Quantity of mothers' and fathers' speech to sons and daughters

Mark VanDam[1,2] & Tracy Tully[3]

[1]Department of Speech & Hearing Sciences
Elson S. Floyd College of Medicine
Washington State University

[2]The HOPE School of Spokane

[3]Department of Communication Disorders
Eastern Washington University

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Background.

Mom-kid dyads have been studied since the 1950s

(Jaffe 1958; Kogan & Wimberger 1966; Hess & Shipman 1968; Levenstein & Sunley 1968; Levenstein 1970; Schmidt & Hore 1970)

Fathers were examined later

(Gleason 1975; Golinkoff & Ames 1979; Rondal 1980; McLaughlin, White, McDevitt, & Raskin 1983)

Differential Experience Hypothesis (McLaughlin et al 1983) and the **Bridge Hypothesis** (Gleason 1975) suggest fathers put extra linguistic demands on children, resulting in improved performance.

Parent talk to children

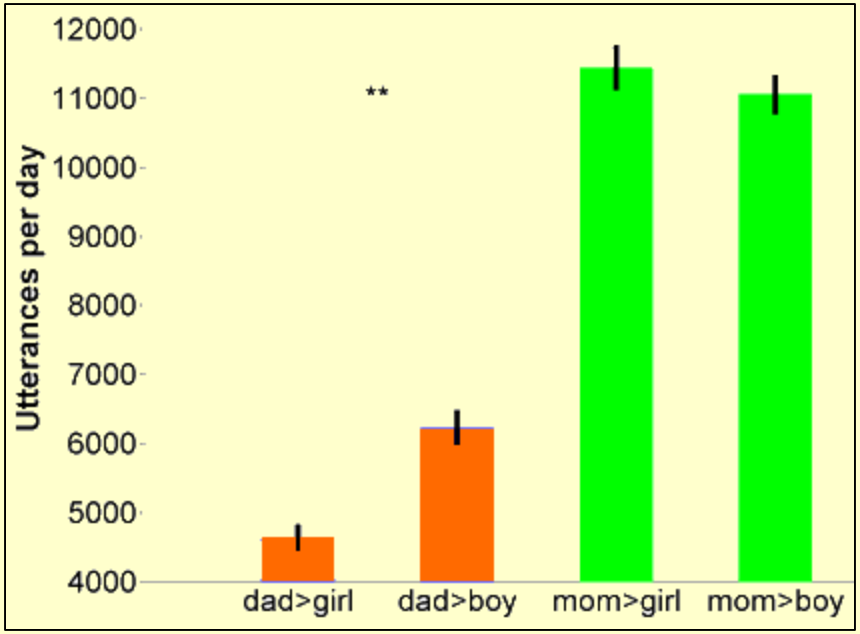
Mothers talk more to daughters than sons
(Berry, et al, 1992; Clearfield & Nelson, 2006; Golombok & Fivush, 1994)
Fathers talk less to children than mothers do
(Davidson & Snow, 1996; McLaughlin, et al, 1983; Rondal, 1980)

Evidence from VanDam (2012):

1. Moms talked more than dads
   F=24.0, *p*<.001

2. Dads talked more to sons than to daughters
   F=8.5, *p*<.001

3. Moms talked about the same to sons and daughters.
   F=.773, *p*=.379

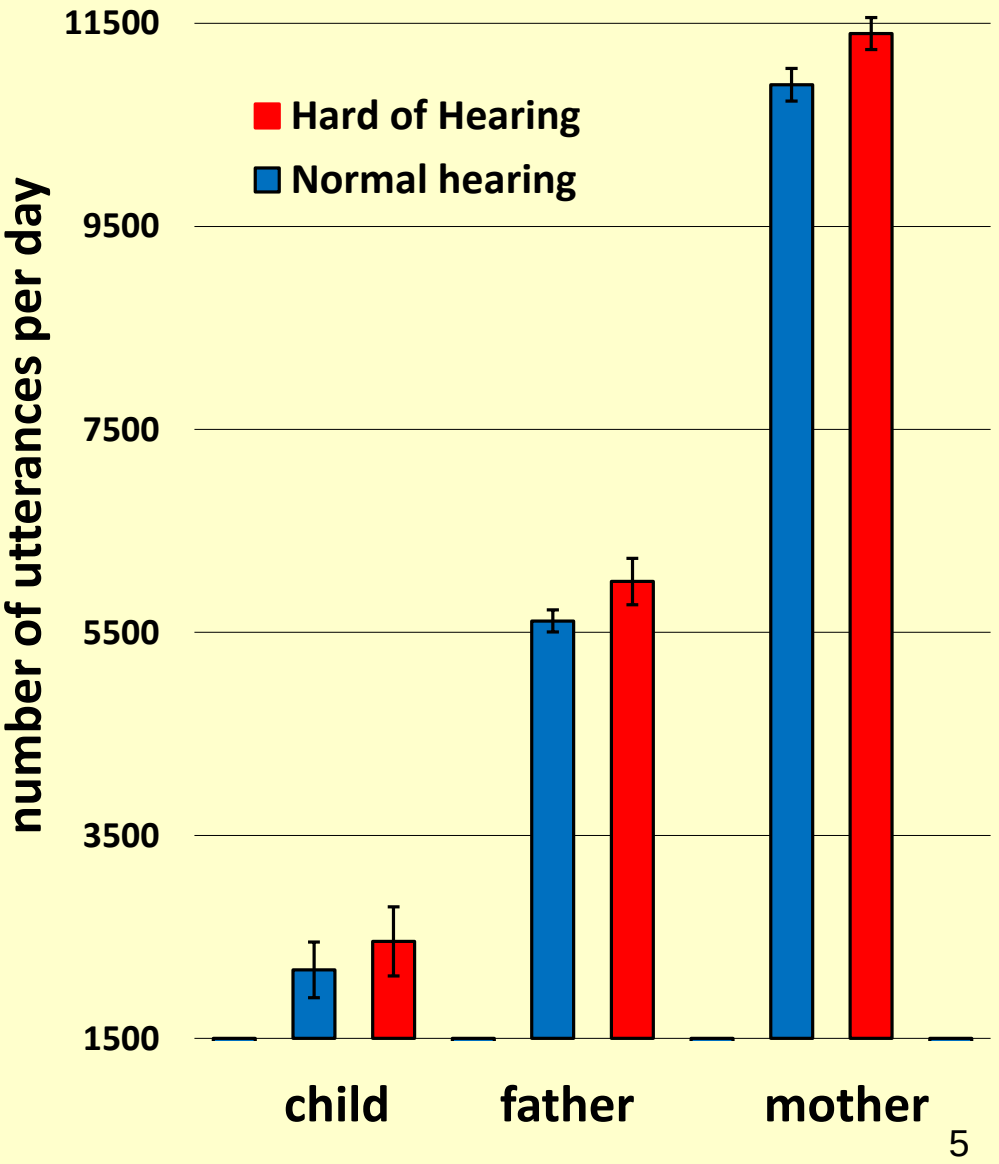


How much do HH families talk?

Mothers talk much more than fathers.

Parents of HH and NH children talk about the same amount.

HH children vocalize as frequently as NH peers.



VanDam, McMurray, Ambrose, Moeller, & Tomblin, 2011, *SRCD.*

Research goals of this work

Using new methods,

(1) examine moms and dads interactions with their sons and daughters.

(2) examine if the initiator of a conversation is a priviledged role

Data collection

LENA™
Every Word Counts

Labels on the acoustic signal:

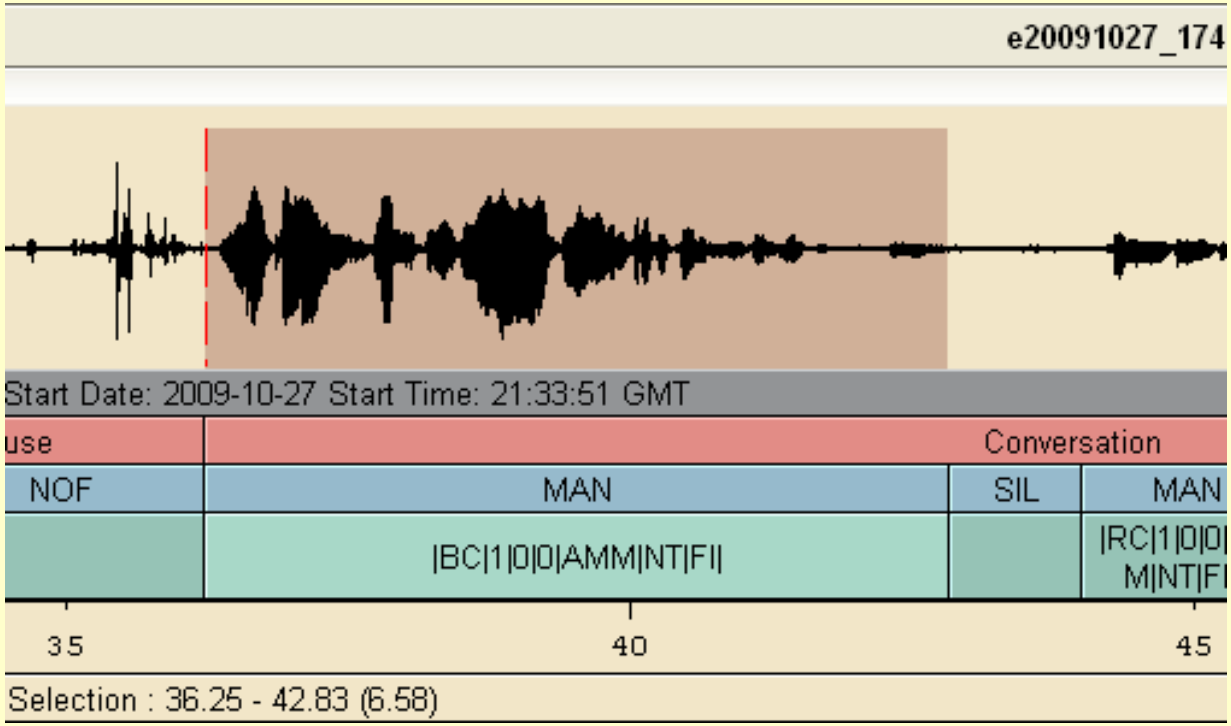
KEY-CHILD ***OTHER-CHILD***

ADULT-MALE ***ADULT-FEMALE*** ← **live human vocals**

SILENCE ***NOISE***

ELECTRONIC (TV, RADIO) ***UNCERTAIN / FUZZY*** ← **other acoustic events**

OVERLAPPING VOCALS



Automatic data collection results in very large database (VLDB) requiring automated data analyses.

Participants

70 families with boys (152 total days recorded);
33.5 mo (SD=8.6 mo; range: 15-46 mo)

64 families with girls (218 total days recorded);
25.7 mo (SD=11.2 mo; range: 12-59 mo)

All kids were typically-developing, living with both parents/caregivers at the time of the recording.

SES is not considered; relatively higher group SES

Data

HomeBank database

HomeBank.TalkBank.org

email:4homebank@gmail.com

Database has:

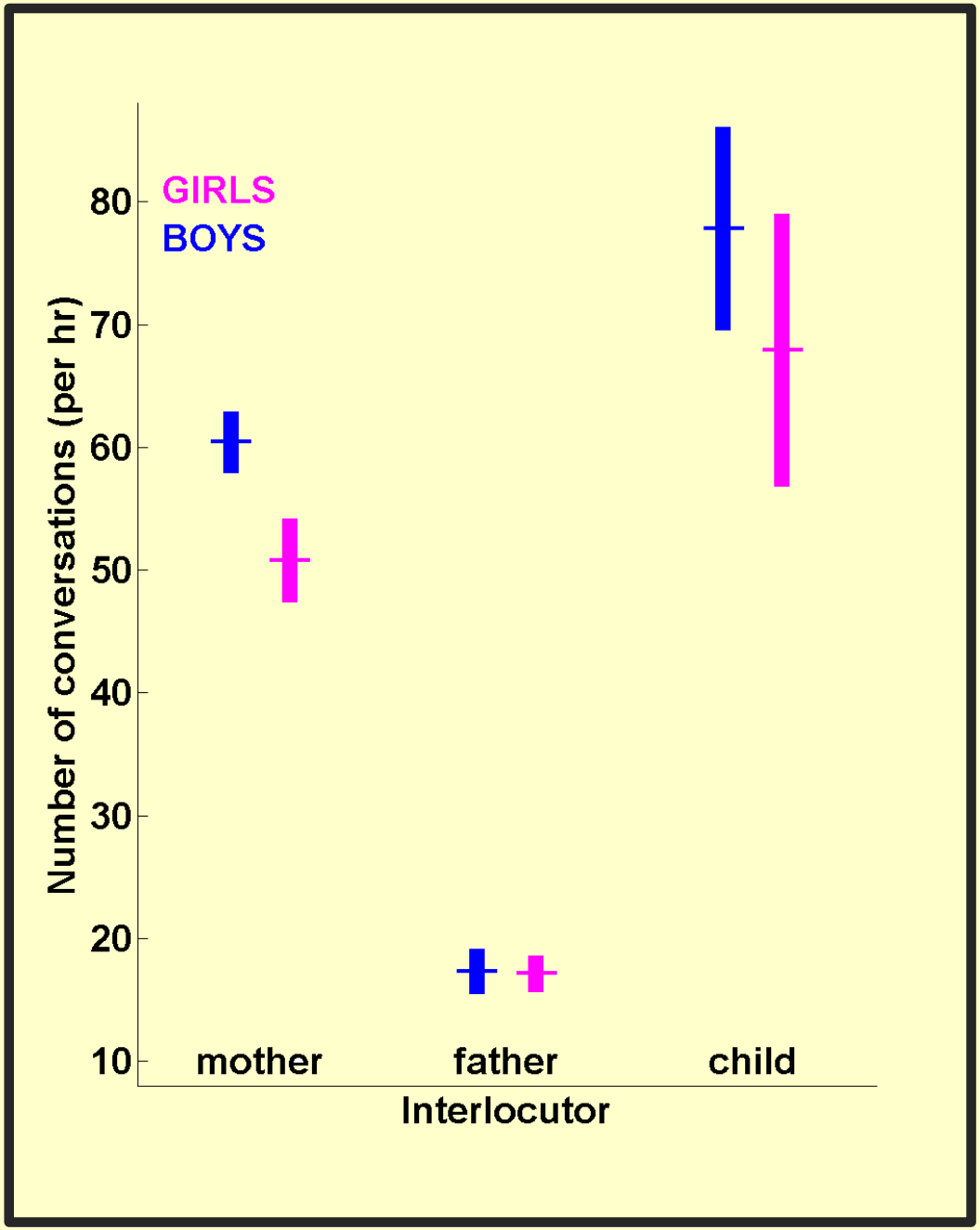
1. **Daylong recordings**
    a. **public**
    b. **semi-public (available with limits)**
2. **Meta-data (SES, age, disorders, med, etc)**
3. **Code repository to process data**

Results

1. mothers and sons engage in more conversations than mothers and daughters.

2. Dads and kids converse about the same.

3. Sons engage in more conversations than daughters.



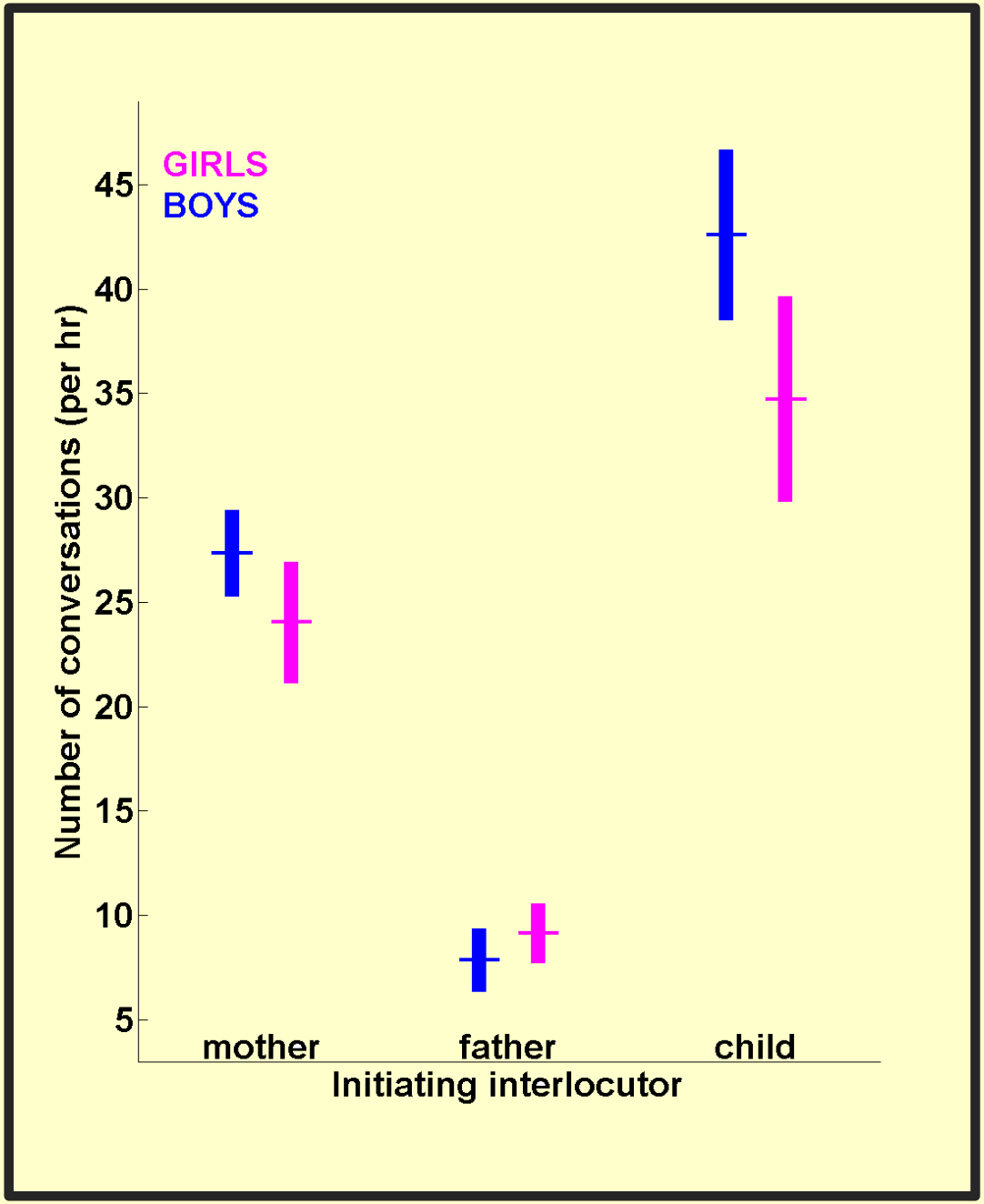
bars are 95% C.I.

Results

1. When sons initiate, moms and sons engage in more conversations than when daughters initiate with moms.

2. Dads talk about the same to sons and daughters.

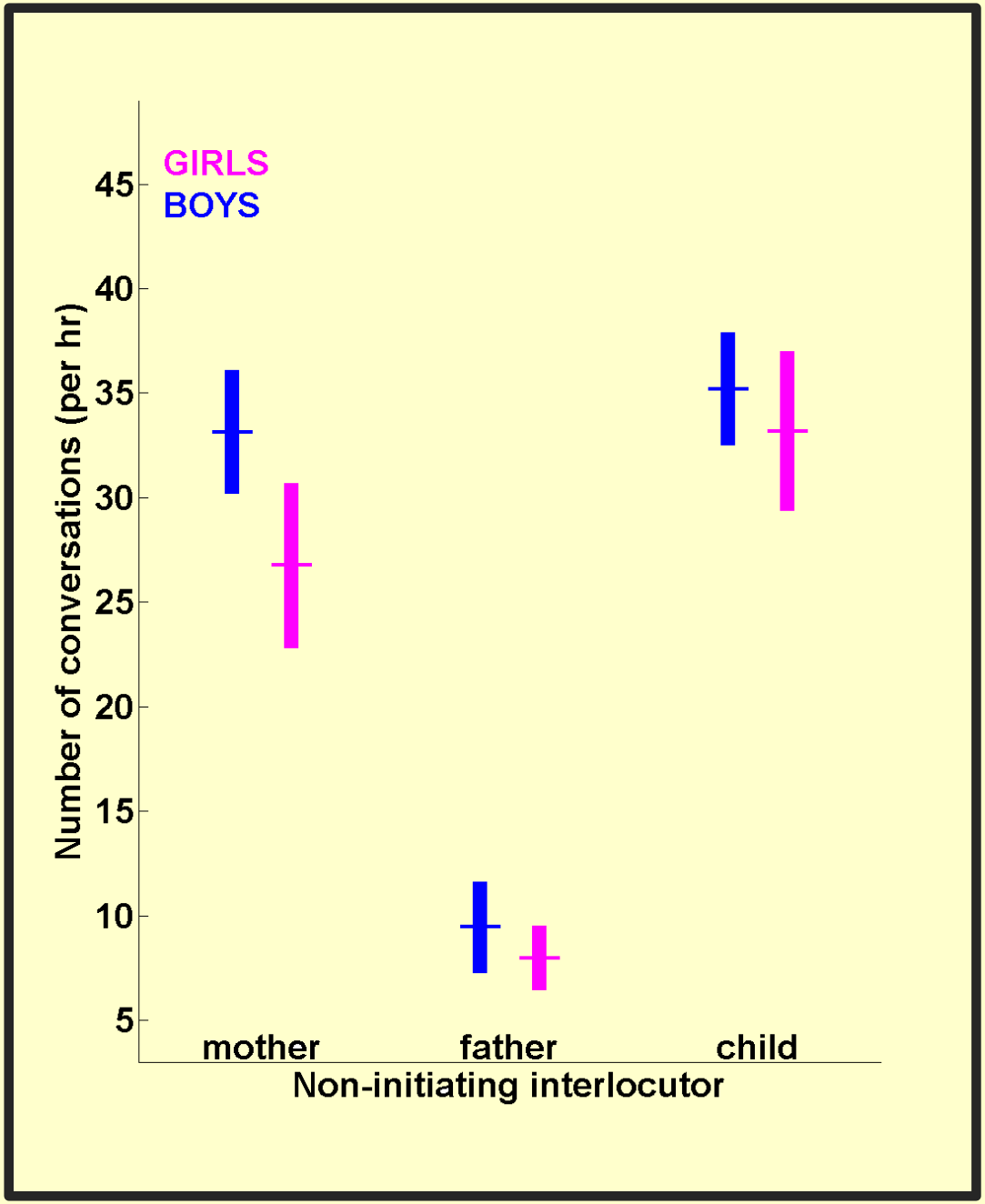
3. Conversations initated by sons are driving effects.



Results

1. Boys engage in more conversations than girls when the parent initiates.

2. Boys and girls engage in about the same number of conversations when they don't initiate.



Conclusions

1. Mothers engaged in more conversations with kids overall.

2. Mothers engaged in more conversations with sons. Previous work looked at total utterances and found moms talk more to daughters.

3. Boys initiating conversations with mothers seems to be driving the effect in 2 above.

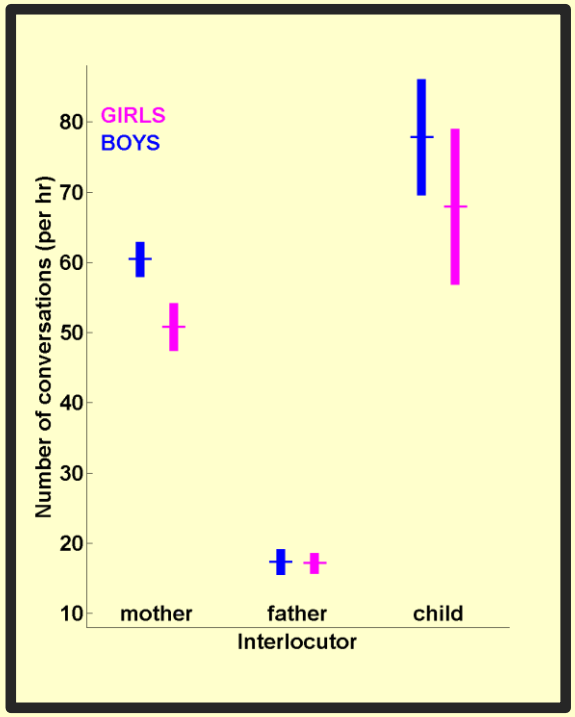
4. Dads are equal-opportunity non-conversationalists.

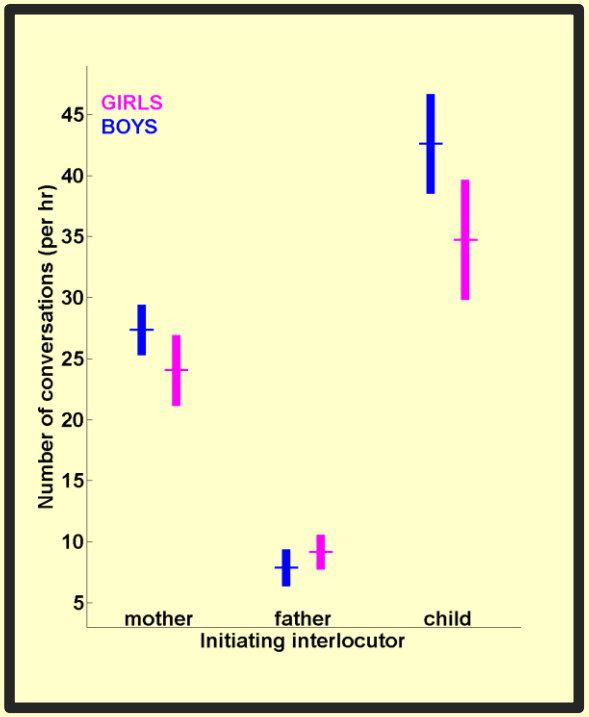
Limitations

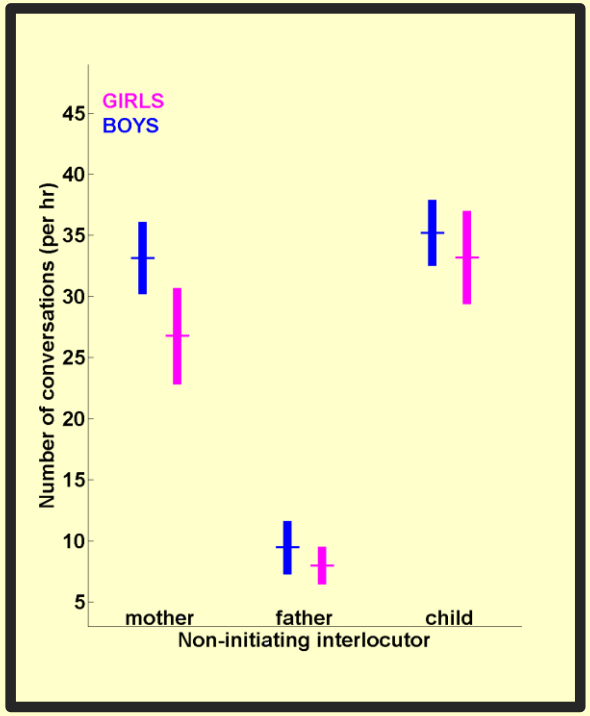
1. **Data are messy.**
2. **Individual factors certainly play a role.**
3. **Boys were a little older in this study.**

Future work may sort out some of these details.

Questions


GIRLS
BOYS
Number of conversations (per hr)
80
70
60
50
40
30
20
10
mother
father
child
Interlocutor


GIRLS
BOYS
Number of conversations (per hr)
45
40
35
30
25
20
15
10
5
mother
father
child
Initiating interlocutor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Non-initiating interlocutor