

Knowledge Acquisition in Small Groups: Consequences of Different Ways of Power Exertion



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INPUT

PROCESS

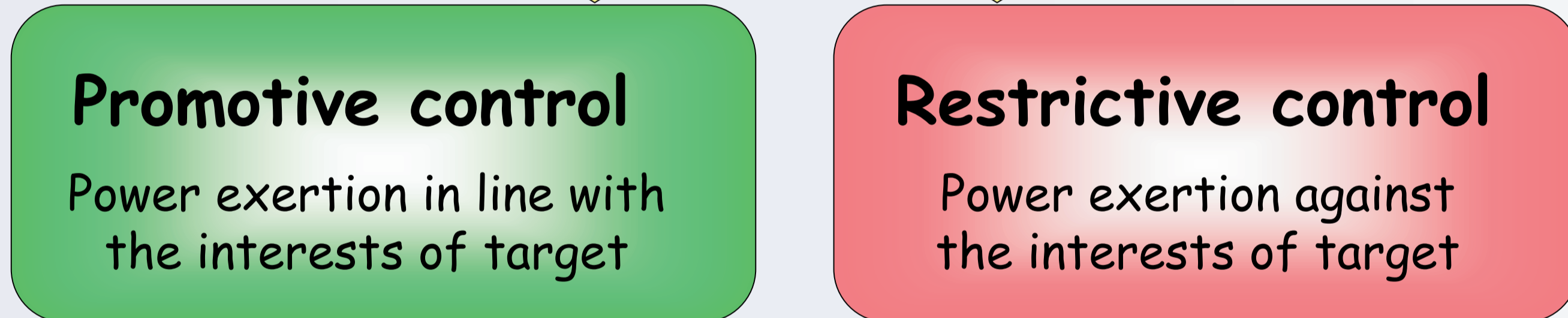
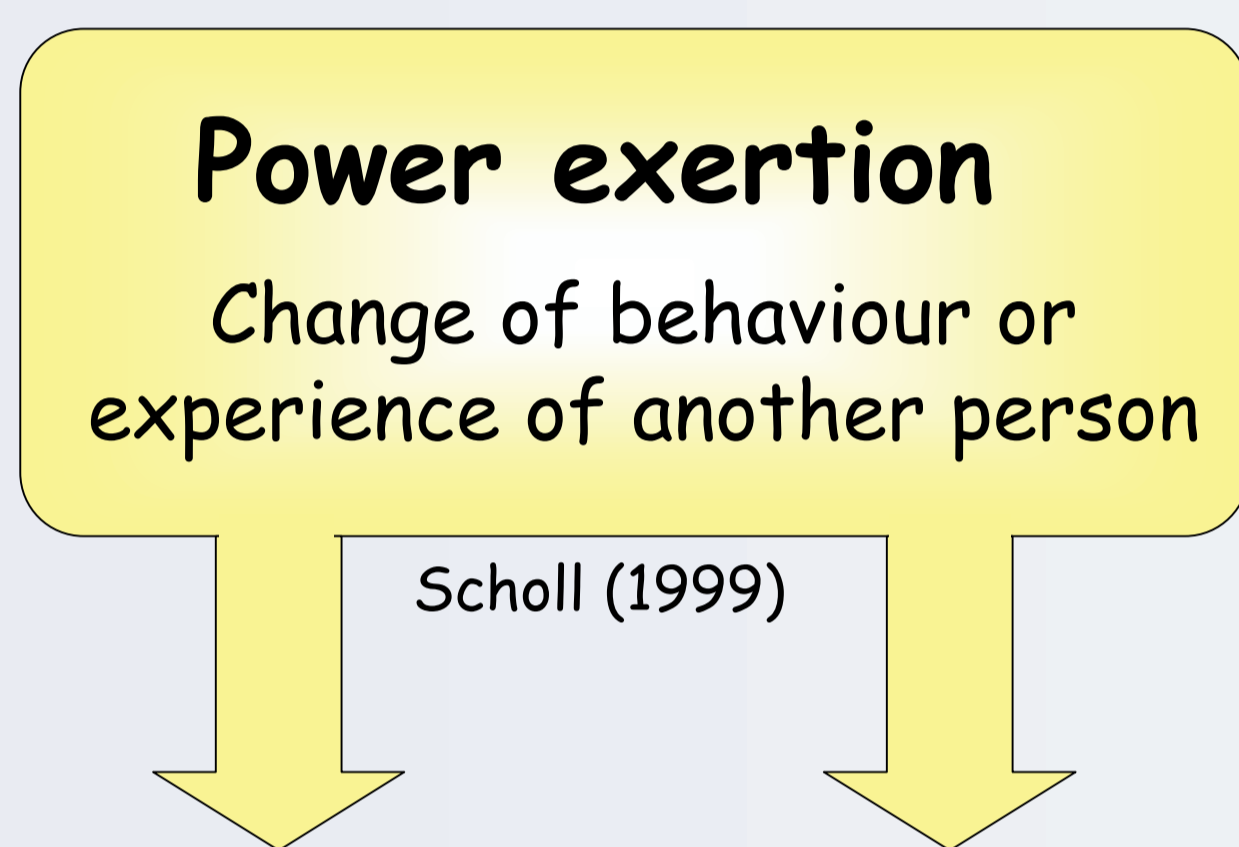
OUTPUT

1. Theoretical Assumptions

- ... are presented by means of the graphical model (see the poster as a whole).
- Complex group task with face to face interaction
 - Computer-simulated shirt company (SCHNEIDERWERKSTATT, Süß & Faulhaber, 1990)
 - Possible interventions: Buy new machines, hire or fire workers, advertise etc.
- Experiment advertised as „Assessment Centre exercise” with the possibility of receiving a feedback on performance and team behaviour and a compensation depending on team performance (raffle tickets for 600 € in total)
- Selection of one male participant for each group as the actor (who exerts power) on the basis of different indicators for dominance and cognitive ability

2. Participants and Group Task

- 223 participants in 62 mixed-gender groups of three or four members
 - 82 % university students from a lot of different disciplines (average age = 27 years)
- Experimental analyses with 31 groups (because experimental manipulations were improved in the second set of experiments)



3. Experimental Manipulations (in the second set of experiments)

1. Control mode: **promotive** vs. **restrictive**

- Actor was instructed to exert power **restrictively** or **promotively** respectively (with examples of relevant behaviour, e.g. „interrupt fruitless discussions” or „provide enough speaking opportunity for each member” respectively)
- Announcement of additional raffle tickets depending on a convincing representation of instructions
- Manipulation check:** Targets perceived more **restrictive control** in the corresponding condition ($Eta^2 = .24, p < .01$). For perceived **promotive control**, expected effect only under position power (onetailed $p < .10$)

2. Power base: **expert** vs. **position**

Expert power	Position power
<ul style="list-style-type: none"> Actor got expert text about shirt company „Shirt company is owned by all group members” 	<ul style="list-style-type: none"> One „company owner” (the actor) + two to three employees Actor was allowed to delegate tasks and to make decisions on his own Actor got PC keyboard
<ul style="list-style-type: none"> Manipulation check: Targets perceived more expert power in the expert condition ($Eta^2 = .45, p < .001$) and more position power in the position condition ($Eta^2 = .33, p < .01$). 	

4. Research Questions

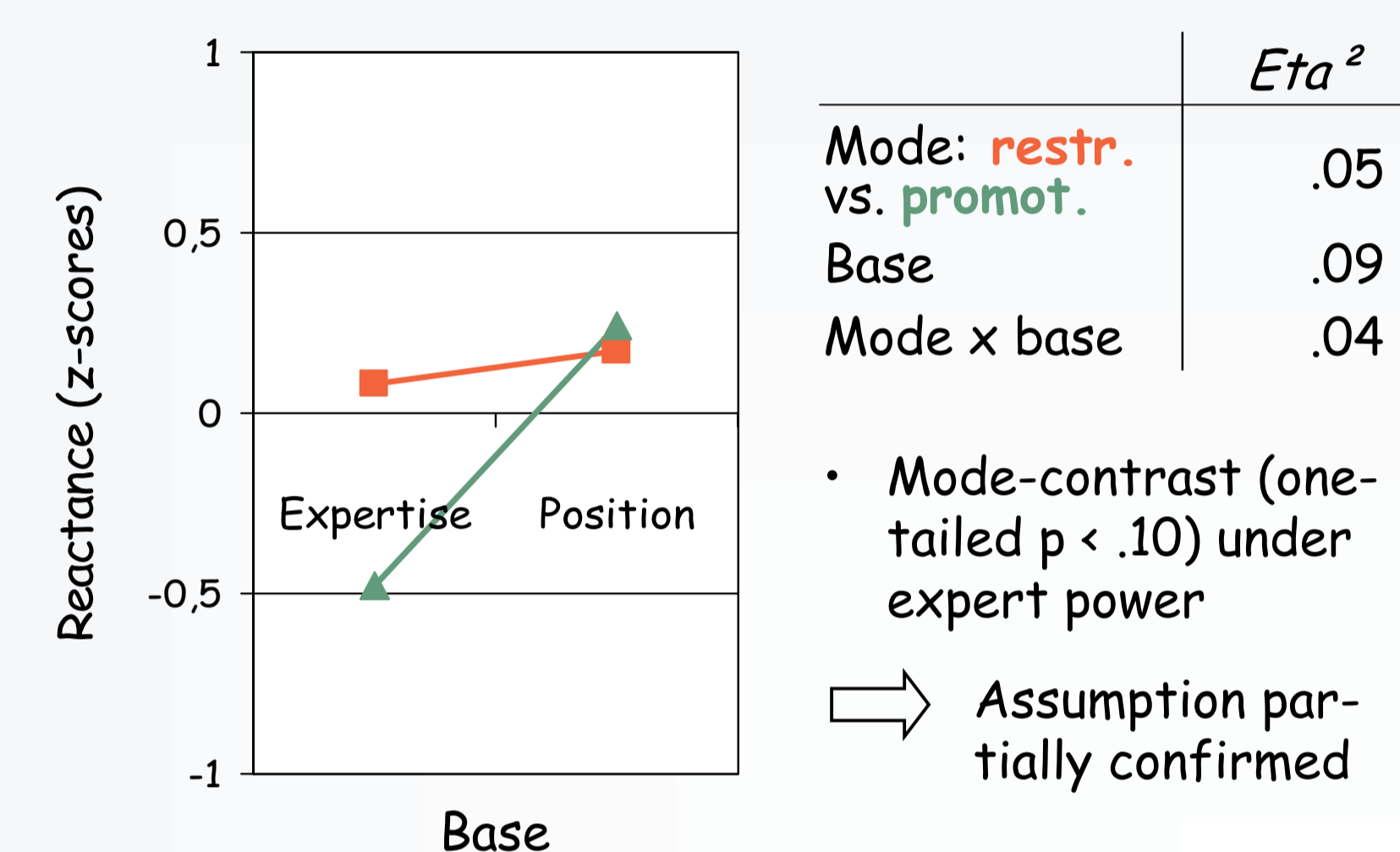
- Does power exertion against the interests of the targets (**restrictive** compared to **promotive control**) interfere with the acquisition and application of knowledge in groups? If so ...
- Why does this effect occur? ⇒ Explain mediating processes
- Are the effects of control mode (**restrictive** vs. **promotive**) valid independently of the power base? ⇒ Clarify area of validity

SUBJECTIVE EXPERIENCE:

Questionnaires after the group task

Reactance of the targets

- Item Examples (Cb. Alpha = .83)
- Thoughts and beliefs: „What rubbish!”
 - Feelings: „irritated”
 - Intentions: „to interrupt him”



COMMUNICATIVE BEHAVIOUR:

Video-based analysis of 22 groups

Ignoring the ideas of the actor Unfounded criticism of ideas of actor

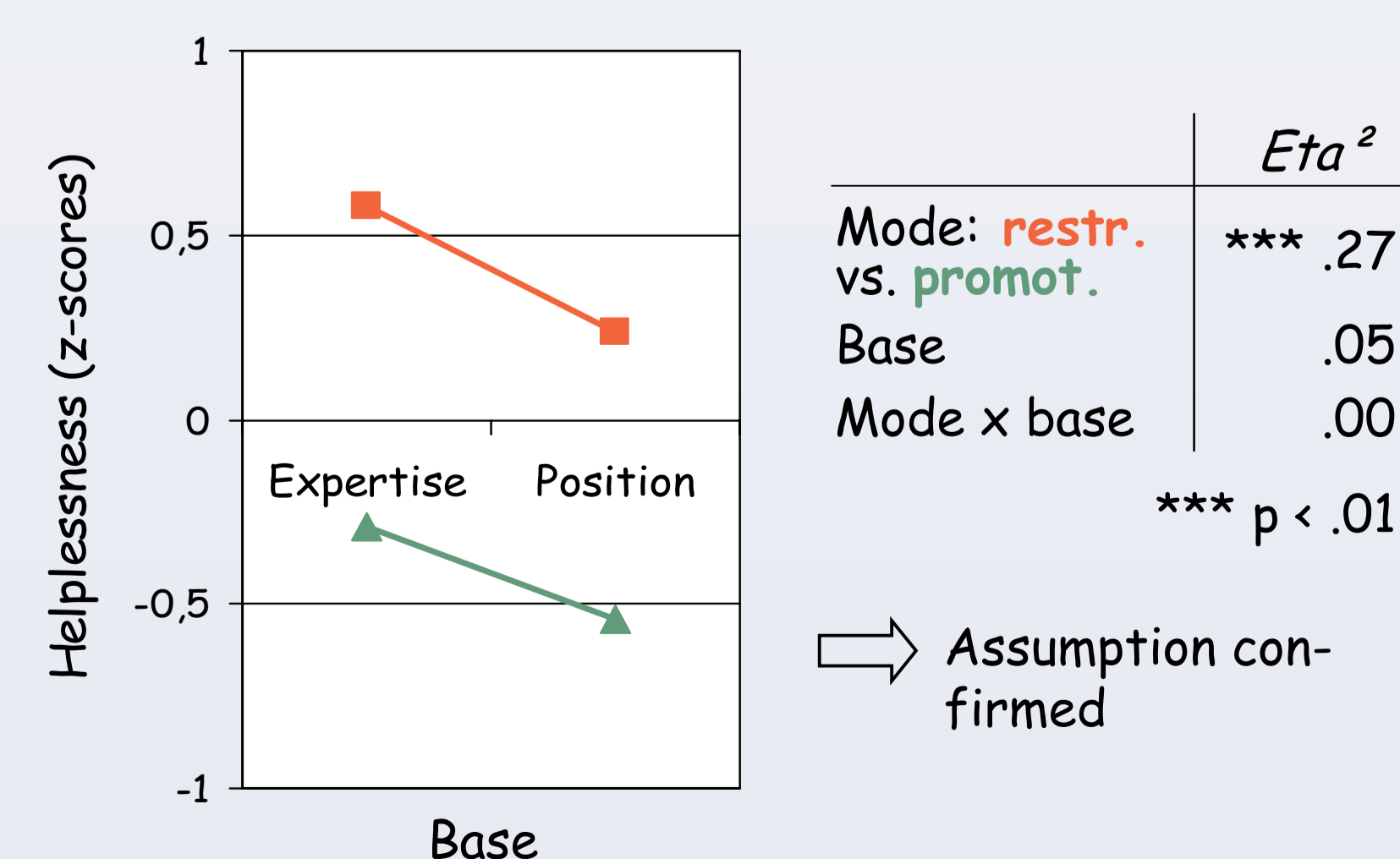
- Coding of every speech unit in three sequences of 11 minutes in total per group
- Interrater-reliability (Cohens Kappa) of the measured constructs $> .50$
- Validity of constructs is unclear, because there are no correlations of indicators of helplessness and reactance with subjective experience
⇒ Difficult to identify mediating processes with regard to communicative behaviour (Exception: see below in this column)

5. General Information about the Analyses

- Pretest-posttest-design
- Pretests of dependent variables (and sometimes additional variables) were partialled out in all analyses: experimental, regression, correlational !!

Helplessness of the targets

- Item Examples (Cb. Alpha = .86)
- Thoughts and beliefs: „I can't concentrate.”
 - Feelings: „intimidated”
 - Intentions: „I felt as if I were paralysed.”



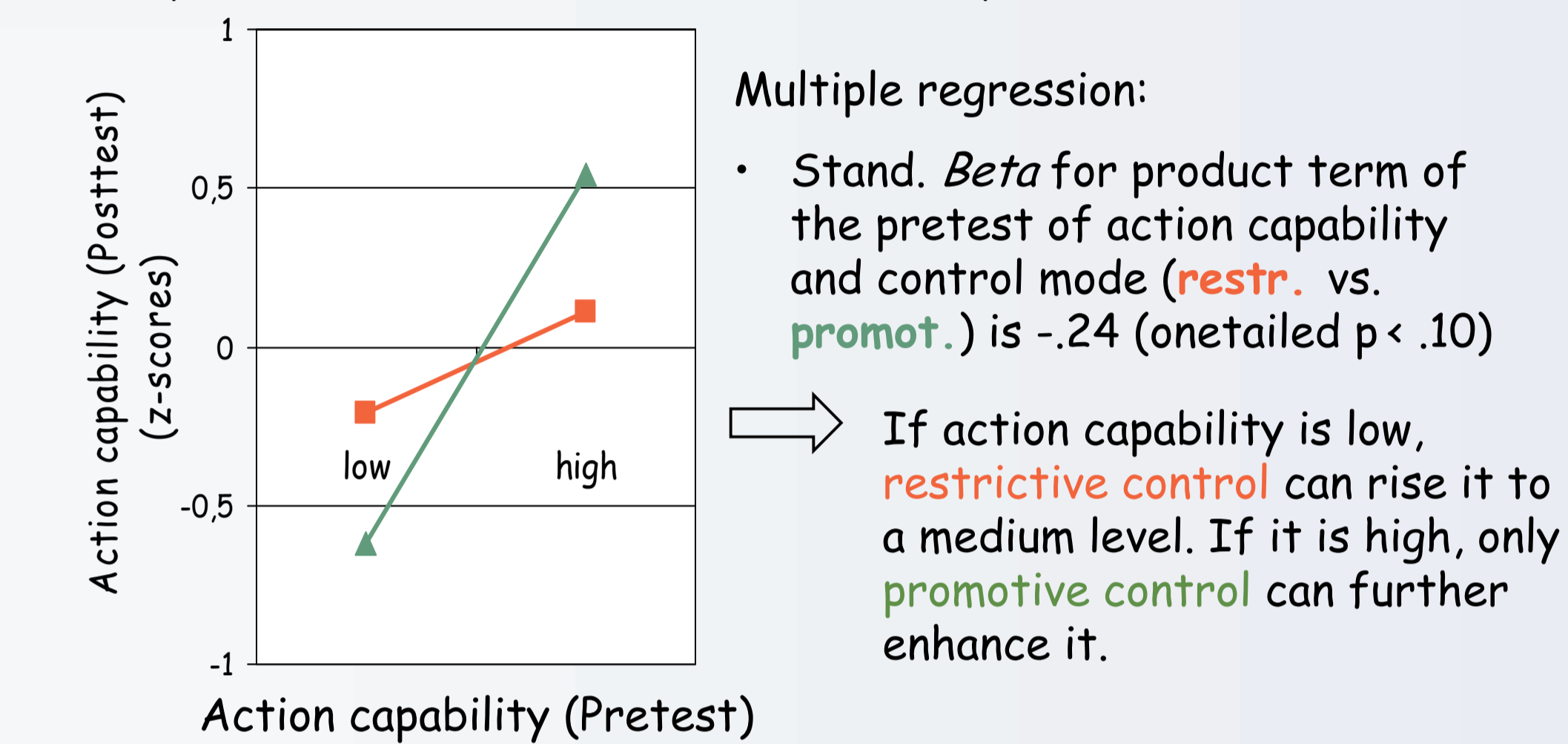
Less own ideas expressed Uncritical approval of the ideas of the actor

- The negative effect of **restrictive control** on the actor's task knowledge is mediated by the helplessness of the targets.
- Why is there less task knowledge due to helplessness?
 - The helplessness of the target is positively correlated (.38, $p < .10$) with unfounded simple suggestions of the targets (e. g. „Let's hire two workers.”).
 - Unfounded simple suggestions of the targets are negatively correlated (-.47, $p < .05$) with task knowledge of the group.
 - Restrictively controlling actors learned less from the targets because those reacted helplessly and thus contributed more unfounded simple ideas.

Action capability

- Item Examples (Cb. Alpha = .71)
- „... clear decisions were made.” / „... translated into action.”

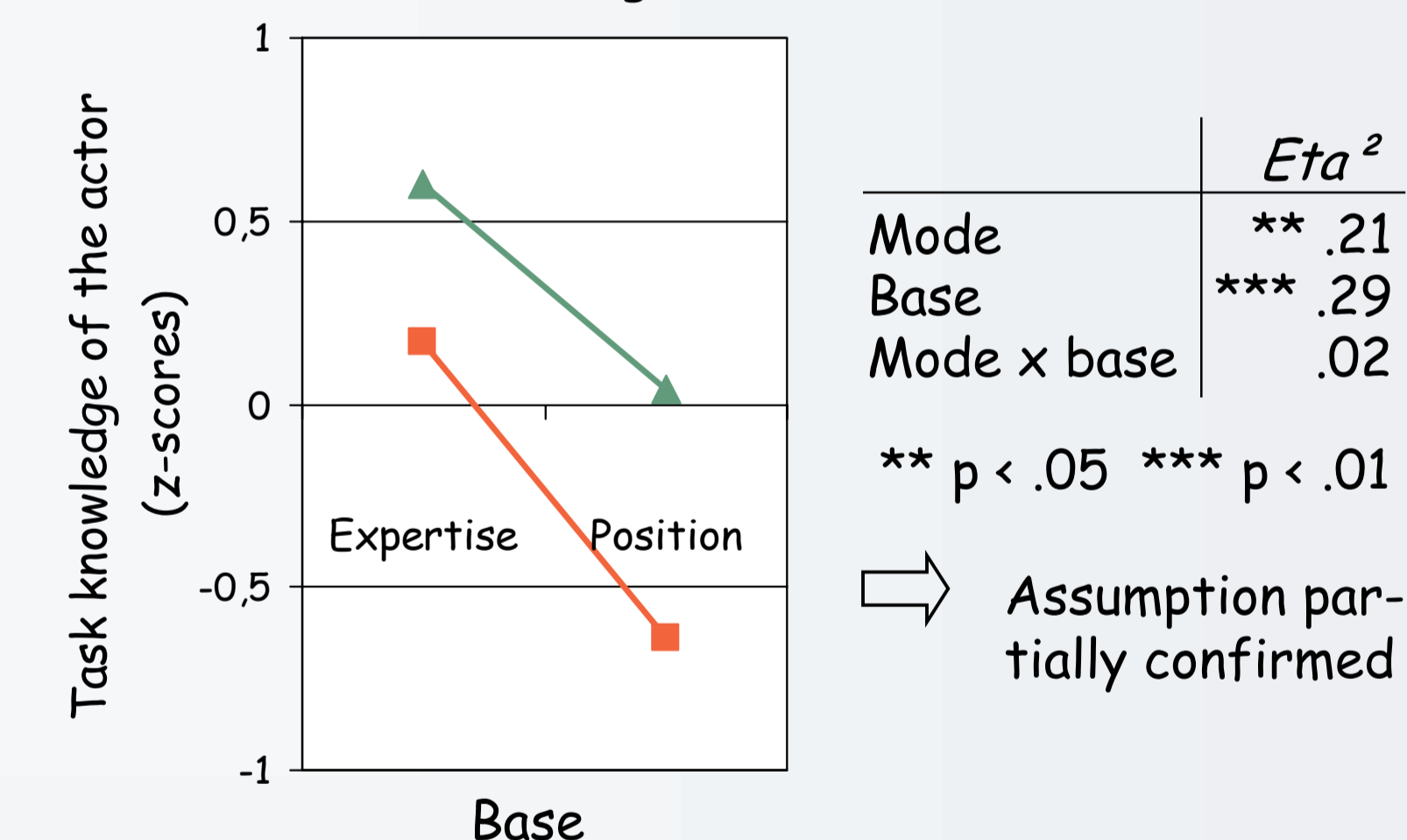
No experimental effects of control mode or power base, but ...



Acquisition of task knowledge

- Knowledge test about the shirt company (Kersting and Süß, 1995)
- System knowledge and action knowledge
 - Cb. Alpha = .69

No effects for the targets, but for the actor ...



6. Summary and Conclusions

- It is important, *how* power is used: against (**restrictively**) or in line with (**promotively**) the interests of the targets.
- Restrictive control** harms the actors themselves: They do not benefit from the knowledge of the targets, because the targets react helplessly and make more „helpless” contributions.
- This effect is independent of the power base (expertise or position).
- Promotive control** is especially useful if ...
 - the targets' knowledge and active involvement is crucial (e. g. in complex tasks)
 - action capability is not threatened

References

- Kersting, M. & Süß, H.-M. (1995). Kontextvalides Wissensdiagnostik und Problemlösen: Zur Entwicklung, testtheoretischen Begründung und empirischen Bewährung eines problemspezifischen Diagnoseverfahrens. *Zeitschrift für Pädagogische Psychologie*, 9, 83-93.
- Scholl, W. (1999). Restrictive control and information pathologies in organizations. *Journal of Social Issues*, 55, 101-118.
- Süß, H.-M. & Faulhaber, J. (1990). *Berliner Version des Szenarios Schneiderwerkstatt (Computerprogramm)*. Berlin: Freie Universität, Fachbereich Erziehungs- und Unterrichtswissenschaften, FPS "Intelligenz und Wissen".