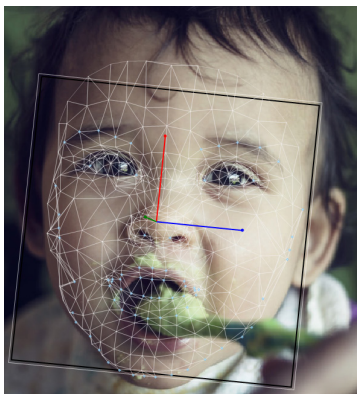


*Get this – Baby FaceReader enables you to recognize the facial expressions of an infant. What’s more, it can do it automatically.*



Since young infants are unable to provide verbal feedback, their facial expressions can give extra insights that help to understand their emotional reactions. Baby FaceReader can automatically measure facial expressions in infants ranging in age from 6 to 24 months old, and will help you:

- Analyze infant responses to taste, odor, and other sensory stimuli
- Detect the expressive behaviors that occur during parent-child interactions
- Examine how the cognitive information processing of infants works
- Address questions in developmental psychology related to affect and developmental disorders

Baby FaceReader is the first and only software tool that offers these possibilities!

## **BABY FACS**

Baby FaceReader uses the Baby Facial Action Coding System (Baby FACS) to describe specific movements of an infant’s face. Baby FACS has been developed by Oster, since infant faces are different from adult faces in that they are smaller, rounder, have a considerable amount of subcutaneous fat, elastic skin and often have little to no eyebrows.

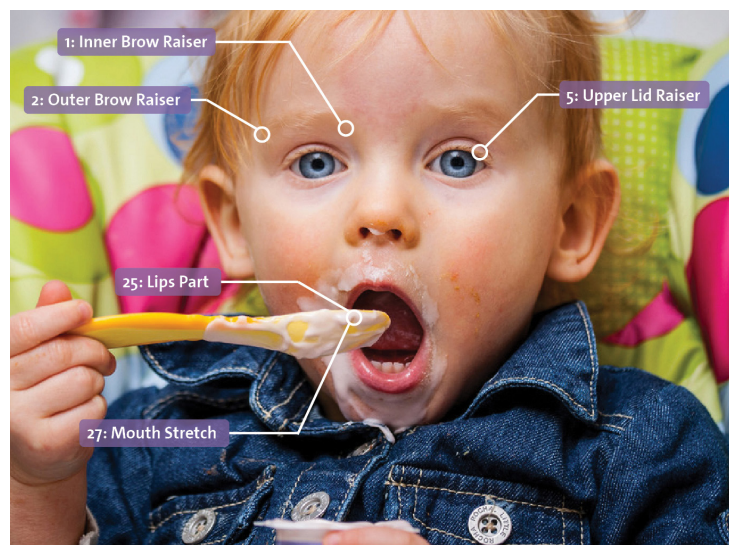
To research changes and stabilities in infants’ facial expressions, as well as responses to taste, odor, and other sensory stimuli, Baby FaceReader is ideally suited. Furthermore, it can help analyze cognitive information processing, as well as expressive behavior occurring in naturalistic and experimental situations and during parent-child interactions.

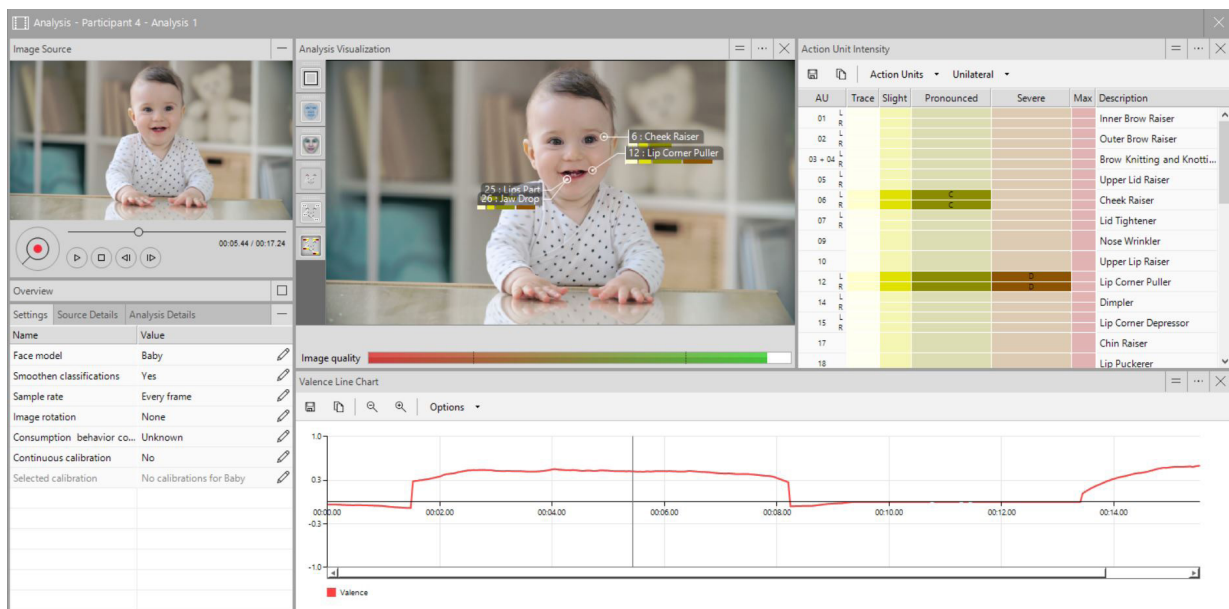
## **INFANT RESPONSES TO FOOD**

Is your infant’s food sweet or sour? Baby FaceReader has the answer - it makes it possible to identify infants’ responses to tastes. For example, the taste of something sweet will result in a facial relaxation, indicating that the infant experienced the sweet taste as pleasant. In contrast, a non-sweet taste will involve certain facial muscle actions indicating an unpleasant experience.

## **DETECTING RISK FOR DEVELOPMENTAL DISORDERS**

Baby FaceReader is a state of the art system to automatically detect infant facial expressions in order to help address questions in developmental psychology related to affect and developmental disorders such as Autism





Spectrum Disorder (ASD) and attention-deficit hyperactivity disorder (ADHD). Quantifying infants' facial expressions can assist studies in parent-child interaction and shed light on how we can possibly achieve early detection of these developmental disorders.

## UNOBTRUSIVE OBSERVATIONS

Measuring infant facial expressions using Baby FaceReader is unobtrusive and will capture a positive or negative valence, a set of Action Units, gaze direction and head orientation. The Remote Photo-plethysmography (RPPG) module is available as an add-on as well.

Would you like to learn more about Baby FaceReader, discuss further applications, or get our most up-to-date information on the software? Please contact us!

## REFERENCES

- Maroulis, A.; Spink, A.J.; Theuws, J.J.M.; Oster, H. & Buitelaar, J. (2017). *Sweet or sour. Validating Baby FaceReader to analyse infant responses to food*. Poster presentation 12th Pangborn Sensory Science Symposium, 20-24 August, 2017.
- Oster, H. (2005). *The repertoire of infant facial expressions: An ontogenetic perspective*. Emotional development, 261-292.
- Oster, H. (2016). *Baby FACS: Facial Action Coding System for infants and young children*. Unpublished monograph and coding manual. New York University.

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