MODELING PARENT'S REPORTS OF CHILDREN'S BEHAVIOR WITH AN INDISTINGUISHABLE DYADS COMMON FATE GROWTH MODEL

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Organization of Talk

1. (Very) brief background and research questions
2. Description of the data
3. Distinguishability
4. Choices for modeling
    1. Dyadic Growth Curve Model
    2. Common Fate Growth Model
5. Results and Conclusion

Some Social Psychology

- Predictors of, and changes in, parent-reported gendered play behavior across early childhood
  - sample of adopted children in lesbian-, gay- (LG), and heterosexual-parent families.
- Social constructionist theories
  - LG parents may be more likely to steer their children away from traditional gender scripts (Berkowitz & Ryan, 2011; Sutfin, Fulcher, Bowles, & Patterson, 2008)
- Social learning theory (Bussey & Bandura, 1999)
  - Gender socialization through positive reinforcement and punishment (Eisenberg, Wolchik, Fernandez, & Pasternack, 1985; Hsu, 2005)
  - Presence of absence of a same-gender parent
  - Sibling gender composition might matter

Main Research Questions

Does the level and change in children's gendered play behavior (as reported by parents) over early childhood…

- differ by family type? (L, G, heterosexual parents)
- differ by sibling gender composition?

Sample

- 181 couples
  - Data from only 1 parent in 16 couples
  - 56 lesbian couples, 48 gay male couples, and 77 heterosexual
  - Indistinguishable dyads
- All couples adopted children
  - Adopting their first child, both parents' first child
  - Median age of child at placement of 0.5 months (infants)
- Three waves of data
  - T1: 2-years post-placement (2.8 years old)
  - T2: 3-years post-placement (4 years old)
  - T3: 5-years post-placement (6 years old)

Pre-School Activities Inventory (PSAI)

- Golombok & Rust, 1993
- Parents use a 5-point scale (1 *never*, 5 *very often*) to rate how often their child plays with the toy, engages in certain activities, and demonstrates certain characteristics
  - toys (7 items): tea set, tool set
  - activities (11 items): playing at taking care of babies, climbing
  - characteristics (6 items): avoids getting dirty, enjoys rough and tumble play
- These items are used to create masculine (12 items) and feminine (12 items) scales
- The feminine scale is subtracted from the masculine scale to create a composite measure

Definitions: Distinguishability

- Can all dyad members be distinguished from one another based on a meaningful factor?
- Distinguishable dyads
  - Gender in heterosexual couples
  - Patient and caregiver
  - Race in mixed race dyads

- If most dyad members can be distinguished by a variable (e.g., gender), but a few cannot, then can we say that the dyad members are distinguishable?
- No, we cannot!

Indistinguishability

- There is no systematic or meaningful way to order the two scores

- Examples of indistinguishable dyads
  - Same-sex couples
  - Twins
  - Same-gender friends
  - Mix of same-sex and heterosexual couples

- Model parameterization differs depending on whether dyads are distinguishable, indistinguishable, or empirically indistinguishable

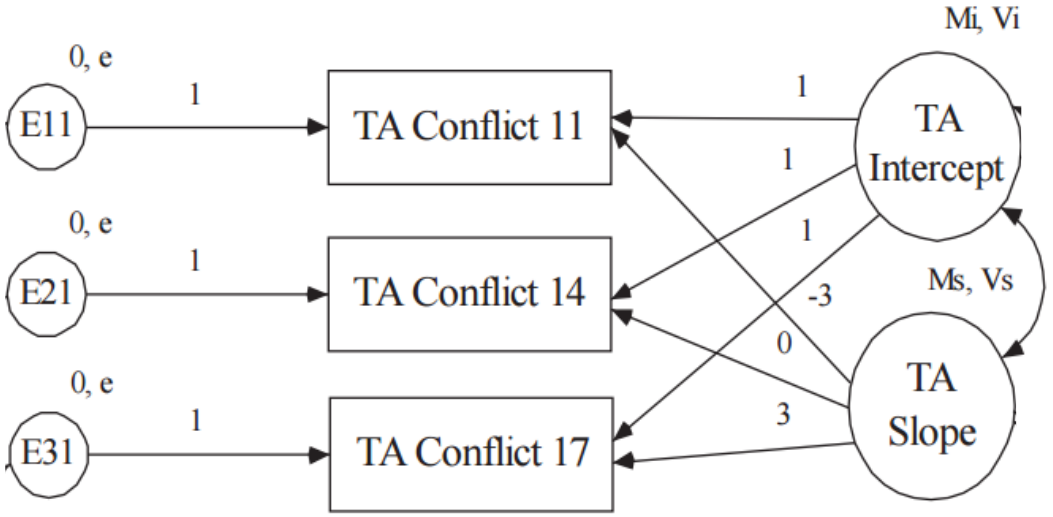
			Lesbian Parents (N = 56)	Gay Parents (N = 48)	Heterosexual Parents (N = 79)
			M(SD)	M(SD)	M(SD)
PSAI	Girls	T1	42.57 (9.83)	40.75 (9.01)	38.75 (9.67)
		T2	38.66 (9.78)	36.70 (9.86)	35.84 (8.29)
		T3	37.86 (11.43)	39.38 (11.70)	34.80 (9.24)
	Boys	T1	53.15 (6.50)	57.56 (6.14)	58.66 (5.68)
		T2	52.85 (8.68)	62.73 (13.64)	59.06 (10.20)
		T3	56.47 (11.76)	62.42 (11.92)	64.49 (9.32)

How should we model parents' reports of child's behavior overtime?

- **Dyadic growth curve modeling**
  - Kashy, Donnellan, Burt, and McGue, 2008
- **Common Fate Growth Model**
  - Ledermann and Macho, 2014

Dyadic Growth Curve Modeling

(Indistinguishable dyads)



Kashy, Donnellan, Burt, & McGue, 2008

Dyadic Growth Curve Modeling

- 8 random effects (indistinguishable dyads)
  - Intercept, slope, and error variance—one for each person fixed to be equal
  - Within-person intercept-slope covariance
  - Between-person intercept-slope covariance
  - Between-person intercept covariance
  - Between-person slope covariance
  - Between-person error covariance
- Add fixed effects to model change overtime in children's gendered play behavior
  - Differences in that change—exogenous predictors of slope with paths fixed to be equal

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Intraclass correlation (ICC) for the PSAI:

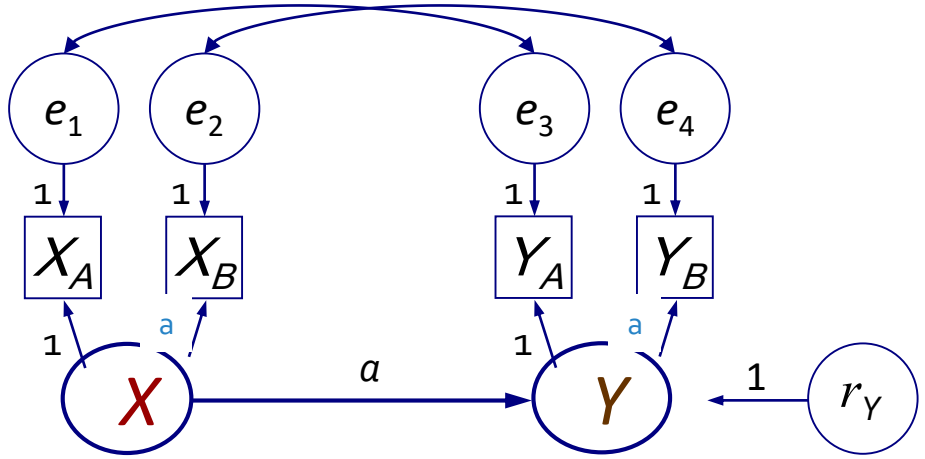
.79, .82, and .86 @ T1, T2, and T3

Common Fate Model

- The Common Fate Model (CFM) is perhaps the oldest dyadic model (Kenny & La Voie, 1985).
  - CFM used empirically only a handful of times (Ledermann & Kenny, 2012).
- CFM treats the two partners' scores in a dyad (e.g., parents' reports of their child's behavior) as indicators of a latent construct (e.g., children's gender-typed behavior)
- The CFM has an advantage over the APIM when actor and partner variables are highly correlated between dyad members

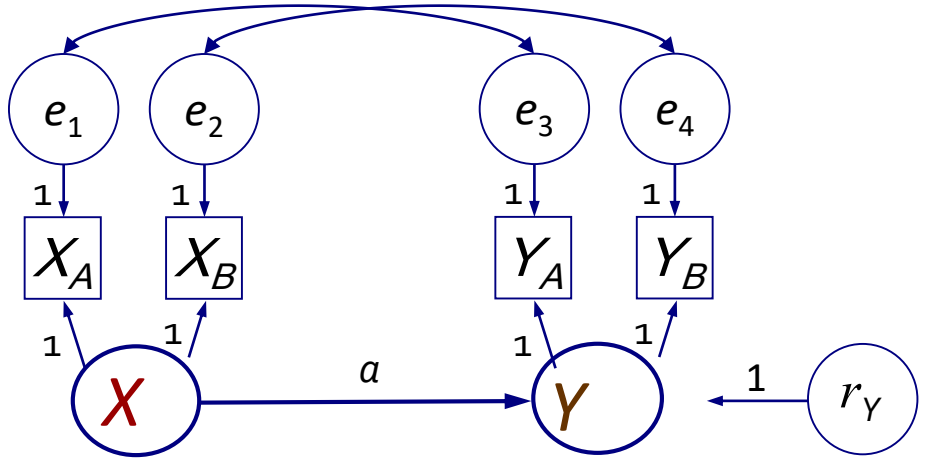
The Basic CFM

- The Common Fate Model (CFM) consists of 2 latent variables (X and Y) and 2 indicators (X_A and X_B, Y_A and Y_B) where A and B are distinguishable members of a dyad.



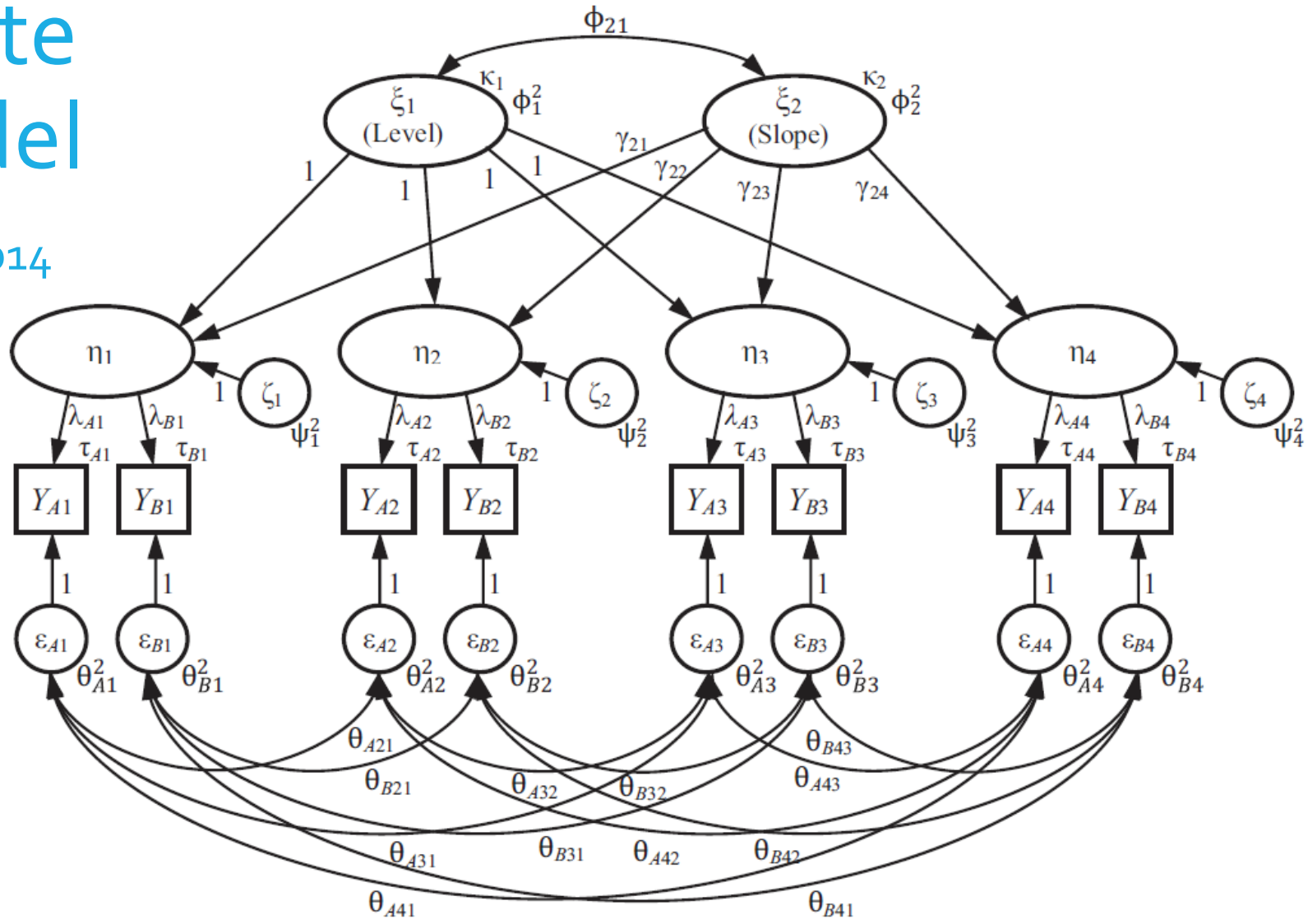
Indistinguishable Members

- Five equality constraints are made: equal X and Y intercepts, equal X and Y error variances, and equal error covariances.



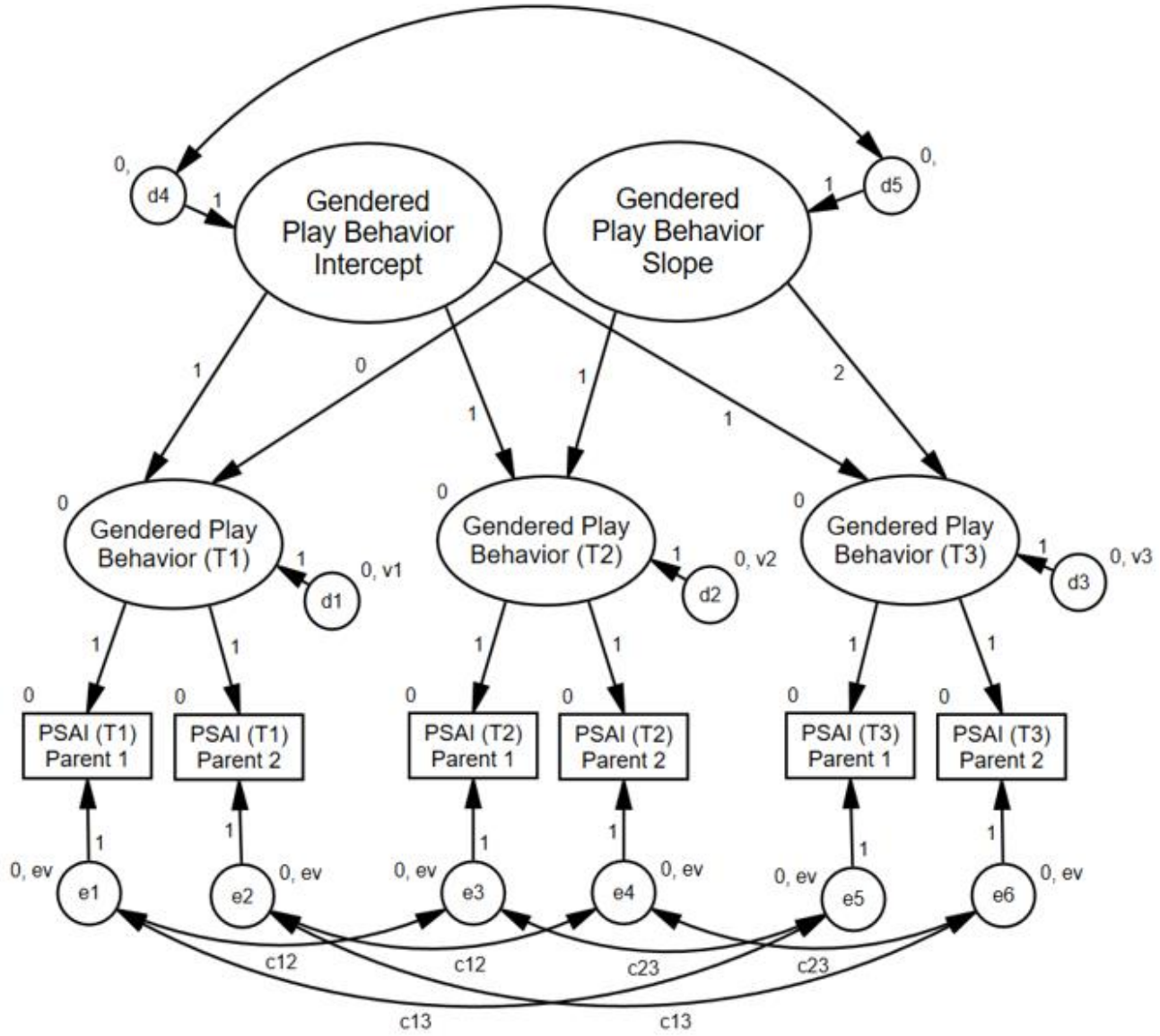
Common Fate Growth Model

Ledermann & Macho, 2014



Children's Gendered Behavior Overtime

Goldberg & Garcia (2016)



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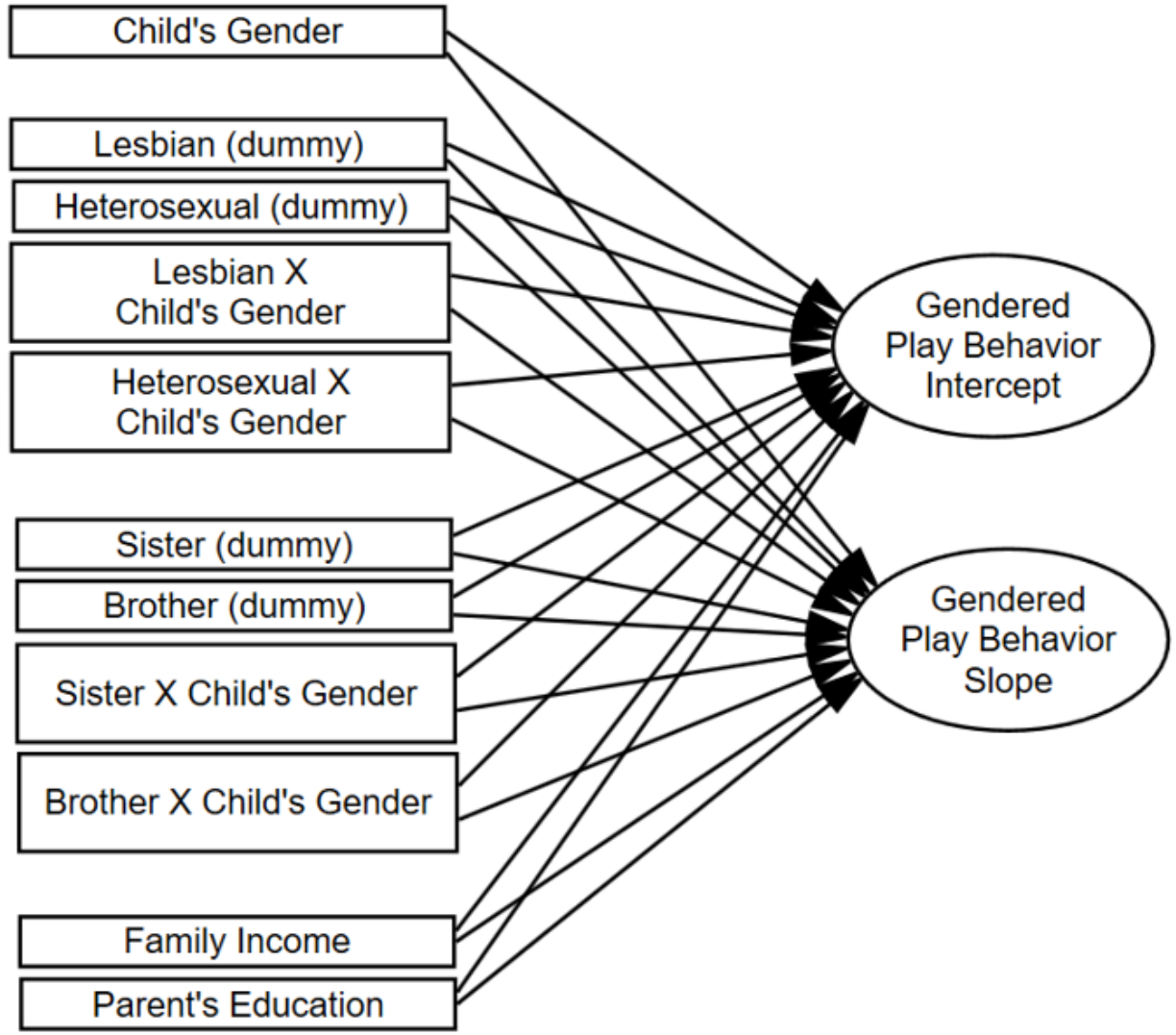

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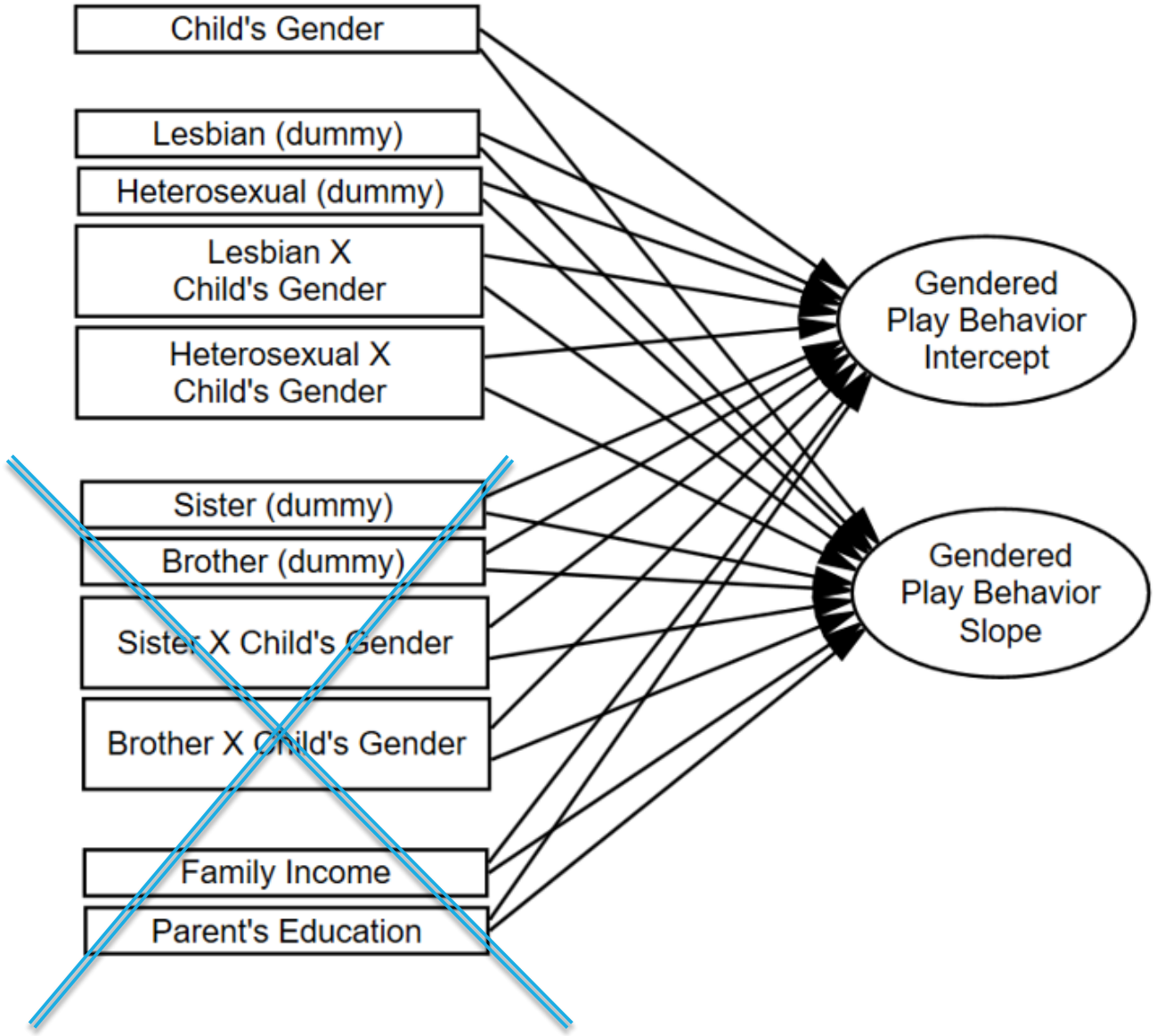
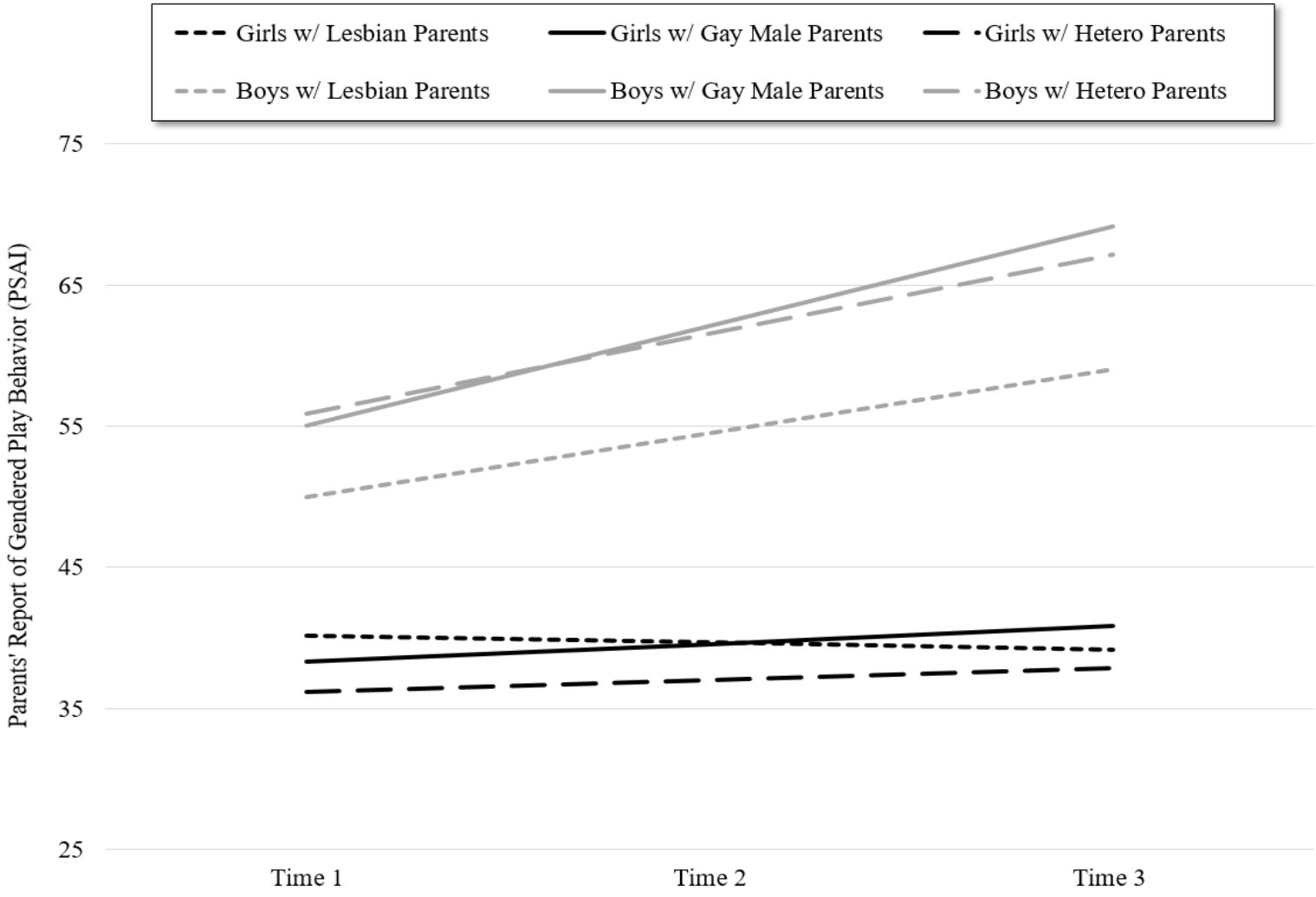


	Intercept			Slope		
	Estimate	S.E.	p	Estimate	S.E.	p
Intercept (Gay Parents; Girls)	46.72	3.80	<.001	4.13	3.08	.179
Child's Gender (Boy = 1)	**8.37**	**1.28**	**<.001**	**2.89**	**1.04**	**.005**
Lesbian Indicator	-1.64	1.58	.298	-2.11	1.27	.097
Heterosexual Indicator	-0.67	1.49	.650	-0.89	1.20	.462
Lesbian × Child's Gender	**-3.49**	**1.56**	**.025**	-0.37	1.26	.772
Hetero × Child's Gender	1.50	1.48	.310	-0.50	1.20	.675

- Slopes were not different across family type for boys nor girls.
- Girls' play behavior was only less feminine in lesbian-parent families than in heterosexual-parent families (p = .042) at T1



Conclusion

- According to parent reports, children in lesbian-parent families had less gender-differentiated behavior (boys were less masculine, girls were less feminine) than children in heterosexual- and gay-parent families
- The degree of gender differentiation did not differ between heterosexual- versus gay-parent families
- Gender-typed behavior of boys, but not girls, significantly changed over time

- Common Fate Growth Model was a useful model for examining the data in this context

THANK YOU

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