CAPTURING THE INTERACTION BETWEEN QUESTION ORDER EFFECTS AND VISUAL LAYOUT: RESULTS FROM AN ONLINE EXPERIMENT

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Main research question: are question order effects the same on item-by-item and grid formats?
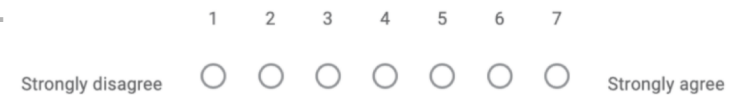
Question order effects

- Earlier items in a questionnaire can affect later responses.
- Priming
- Accessibility hypothesis (Bishop et al., 1982; Tourangeau et al., 1989)
- Interpretative framework
- Standards for later comparisons
- Welfare attitudes have been shown to be sensitive to question order
- Order effects depend on a number of things

BACKGROUND AND THEORY

Item-by-item format vs. grid format

- Grids require more extrinstic cognitive load from the respondents (they look more complex).
- Respondents give more negative ratings to grids.
- When cognitive load is high, respondents are likely to satisfice (Krosnick, 1991)
- Higher intra-item correlations, lower completion time, more straightlining, nondifferentiation and item-nonresponse in grids, especially in large grids
- In contrast, spending more time with a question may indicate deeper cognition – item-by-item format
- However, existing evidence is mixed.

What do these imply on question order effects?

- The manifestation of context effects can be subject to how well the priming question is processed

A deeper cognition in item-by-item formats may lead to stronger priming and question order effects

- BUT, following the interpretive heuristic (Tourangeau et al. 2004) of *near means related,* questions are presented close to each other in a grid format, thus, they may be interpreted as conceptually related.

Respondents may still be influenced by earlier questions in grid formats, but due to spatial proximity

THE CURRENT STUDY

- **Welfare attitudes** – questions from the ESS round 8
- Target item (E10): *To what extent you agree or disagree that social benefits and services in Hungary* **prevent widespread poverty?**
- Priming item (E13): *To what extent do you agree or disagree that social benefits and services in Hungary* **make people lazy?**
- Intervening item (E9): *To what do you agree or disagree that social benefits and services in Hungary* **place too great a strain on the economy?**

	Group1 (ESS - control)	Group2	Group3	Group4	Group5	Group6
Question order treatment	E13 after E10	E13 after E10	E13 before E10	E13 before E10	E13 before E9	E13 before E9
Visual Treatment	Grid	Item-by-item	Grid	Item-by-item	Grid	Item-by-item
N	200	180	180	180	180	180

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Expectations:
- Placing E13 before E10 will shift responses in a negative way.
- This effect will weaken or diminish if E9 intervenes.
- We expect similar order effects on both visual formats (explorative).

DATA

- Non-probability based online panel (opt-in)
- Quota sample
- Survey experiment
- 1100 respondents
- December 2018
- In both formats, scales (1–5) were presented vertically
- Fully-labelled
- Grids contained six items, and were not adapted to the device of completion.
- The same matrix appeared on every type of device, therefore scrolling was required in small screen sizes.

RESULTS

Dunnett's-tests on mean differences
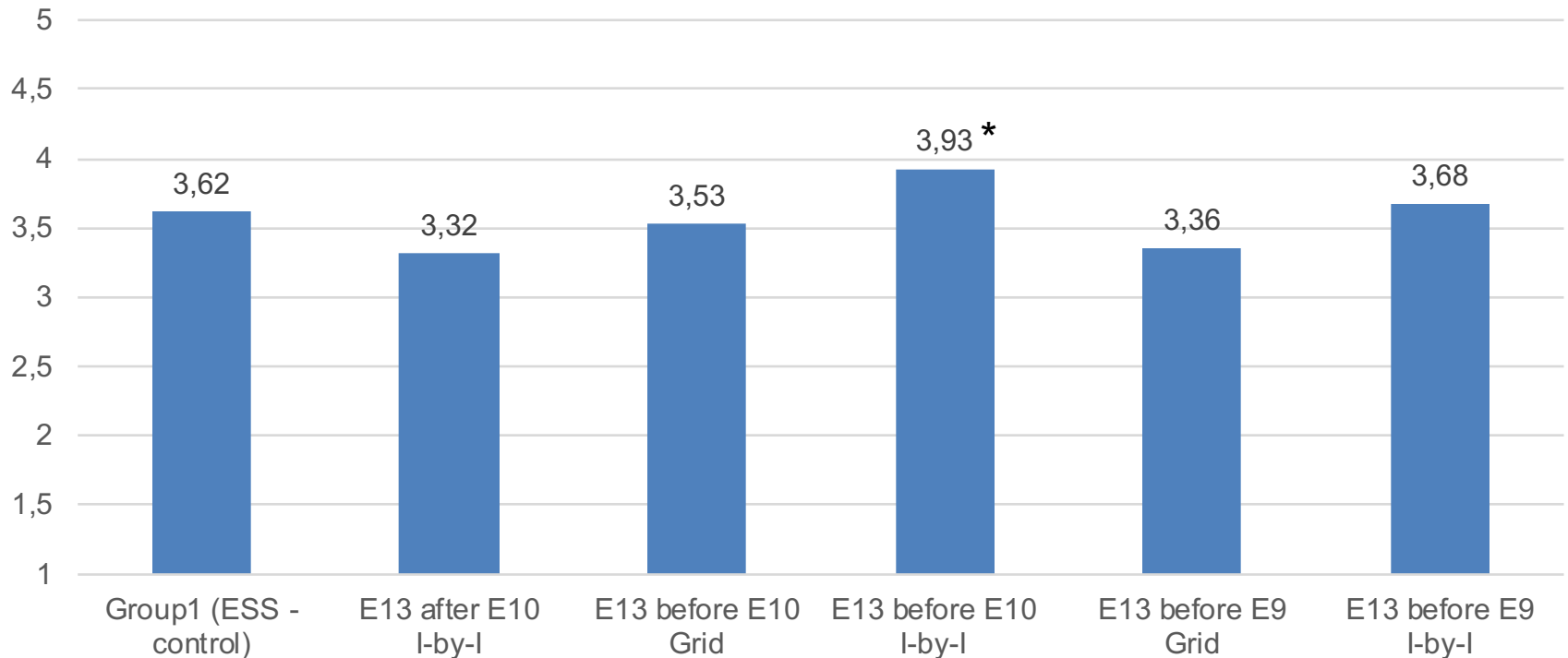
P values are based on Dunnett's tests comparing treatment groups to the control group,
*p < .05; **p < .01; ***p < .001.

RESULTS

OLS on E10

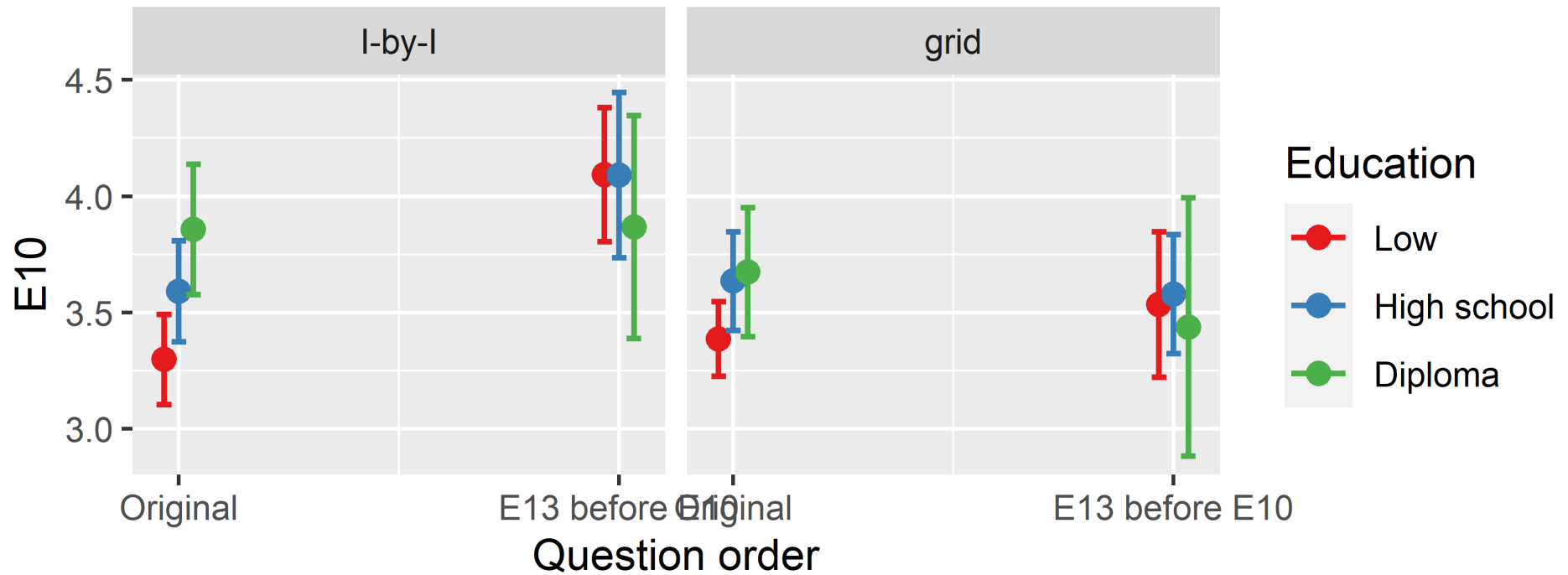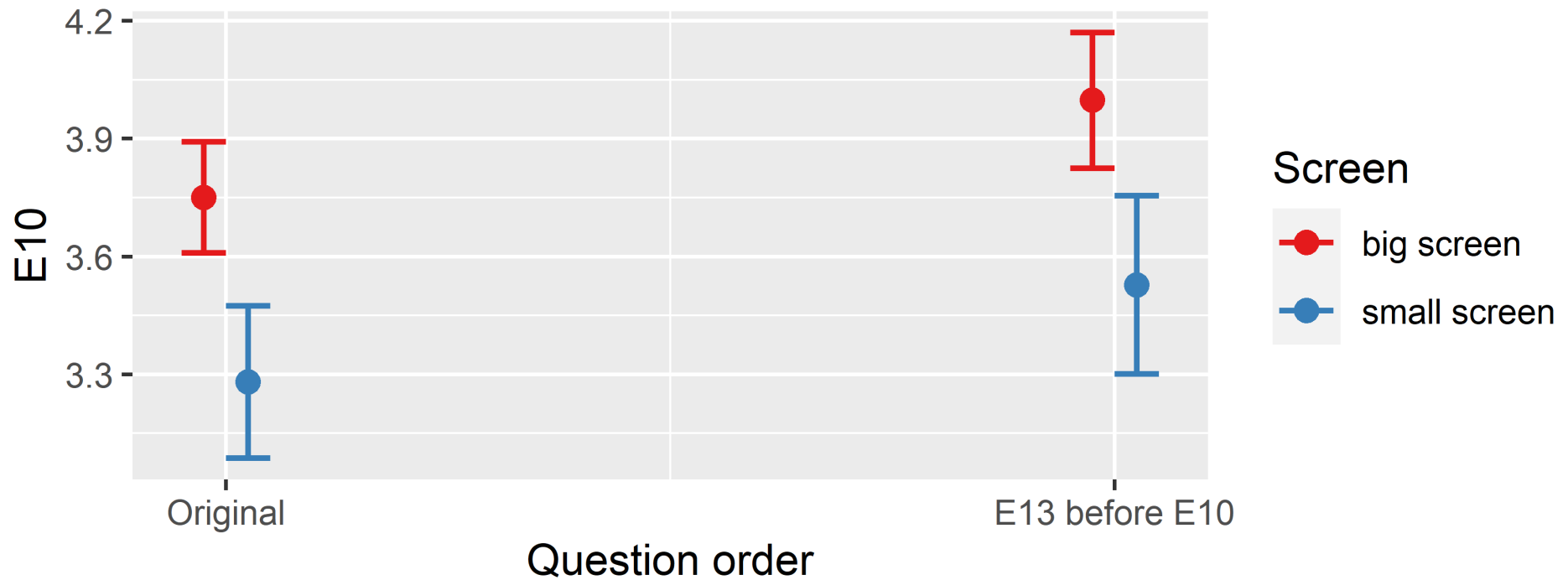|	Est.	2.5%	97.5%	*p*
(Intercept)	4.73	4.13	5.32	0.00
E13 before E10	0.55	0.31	0.79	0.00
Grid format	0.01	-0.16	0.18	0.89
Gender	-0.17	-0.33	-0.02	0.03
Age	-0.01	-0.01	0.00	0.09
Education	0.14	0.04	0.25	0.01
Settlement size	-0.03	-0.14	0.08	0.59
Political interest	-0.12	-0.19	-0.06	0.00
Fill length	-0.01	-0.02	-0.00	0.00
Big screen	-0.24	-0.40	-0.07	0.00
Big Five Cons.	0.05	-0.02	0.13	0.15
E13 before E10*Grid format	-0.53	-0.86	-0.21	0.00
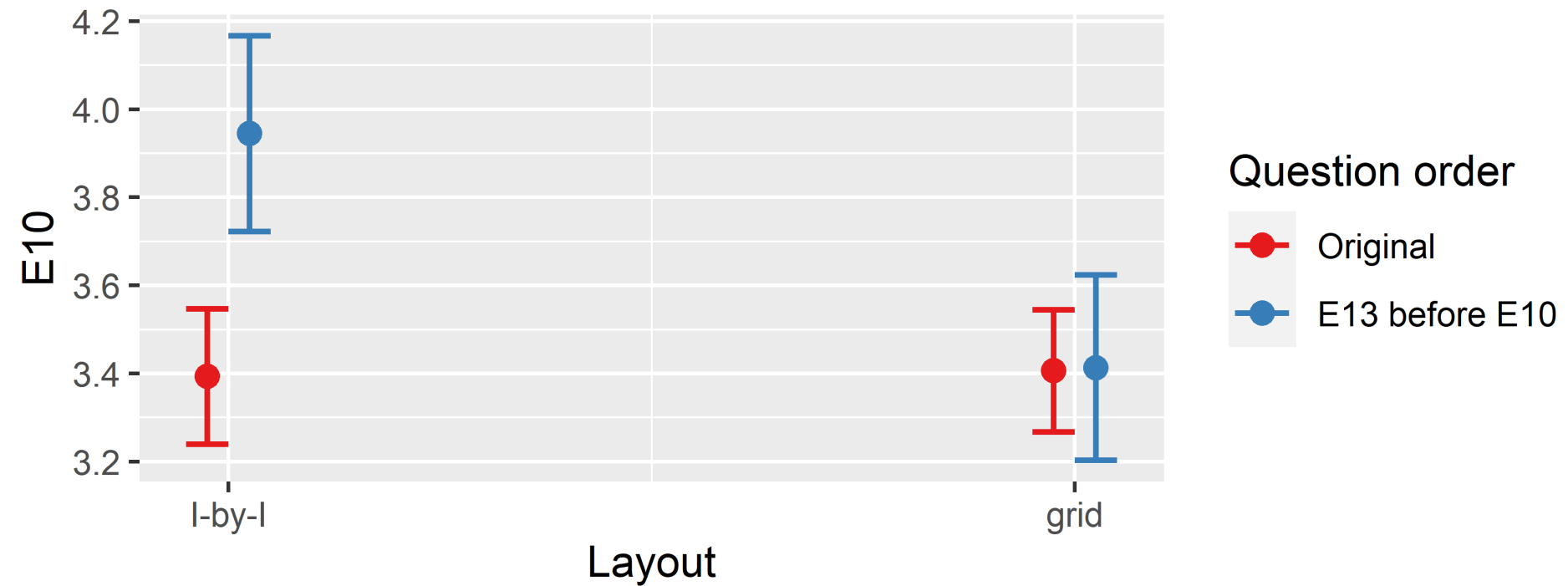
OLS on E10

OLS on E10

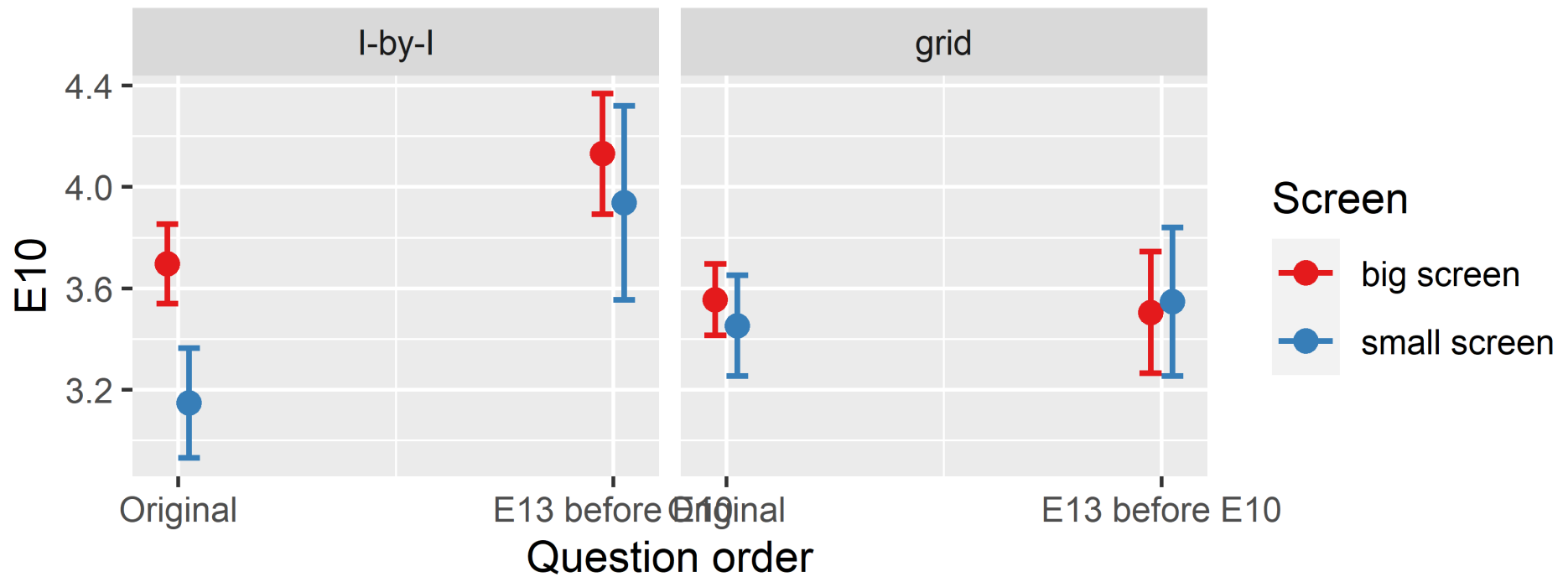# RESULTS

OLS on E10

RESULTS

OLS on E10

OLS on E10

RESULTS

- Item-nonresponse was higher on grids and when question order was manipulated
- But, no differences in terms of intra-item correlation or straightlining.

CONCLUSIONS

- Question order does matter when measuring welfare attitudes.
- Item-by-item formats are more sensitive to question order.
- A trade-off?
- Further research is needed to understand the underlying mechanisms.
- Use the two formats simultaneously with caution!

THANK YOU FOR YOUR ATTENTION!

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