

Gender Identity Construction and Cognitive Development: Two sides of the same coin

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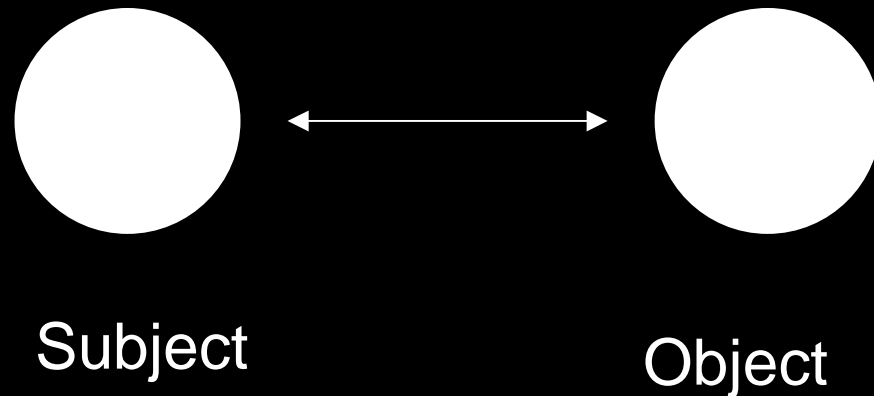
University of Cambridge

Introduction

- A short autobiographical and the value of “disrespecting” disciplinary boundaries.
- The question:
- “How are social relations of asymmetries involved in the collaborative problem solving of the partners and in turn their learning and cognitive development?”.

First Danger:

The individualistic reading of Piaget and cognitivism, computationalism- The epistemic subject, decontextualised, without social relations: Constructivism BUT not Social Constructivism.



Going where?

- Breaking away from Methodological individualism and
- Individual Reductionism

The second Danger:



- Avoiding Sociological Reductionism - Holism - Suppression of agency -
- The passive social subject
- Transmission metaphors in social learning-Imitation
- Socialisation approaches in development

The third way:

Relational
Systemism

The process of
social
representations

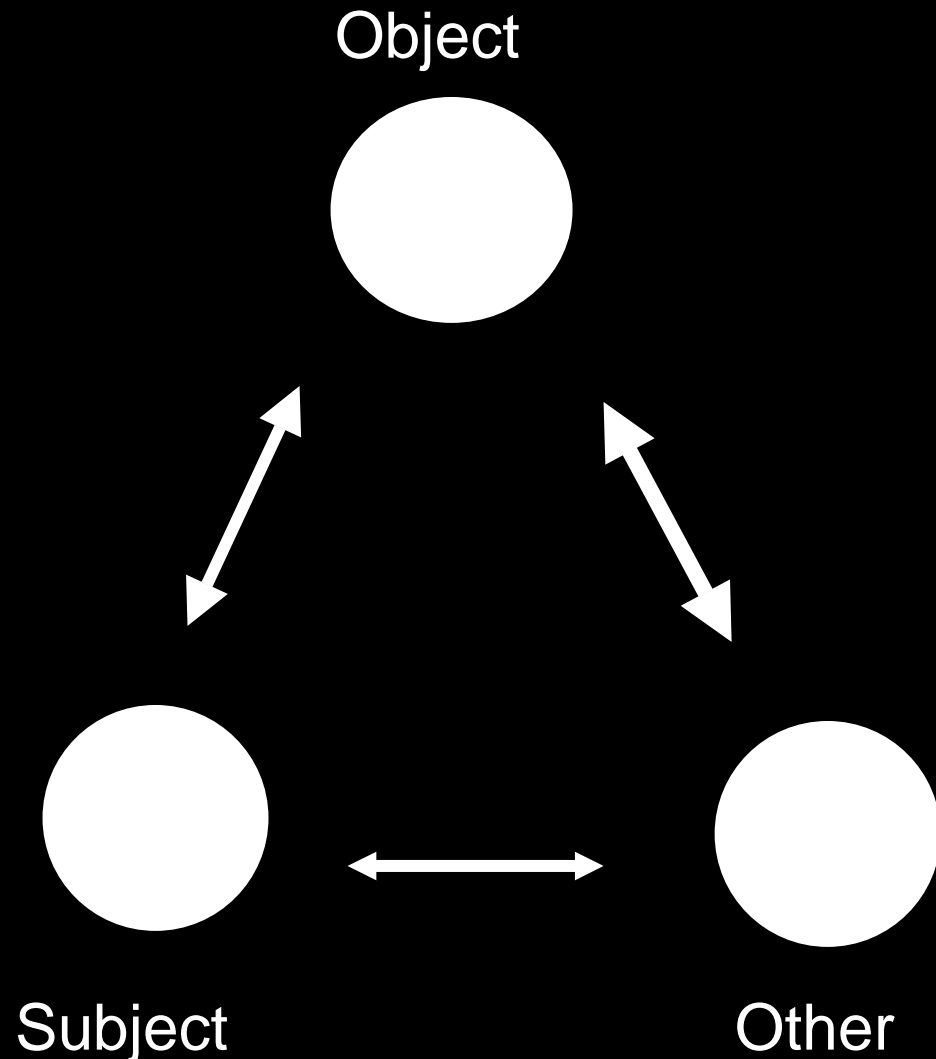
(Moscovici, 1984)

(Marková, 2004)

(Valsiner, 2004)

The genetic
model

(Moscovici, 1976,
1980)

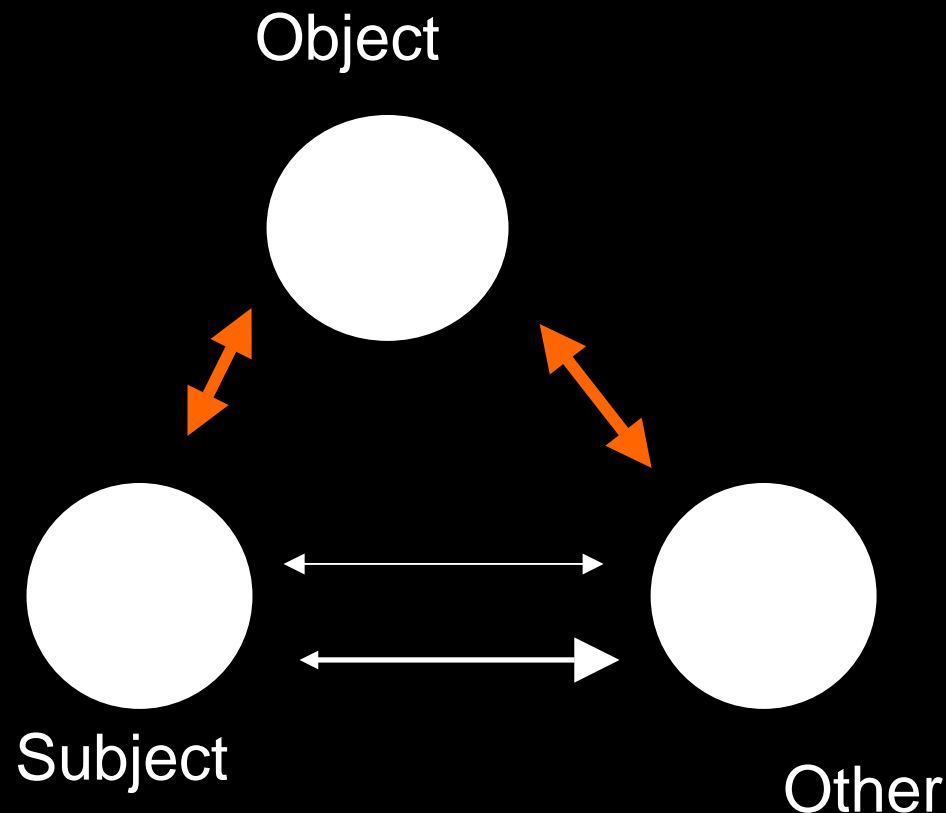


Piaget (1932). “The moral judgment of the child”

Piaget (1965 [1995]) “Sociological Studies”

Piaget was NOT an individualist!

Relations of constraint between child and adult (hindering cognitive and moral development)-Relations of co-operation between peers (promoting cognitive and moral development)

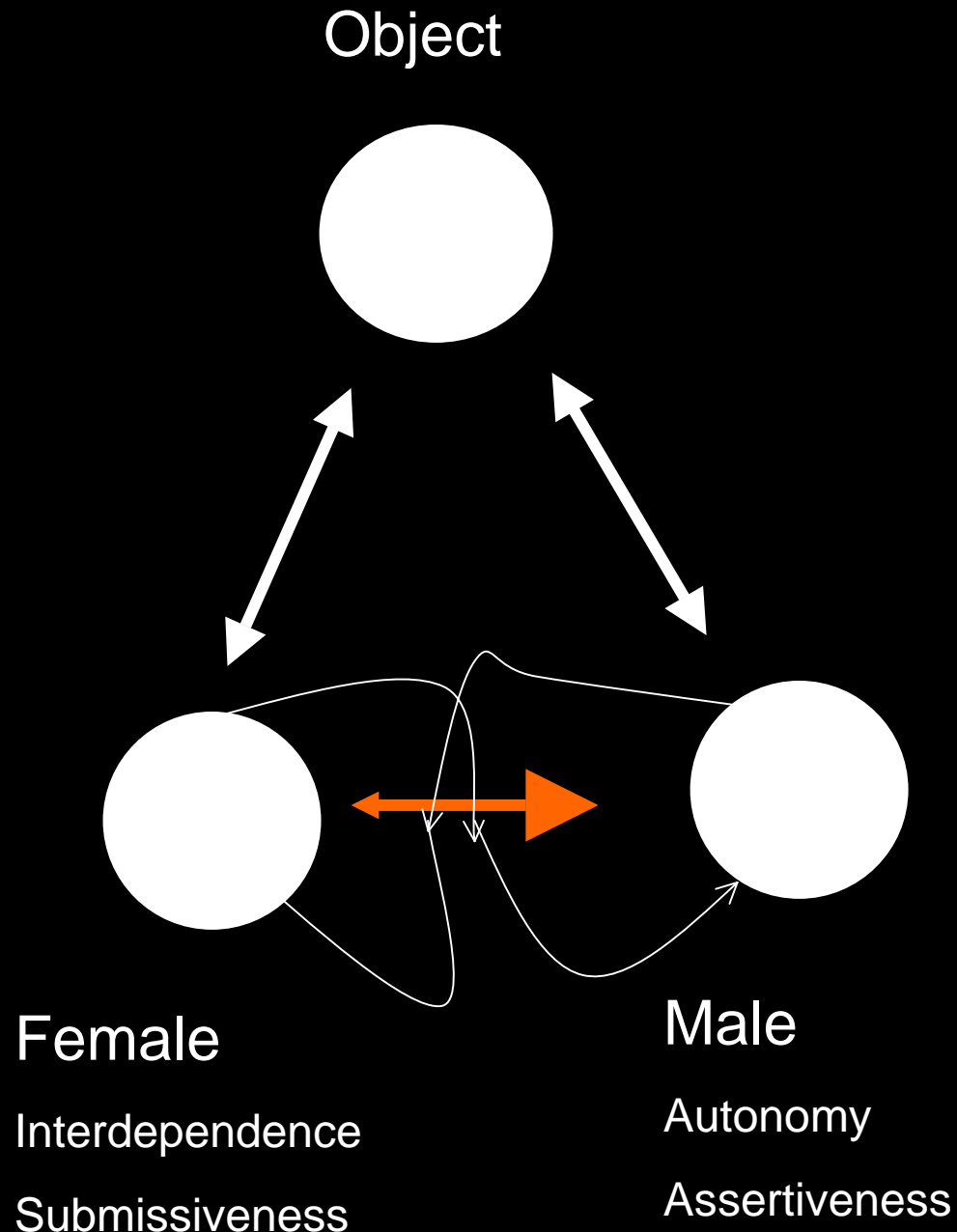


Piaget (1932)

"If then we had to choose from among the totality of existing educational systems those which would best correspond to our psychological results we would turn our methods in the direction of what has been called "Group work" and "Self-Government".

Asymmetries of gender status:
What is their impact on the system?

As West and Zimmerman (1987) argued, gender is both a cultural construct and a feature of the social structure, perpetuated because we are continually "doing gender."



My Research:

Social Identities and Tension

- Pupil answering correctly in the pre-test (Capital) (TC) – Pupil giving a wrong answer in the pre-test (Lower case) (NC).
- Children who give the correct answer are more likely to support their positions and with a wider variety of arguments. They are usually the children that teachers and pupils consider as high academic achievers.

Mm

Mf (Alignment of Doing Gender-Knowledge Asymmetry)

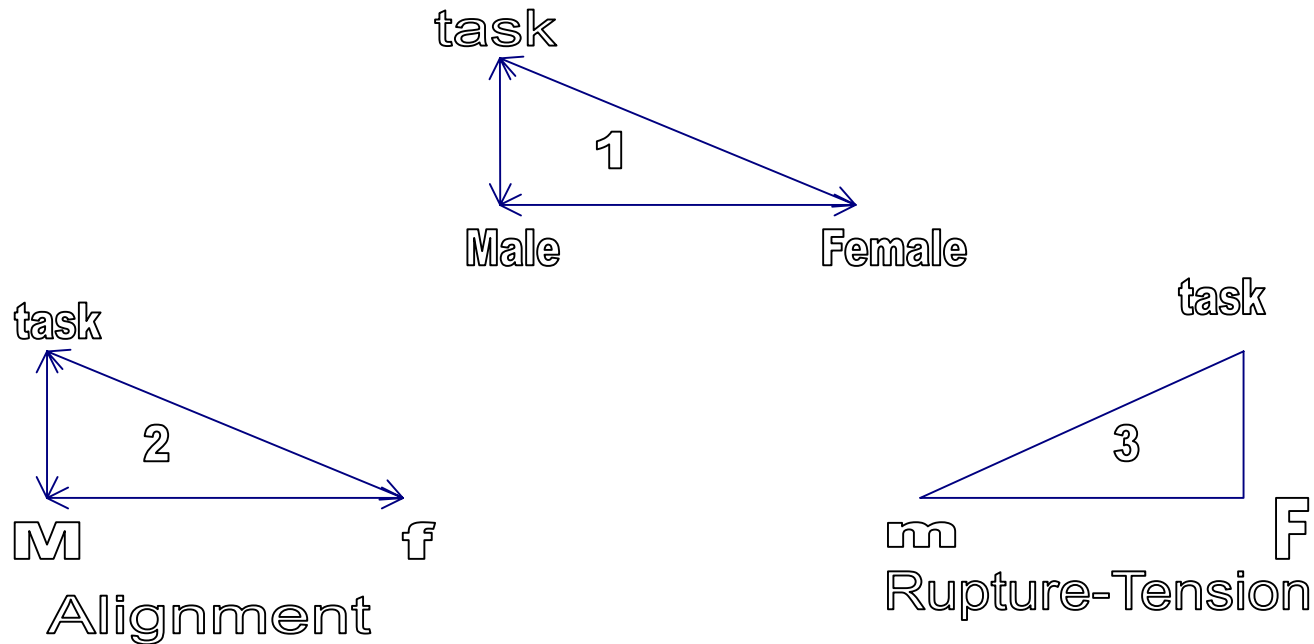
Ff

Fm (Tension between Doing Gender-Knowledge Asymmetry)

Experimental manipulation

Alignment and rupture in triangular configurations

Representational-expectations triangle



1-2: Alignment-Harmony BUT 1-3 Tension-Conflict

Two studies

1. Conservation of liquid task:
 - ◆ pre-test, interaction, delayed post-test design.
 - ◆ 1 Control group (Delayed)
 - ◆ Teacher's evaluations of language and maths achievement and popularity.
2. Spatial perspective taking task:
 - ◆ pre-test, interaction, immediate and delayed post-test design.
 - ◆ 2 Control groups (Immediate, Delayed)
 - ◆ Teacher's evaluations plus
 - ◆ Sociometric tests with peer nominations for popularity and academic reputation
 - ◆ Interviews with children regarding their partner's academic achievements.

- **Participants:** 226 children participated in the study. 256 children in the second study.
- **All participants were in the first grade of formal education (6.5-7.5 years old) and were drawn from primary schools in Nicosia.**
- **Design: Pre-test -interaction phase-post-tests**



**What is happening in
the interactions?**

Initiation of NC by pairing

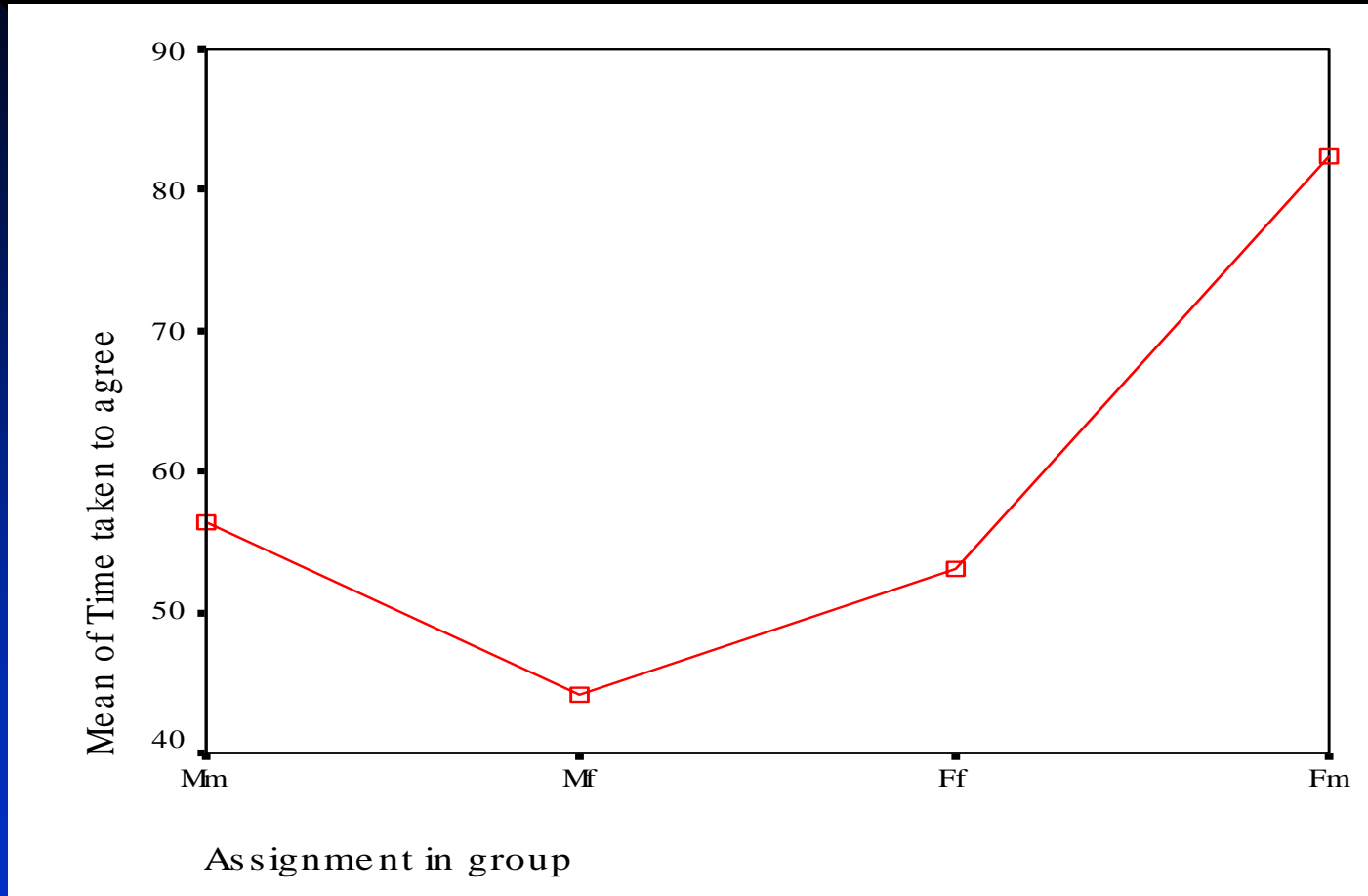
Count

	Assignment in group				Total
	Mm	Mf	Ff	Fm	
initiation i No	10	15	11	6	42
yes/no Yes	10	5	10	12	37
Total	20	20	21	18	79

Mf vs Fm ($\chi^2(1)=6.65$, $p=0.024$).

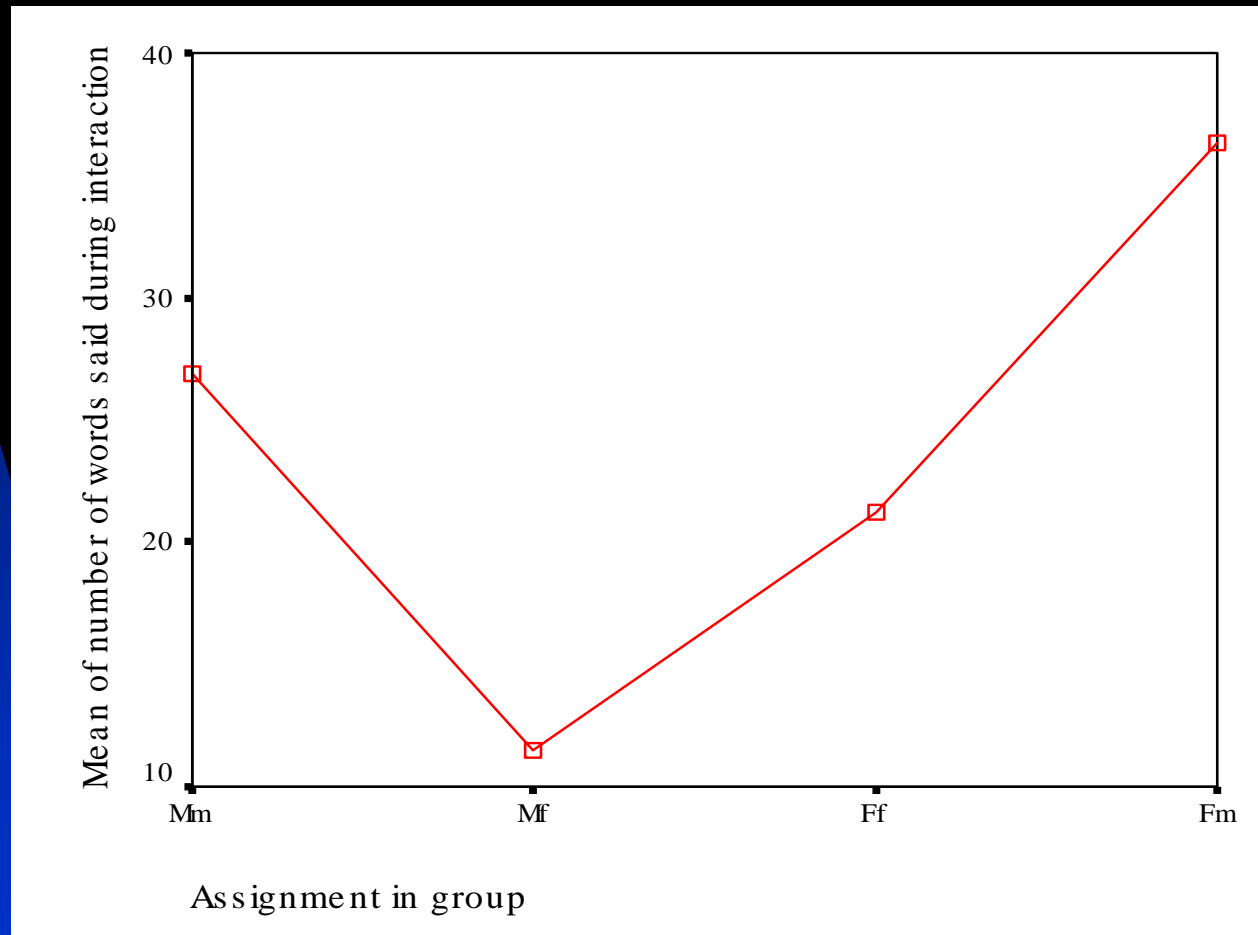
Odds Ratio=6

Time taken to agree by pairing



$F(3, 73) = 3.6, p=0.017$

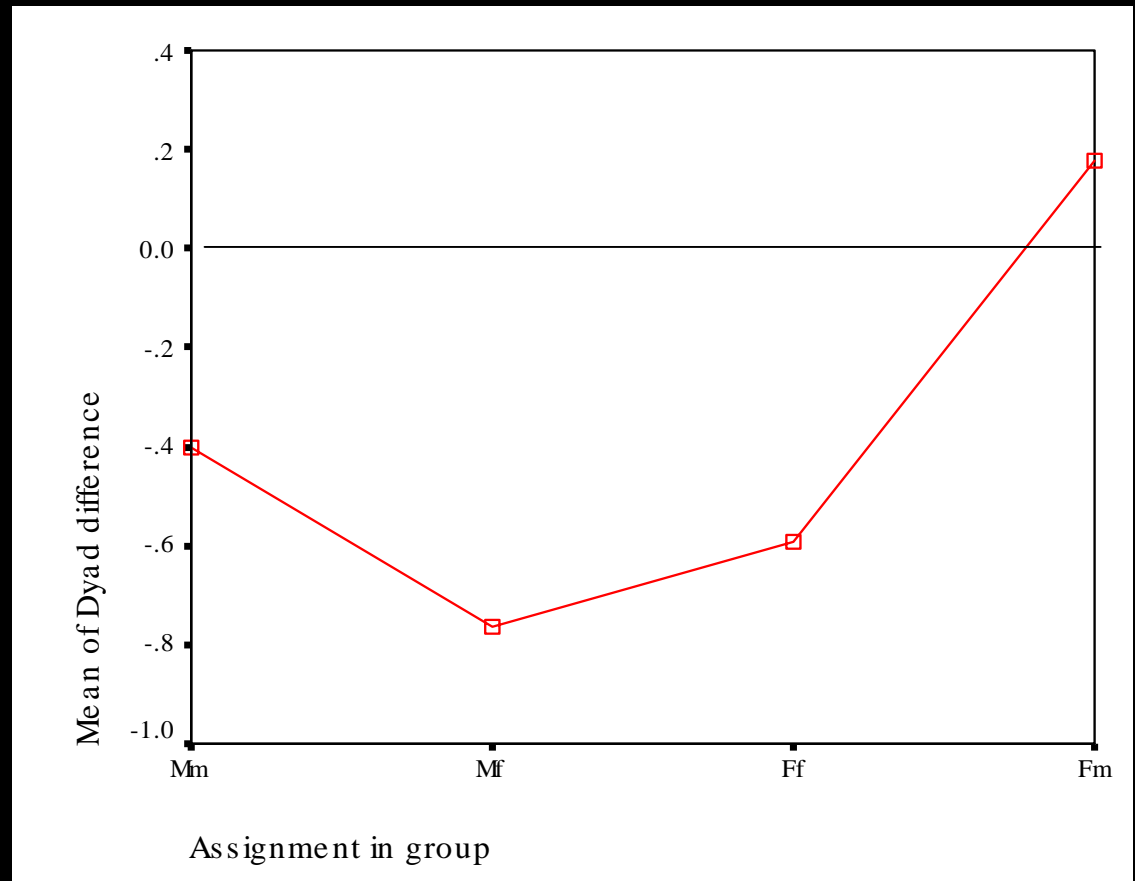
Words said by NCs by pairing



$F(3,71) = 4.97, p = 0.003$

**What is happening in
the delayed post-tests?**

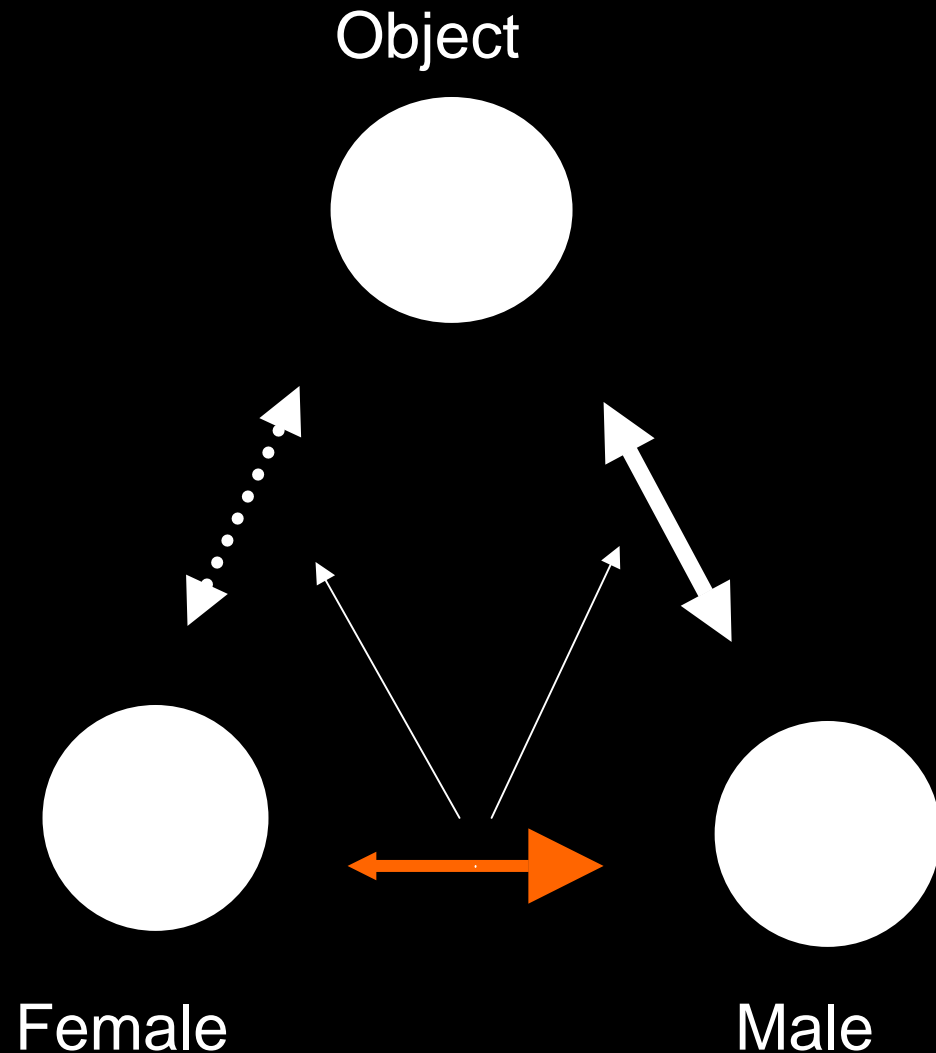
Dyadic analysis Difference index (NC-TC) by pairing in the delayed post- test



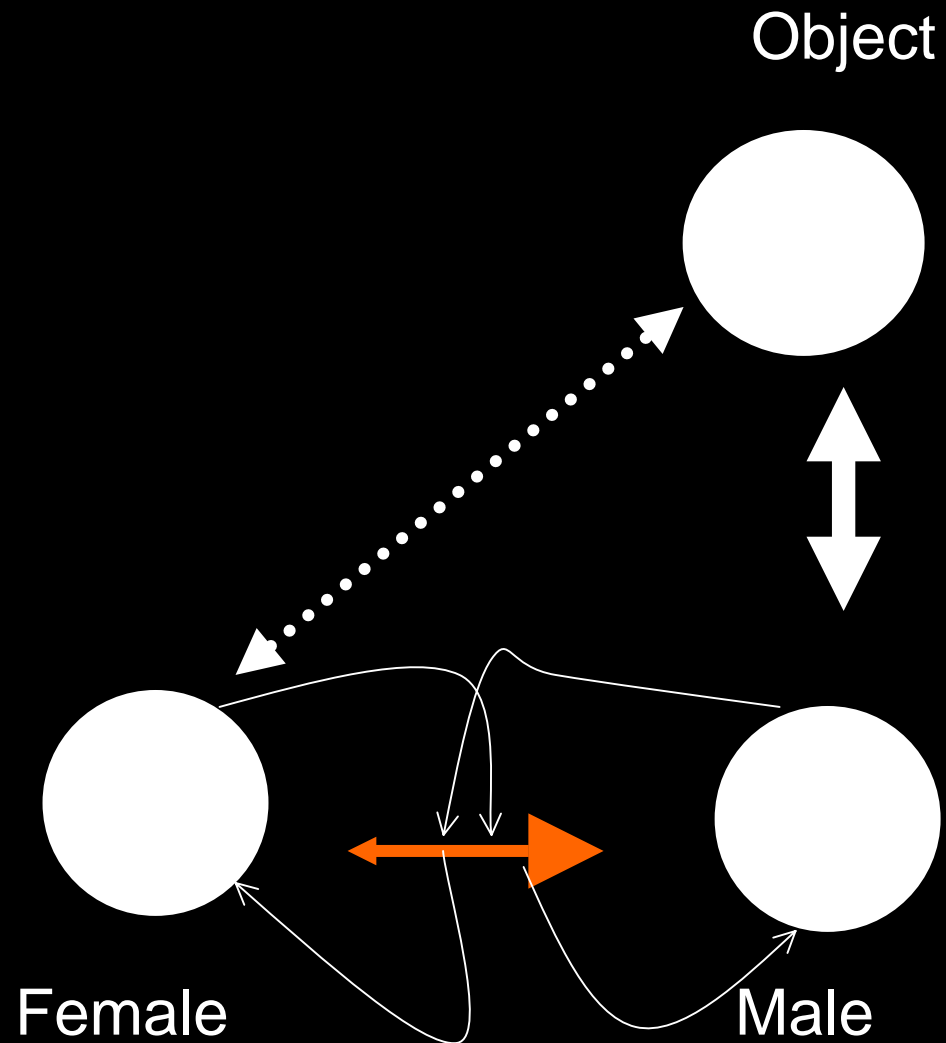
Conclusions

- Girls in a position of knowledge and power (tutor) tend to give part of their autonomy away and more easily than boys. Especially when interacting with less knowledgeable boys they might even show regression from the original correct solution depending on the task due to the increased resistance of boys. This is part of a construction of a traditional femininity that gives responsibility and autonomy to the other whereas at the same time it is creating interdependence for her self.
- Boys in the knowledgeable position (Tutor) try to keep it intact, especially when interacting with a less knowledgeable girl. On the contrary when they are in the position of the less knowledgeable they feel tension. They try to compensate for the uncomfortable position they find themselves into. Post-tests suggest they manage that by making more stable and generalised progress on the tasks.
- Knowledge construction as social gender identity construction₂₁

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Teşekkürler-Eυχαριστώ

- Zittoun, T., Duveen, G., Gillespie, A., Ivinson, G. & Psaltis, C. (2003). The use of symbolic resources in developmental transitions. *Culture & Psychology*, 9(4), 415- 448.
- Psaltis, C. & Duveen, G. (under review). Social relations and cognitive development: The influence of conversation type and representations of gender. *European Journal of Social Psychology*.

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Social relations important for cognitive development

- Relations of co-operation as an emerging shared property in peer interaction. Never given as an ideal in the peer world (as implied by Piaget, 1932, 1995). It emerges through conflicting asymmetries.
- Social Gender Identity as an asymmetry in a relationship which constrains what can be communicated and internalised.

Four Conversation types

1. Less developmentally advanced answer prevails
2. More developmentally advanced answer prevails
 - No Resistance
 - Resistance
 - Explicit Recognition

No Resistance

1. M: They are equal because it was the same in here right? (pointing to the pre-transformation glass).
2. f: Yes
3. M: He poured it in here but this is taller and narrower. So we have the same right?
4. f: Yes...Come! (calling the experimenter)
5. EXP What did you agree?
6. M: That we have equal

Resistance

1. F: They are equal. They are equal! I say they are equal, equal
2. m: No they are not!
3. F: They are equal!
4. m: But yours is here (points to the level of water)
5. F: equal
6. m: and mine [is
7. F: [equal
8. m: here! (points to the level of the water in the transformation glass C)
9. F: But they are equal! Equal! We had both glasses and they were equal
10. m: Mine is up to here and yours is up to here (points to the level of water in glass C and glass A)
11. F: But they are the same! It's just that the glass is bigger and it can contain more that's why
12. m: OK should we tell him?
13. F: Yes
14. m: Come!
15. EXP What did you agree?
16. m: Equal
17. F: Equal

Explicit Recognition

1. F: Well, they are equal because this is fatter but this is[
2. m: [it's fatter but
this is narrower
3. F: and it looks like[
4. m: [and since this is taller this is less (water)
but they are equal, he just changed glass.
5. F: it only looks like, it looks like this is more
6. m: they are equal, he just changed glass, and this is longer
but they are the same
7. F: but this is fat and it looks like it has less
8. m: but they are the same, shall I call him? come!
9. EXP what did you agree?
10. m: equal

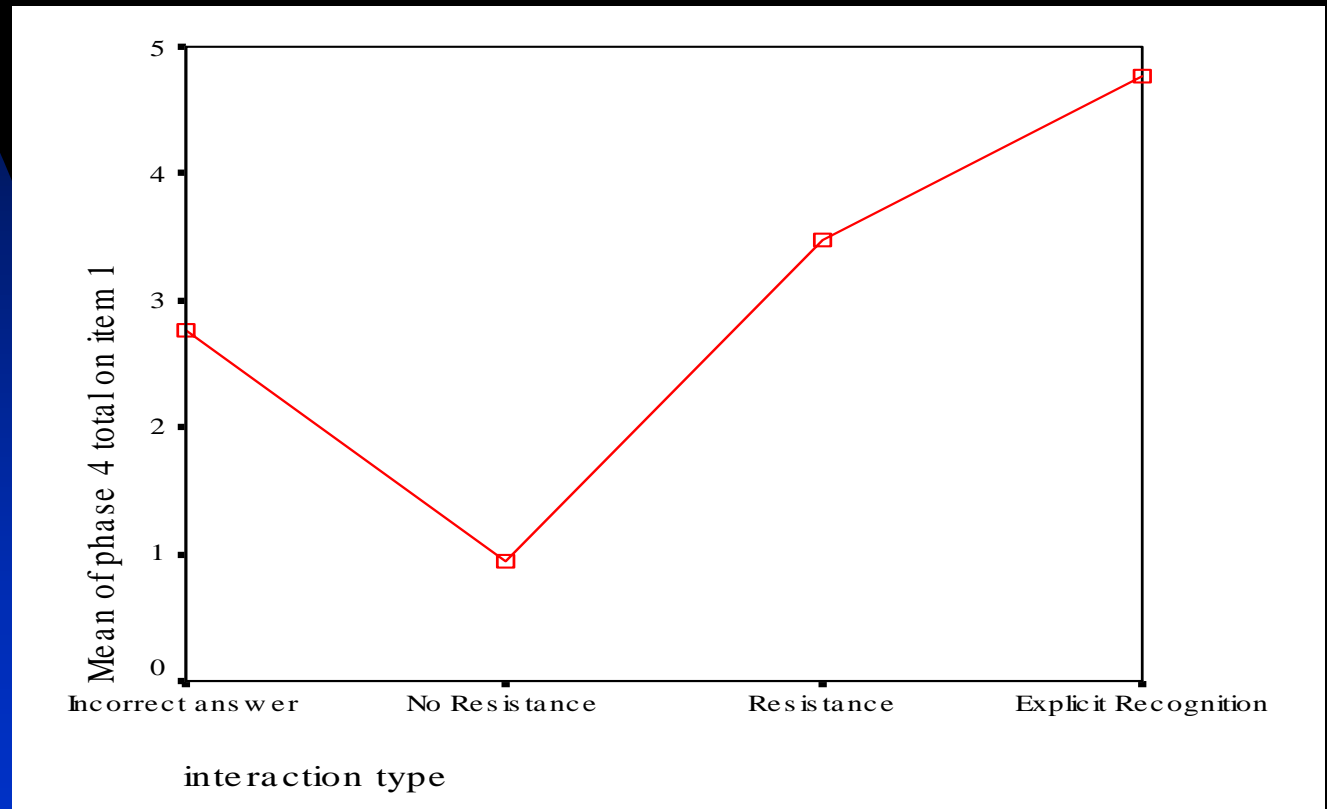
Conversation type by progress

		Conversation type			
		Nonconserving	No Res.	Resist.	Explicit Recognition
1	No progress	13	7	16	2
2	Progress without novelty	0	6	9	8
3	Progress with novelty	0	1	2	8
4	Global (total) Progress	0	7	11	16

(χ^2 (3)= 24.66, $p < 0.0001$) (lines 1 and 4 in Table 4)

(χ^2 (6)= 30.93, $p < 0.0001$) (lines 1, 2, and 3)

Interaction types by performance on delayed post-test



$F(3, 78) = 13.71, p=0.0001$