, nuanced distinctions between similar emotional states” (Smidt & Suvak, 2015, p. 48). Therefore, individuals within and across cultures appear to vary in both emotional granularity and the emotion categories available for making sense of interoceptive experience. To put it another way, this literature accepts as universal that all humans experience sensations in their bodies and affective states of positive, negative, low-, and high-arousal. How finely we distinguish between their various combinations and the constructs to which we learn to assign these combinations are culturally and socially determined.

3.4. Fear is constructed based on a prediction about a situation, not the situation itself

Psychologist Lisa Feldman Barrett (2017a) argues, based on a growing research literature using functional MRI methodology, that, not only are our feeling categories (including fear) shaped by our cultural and social resources (i.e., our available categories for organizing our interoceptive experience), but they are activated *before*, rather than in *response* to, situated experience. Indeed, she argues, we “construct” each new emotional experience *in anticipation* of what may come. Barrett writes:

“The first thing you must realize is that your brain is not merely responding to stimuli in the world. Your simulations function like predictions that continuously anticipate, rather than react to, sensory inputs from the world. Your brain is wired to be a generative model of your world by using past experience to actively create simulations that best fit the situation you are in” (2017c, p. 24).

We construct each instance of emotion, then, by making predictions or hypotheses based on interoceptive and exteroceptive information and our history of experience, then assigning it meaning in line with the emotion categories that our culture and past experience make available to us, e.g., “my heart is racing (interoceptive) and a child is running toward me with a rock in his hand (exteroceptive), fear is a category of experience that I can draw on to make sense of this experience, therefore I am afraid.” The next moment may reveal whether the child will attempt to throw the rock or share its beautiful color and crystals with the worker, at which point the worker’s predictions and emotional responses can be adjusted.

Taken together, social/cultural theories of emotion and Barrett’s theory of constructed emotion appear to upend many taken-for-granted assumptions in the field of therapeutic residential care and offer us new ways of understanding the fear experiences of children and staff. First, we can think of TRC agencies as organizational cultures that shape available categories for making sense of emotional experience. These categories of experience, which staff and organizational leadership may view as universal among incoming children and staff, likely are not. Children and staff arrive with varying emotion categories, emotional granularity, feeling rules, and cultural beliefs about how one ought to experience and perform emotion, including how to appraise and respond

to perceived threat. The field of TRC has made progress in acknowledging that cultural diversity shapes the way children make sense of experiences in residential care and, literatures on trauma-informed care call us to recognize that children's history of trauma tends to shape how they (mis)interpret the actions of staff and other children.

For example, some children in care may arrive with low emotional granularity and be able to use only a few emotion categories to make sense of their affective states. A child who is used to classifying negatively valenced affective states as only "mad," "sad," or "scared" may be assisted by discovering finer-grained distinctions used by others in their new social context, such as "irritable," "grieving," "worried," or "anxious." If we imagine that they are trying to live in a new environment that has different feeling rules than their family or community of origin, we should expect them to struggle to verbalize feelings or match their emotional performance to the expectations of this new place. Specific to fear, staff should be curious to understand the feeling rules with which children are familiar and how those feeling rules govern their emotions and behavioral responses in the presence of perceived threat. It is not simply that they may misinterpret benign situations in their new milieu as potentially threatening, but that they likely have existing feeling rules about how to do and feel fear (e.g., if I feel fear, strike first, run away, act menacing to protect myself; only sissies are afraid.) Understanding that children are experiencing emotional responses that come from *their culturally-shaped predictions about future events*, rather than to the events themselves, further heightens the stakes of understanding the past experiences that feed those moment-to-moment predictions and the emotions associated with them. This holds equally true for staff, though we have attended less to the fact that they too, come with culturally specific frameworks for understanding and making predictions about the actions of children.

3.5. People vary in their ability to feel fear and identify it in others

The assumption that fear is a universal emotion instinctively experienced and expressed by humans has been challenged not only by sociologists and anthropologists of emotion (e.g., (Lutz, 1986; Hochschild, 1979) and the theory of constructed emotion (Barrett, 2017), but also by a growing body of neuroscience research that demonstrates neurological variation in people's ability and propensity to experience fear and recognize it in others. Based on neuroimaging research, Abigail Marsh and colleagues have demonstrated that individuals' ability to experience fear and recognize fear in others is arrayed along a spectrum, with some individuals having almost no capacity to experience affective states that others within their culture would classify as fear and suffering corresponding deficits in their ability to recognize facial and vocal expressions of fear in others (Marsh, 2017; Marsh, et al., 2008; Marsh, et al., 2011). In these individuals, brain regions that are typically active in response to threat signals show little to no activation in the presence of threatening stimuli. At the other end of the spectrum, some individuals appear both particularly attuned to fear in others and have an increased ability and propensity to feel fear themselves. According to Marsh's research, anchoring the two ends of this fear spectrum are people with psychopathy and people who demonstrate extraordinary altruism.

Psychopathy, which is not commonly addressed in the field of therapeutic residential care or child welfare more broadly, is currently understood as a highly heritable (Larsson et al., 2006), pervasive developmental disorder with neurological, psychological, and social features (Marsh, 2013; Patrick, 2022). Psychopathy is understood as comprising three trait dispositions, which may be influenced by somewhat different causes and associated with somewhat different outcomes: Disinhibition, boldness, and meanness. (Patrick, Drislane, & Strickland, 2012; Patrick, 2022). Psychopathy is not included in DSM-V, though it shares many symptoms in common with Axis II Antisocial Personality Disorder in adults and Conduct Disorder in children (Frick, 2009). Though not diagnosable under DSM-V, psychopathic traits can be reliably measured by standardized assessment instruments (e.g.,

Psychopathy Checklist—Revised (PCL-R) (Hart, et al., 1992) and the Psychopathic Personality Traits Scale (Boduszek et al., 2018). Children and adolescents are not usually labeled as psychopathic, but rather understood as demonstrating high callous-unemotional (CU) traits (Barry, et al., 2000; De Brito et al., 2021). High CU traits can be designated as a subtype of conduct disorder in DSM-V diagnoses. Often beginning in childhood, people with psychopathy appear callous and unemotional, experience superficial emotional responses, use others instrumentally, seek stimulation through substance use and other risky behaviors, have poor behavioral controls, and may engage in aggressive and antisocial behaviors without guilt or shame (Hare & Neumann, 2008). Marsh and colleagues' research has demonstrated that people with psychopathy are notably impaired in their ability to experience fear, though other emotional capacities—like anger and excitement—are spared (Marsh, 2017; Marsh, et al., 2008; Marsh, et al., 2011).¹ Estimates of the prevalence of psychopathy in the adult population range from to 1.2% to 4.5% (Sanz-Garcia et al., 2021). Among incarcerated adults, the prevalence is much higher (De Brito et al., 2021). 2% of children in a community sample show high callous-unemotional traits, while 32–46.1% of youth with conduct disorder scored high on CU traits (Rowe et al., 2010).

Although it may make us uncomfortable to acknowledge, many children in TRC and in child welfare systems more generally may have high CU traits associated with a future diagnosis of psychopathy, particularly those whose conduct disordered behavior led to their admission. Marsh's (2013) findings that people with high psychopathic/CU traits have an impaired ability to experience and recognize fear can inform the treatment of some children in TRC settings. High CU children who cannot recognize fear in others and cannot feel it themselves may have a genuine inability to understand why some of their behaviors are risky or harmful or to show expected empathy for others. With a better understanding of high CU children's deficits in fear experience and recognition, we may be able to experience greater empathy for their callous actions and develop new ways of helping them understand why aggressive or threatening behavior is unacceptable (Frick et al., 2014); see Salekin et al. (2010) for a review of interventions for high CU children.

At the other end of the spectrum of fear experience and recognition are people who Marsh calls extraordinary altruists. Marsh studied these "anti-psychopaths" (2017, p. 108) by sampling the less than 0.001% of US adults who donate a kidney to a stranger (Marsh, et al., 2014). She found that, almost exactly inverse to the psychopathic participants she studied, the altruists reported and demonstrated through brain imaging high levels of empathy for others and heightened sensitivity to fear (though not to other emotions) in others. They themselves experienced elevated levels of fear and corresponding activity in brain systems where fear processing takes place. These individuals were both especially vulnerable and attuned to fear and especially empathic and motivated to assist others.

Why is this finding about the relationship between fear and altruism important in the context of TRC? We suggest that TRC, foster care, and other parts of the child welfare system are places where those high in CU traits and those high in altruism are likely to coexist. As Smith and Colletta (2019) found, youth care workers in TRC often view their work as moral projects in which altruism is a motivation. Organization leaders in this study believed that youth care work required highly altruistic individuals: "virtuous people" who "want to make a difference" (p.36) and who are willing to tolerate low pay, difficult hours, and

¹ Although we know of no literature directly challenging Marsh and colleagues' assertions about the relationship between psychopathic traits and capacity for fear, we want to acknowledge that theirs is not the only line of research on the neurobiological foundations of psychopathy and callous-unemotional traits. For a review of these literatures, see Blair et al. (2018) and Yang & Raine (2018).

child violence while responding to children with empathy. Marsh's findings help us see that these altruistic workers may also have been systematically more vulnerable to fear-provoking experiences intrinsic to their work. Surely, many children in care are also high in altruism. Given the association between fear sensitivity and altruism, children in care who exhibit these traits should be evaluated carefully with regard to their experiences of fear. Behind their altruistic, "good kid" behavior may also be a heightened experience of fear obscured by the instinctive bravery Marsh describes among extraordinary altruists.

4. Implications for therapeutic residential care

4.1. Integrating the contemporary science of fear and other emotions could transform therapeutic residential care

We acknowledge that the science we've reviewed here presents a very complex picture of the biopsychosocial workings of fear—a picture that may at first seem distant from the everyday flow of experience for children and staff in TRC. But if we accept the charge of translational research, we should consider how to more fully integrate this developing social and biological science of emotions into our work. We conclude this paper by suggesting actions TRC and other child welfare organizations could take now to help children and staff better understand fear and perhaps develop healthier responses to it. We also propose ideas for future biopsychosocial research on fear and other emotions that play out in TRC in the hope that further empirical work in our field can provide clearer guidance on how to make TRC a less threatening experience for children and the people who care for them.

4.2. Reflecting on fear and anxiety: why definitions matter

What we are learning about how fear works in brains, minds, bodies, and social environments has implications for post-crisis reflection with children (e.g., life space interviews) and clinical supervision—the times in which children and workers are encouraged to reflect on significant experiences. First, we should remember that fear is produced by two distinct but related processes. One is hardwired and reactive, involving immediate physiological and behavioral responses as the brain initially detects threat, and the other is a cognitive, constructive process of generating an appropriate emotional response that determines our subjective experience (i.e., feeling fearful) and motivates our deliberate actions. Because the immediate, nonconscious defense reactions (labeled reactive fear by Mobbs, 2017) occur subcortically, children and staff may not easily be able to reflect on their initial responses to a threatening situation. The defensive survival circuits responsible for our most immediate responses to threat are, by nature, not entirely subject to conscious awareness (LeDoux, 2014; see also Smith, 2014). Attempts to encourage reflection on inaccessible aspects of defensive responses may be frustrating or produce accounts that reflect concepts of fear that are familiar or desirable even if they do not describe what was consciously experienced at the time (see Carr (2010) on the performance of clinical scripts.) It is important to consider the potential to evoke frustration when we ask a child or staff member to recall threatening situations and experiences that occurred through neural processes that may have simply been too rapid to have been consolidated into narrative memory. A more useful intervention in such cases might include psychoeducation about the automaticity of some brain processes and how they can lead to non-deliberate responses that are outside our conscious awareness and shaped to a large degree by our histories of experience. Such understanding may invite self-compassion and strategizing about how to avoid, extinguish, or lessen maladaptive reactions in the future.

The cognitive component of fear may be more amenable to reflection in life space interviews (James, 2008; Long et al., 2001) and clinical supervision because its temporality allows conscious experience and recollection of thoughts and feelings. Reflections on situations that involved fear could begin with a consideration of what defensive

reactions and/or cognitive fear experiences occurred and how they may have been involved in the person's behavioral responses to fear. Similarly, there may be benefit in helping children and staff understand the differences between fear and anxiety. For example, helping a child to consider the *imminence* of a predicted threat may be useful in helping them shape future responses to difficult situations. Imagine, for example, a child who can learn to think "What I am feeling in my mind and body right now would make a lot of sense if my mom's ex-boyfriend was here right now and threatening to hurt me again. But he isn't here now, and the sensations I'm feeling are connected to threats that 1) my mind is predicting, and 2) that may occur in a distant, possible, but not certain future." While this sort of reflection might be a significant achievement for a young person, it is a common target of cognitive therapies for anxiety. Similar strategies might also be of use to staff who struggle with future-oriented anxiety about the range of well-documented challenges and threats to workers in TRC.

4.3. Attending to fear (and other emotions) in our understanding of pain-based behavior

James Anglin's (2002) study of young people in TRC found that they experienced profound psycho-emotional pain that they almost never discussed with staff members in those terms. Anglin coined the term "pain-based behavior" to highlight pain as an underlying cause of children's difficult behaviors and later demonstrated that programs whose staff responded empathically to pain-based behavior reported less use of coercive interventions, reduction in fear among children, and subsequent reduction in anticipatory anxiety among their staff (Anglin, 2012). Anglin's descriptions of "pain-based behavior" as a frame for understanding the actions of children when they are suffering has become a core concept in our field (e.g., Bath and Seita, 2008; Brendtro, & Du Toit, 2005; Holden, 2023; Emond, Steckley & Roesch-Marsh, 2016). Many of the most challenging behaviors children exhibit in care arise not because the child is inherently "aggressive," "avoidant," "resistant," or labeled with any other internal attribution of their actions, but because they are responding to pain. Remembering that difficult behavior is a response to suffering invites us to understand children better, consider the world from their perspective, and extend empathy provisionally even when we cannot immediately comprehend their actions. We suggest that fear should be considered an element of pain-based behavior and that it may be particularly illuminating to explore various dimensions of fear and anxiety as sources of pain-based behavior. A clearer understanding of how these threat responses come about can deepen our insight into pain-based behavior and prime us to respond to children from a place of compassion rather than fear or coercion.

4.4. Remember that fear (and all emotions) are shaped by social experience

Recent neuropsychology that demonstrates the socially constructed and predictive nature of emotion dovetails with foundational sociological research that frames emotional experience as shaped by our social histories and the demands of our current social milieu. To put it simply, the fear we experience and our responses to it are based on the brain's simulation of the threatening situation that it predicts. This flow of predictions we make about what is about to happen reflects our very different life histories and the culturally conditioned feeling rules we implement in our everyday interactions. Understanding that our predictions about social experience are 1) based on the brain's socially conditioned predictions rather than on actual circumstances, and 2) shaped by our current social context and unique life experiences may be of great value to children and staff in TRC.

We think it may be a profound insight for staff to recognize that their own emotional experience at work is shaped both by the feeling rules derived from their own social history and their in-service training and

informal apprenticeship in new feeling rules (Smith, 2017). These rules may sometimes differ from one another. For example, imagine a youth care worker who has been socialized as a White, American, man with a successful college football career and background in law enforcement to respond to fear by inhibiting any enactment of the emotion in his facial expressions or speech and perhaps to increase verbal and physical demonstrations of strength and authority in response. It is not difficult to imagine that these conditioned feeling rules would be challenging for a new worker tasked with de-escalating a flaring behavioral crisis (c.f., Andersson, 2022). Supporting his ability to reflect on this *trans*-cultural emotional labor (i.e., the expectation to shape his emotional experience and performance to new and very different rules in order to be ethical and helpful to children) could make him more receptive to understanding and embracing his role as a therapeutic agent and developing his capacity for more appropriate response patterns during threatening situations with children. Helping him articulate the challenge of his own acculturation could also provide a useful and empathic analogue to children's experiences of acclimating to the different feeling rules that characterize the milieu of care.

We should expect that children enter care with emotion categories, emotional granularity, and feeling rules that may differ from one another and from the staff who care for them. Bell et al. (2024) argue that discussing emotions and mental states with caregivers in everyday conversation is essential for healthy social-emotional development from early childhood through adolescence. TRC presents ample opportunities for such impromptu discussions of fear and other emotions and may allow for the use of emotion curricula like The RULER Feeling Words Curriculum (Brackett, et al., 2012), designed to increase children's ability to identify emotion words and link them to real life experiences at home and school. Among other major challenges, children's acclimation to TRC or other child welfare settings may also include learning to see that their assumptions about fear and other emotions and the proper responses to them are learned in their families and communities, often through very painful experiences of maltreatment and oppression. Children may also be able to recognize ways that those patterns do not serve them well or are no longer necessary to protect them from harm. With care, we may be able to help children develop more adaptive ways of making sense of affective experience (i.e., new and more nuanced emotion categories) and healthier patterns of prediction based on their new history of social encounters in the therapeutic milieu. For example, individual or group psychotherapy sessions could be used to explore feeling rules. Questions like the following could guide discussion: *Is fear an emotion that you recognize in yourself and others? Do you remember how you learned how to act when you're afraid? What do you think about those rules about how to do fear, anger, sadness, etc.? What works for you about them? Are some things about those rules difficult or do they cause problems? How do they differ from the things you're learning about feelings here?*

Reflection on feeling rules may also be appropriate at the organizational level. An exploration of the feeling rules—implicit or explicit—that shape staff and administrators' experience of emotions like fear and their responses to those feelings may yield surprising responses. We might begin to view staff training curricula as, among other things, sets of feeling rules insofar as they tell us how to make sense of the emotional experience of others and how to perform emotional responses that are in line with the organization's goals and philosophy. Where feeling rules are identified that are not in line with ethical, effective, or sustainable practice, organizations can begin to think about how to change the culture of the organization to modify those expectations. For example, if an organization's inquiry into feeling rules reveals that youth care workers believe they should not acknowledge or show that they fear a particular child or situation and therefore are unlikely to talk with supervisors about it, staff may benefit from further discussion of why this way of "doing" fear in TRC is counterproductive. What would it look like for us to make room for fear in our feeling rules, and what would need to change for us to be able to acknowledge this fear to each other and even to children?

The above suggestions for practice rely on the ability to reflect on conscious experiences of fear, which we know is not always possible. A hopeful implication of this article is that we can also rely on less conscious ways to shape feeling and action. The TRC milieu offers opportunities for children to unexpectedly experience safety and contentment in situations that they previously associated with fear and avoidance. Through this new history of corrective experiences, children can come to generate new and more adaptive predictions to guide their social interpretations and response patterns. Notably, LeDoux and Pine (2016) hold that such implicit social and emotional learning experiences (presumably within the context of relationships) are among the most viable approaches for changing behavior patterns that were established through subcortical processes of fear learning and are already being studied in the context of TRC (Izzo, et al., 2020). Exposure-based approaches to behavior change, anxiety, and other mental disorders may also be of great value in this area (e.g., Barlow & Long, 2023; Craske, et al., 2018; Morrison & Ressler, 2014). Approaches based in operant conditioning can support these changes under the right conditions, but when practiced as rigid point and level systems, as they often are in TRC, they are just as likely to undermine such processes and/or divert attention from more promising approaches.

4.5. Therapeutic residential care brings together people who are especially sensitive to fear and people who have impairments in the ability to feel fear and perceive fear in others

Perhaps the hardest pill for some of us to swallow in the new science of fear is that many of the children we serve—those with high CU traits—do not feel fear in the same way others do and may have an impaired ability to recognize it in peers or staff. Understanding that this insensitivity to fear in some children is a vulnerability with a biological basis may increase our ability to empathize with their sometimes dangerous or callous actions. Staff who understand that high CU children have impaired fear processing can make more informed and compassionate decisions about those children's safety and avoid negative attributions of proactive or intentional aggression toward others that may, in light of these insights, be best understood as stemming from their inability to perceive fear in others. We note also that the impairments present in high CU children may not be immutable and encourage attention to emerging interventions for this population (e.g., Dadds, et al., 2012).

It is also essential to recognize that, insofar as TRC attracts a workforce who is motivated by altruism, this workforce may be at increased risk for fear (Marsh, 2017). Altruistic individuals are highly sensitive to fear even though they often demonstrate acts of bravery that may obscure their suffering. Highly altruistic children in care may also be susceptible to this increased exposure to fear, especially in a milieu that is shared with high CU children.

5. Directions for future research

5.1. How fear works

Although we understand fear as an unavoidable, even potentially adaptive experience for children and staff, we suggest that further research into how fear works in the unique social environments of TRC can lead to less fearful living and working conditions and better enable healthy development and healing. Further research is needed to better understand how fear operates in care settings, not only *what* children and staff fear. In this regard, we take Sonya Stanford's (2007, 2008, 2010) study of fear and perceived risk in TRC as exemplary. Beginning with the recognition that conditions of staff surveillance, pressures of risk society, and fear of sanctions can be stultifying to staff, she tracks the ways in which workers "speak back" to fear and rise above pressures to provide what she calls "morally-timid care." Echoing Furedi's claims that a "culture of fear" presents its own moral hazards (1997; 2018),

morally-timid care sacrifices the potential benefits of developmentally appropriate risk-taking—like offering a hug to a distressed child or taking a child on an outing in the community—out of fear of sanction or accusations of maltreatment. This work not only helps us see *that* this care workforce experiences fear but shows *how* that fear travels through the social environment, affecting the care children receive and how fear drives the labeling of care staff as both “at-risk” from children and “a risk” to them.

5.2. Emotional labor

We think there is great promise in continuing to study TRC and child welfare from the emotional labor perspective. High quality TRC and child welfare work is emotional labor *par excellence*, and we still have much to learn about how constructs like deep acting and feeling rules operate in these settings. Research on emotional labor in child welfare contexts need not stop with the identification of feeling rules but can demonstrate the political effects of these practices for children and staff. For example, Carissa Froyum’s (2013) study of emotional labor in a child serving organization powerfully demonstrates how feeling rules reproduced racialized classes of workers. Black workers, who worked primarily in direct practice with children, were expected to perform rigorous deep acting, displaying both deference to young people and creating for them an “emotional refuge,” (p. 1076). In contrast, carefully engineered emotional experiences were devised for White donors, board members, and administrators wherein they could experience a “warm glow” (p. 1079), an “emotional release” (p. 1080) at seeing children benefit from their altruism. We wonder what further critical attention to fear and emotional labor in child welfare settings might reveal about our field as a site of the reproduction of racism, sexism, and other forms of oppression.

Further, we suggest that, because in-service training in approaches to care is common in TRC, these settings have much to teach us about how, for example, professional feeling rules are cultivated and about the reality that TRC is a site of confluence of different culturally-based feeling rules. Ethnographic and participatory approaches are particularly well-suited to the study of emotional labor. Such methods may also be used to reveal the social pathways of fear (Ahmed, 2004; Ahmed, 2014) and identify how children whose behavior evokes fear are labeled as threatening or to-be-feared and whether and how these attributions of danger reflect or reproduce racism and other forms of oppression.

We suggest that TRC may also be a fruitful area in which to study how fear operates in the treatment of high CU children and the intersection of these low-fear kids with the high-fear altruists who work in care. Future studies in this area could provide insights into how to treat this troubled population of children for whom effective treatments are just emerging (Perlstein, et al., 2023). Further, a better understanding of fear in high-altruism individuals may contribute to efforts to protect and reduce burnout and turnover in this vulnerable workforce.

6. Conclusion

A challenge in writing this paper has been that the sociological and neuropsychological discourses on fear, and emotion more generally, are not well integrated. We have not presented an exhaustive review of all relevant literatures here. Rather, our intention was to highlight and begin integrating important and as-yet underexplored literatures that may guide improvements in the quality of TRC. We suggest that studying fear among children and staff in TRC and other child welfare settings presents an opportunity to integrate these perspectives to produce truly biopsychosocial research on how fear works both in minds and social settings of care. Innovative partnerships between child welfare researchers, neuroscientists, and care organizations to investigate fear are possible if we bring together methods that can account for both individual and situated social experience.

Finally, to the extent that child welfare intervention models draw

from the biopsychosocial science of fear and other emotions, we can investigate the value added by these understandings in terms of children’s wellbeing, reduction in behavioral crises, staff retention, and other essential measures of treatment quality. We believe that innovative, collaborative research in this area can contribute to the creation of maximally humane care environments in which fear can function adaptively for children and staff.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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