The relations between parental code-switching and emotion expression in bilingual families

Aya I. Williams, Mahesh Srinivasan, & Qing Zhou
University of California, Berkeley

Background

- Bilingual speakers perceive and experience emotions differently by language use (Pavlenko, 2011)

- First language (L1) use is associated with increased emotion expression and higher emotional arousal

- Second language (L2) use is associated with decreased emotion expression and lower emotional arousal

- Code-switching (CS), the concurrent L1 and L2 use, in an emotional interaction has yet to be quantitatively examined (Chen et al., 2012)

- Novel approach to study micro-level bilingual interactions between parents and children focusing on the link between CS and emotion

Specific Aims

Do bilingual speakers use CS to express and control emotions?

1. **Replicate prior findings on L1/L2 use and emotion expression**
- L1 Chinese associated with ↑ positive and negative emotion expression
- L2 English associated with ↓ positive and negative emotion expression

2. **Hypothesis: CS as a mechanism to regulate negative emotion**
- CS is associated with ↑ negative emotion expression, not positive
- L1 to L2 switch ↓ negative emotion; L2 to L1 switch ↑ negative emotion

Participants

68 Chinese-American "balanced bilingual" parents and children

Parents (n=34)
- Age M = 41.05, sd= 4.67
- 88% mothers
- 97% foreign-born, 3% other
- Chinese proficiency M = 4.11 (good), sd = .75
- English proficiency M = 2.88 (average), sd = .78

Children (n=34)
- Age M = 7.28, sd=.81
- 56% female
- 85% US-born, 15% foreign-born
- Chinese proficiency M = 2.48 (average), sd = .75
- English proficiency M = 3.57 (good), sd = .75

Methods

Procedure:

Parent-child puzzle box task (Eisenberg et al., 2001)


Measures:

Demographics

1. Demographics: Family Demographics and Migration History Questionnaire

Moment-to-moment observed emotion expression

1. Parent's observed facial emotion expression
2. Child's observed facial emotion expression
   - Positive emotion (smile, laughter, alert, interest): 0, 1, 2, 3
   - Negative emotion (frown, pressed lips, lowered eyebrow): 0, 1, 2, 3
   - Code each 5-s epoch in 5-min task using muted video (ICC = .97)

Moment-to-moment observed CS

1. Parent's language use
   - L1 Mandarin / Cantonese
   - L2 English
2. Parent's code-switching frequency and directionality
   - CS frequency
   - CS directionality (i.e., L1→ L2 or L2 → L1)
   - Code each CS during 5-min task using original language in ELAN
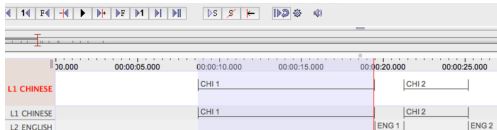
Results

Results 1:

Replicate prior findings on L1/L2 use and emotion expression

- **Consistent** with prior findings, parents use L1 Chinese more when expressing negative emotion

- **Contrary** to prior findings, parents use L2 English more when expressing positive emotion

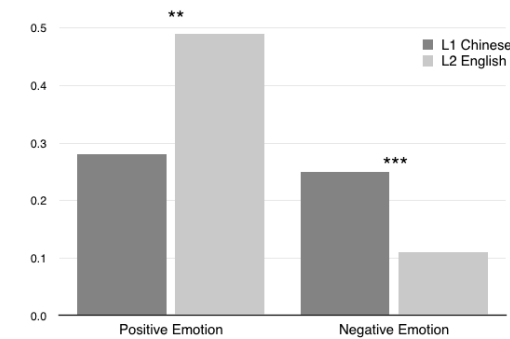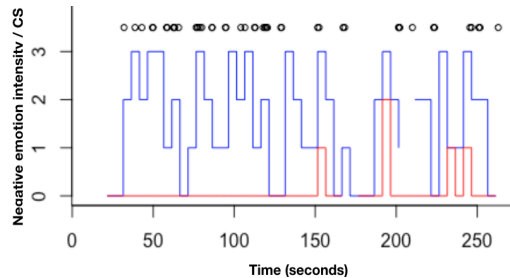Figure 1. Mean parent emotion expression by L1 and L2 language use

Figure 2. Negative emotion and CS ratings by one parent and child dyad

Results 2:

CS as a potential mechanism to regulate negative emotion

- **Supporting** hypothesis, CS frequency ↑ during heightened negative emotion expression, but not positive emotion

Table 1. The relationship between CS frequency and emotion expression

Parent Negative Emotion	Estimate	SE	df	t	p
Intercept	.30	.07	1027	4.44	.000
Child negative emotion	-.04	.06	1027	-.72	.475
English vs. Chinese use	-.08	.02	1027	-3.45	.001
Parent CS frequency	.02	.01	1027	2.28	.023
Parent Positive Emotion					
Intercept	-.13	.07	1027	-1.96	.050
Child positive emotion	.28	.03	1027	8.10	.000
English vs. Chinese use	.14	.04	1027	3.96	.000
Parent CS frequency	-.01	.01	1027	-.89	.372

- L2 to L1 switch associated with ↑ negative emotion (p=.01)
- L1 to L2 switch _not_ associated with ↓ negative emotion

- Controlling for child's observed emotion expression and parent's L1 Chinese vs. L2 English use

Discussion

- Parents may express lower negative emotion in L2 English due to psychological distance afforded by L2

- The lack of expected association for L1 Chinese and positive emotion may be due to frustration-inducing nature of study task

- There may be bidirectional processes:
a) Higher negative emotion may tax executive functions, increasing CS
b) Higher CS may increase L2 use and down-regulate negative emotion

- Due to rapid switches between L1 and L2, the relationship between CS directionality and emotion could not be fully explored in this study

- Future study can manipulate L1/L2/CS conditions to test regulatory effects

- Implications on language and emotion socialization in bilingual parenting, bilingual education, bilingual clinician-patient interaction in psychotherapy