SEMANTIC COMPLEXITY IN THE TREATMENT OF APHASIC NAMING DISORDERS

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BACKGROUND

According to the ***semantic complexity account of treatment efficacy*** in the treatment of aphasic naming disorders (Kiran, 2007), training **complex items** (atypical exemplars of a category: e.g., ANIMALS: *TICK*) results in generalization to less complex items within the treated category (typical exemplar of a category: e.g.,ANIMALS: *BUTTERFLY*). This **generalization within the treated semantic category** after training of atypical exemplars has been reported for a number of patients having been treated with different semantic categories of both the living and nonliving domain (Kiran, 2008; Kiran & Thompson, 2003; Stanczak et al., 2006).

RESEARCH QUESTIONS (ONGOING MULTIPLE SINGLE CASE TREATMENT STUDY)

Is the TREATMENT METHOD
(picture naming and semantic feature analysis of semantically complex items)
effective
within **15 sessions** à 60 min. 2-3 per week

?

- **TRAINING EFFECT** → qualitative change in response pattern?
- **GENERALIZATION EFFECT** → items of same semantic category **COMPLEXITY EFFECT**
- **GENERALIZATION EFFECT** → items of living /nonliving domain **CATEGORY EFFECT**

EXAMPLE OF TREATMENT PROCEDURE

(after Kiran & Thompson, 2003)

NAMING	PICTURE SORTING	CARD SORTING	YES / NO ANSWERS	NAMING
10 ATYPICAL ANIMALS	10 SEMANTIC FEATURES	10 SEMANTIC FEATURES same category	15 SEMANTIC FEATURES same category / same domain	10 ATYPICAL ANIMALS
 TICK	5 TRUE *lives on land* / 5 FALSE *lives in water*	5 TRUE *is blood-sucking* / 5 FALSE *can fly*	5 YES *is a parasite?* / 5 NO *is heavy?* / 5 NO *has roots?*	 TICK

MATERIAL

180 pictures, items matched for frequency

- **Animals** n=30
- **Fruits** n=30
- **Vegetables** n=30
- **Clothing** n=30
- **Transport** n=30
- **Musical Instruments** n=30

→ atypical n=10; moderately typical n=10; typical n=10

TREATMENT: trained and control items

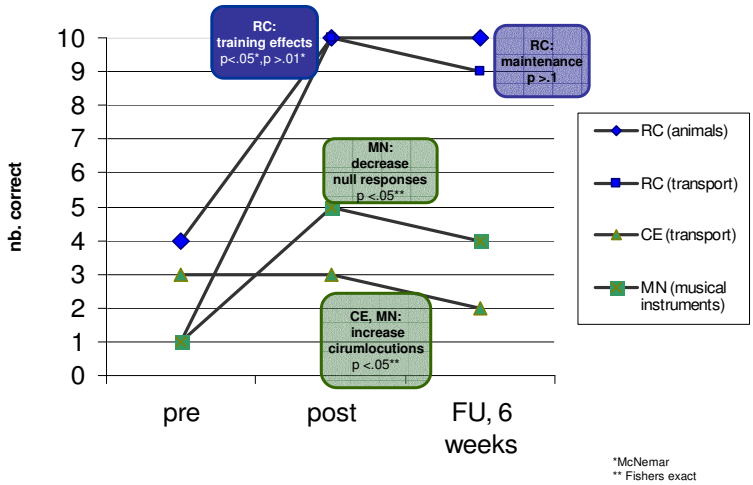
TRAINED	CONTROL		
atypical n=10	same semantic category n=20	same domain: living n=60	other domain: non-living n=60
	typical n=20	atypical/ typical n=30 / atypical/ typical n=30	atypical/ typical n=30 / atypical/ typical n=30

4 PARTICIPANTS:

core deficit: access from semantics to phonological output lexicon,
no apraxia of speech

participant	age	etiology	post onset
RC	54	left CVA	3;6 yrs
RC	55		4;6 yrs
MN	44	mild TBI/ left CVA	8;6 yrs
CE	47	left CVA	10 mths

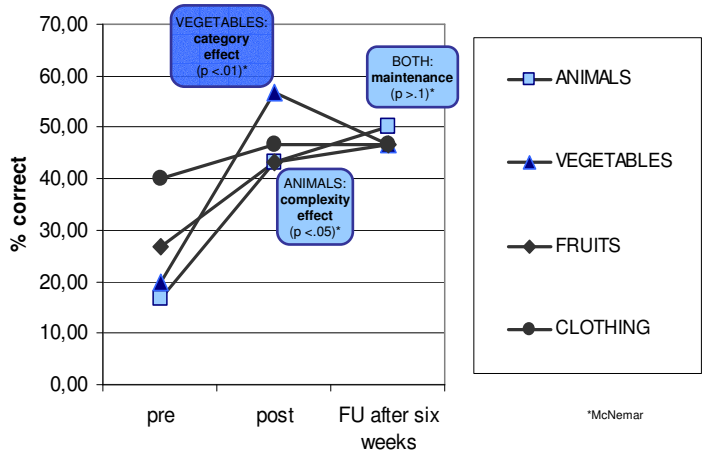
TRAINING EFFECTS: TRAINED ITEMS



*McNemar
** Fishers exact

GENERLIZATION EFFECTS: CONTROL ITEMS

Participant RC



*McNemar

CONCLUSION

- ✓ **Confirmation**: Our preliminary results are in line with recent findings that treating semantically complex items **does not always** lead to a significant increase in correct naming responses (Stanczak et al., 2006). However, **effectiveness** may also be defined qualitatively, i.e., by the **communicative adequateness of errors** (semantic circumlocutions vs. null responses).
- ✓ **New:** Our results show that generalization can extend **across category** to **items** of the **treated semantic domain**.
- ✓ **Future:** Further research needs to investigate variables that determine **individual outcomes**, e.g.,: treatment intensity, learning potentials, underlying deficit.

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ACKNOWLEDGEMENT
We'd like to thank all participants with aphasia for taking part in the study and the students of the Patholinguistics program at Potsdam University for their help in developing the material and conducting the therapies: T. Gemballa, S. Gericke, M. Höger, C. Kneider, A. Marinov-Laue, J. Thieke, N. Walch, M. Wittstock.