Infant Crying: To Soothe or Not to Soothe

By Josh Thompson and Lydia Leeds

After reviewing the nature of crying and its purposes, this paper will examine caregivers' simultaneous roles of observer and participant in assessing crying as an indicator of a child's developmental and emotional well-being. A review of Barr, Hopkins & Green's (2000) litany of crying as a sign, symptom, or signal leads to a discussion of FATT DRIP (Thompson & Leeds 2004, Leeds & Thompson 2005), a newly created mnemonic for evaluating eight components of an infant's cry (Frequency, Age, Time, Tone, Duration, Rhythm, Intensity, and Pitch). The value of providing self-soothing strategies to children will also be discussed, along with coping strategies for the caregivers of excessive criers.

CRYING AS A PHENOMENON

A baby's low cry means one thing to a loving parent, while a startling, rattling wail in the middle of the night means something entirely different to that same parent, now tired and beleaguered. Or does it? Perhaps these noises from the youngest, newest members of our species, our society, our clan actually serve similar, multilayered meanings, intentional or not. Barr, Hopkins & Green (2000) propose a new perspective on this frequent phenomenon, one that accounts for multiple "meanings" or interpretations of the same cry. They suggest that a cry can be a sign, a symptom, or a signal. Sorting through this myriad of purpose and intent leaves a responsive caregiver pondering the question of what to do about infant crying: to soothe or not to soothe?

A. Sign

The neurological stimulation that results in a cry is a good thing. The anencephalic infant, born without a whole brain, doesn't survive long; nor is she likely to cry. Without brain impulses, crying ceases. With neurological organization, crying is normal, natural, and occurs in cyclical patterns. Barr (1990) describes this pattern with a curve (Figure 1), one that denotes an "early increase to a peak during the second month, a decrease until about four months, and little change thereafter" (p. 356). His report followed a decade of growth in the use of cry spectography to supplement the continued use of observation and diary records. Together, these data connect the rise in the normal crying curve with other factors in infant development, a bio-behavioral shift in the infant's development, including an increase in the infant's ability to regulate states of wakefulness and attentiveness (Wolff, 1987).

These bio-behavioral shifts, including the increase in crying to an average peak of 2 hours per day, are common and predictable, and are actually independent of any action

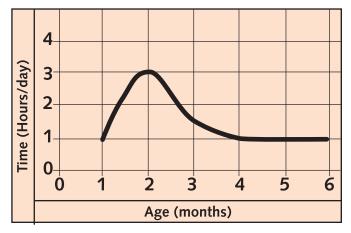


Figure 1. Normal Crying Curve (Barr, 1990)



Responsive caregiving can ameliorate crying

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or reaction in the caregiver's style (Barr, 1990). This pattern is a sign indicating the child's presence in the world.

B. Symptom

In addition to its role as a sign, the infant's crying also indicates a state of being, a symptom of disequilibrium or imbalance in the status of the child. This child is in transition. Here, crying indicates a physiological maturational change, requiring adjustment and adaptation. This is not a signal for help or relief, but instead a particular articulation of being, like weight or height, which needs noting, but does not require intervention. Sometimes, weaving the myriad threads of development requires, demands, and provokes the child to effuse with crying, not in any attempt to express or articulate, but instead merely as a means of marking a passage: "This is where I am, how I am, what I am." Like temperament, this inborn system navigates external influences with personality and panache, a unique manifestation of the human spirit.

C. Signal

After listening to all the voices, articulations, and expressions that infants make when crying as a sign of being, or as a symptom of current status or state of being, responsive caregivers finally attend to the most obvious of reasons for crying: Crying is a signal that something is not okay. "[N]eonatal crying is a species-specific behavior which achieves its likely evolutionary function (infant survival) by reliably eliciting responses from caregivers" (Gustafson & DeConti, 1990, p. 46).

Crying provokes people. Infants as young as a few hours old have been observed reacting to a nearby infant's cry (Simner, 1971). Six types of signal cries are broadly recognized: pain, hunger, colic, discomfort, boredom, and distress (Lester & Zeskind, 1982; Wolff, 1987). These cries are not unequivocal and absolute in their expression—the infant's intention is not being considered here. But the individual infant's response to a provoking stimulus, like pain or hunger, tends to be expressed, by that infant, in regular, predictable, and, thereby, comprehensible ways—at least

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comprehensible to the responsive caregiver who has, through trial and error, narrowed down the array of strategies and developed an almost intuitive understanding of what this cry "means." The child, reacting to some provoking stimulus, is sending a signal to the caregiver. Apt attention to the cry comforts the crying infant, relieves the provocation, and thereby creates a dialogue of responsiveness upon which the infant builds a worldview—this is a place where my needs are met (or not).

NATURE OF CRYING

What is normal crying for an infant? Is there an underlying purpose? What is culturally appropriate? Can you spoil an infant? These questions, and the thousand others besieging a busy caregiver, beg an examination of the nature of crying. Many ancient references to the life of the infant report bouts of crying, with detailed descriptions of interventions and strategies, some more universally successful than others (Marrou, 1956). With Darwin's baby biography (1872), the advent of modern sociological records led to the collection and analysis of ample data documenting cry frequency, duration, and tone, as well as successful or unsuccessful intervention strategies by caregivers. The Yale Rooming-In Project (Wessel et al., 1954) produced significant data documenting what normal crying looks like, and what constitutes extremes. The germinal work of T. Berry Brazelton (1962) gathered data about normally developing infants from the home diaries and anecdotal reports of a large population of parents of newborns. According to Barr, Hopkins & Green (2000), Brazelton's work "was the first systematic description of the so-called 'peak pattern' of early crying, and demonstrated (among other things) that the pattern was not specific to a distinct clinical syndrome, but was characteristic of non-clinical crying as well" (p. 3).

OFF THE CURVE

Normal crying has its boundaries and parameters, and is ameliorated by responsive caregiving; this is not so with abnormal crying. Three causes for abnormal crying are colic, trauma, and disability (Frodi & Senchak, 1990; Michelsson 1980).

The colic cry is off the curve, beyond the realm of normal, and often does not change, no matter what the caregiver does. Wessel, and others, defined colic in 1954 in what has become known as the rule of threes: A threemonth-old infant "... who, otherwise healthy and well-fed, had paroxysms of irritability, fussing, or crying for a total of three hours a day and occurring on more than three days in any one week" for more than three weeks (Lester & Boukydis, 1992, p. 15).

Trauma, either physical or emotional, results in prolonged disequilibrium: The traumatized infant does not develop normal cry patterns that are predictable. A caregiver's inability to recognize erratic cries further compounds this needy infant's developmental distress.

Disabilities can stem from neurological disruptions, chronic pain, or genetic abnormalities. The cry of an infant with disabilities is characteristically different than normal, and thereby off the curve (Frodi & Senchak, 1990; Michelsson, 1980). While this infant may develop withinindividual continuity, or predictability of cry patterns, enough variance across individuals leads to no substantial generalizations about the nature of crying by an infant with disabilities.

OBSERVATION AND ASSESSMENT

The role of the caregiver as an observer of the crying patterns of the infant intersects and interferes with the caregiver's responsibility as a participant, an agent of change in charge of modifying the environment, and soothing the infant. This dual position requires the successful caregiver to become fluent in the "language" of crying as a sign, symptom, or a signal, to the point of providing competent, secure care for the infant (Epstein, 1991).

A. Sign

The caregiver's dual role as observer and participant considers the infant's cry as a sign, and notes it as a good thing that the baby is crying. The infant's cry is a sign of neurological organization. The absence of crying should alarm the responsive caregiver and incite her to action.

B. Symptom

When an infant's cry is in fact a symptom of disequilibrium, the caregiver must recognize this symptom as an expression of current state of being. The infant is not evoking anything. This type of cry does not demand comfort or soothing—it is not a personal indictment of the caregiver's incompetence. It simply identifies the infant's pursuit of homeostasis. Very much like temperament, the cry of the infant "... is innate: It's not a product of the environment, your responses, nor of your child's attempts to elicit some response from you" (McKay, 1996, p. 38).

C. Signal

When crying is not a sign, expressing neurological presence, nor a symptom, a statement of disequilibrium, then it is a signal that something is not okay. This is when a cry should be evoking response and intervention from a caregiver. The standard 6 classes of cries (pain, hunger, colic, discomfort, boredom, and distress) each have normal descriptive parameters (Lester & Zeskind, 1982): The pain cry is a short, loudly piercing wail, high pitched, with a short apnea, a pause of silence during which the child is not breathing. The hunger cry is often in short, continuous bursts that are rather insistent. It typically has a medium pitch. Colic is noted for its persistence in spite of multiple soothing strategies. The infant who is uncomfortable expresses her discomfort with intermittent cries, not prolonged nor particularly irritating to the listener, yet provocative to the responsive caregiver who seeks to comfort. Boredom is expressed by whimpers in burststhe infant is calling for action, stimulus, and intervention. Finally, the infant in distress of any type lets her need be known in any way possible, and will cycle through a variety of expressions until her distress is relieved.

FREQUENCY

From one to infinity

DURATION

Elapsed time (1:03 A.M. to 1:20 A.M. = 17 min.)

AGE

Number of days, weeks, months, or years since child's birth

RHYTHM

From waltz to hip-hop

TIME

Morning, afternoon, evening, or night

INTENSITY

Relaxed (yoga) to vigorous (Taebo[©])

TONE

From whimper to wail

PITCH

Low (purr) to high (screech)

Table 1. FATT DRIP: A Mnemonic Device (Leeds & Thompson, 2005)

D. FATT DRIP: A Mnemonic Device

Responsive caregivers quickly survey a gamut of probable causes for crying as a signal, and often run down a mental checklist of appropriate interventions, searching for a way to meet the child's needs. One mnemonic device, FATT DRIP (Leeds & Thompson, 2005), accounts for many of the factors that responsive caregivers need to evaluate to determine whether a certain cry is a trigger for intervention (Table 1).

Accounting for these variables should help the caregiver discharge her multiple roles as observer of the infant emitting signs, symptoms, and signals, and participate in the "social dance" of interaction between responsive caregiver and expressive infant (Hart & Risley, 1999; Wolke, Gray & Meyer, 1994).

INFANT COMFORTING STRATEGIES

In response to the signal cry, the responsive caregiver implements strategies that assist the infant in soothing activities, either assisted or unassisted self-soothing strategies, or caregiver-assisted soothing.

A. Assisted Self-Soothing

By directing the child toward a comfort object (a pacifier, blanket, doll, music, or a swing, for example), the caregiver is training the child in strategies to self-soothe (and cease crying) through the use of an intermediary device.

B. Caregiver-Assisted Soothing

Caregiver-assisted soothing strategies involve the caregiver in responsive care, such as nursing, rocking, massage, swaddling, etc. Sometimes, simply holding an infant provides the soothing that an infant longs for.

C. Unassisted Self-Soothing

Unassisted self-soothing occurs when the child discovers an activity that is comforting and calming: Thumb or finger sucking is the most obvious form of unassisted self-soothing, but many infants also rock themselves, stroke the navel or an ear, or twirl a lock of hair. Some hum. The caregiver may help this child discover her unassisted self-soothing activity.

CAREGIVER COPING STRATEGIES

Responsive caregivers will do all it takes to calm their crying infants. Most often, these responses are successful; yet sometimes the caregiver's best efforts are not enough to calm the crying child. At this point, the caregiver must self-monitor, regulating her actions and reactions, lest anger and frustration impede rational interventions. Excessive exposure to crying may tip the motivation from a concern with the infant's distress to a desire to alleviate the discomfort in listening to the cry (Frodi & Senchak, 1990). Utilizing checklist systems, like FATT DRIP (Leeds & Thompson, 2005) or Brazelton's 11-point checklist (Brazelton & Sparrow, 2003, Table 2) helps caregivers confidently identify important information about the background and framework of this immediate cry. When the caregiver has exhausted all remedies and the child is in competent, secure care, meaning that the child cannot be hurt or hurt herself, the advice to the caregiver is strident: walk away. This is not abandonment, but a withdrawal to a nearby location where the caregiver can continue to monitor the child's progress through self-soothing strategies, and yet far enough away for the caregiver to receive relief and respite before rushing in to attend to the child's next needs.

CONCLUSION

When is it appropriate to soothe a crying child? The evidence is confusing; there are many different aspects

to an infant's cry. But sorting and organizing the various stimuli under three broad categories may help the attentive caregiver. Sometimes a cry is a signal for help: Something is wrong and the infant needs caregivers to attend. At other times, the cry is a symptom, a statement of being in a condition that does not need intervention. Or, finally, the cry as a sign simply declares the child's presence as a human being in need of nothing specific from the caregiver except responsive awareness to her life.

When do we let them cry it out? If the responsive caregiver is unable to soothe the child, it is wise to place the child in competent, secure care, and walk away, keeping within a reasonable distance to intervene if needed, and yet staying far enough away to allow the child to grow in autonomy and independence.

References

- Barr, R.G. (1990). The normal crying curve: What do we really know? Developmental Medicine and Child Neurology, 32: 356-362.
- Barr, R.G., Hopkins, B. & Green, J.A. (2000). Crying as a sign, a symptom, and a signal: Evolving concepts of crying behavior. *Crying as a sign, a symptom, and a signal: Clinical, emotional and developmental aspects of infant and toddler crying. Clinics in Developmental Medicine No.* 152, eds. R.G. Barr, B. Hopkins & J.A. Green, 1-7. London: Mac Keith.
- Brazelton, T.B. (1962). Crying in infancy. Pediatrics, 29: 579-588.
- Brazelton, T.B. & Sparrow, J.D. (2003). *Calming your fussy baby the Brazelton way*. Cambridge, MA: Perseus Publishing.
- Darwin, C. [1872] (1979). *The expression of emotion in man and animals*. London: Julian Friedmann.
- Epstein, P. (1991). Observation: Ethnography in the Montessori Classroom. *Montessori Life*, 3(3): 28-30.
- Frodi, A. & Senchak, M. (1990). Verbal and behavioral responsiveness to the cries of atypical infants. *Child Development*, 61: 76-84.
- Gustafson, G.E. & DeConti, K.A. (1990). Infants' cries in the process of normal development. *Early Child Development and Care*, 65: 45-56.
- Hart, B.M. & Risley, T.R. (1999). *The social world of children learning to talk*. Baltimore: Paul H. Brookes.
- Leeds, L. & Thompson, J. (Spring 2005). Tears as tools: How to learn from crying. Early Years: Journal of the Texas Association for the Education of Young Children, 27(1): 5-6.
- Lester, B.M. & Boukydis, C.F.Z. (1992). Infantile colic: Acoustic cry characteristics, maternal perception of cry and temperament. *Infant Behavior and Development*, 15: 15-26.
- Lester, B.M. & Zeskind, P.S. (1982). A biobehavioral perspective on crying in early infancy. *Theory and research in behavioral pediatrics (vol. 1)*, eds. H. Fitzgerald, B.M. Lester & M.W. Yogman. 1, 133-180. New York: Plenum Press.
- Marrou, H.I. (1956). *A history of education in antiquity (3rd ed.)*. New York: Sheed and Ward.

What to do when baby cries

(Brazelton & Sparrow, 2003, pp. 19-20)

- 1. Try to identify the kind of cry and what the baby's other behaviors are telling you. Use other clues—for example, time of last feeding, last nap, last diaper change, baby's reactions to sounds, light, air temperature, activity, and movement.
- 2. Change him. Try feeding him. If it is soon after a nursing or a bottle, he probably won't need to be fed again. Still, sucking is a powerful soother. Help him find his fist or thumb. Or let him suck on your finger or sugar water.
- Speak softly and comfortingly until you break through the crying, then try to bring the pitch and volume of his crying down by slowly lowering your own voice.
- 4. Hold his arms and body to avoid startles.
- 5. Swaddle him with his baby blanket, so that his legs and arms are firmly contained. Be sure to place him on his back, and near you, so that you can be sure that he does not snuggle down inside his blanket, where he could possibly suffocate.
- 6. Pick him up to cuddle.
- 7. Try massaging his back and limbs gently.
- 8. Sing to him.
- 9. Walk with him. Even rock him up and down, or gently swing him.

- 10. Use white noise or motion. Parents tell me they set their infant on a washing machine, or use a "white noise" machine to soothe him. Some take the baby for a ride in the car. While this may work, crying is likely to start again when the repetitive stimulation stops. It creates a kind of shutting out in small babies that we call "habituation": An infant quiets, even puts himself to sleep, but only to avoid all the commotion. It is likely to work only as long as the repetitious stimulation persists. When the crying starts again, it is usually due to whatever set it off in the first place.
- 11. Another way to quiet a fussy, unsettled baby is what I call a "football hold." Placing the baby across your forearm on his belly, chest in your hand, legs and arms dangling, your other hand securely on his back, you can gently rock the baby up and down. When he begins to quiet, he'll lift his head and look around. Sing to him and croon comfortingly. As he slows to quiet, use his interest in the world to maintain his quiet alertness. Watch his eyes open wide. Many babies quiet, often because it is more difficult when they are on their bellies to take the deep breaths that are necessary to crying. But the rhythmic rocking and the interesting sights and sounds also help him to maintain his control. This method can offer a short break for desperate parents.

Table 2. 11-point checklist (Brazelton & Sparrow, 2003)

McKay, M. (1996). *When anger hurts your kids: A parent's guide*. Oakland, CA: New Harbinger Publications.

- Michelsson, K. (1980). Cry characteristics in sound spectrographic cry analysis. *Infant Communication, Cry and Early Speech*, eds. T. Murry & J. Murry, 85-105. Houston: College Hill Press.
- Simner, M. (1971). Newborn's response to the cry of another infant. *Developmental Psychology*, 5: 136-150.
- Thompson, J. & Leeds, L. (2004). How to learn from crying. *Paper* presented at the annual convention of the Texas Association for the Education of Young Children, Oct 8, Arlington, Texas.
- Wessel, M.A., Cobb, J.C., Jackson, E.B., Harris, G.S. & Detweiler, A.C. (1954). Paroxysmal fussing in infancy, sometimes called "colic." *Pediatrics*, 14: 421-434.

Wolff, P.H. (1987). *The development of behavioral states and the expression of emotion in early infancy: New proposals for investigation.* Chicago: University of Chicago Press.

Wolke, D., Gray, P. & Meyer, R. (1994). Excessive infant crying: A controlled study of mothers helping mothers. *Pediatrics*, 94(3): 322-334.

JOSH THOMPSON is a parent educator and an assistant professor of Early Childhood Education, Texas A&M University-Commerce. Contact him at Josh_Thompson@tamu-commerce.edu. LYDIA LEEDS is a writer and professional speaker on topics related to children, families, and education. Copyright of Montessori Life is the property of American Montessori Society and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.