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# Gestural correlates to the OVER AND OVER expression

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## INTRODUCTION

This study identifies stable gestural correlates to the OVER AND OVER adverbial phrase in American English. This expression involves lexical iteration and adds aspectual information. Speakers have been shown to rely on co-verbal gestures to communicate aspectual information (Duncan 2002; Parrill et al. 2013; Bressem 2021) along with lexical and grammatical means. However, most of the research has focused on hand gestures. Cyclic gestures have particularly been linked with meanings of motion (Ladewig 2011; 2014), either physical or metaphorical (Zima 2014), as well as continuity (Hirrel 2018).

We determine which formal features participate in the expression of iteration, in a variety of articulators.

## METHOD

- Video datasets of spoken American English belonging to the Distributed Little Red Hen Lab (Steen et al. 2018); UCLA Library Newscape Archive. Lexical query in the Edge search engine = "OVER AND OVER".
- Two selection criteria : TV show type (celebrity guest interviews during talk-shows; television network news) and gesture visibility (hands and face) = 116 most recent hits. Broadcast area not controlled. Mostly Western American and New York speakers.
- Control group with same selection criteria. Lexical query = "ALL OF A SUDDEN" (same number of syllables; perception test ensuring no extract contained iterative information in the verbal or gestural modalities).
- Annotation of tense, aspect, silent pauses (+200 ms;  $\kappa = .84$ ), eyebrow movement ( $\kappa = .73$ ), head movement ( $\kappa = .53$ ). Several tiers dedicated to hand gestures (Bressem & Ladewig 2011; Bressem 2021): form ( $\kappa = .75$ ), direction, trajectory, repetition ( $\kappa = .64$ ).
- Proportion tests looking for a relation between these variables and OVER AND OVER expressions.

these are two issues we just talked about OVER AND OVER in the middle of this crisis



Figure 1. Screenshot from an interview with Elizabeth Warren, broadcast 01/04/2020, Late Night with Seth Meyers, KNBC (NBC Owned Television Stations).

## RESULTS

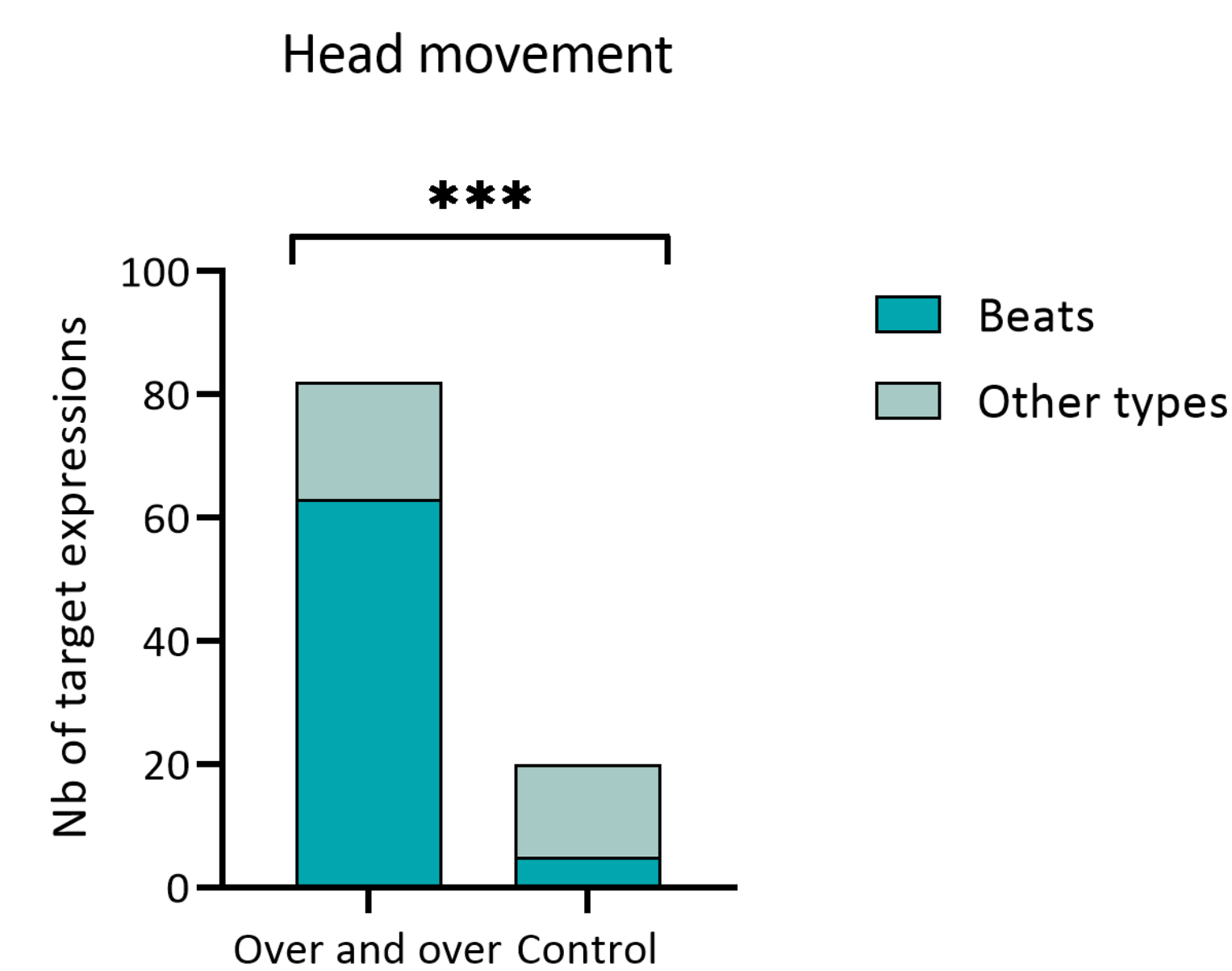


Figure 2. Significant relation between prop. of head beats and OVER AND OVER ( $X^2(1, N = 102) = 19.44, p > .0001$ ). Head beats make up 76.8% of head movement in OVER AND OVER expressions.

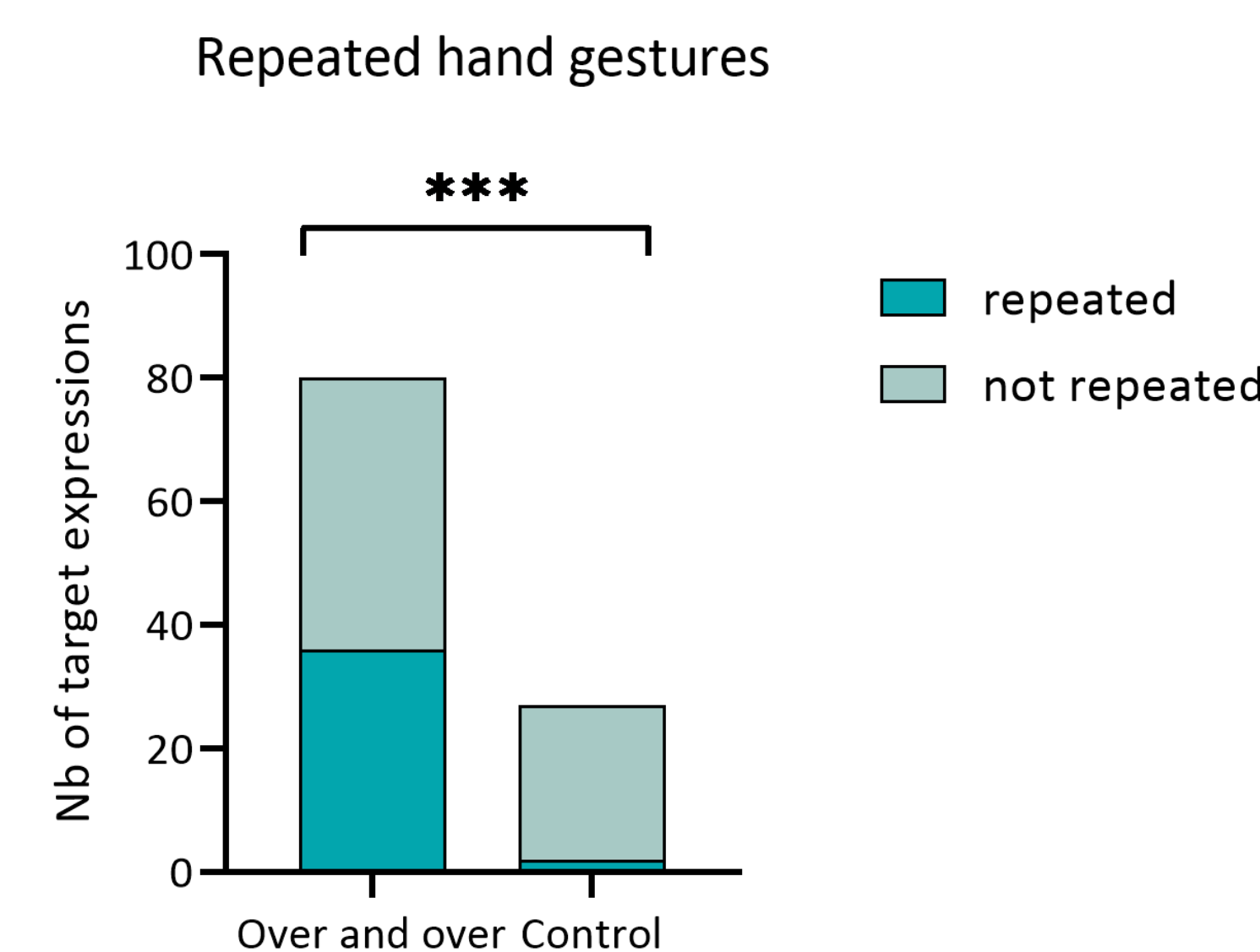


Figure 3. Significant relation between prop. of gesture repetition and OVER AND OVER ( $X^2(1, N = 199) = 15.96, p > .0001$ ). They make up 45% of hand gestures in OVER AND OVER expressions.

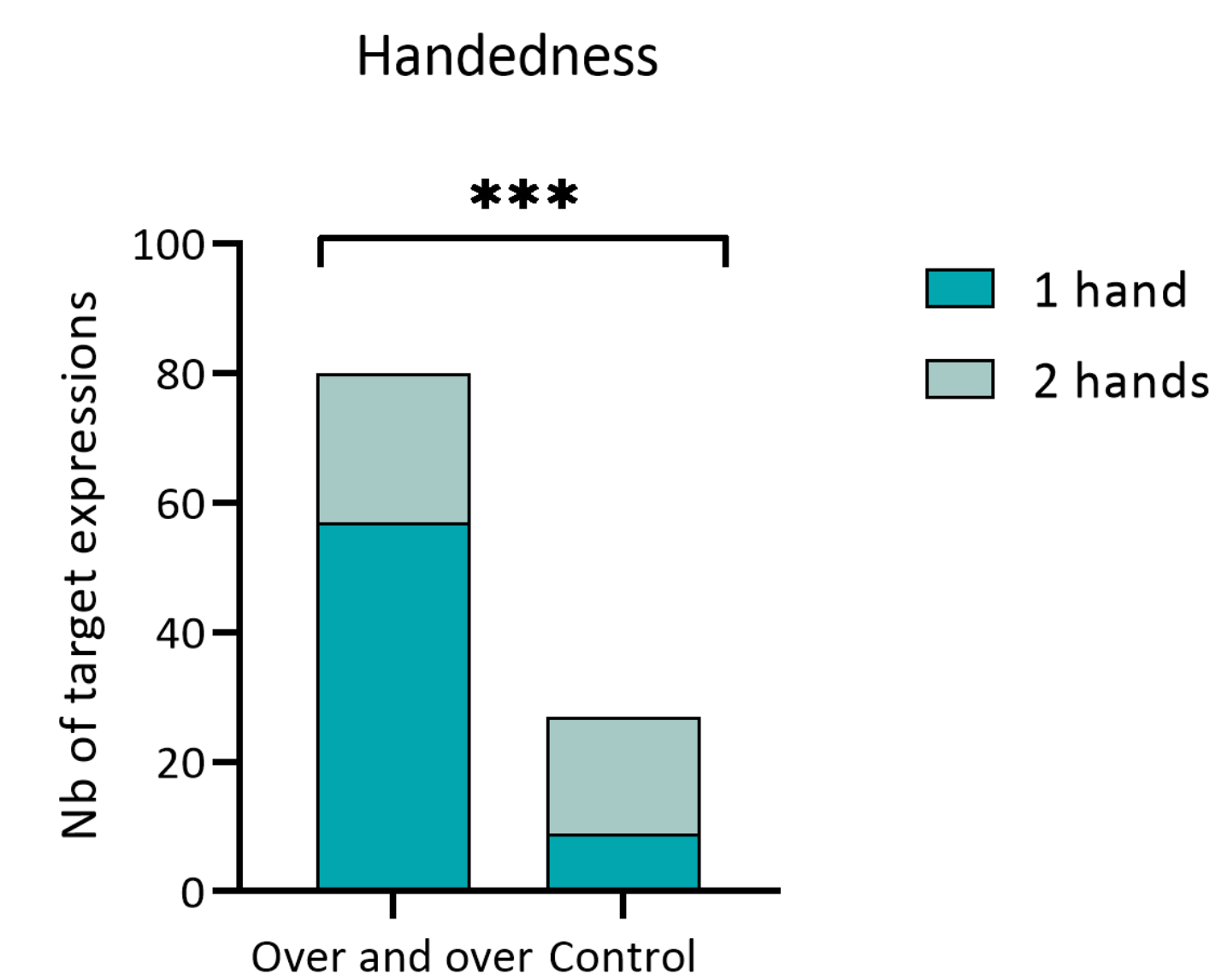


Figure 4. Significant relation between prop. of single-handed gestures and OVER AND OVER ( $X^2(1, N = 107) = 12.28, p = .0005$ ). Gestures are mostly single-handed during OVER AND OVER while they are mostly two-handed during ALL OF A SUDDEN.

The rest of variables tested for a relation with OVER AND OVER expressions are listed below.

hands = proportion of co-occurring gestures	***	68.1% of OAO expressions
eyebrow rises	*	16.4% //
hands = direction = down	***	40.1% of hand gestures in OAO
hands = type = circle	***	42.5% //
hands = type = beats	***	38.8% //
hands = trajectory = vertical; horizontal; oblique	n.s.	46.8; 30.4; 22.8% //
silent pauses	n.s.	19.8% of OAO expressions
separate intonational unit	n.s.	31% //
aspect	***	47.9% // (+ progressive)
tense = past; present	n.s.	31; 69% //
semantic type of process = stative; dynamic	n.s.	48.3; 51.7% //

Table 1. Results of a series of chi-square tests examining the relation between our variables and OVER AND OVER expressions.

## CONCLUSION

OVER AND OVER has recurrent formal features involving eyebrows, head, and hands. To be considered a multimodal construction, the relation between these features and discourse sequences (i.e. contexts of use according to speakers' goals) has to be investigated.

The fact that OVER AND OVER expressions attract more hand gestures than the control group is not linked with the semantic type of processes. However, the relation with semantic categories has yet to be probed, along with potential differences in information structure ("rush-through" vs. emphatic deliveries).

We found a relation between repeated hand gestures and OVER AND OVER. Bressem's (2021) categorization between iteration and reduplication (direction or position) is to be applied. We expect more iterations than reduplications.

The relation between OVER AND OVER and gesture duration remains to be investigated.

After enlarging the data, a series of mixed models (GLMMs) will be used to investigate clusters of gestures on a same expression. They also offer a more ecological treatment of the data.

Scan here for the full list of references and video examples from the dataset.



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