Multisensory Olfactory Training: A New Treatment for Long-Term Olfactory Loss Post-COVID-19

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INTRODUCTION

❖ 30-60% of COVID-19 cases end up with olfactory loss/dysfunction.
❖ Olfactory loss affects our social, mental and survival abilities.
❖ Olfactory training is the most promising method.

OBJECTIVES/HYPOTHESES

Objective: The purpose of this study is to test a new multi-sensory olfactory training alongside the already existing classical olfactory training with new stimuli.

Hypotheses:
1. There is a significant increase in UPSIT scores in both groups.
2. There is a significant decrease in QOD scores in both groups.
3. There is a significant increase in self-evaluation scores in both groups.

IMAGES
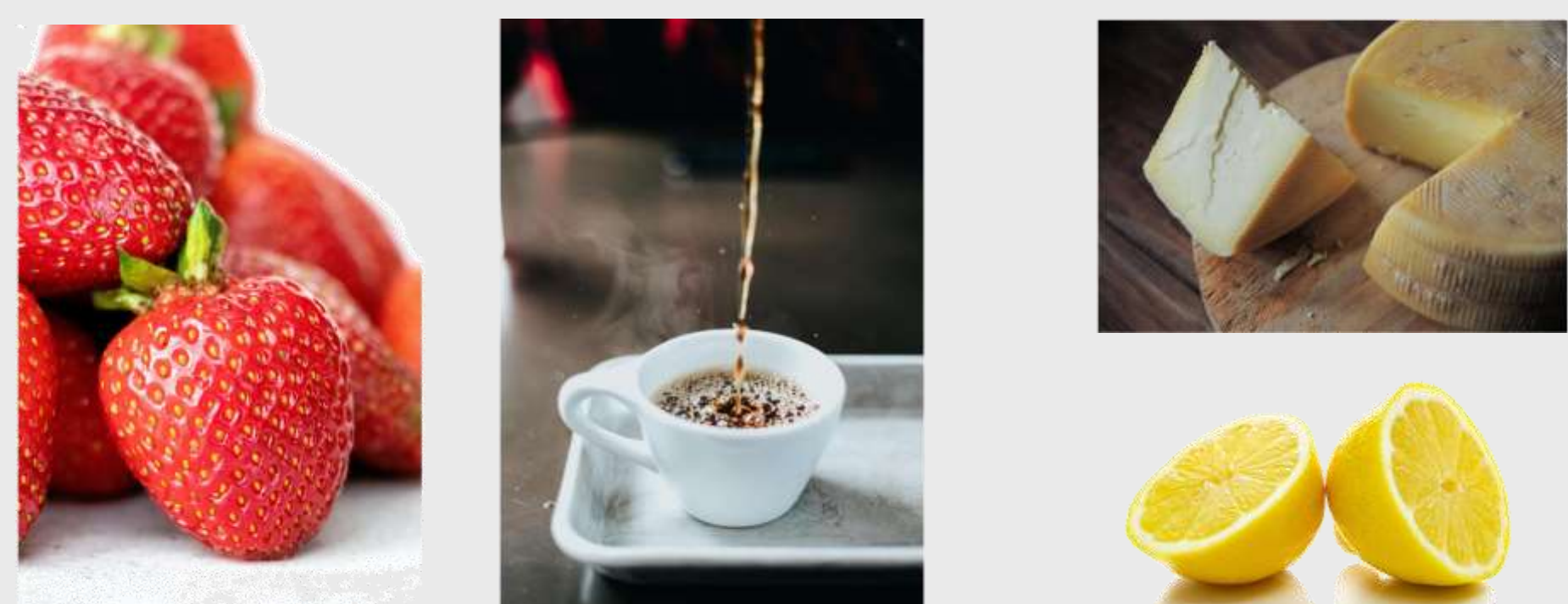
MATERIALS & METHODS

Participants:
❖ Classical Olfactory Training Group (COT): 20 participants (15 women, 5 men)
❖ Multi-sensory Olfactory Training Group (MOT): 16 participants (11 women, 5 men)

Measurements:
❖ UPSIT (University of Pennsylvania Smell Identification Test)
❖ QOD (Questionnaire for Olfactory Dysfunctions)
❖ Self-evaluation

OLFACTORY TRAINING

Classical Olfactory Training:
❖ Twice a day sniffing-only the bottles
❖ 4 different bottles with odours (strawberry, cheese, coffee, lemon)

Multi-sensory Olfactory Training:
❖ Twice a day droplets at the back of throat
❖ 4 different bottles with flavours (sweet-sucrose strawberry, salty-sodium chloride cheese, bitter-Sucrose Octaacetate-coffee, sour-citric acid lemon)
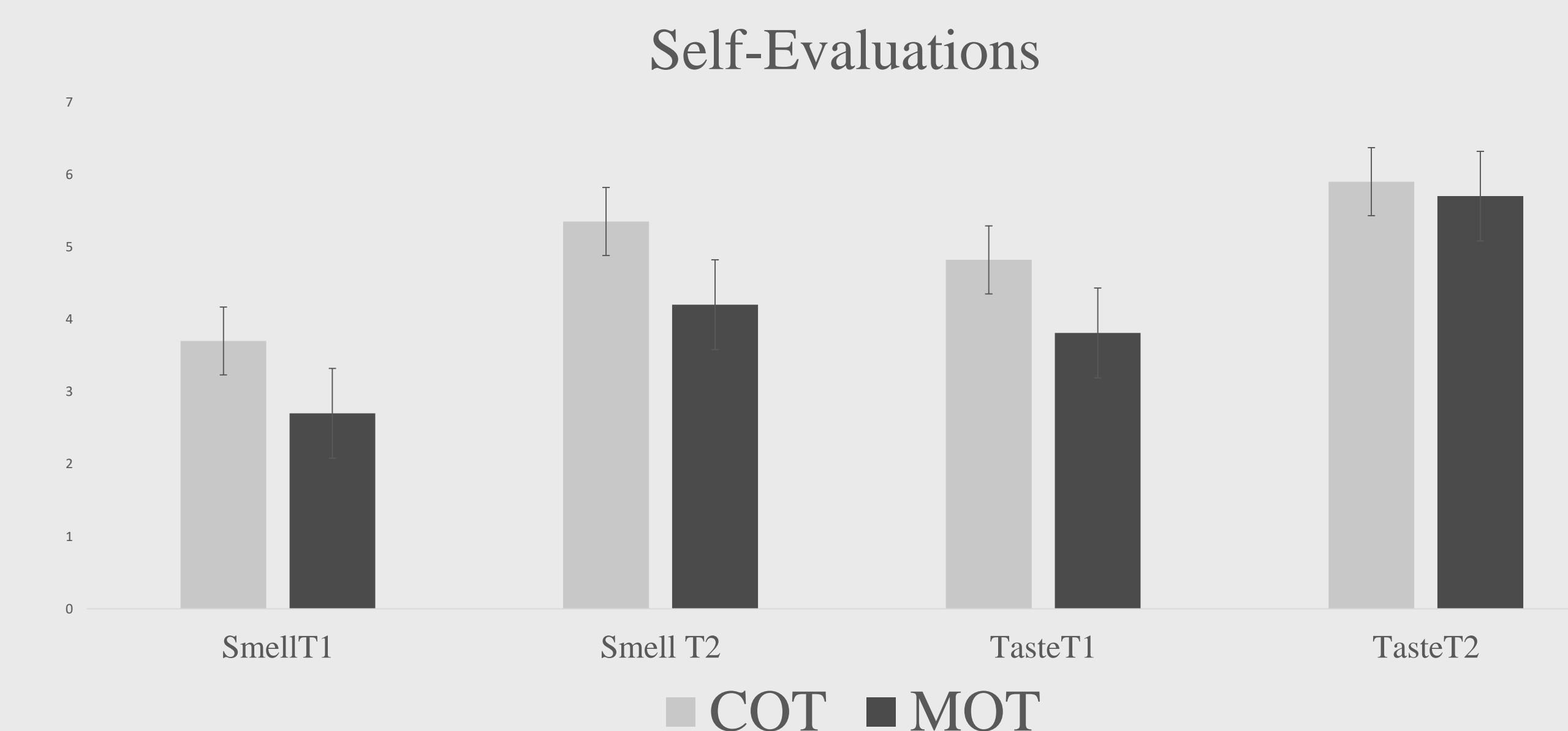
12 weeks of self-administration for both groups.

RESULTS

❖ There is a significant effect of time on both groups, $F(1, 34) = 18.7$, $p<.001$, Wilk's $\Lambda = .645$, partial $\eta2 = .35$.

UPSIT Scores
COT   MOT
■ T1 ■ T2
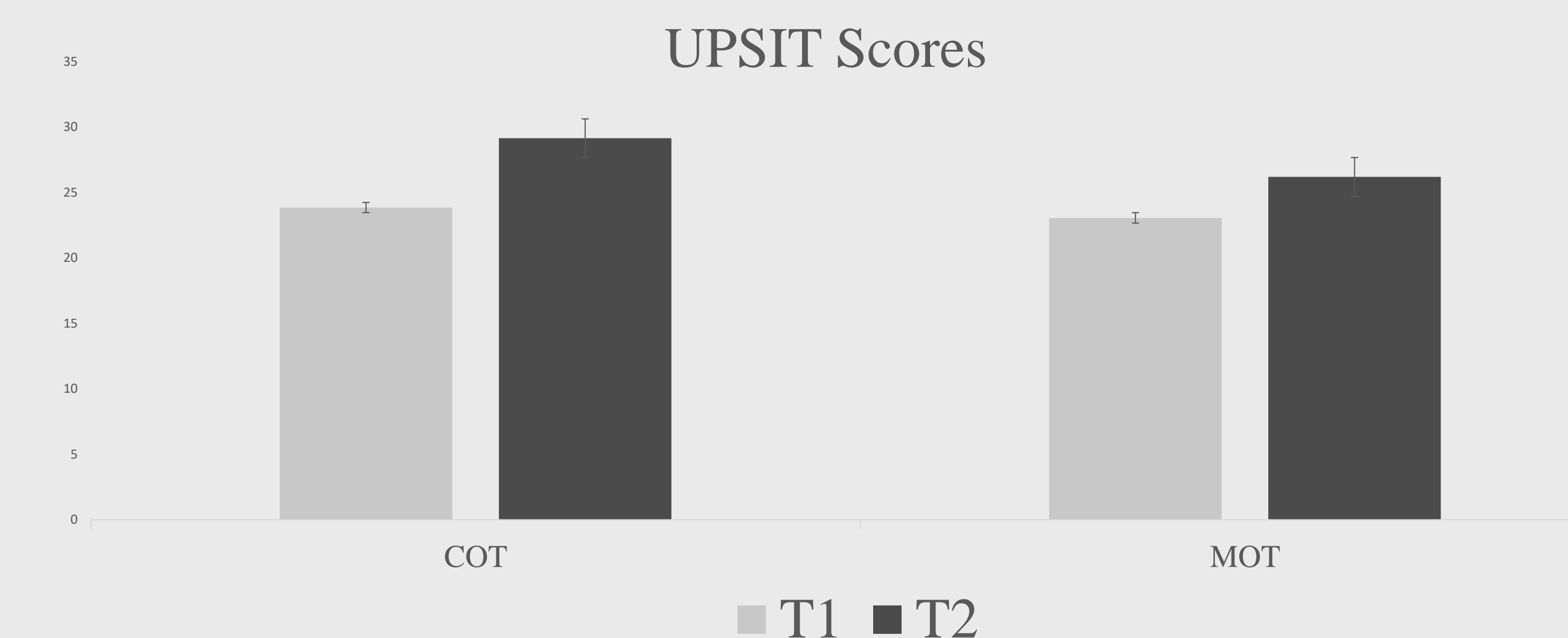
❖ There is a significant effect of time on both smell and taste self-evaluations on both groups $F(1, 34) = 18.7$, $p<.001$, Wilk's $\Lambda = .45$, partial $\eta2 = .55$.

Self-Evaluations
SmellT1   Smell T2   TasteT1   TasteT2
■ COT ■ MOT

❖ There is no significant effect of time on QOD scores in both groups.

CONCLUSIONS

❖ First multi-sensory olfactory training with gustation & vision combined.
❖ Multi-sensory training works.
❖ Sex ratio between men and women is big.
❖ We might need stronger solutions rather than natural such as in Sniffin' Sticks.

REFERENCES & ACKNOWLEDGEMENT

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