FLORIDA AFFECT BATTERY

Dawn Bowers, Ph.D.
L.X. Blonder, Ph.D., & K.M. Heilman

Center for Neuropsychological Studies
Cognitive Neuroscience Laboratory
University of Florida
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BACKGROUND

Theoretic Overview

A radiant smile, a piercing scream, a looming upraised fist! In humans and nonhuman primates, the ability to decipher the meaning of nonverbal social signals - facial expressions, tone of voice, body posturing - is present very early in life and remains relatively stable throughout the adult life span. These nonverbal signals form the basic elements of a highly evolved and complex social signaling system that enables socially driven creatures to "read" the intentions of others (i.e., threat, acceptance) and at the same time communicate one's intentions to others. Over the course of normal development, the complexity and nuances of this nonverbal language rapidly evolve. A repertoire of culture-specific contextual rules is seamlessly acquired - ranging from conversational turntaking, appropriate eye contact and gaze deviation, to knowledge of the appropriate space boundaries between individuals. All in all, this type of knowledge or "social cognition" supports fluid interaction with other members of the species and culture.

The tests described in the Florida Affect Battery (FAB) examine two elemental components of "social cognition" - facial expressions and tone of voice. This battery was designed as a research tool for investigating disturbances in the perception and understanding of nonverbal communicative signals of emotion that can occur as part of neurologic or psychiatric disorders.

The selection and use of the specific subtests in the FAB were theoretically driven and based on a cognitive neuropsychological model of affect processing. This model has been described in several publications referred to in the references (see Bowers et al., 1993, 1991, 1985). We have argued that specific neural networks exist within the brain that are particularly concerned with deciphering the affective meaning of perceptual signals (facial expressions/tone of voice). In our view, it is primarily *(though not exclusively)* the right hemisphere of humans that contains a "vocabulary" or neural representations of these nonverbal affect signals. We have referred to these representations as the "nonverbal affect lexicon". The overall network appears modular in organization with independent lexicons for faces and prosody and these lexicons are multiply represented across different sites. Broadly speaking, these affect representations are just one component of a cortically based affect processing network that is dedicated to reading the nonverbal social displays of other members of the species.

One key aspect of our model is that distinct subtypes of affect processing disturbances are predicted to accompany dysfunction of neural systems within the right versus left hemisphere. These subtypes range from modality specific affect disturbances (i.e., facial affect agnosias, facial affect anomias, etc.) to more global perceptual difficulties. The present battery of affect perception subtests (in conjunction with several output/production tasks) was developed to identify these behavioral subtypes.

Research and Clinical Findings

Our particular interest in formalizing a "battery" of affect subtests stemmed from the interplay between clinical observations, hypothesis testing, research findings, and model refinement. It was never our intent to develop a battery per se. Rather, it directly grew from our research approach. Some of the major findings with stroke patients which both drove and resulted from initial studies in our neuropsychology/cognitive neuroscience laboratory are mentioned below.

a. **Affect recognition defects commonly occur following cortical strokes, particularly those involving the right**. In one sample of 60+ stroke patients, 72% of right stroke patients vs. 15% of left stroke patients were significantly impaired on affect discrimination tasks involving *facial expressions* (Bowers et al., 1993). In a subsequent study, 105 stroke patients from two demographic locations (Florida, Kentucky) were evaluated using the Florida Affect Battery. Of the right hemisphere patients, 70% were impaired on some aspects of affect recognition (faces, prosody, or both) versus 32% of the left hemisphere damaged patients (Bowers, Blonder, Slomine, Heilman, 1996).

b. **Dissociation between affect recognition vs. more general perceptual abilities occurs in 20% of patients with right hemisphere lesions**. Although both affect recognition and perceptual defects commonly occur among RHD patients, a subgroup of individuals display dissociations between visuoperceptual vs. visuoaffective abilities. That is, patients were impaired in identifying/matching facial emotions, yet performed normally when asked to match unfamiliar faces (nonemotion). In these patients, impaired performance on affect recognition tasks cannot be attributed to an underlying perceptual or visuoattentional defect. In one sample, 22% of the right cortical strokes displayed affect recognition disturbance in the absence of perceptual disturbances. Only 6-10% of the left stroke patients showed a similar performance dissociation (Bowers et al., 1991). Data such as these imply that affect may represent a domain-specific subsystem that is not solely an exemplar of complex perceptual processing.

c. **Modality specific disturbances exist, whereby only face expressions or prosody perception is affected**. Dissociations between the ability to perceive facial affect vs. the ability to perceive emotional prosody have been clinically described by several researchers (see Ross, 1981; Etcoff, 1989). Some RHD patients perform normally on receptive emotional-prosody tasks but are impaired on receptive emotional-faces tasks. Others show the opposite modality pattern.

Dissociations such as these can be masked in group studies, which often report robust correlations between perception of facial and prosodic emotions (Borod et al., 1990; Cimino & Bowers, 1988).

In a recent study with >100 cortical stroke patients, we noted the frequency of modality specific affect perception disturbances using the FAB (Bowers et al., 1996). This information is depicted in the table below. Approximately 1/5 of the RHD patients were ***uniquely*** impaired on face perception tasks vs. 2% of the LHD group. Of note, relatively few patients were found to have an "isolated" prosody perception defect, and the lesions in these "pure" cases included the insula and temporal region.

STROKE

% Showing Impairment

	LHD	**RHD**	***Lesion Correlates***
PROSODY SPECIFIC	6	4	Temporal, Insula
FACE SPECIFIC	2	22	Posterior Temp, Perisylvian
GLOBAL (Prosody + Face)	22	44	Perisylvian, Large, Frontal
AFFECT ANOMIA	2	0	

(Bowers, Blonder, Slomine, Heilman; 1996)

DESCRIPTION OF SUBTESTS

The Florida Affect Battery (FAB) was designed to assess the perception of facial and prosodic affect under a variety of task demands. This battery includes 10 different subtests (5 facial, 3 prosodic, and 2 cross-modal) described below. Five different emotions (happiness, sadness, anger, fear, and neutral) are used across these subtests.

I. FACIAL AFFECT TASKS

The stimuli used in constructing the facial affect tasks include four different women, each displaying one of 5 different emotions. All the face stimuli used in this battery were derived from a larger set that was rated by 50 college students and 20 normal elderly according to "what emotion was depicted on the face". This larger face set consisted of black and white photographs of actors and actresses, each of whom had been asked to produce 5 target emotions (happy, sad, anger, fear, neutral). To be included as a FAB stimulus, a face had to meet two criteria: (1) each emotional face had to exceed greater than 80% agreement among the raters as to its communicative intent, and (2) *all* the emotional expressions made by a *individual* actor/actress had to meet the 80% agreement criterion. Of the initial 33 actor/actress participants, only females met the above criteria. It is for this reason that face stimuli contained in the FAB battery are women (rather than men).

Depending on the particular FAB subtest, facial stimuli are presented either individually or in vertical arrays. This latter is done to minimize potential effects of hemispatial neglect or visuo-attentional scanning disturbance among brain impaired subjects. Except for Subtest 1, twenty trials are given in each of the face emotion tasks.

<u>1. FACIAL IDENTITIY DISCRIMINATION</u> (Subtest 1)

In this task, Ss are shown pairs of unfamiliar faces and have to determine whether the faces are the same or a different person. The stimuli are photographs of women, each with a neutral facial expression. Their hair is covered by a surgical cap to reduce nonracial cues for identification. Half the trials consist of two pictures of the same person, and the remaining trials are pictures of different people. This identity discrimination task can serve as a perceptual "control" for the facial affect tasks.

2. FACIAL AFFECT DISCRIMINATION (Subtest 2)

In this task, Ss must determine whether two faces depict the same or different emotional expressions. Each trial consists of a photograph of two different actresses. On half the trials, the two women display the same emotional expression (i.e., 10 "same" trials), and on the remaining trials the actresses display different emotions (i.e., 10 different trials).

3. FACIAL AFFECT NAMING (Subtest 3)

This task requires Ss to verbally label facial expressions. Individual faces are shown as stimuli, and the subject is asked to name the emotion depicted by a particular face (i.e., happy, sad, angry, frightened, neutral).

4. FACIAL AFFECT SELECTION (Subtest 4)

This task assesses the ability to select target facial expressions named by the examiner. On each trial, Ss are shown five pictures of different women, each expressing different facial emotion. The Ss are asked identify the picture of the face that corresponds to the emotion named by the examiner (i.e., "point to the angry face").

5. FACIAL AFFECT MATCHING (Subtest 5)

In this task, Ss are asked to match the picture of an emotional face to another face with the same emotional expression. The Ss are shown a stimulus slide consisting of multiple photographs. On the left side of the slide, there is a single photograph of a target emotional face. To the right of the slide, there are pictures of five women, expressing different emotional expressions. The S's task is to match the target expression with its counterpart on the right of the slide.

II. Prosody Tasks

The prosody tasks are designed to complement the facial perception tasks. The first three prosodic subtests (Subtests 6, 7, 8A) consist of a set of semantically neutral simple sentences (e.g., the shoes are in the closet) spoken in various nonemotional or emotional tones of voice. The fourth prosody subtest (Subtest 8B) involves affectively intoned sentences whose semantic content conflicts or complements the prosodic message.

<u>6. NONEMOTIONAL PROSODY DISCRIMINATION</u> (Subtest 6)

This task assesses the ability to process propositional prosody and serves as a control for the affective prosody tasks. The Ss listen to 16 pairs of sentences, spoken in either an interrogative (fish jump out of water?) or declarative tone of voice (fish jump out of water). On half the trials, two sentences convey the same propositional prosody (i.e., both statements are questions). For the remaining trials, the two sentences differ in their propositional prosody (i.e., one a statement and one a question). The S indicates whether the sentence pairs are the same or different in terms of prosody.

<u>7. EMOTIONAL PROSODY DISCRIMINATION</u> (Subtest 7)

In this task, Ss are presented pairs of semantically neutral sentences that are spoken in the same or different emotional tone of voice. The Ss judge whether the affective prosody is the same or different in both sentences. Half the items are "same" (10 trials) and half are "different" (10 trials).

<u>8. NAME THE EMOTIONAL PROSODY</u> (Subtest 8A)

This task assesses the ability to verbally label affective prosody. The Ss listen to semantically neutral sentences spoken in one of five affective tones of voice (happy, sad, anger, etc.). The Ss are asked to name the emotional prosody of each item. Twenty trials are given, with four repetitions of each of five affects.

<u>8. CONFLICTING EMOTIONAL PROSODY</u> (Subtest 8B)

In this task, Ss listen to affectively intoned sentences whose semantic content may differ (i.e., conflict) or parallel the prosodic message. Thirty-six sentences are given, and Ss judge the affective tone of voice of the speaker in each. In half of the trials, the semantic content and prosody conflict (i.e., "all the puppies are dead" said in a happy tone of voice), such that the S must disregard "what the message says". In the remaining sentences, the semantic content and prosody are congruent (i.e., "all the puppies are dead" said in a sad tone of voice).

III. CROSSMODAL FACIAL-PROSODY TASKS

In these tasks, Ss are required to match the affect conveyed by facial expression with a corresponding prosodic stimulus or vice versa. Each task consists of 20 trials.

9. MATCH EMOTIONAL PROSODY TO AN EMOTIONAL FACE (Subtest 9)

The Ss are shown a slide with three photographs of the same woman, who is expressing three different facial emotions. At the same time, the S listens to an audiotaped sentence spoken in an emotional tone of voice by a female speaker. The S is asked to point to the emotional face that corresponds to the emotional tone of voice of the speaker.

10. MATCH EMOTIONAL FACE TO THE EMOTIONAL PROSODY (Subtest 10)

The Ss are shown a picture of an emotional face. At the same time, they listen to three pre-recorded sentences, each spoken in a different emotional tone of voice. They are asked to indicate which sentence best corresponds to the facial expression. Because this task entails some "memory load", each set of three sentences is presented twice to the subject.

NORMATIVE INFORMATION

As of 1998, normative data have been collected from approximately 164 normal individuals, ranging in age from 17 to 85 years of age. These data were obtained during the course of several research studies conducted at the University of Florida (Gainesville) and the University of Kentucky (Lexington). A normative sample using children has recently been collected by Dr. Mary Morris (Dept. of Psychology, Georgia State University, Atlanta, GA), and will be available in the near future.

Shown below are demographic characteristics of the adult sample, broken down according to age. Overall, these subjects are well-educated, right handed, primarily Caucasian, and living in the southeastern United States. Most were extremely motivated and displayed no evidence of major psychopathology at the time of testing.

Table 1 **DEMOGRAPHIC INFORMATION OF ADULT NORMATIVE SAMPLE**

Adult	***N***	***Mean Age***	***Education***	***Male***	***Female***
17-30 yrs	N=53	19.4 (3.4)	12.5 (.8)	30	23
31-60 yrs	N=42	49.0 (7.8)	15.0 (2.7)	31	11
61-69 yrs	N=49	64.9 (3.1)	14.0 (3.1)	38	11
70-85 yrs	N=20	74.1 (3.3)	13.9 (3.1)	11	9
TOTAL	***N=164***	***46.9 (3.4)***	***13.8 (2.7)***	***110***	***53***

In looking at the scores on the following pages, it will become evident that normal individuals from age 17 (i.e., college) through the mid-60's perform exceptionally well across the FAB subtests. Statistical analyses revealed no differences among the following three groups: college, 40-49 yrs., and 55-64 yrs. After the mid-60's, there is a minimal but statistically significant age-related decline on several of the affect subtests.

Psychometric Properties

Test-Retest Reliability: Test-retest reliability has been examined in two groups of normal individuals - college students (N=20) and a smaller group of middle age adults in their early 50's (N=12). The subjects were tested 2 weeks apart. Minimal changes in test scores occurred and test-retest reliability ranged from .89 to .97.

Factor Analytic Studies: Factor analyses conducted on data obtained from 125 normal individuals who were given the Florida Affect Battery have consistently revealed the presence of two "independent" factors. One corresponds to a visual/facial factor and the other corresponds to a general prosody factor.

Ceiling Effects: The FAB is a test of "pathological" performance, in much the same way that various aphasia batteries (i.e., Western Aphasia Battery, Boston Diagnostic Aphasia Exam) assist in documenting different types of linguistic/aphasic disturbances. The ability to decipher nonverbal social displays of other members of the species is present very early in life and remains relatively stable throughout the adult life span. It represents one of the elemental building blocks of "social cognition". As such, normal individuals should have minimal or no difficulty "reading" facial expressions and prosody. Indeed, this is reflected by the performance of normal adults across the FAB subtests. They, as well as children, perform exceptionally well across this entire battery of tasks. For this reason, the FAB does not have ideal psychometric properties for the population at large due to a "ceiling" effect.

To re-iterate, the FAB was specifically developed to assist in identifying and characterizing pathological disturbances in affect recognition, particularly that associated with neurologic dysfunction. Based on studies with focal stroke patients (Blonder et al., 1991; Bowers et al., 1996), it does appear to distinguish between patients with right versus left hemisphere lesions.

Various modifications can easily be implemented to increase the "difficulty" level of the FAB, which in turn would diminish the "ceiling" effect with normals. Potential options could include using "degraded stimuli", instituting time limits, increasing the complexity of the subtest demands, and so on. In the present FAB version, we chose not to do so since increasing the task difficulty/complexity level would require recruitment of additional processing resources (i.e., attentional capacity, etc.) which in and of themselves might be independently disrupted or altered by focal brain lesions.

On the following pages are detailed normative information for different age groups (18 years-mid 80's), including individuals with neurologic disorders (strokes, epilepsy).

NORMS

YOUNG ADULTS (18-30 yrs)

N=53

30 male, 23 female

Age = 19.4 yrs (3.36)
Education = 12.5 yrs (.81)

Benton Face Recognition 46.5 (1.7)
Milner Face Memory 8.5 (1.5)

FACE TASKS	***Mean***	***(SD)***
1. Person Discrim.	97.7	(3.9)
2. Affect Discrim.	92.4	(7.3)
3. Name Affect	94.7	(5.9)
4. Pick Affect	98.5	(2.7)
5. Match Affect	96.7	(5.7)

PROSODY TASKS

6. Neutral Discrim.	99.5	(1.6)
7. Affect Discrim.	99.6	(1.8)
8. Name Affect	96.7	(5.1)
8b. Congruent	89.5	(8.6)
8b. Incongruent	89.6	(7.5)

CROSSMODAL TASKS

9. Prosody-Face	98.2	(4.1)
10. Face-Prosody	99.4	(1.5)

MIDDLE AGE (31-60 yrs)

N=42

31 male, 11 female

Age = 49.0 yrs (3.1)
Education = 15.0 yrs (2.7)

Benton FRT = 47.5 (4)
Milner Faces = 8.4 (1.3)

FACE TASKS	***Mean***	***SD***
1. Person Discrim.	97.5	(3.8)
2. Affect Discrim.	88.9	(9.8)
3. Name Affect	89.8	(14.4)
4. Pick Affect	97.9	(3.9)
5. Match Affect	94.5	(11.5)

PROSODY TASKS

6. Neutral Discrim.	96.3	(7.3)
7. Affect Discrim.	98.8	(2.7)
8. Name Affect	92.5	(8.6)
8b. Congruent	82.5	(8.5)
8b. Incongruent	76.1	(12.7)

CROSSMODAL TASKS

9. Prosody-Face	93.0	(8.2)
10. Face-Prosody	97.8	(9.8)

OLDER ADULTS (61-70 yrs)

N=49

38 male, 11 female

Age = 64.9 yrs (3.1)
Education = 14.0 yrs (3.1)

Benton FRT = 46.8 (3.7)
Milner Faces = 8.67 (1.61)

FACE TASKS	*Mean*	*SD*
1. Person Discrim.	95.7	(6.1)
2. Affect Discrim.	90.0	(7.9)
3. Name Affect	89.7	(8.8)
4. Pick Affect	95.9	(6.4)
5. Match Affect	85.0	(11.5)

PROSODY TASKS

6. Neutral Discrim.	95.8	(1.6)
7. Affect Discrim.	98.4	(2.9)
8. Name Affect	83.2	(11.0)
8b. Congruent	91.2	(6.4)
8b. Incongruent	63.7	(11.0)

CROSSMODAL TASKS

9. Prosody-Face	89.4	(10.6)
10. Face-Prosody	93.7	(9.8)

ELDERLY ADULTS (71-84 yrs)

N=20

11 male, 9 female

Age = 74.1 yrs (3.4)
Education = 13.9 yrs (3.1)

Benton FRT = 46.6 (3.7)
Milner Faces = 9.0 (1.4)

FACE TASKS	***Mean***	***SD***
1. Person Discrim.	92.8	(11.6)
2. Affect Discrim.	87.8	(9.8)
3. Name Affect	87.0	(8.7)
4. Pick Affect	94.8	(6.2)
5. Match Affect	85.0	(11.5)

PROSODY TASKS

6. Neutral Discrim.	97.9	(4.3)
7. Affect Discrim.	97.8	(4.6)
8. Name Affect	83.2	(13.0)
8b. Congruent	89.8	(8.1)
8b. Incongruent	61.7	(12.6)

CROSSMODAL TASKS

9. Prosody-Face	90.5	(10.7)
10. Face-Prosody	95.6	(7.2)

UNILATERAL STROKE PATIENTS

1991 Study

Presented below are scores obtained from an initial group of patients with focal neurologic lesions who were administered the FAB subtests. These patients, all of whom were right-handed and predominantly male, had unilateral stokes affecting either the left or right hemisphere. Although some information regarding clinical characteristics of this sample is presented below, more detail can be found in an article by Blonder, Bowers, & Heilman (The role of the right hemisphere in emotional communication. Brain, 1991, 144, 1115-1127).

Group	*Age*	*Education*	*Months Since Stroke*
RHD	64.1 (5.3)	12.3 (3.8)	40.7 (49.0)
LHD	59.6(9.6)	13.4(1.8)	55.7(47.4)
NHD	63.2(4.7)	12.7(2.1)	

The NHD controls were patients with orthopedic disease and had no history of neurologic illness

	RHD *(N=10)*	**LHD** *(N=10)*	**NHD** *(N=10)*	*Significance*
FACE TASKS				
1. Person Discrim.	79.5 (15.4)	94.5 (7.3)	95.0 (5.3)	R<L, R<N
2. Affect Discrim.	68.0 (13.0)	81.5 (7.1)	90.5 (8.3)	R<L, R<N
3. Name Affect	80.0 (13.9)	84.5 (13.6)	89.5 (9.6)	ns
4. Pick Affect	84.5 (15.5)	95.5 (6.4)	96.5 (4.7)	R<N
5. Match Affect	65.5 (23.6)	85.5 (11.9)	91.5 (14.4)	R<L, R<N
PROSODY TASKS				
6. Neutral Discrim.	80.1 (17.1)	89.4 (13.9)	97.6 (4.1)	R<N
7. Affect Discrim.	85.5(17.7)	97.0 (6.3)	99.0 (2.1)	R<L, R<N
8. Name Affect	63.5 (18.0)	81.5 (11.6)	83.0 (12.1)	R<L, R<N
8b. Conflicting	See page 11			
CROSSMODAL TASKS				
9. Prosody-Face	64.0 (19.4)	81.5 (15.1)	89.0 (9.9)	R<L, R<N
10. Face-Prosody	71.0 (17.5)	90.5 (6.4)	95.5 (7.3)	R<L, R<N

CONFLICTING PROSODY TASK: Subtest 8B

Although the Conflicting Prosody Task (Subtest 8B) appears to be among the more sensitive of the affective prosody tasks, appropriate normative data is not available at present. This particular task was used in one research study (Bowers et al., 1987) with patients following unilateral strokes of the left or right hemisphere and normal age-matched controls. All Ss in this study were right-handed males.

CONDITION	**RHD** ***(N=9)***	**LHD** ***(N=8)***	**NHD** ***(N=8)***
Congruent	71.6% (24.3)	86.4% (11.4)	92.1% (4.4)
Incongruent	24.7% (18.2)	57.0% (20.2)	85.1% (12.5)

The Congruent condition can be further broken down into Conflicting (i.e., angry tone of voice coupled with happy message) and Inconsistent conditions (i.e., angry tone of voice coupled with neutral message).

CONDITION	**RHD** ***(N=9)***	**LHD** ***(N=8)***	**NHD** ***(N=8)***
Conflicting	17.7% (18.5)	61.2% (25.3)	82.5% (10.3)
Inconsistent	33.2% (21.4)	50.0% (27.1)	82.0% (16.8)

TEMPORAL PARIETAL STROKES

The tables below represent data from stroke patients with MRI documented lesions that were restricted to the temporo-parietal area. These data were extracted from a larger study of stroke patients who had been given the Florida Affect Battery (Bowers, Blonder, Slomine, Heilman, 1996).

	RTP ***(N=11)***	**LTP** ***(N=11)***	***Significance***
FACE TASKS			
1. Person Discrim.	90.8 ()	96.2	*R<L*
2. Affect Discrim.	73.5 (12.1)	77.8 (12.8)	*ns*
3. Name Affect	61.5 (15.6)	87.7 (10.6)	*R<L*
4. Pick Affect	78.0 ()	95.7	*R<L*
5. Match Affect	59.5	80.7	*R<L*
PROSODY TASKS			
6. Neutral Discrim.	79.4 (23.1)	89.3(18.7)	*ns*
7. Affect Discrim.	86.2	90.5	*tr (R<L)*
8. Name Affect	63.0	76.4	*ns*
8B. Congruent	83.3	79.7	*ns*
Incongruent	47.9	64.1	*R<L*
CROSSMODAL TASKS			
9. Prosody-Face	59.0	69.2	*R<L*
10. Face-Prosody	62.0	85	*R<L*

TEMPORAL LOBE EPILEPSY

The tables below represent data from patients with nonlesional temporal lobe epilepsy (TLE) who eventually underwent anterior temporal resections for seizure control. All patients were left language dominant. These data were extracted from a larger study dealing with changes in emotional reactivity following anterior temporal ablations.

	RTLE ***(N=14)***	**LTLE** ***(N=12)***	***Significance***
Age	*38.1 (5.9)*	*32.9 (6.8)*	*ns*
Education	*12.5 (2.1)*	*13.1 (2.8)*	*ns*
Gender (M/F)	*7/7*	*5/7*	*ns*
Seizure Onset	*10.8 (8.4)*	*7.5 (4.4)*	*ns*
FACE TASKS			
1. Person Discrim.	98.2 (3.2)	96.3 (5.2)	*ns*
2. Affect Discrim.	90.0 (7.1)	86.3 (7.7)	*ns*
3. Name Affect	90.0 (8.5)	89.5 (6.2)	*ns*
4. Pick Affect	97.8 (3.7)	95.0 (6.7)	*ns*
5. Match Affect	90.7 (7.1)	93.8 (7.1)	*ns*
PROSODY TASKS			
6. Neutral Discrim.	98.7 (2.6)	93.8 (8.1)	tr (L<R)
7. Affect Discrim.	99.3 (1.8)	96.2 (4.3)	*ns*
8. Name Affect	91.4 (10.1)	87.1 (11.6)	L<R
8B. Congruent	88.9 (8.1)	83.4 (8.7)	L<R
Incongruent	86.7 (14.8)	67.1 (17.5)	L<R
CROSSMODAL TASKS			
9. Prosody-Face	93.1 (9.1)	86.7 (14.8)	*ns*
10. Face-Prosody	98.8 (2.9)	92.1 (7.5)	L<R

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