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The Next Mobile Office: Safe and Productive Work in Automated Vehicles

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Gesture and Voice Commands to Interact With AR Windshield Display in Automated Vehicle: A Remote Elicitation Study

Problem: We don't know how people expect to interact with AR windshield display of automated vehicles in the future.

Research Questions:

1. How do drivers *expect* to use gestures and voice commands to interact with windshield displays?
2. How do drivers *prefer* to interact with windshield displays of automated vehicles?

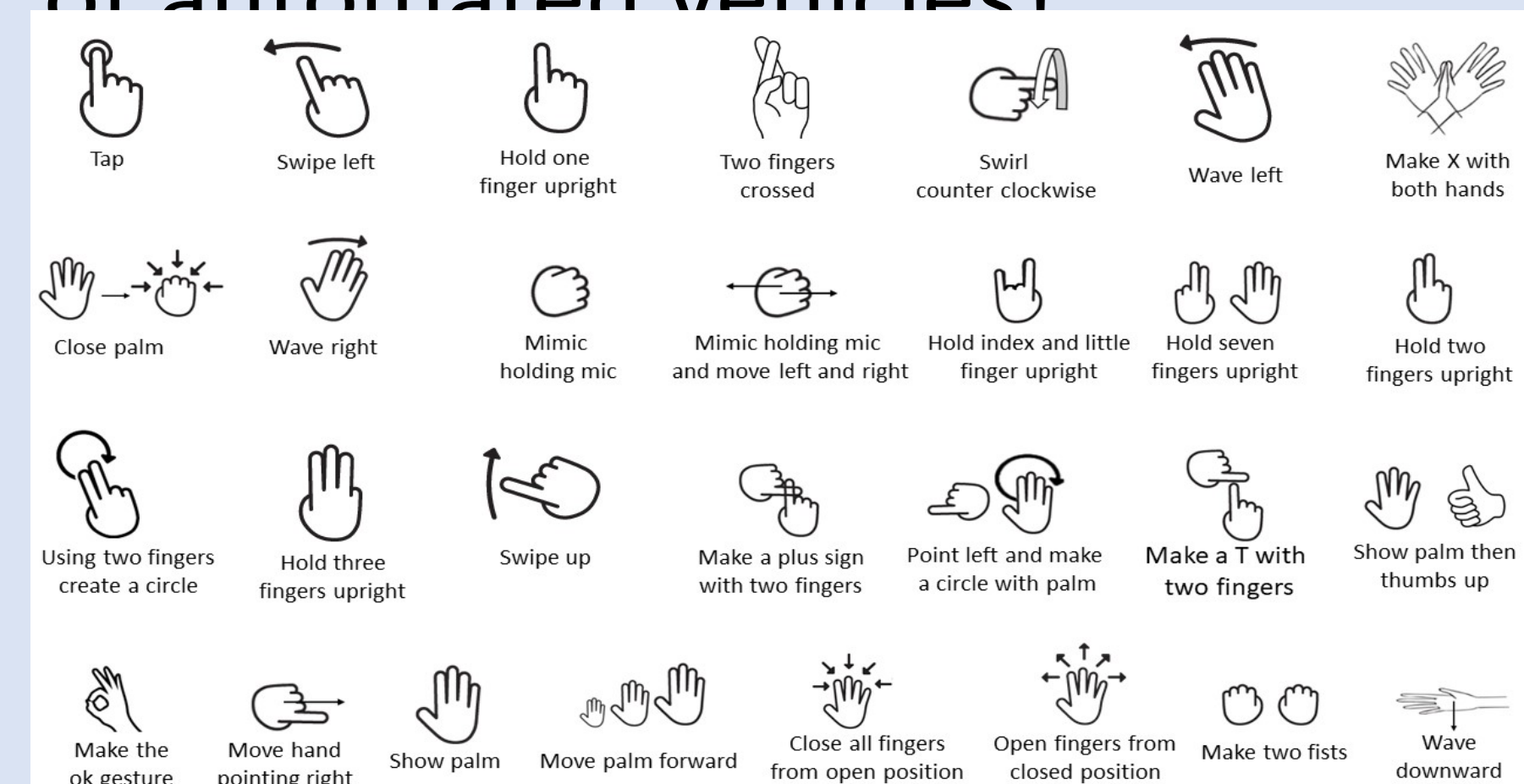


Figure: Popular gestures proposed by the participants.

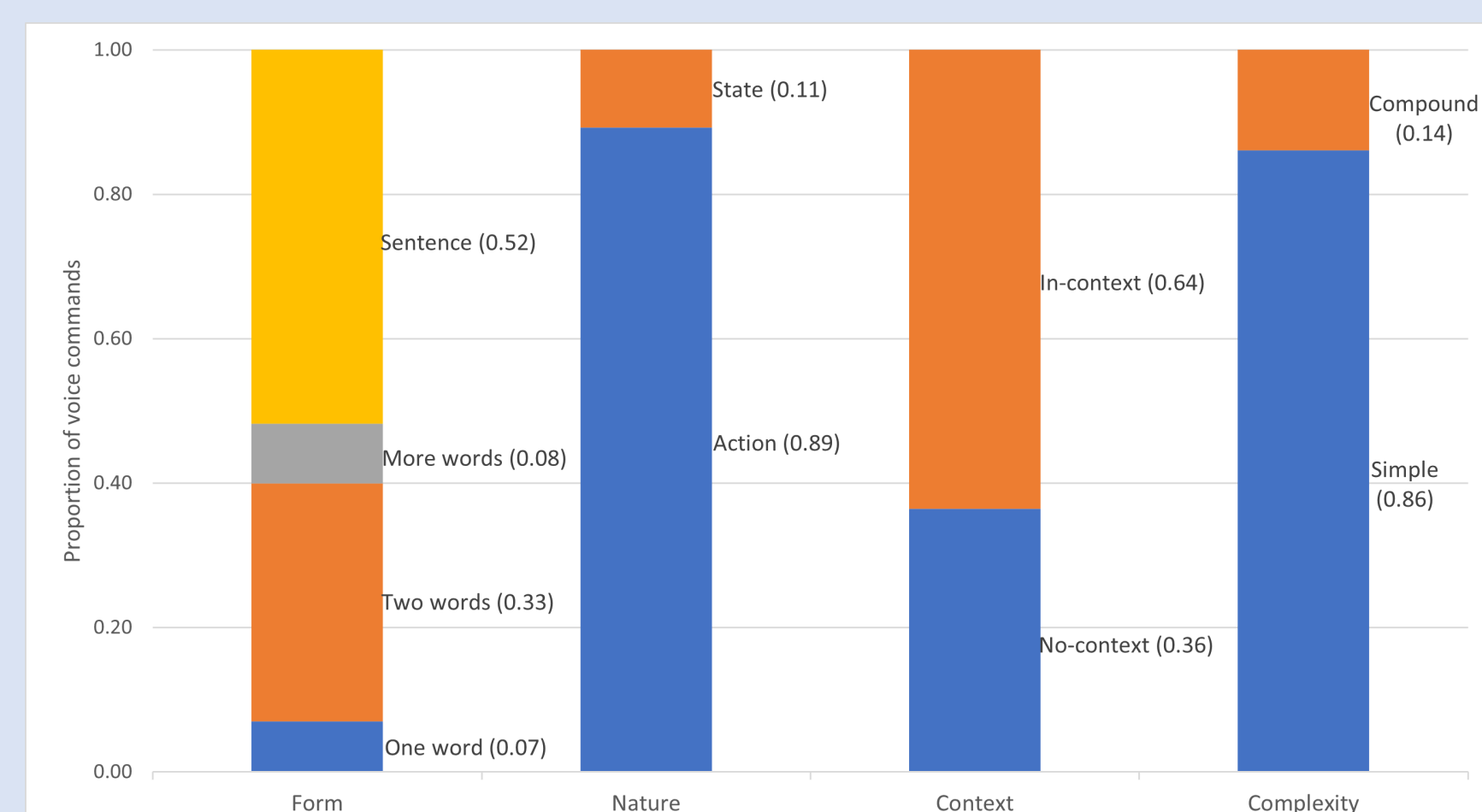


Figure: Percentage of voice commands in each category along four dimensions

"I need to respond to this" – Contributions to group creativity in remote meetings with distractions

Problem: There is limited research on the effect of remote meetings on group performance.

Research Questions:

1. How do groups perform in creativity tasks during remote meetings?
2. What are the effects on individual and group performance when one individual is frequently interrupted?

Method: Groups of 4 individuals participated in creativity tasks. One member of the group was also engaged in a secondary task.

Findings:

1. Distracted participants seemed to contribute less than other members of the group.
2. Preliminary evidence suggests that even while engaged in non-meeting tasks, people can give meaningful contributions to a creativity task.

Virtual Nature Experiences and Mindfulness Practices while Working from Home during COVID-19: Effects on Stress, Focus, and Creativity

Problem: Working remotely during COVID-19 pandemic can negatively affect stress, focus, creativity of the workers.

Research questions:

How do daily virtual nature experience and mindfulness practice effect stress, focus, and creativity of remote workers over an extended period?

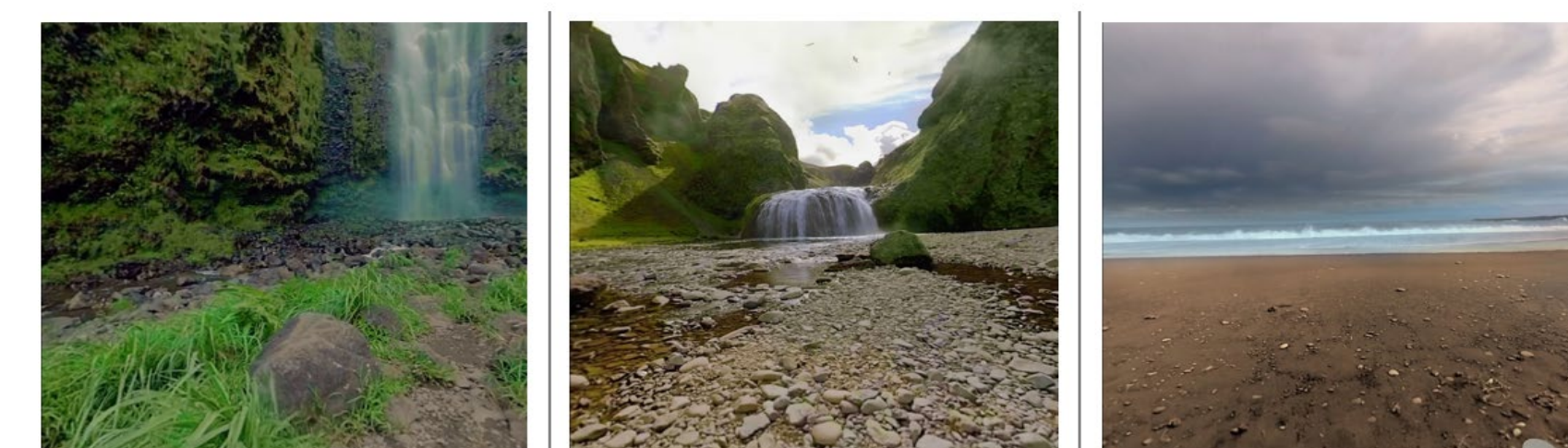


Figure: Nature scenes experienced by participants using virtual reality headsets.

Findings:

1. VR nature experience improved stress but no significant improvement when mindfulness practice was added
2. VR nature experience improved focus but no significant improvement when mindfulness practice was added
3. Interventions had mixed effects on different aspects of creativity (Convergent and divergent thinking).

Multitasking while Driving: A Time Use Study of Commuting Knowledge Workers to Assess Current and Future Uses

Goal: To understand how future automated vehicles can support the work and wellbeing of knowledge workers.

Method:

We conducted an online time-use study in which 616 knowledge workers participated.

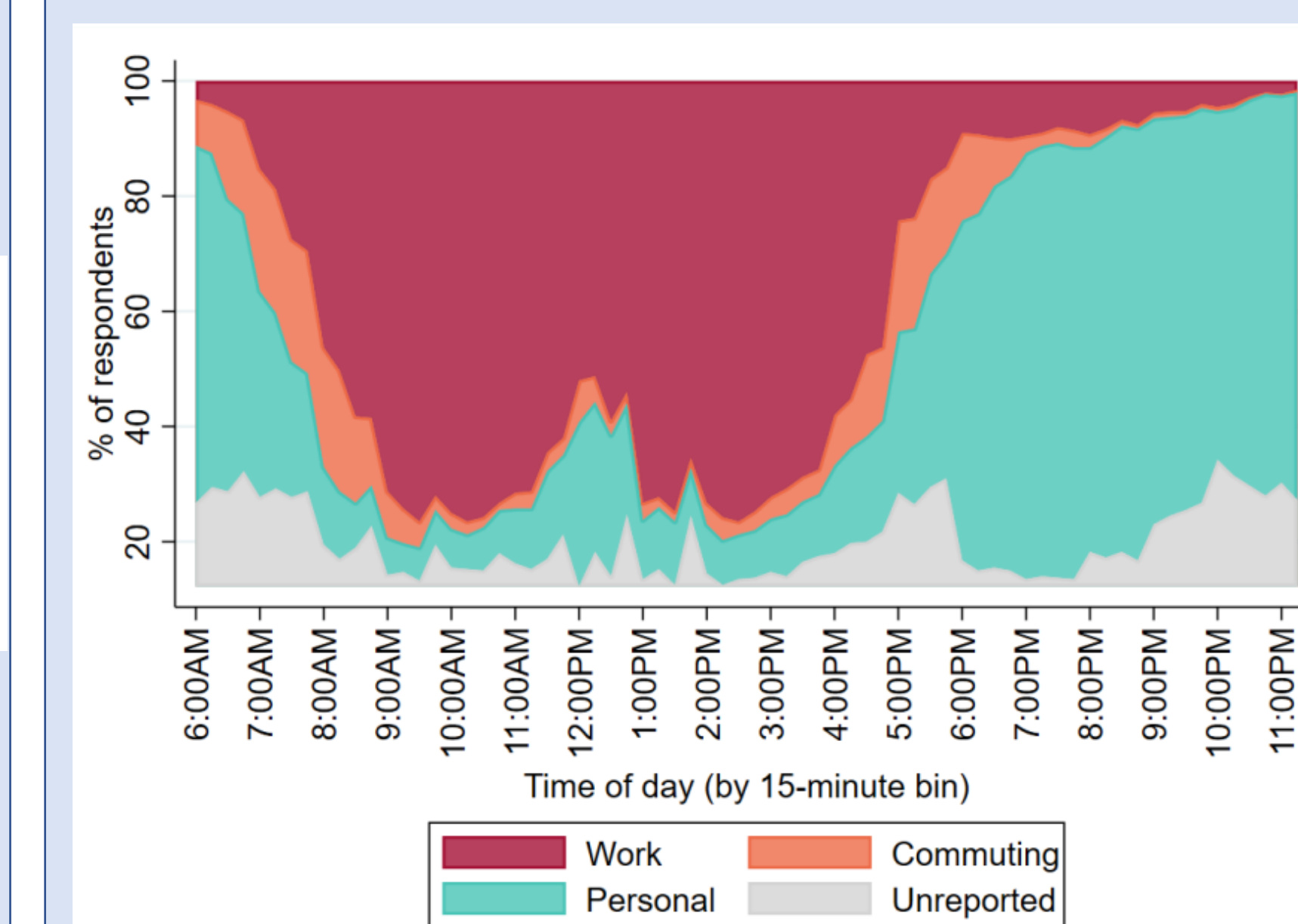


Figure: Time-Use of 400 knowledge workers who commute by driving a car.

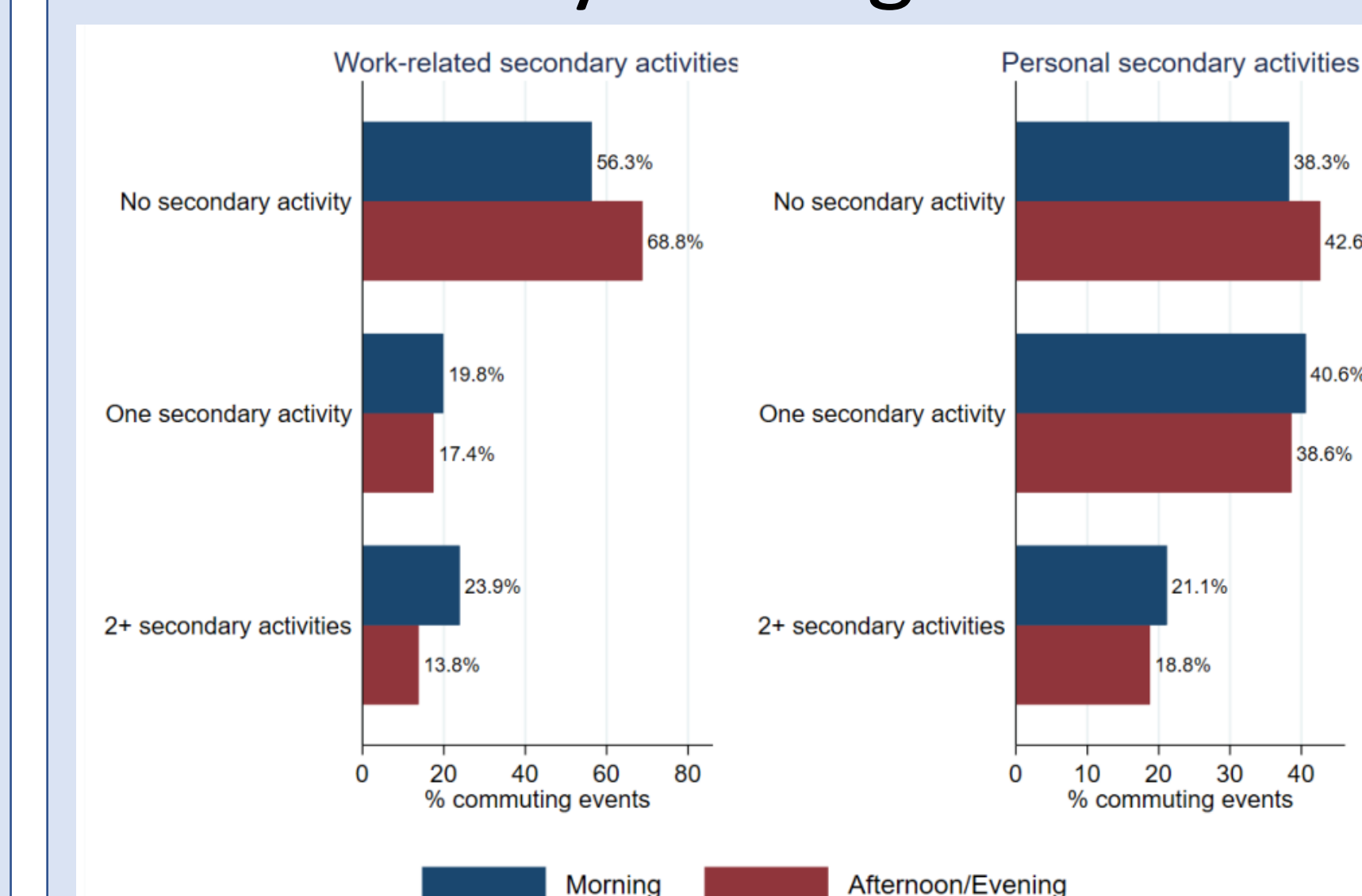


Figure: Share of commuting events by intensity of work-related multitasking behavior.

How does working from home during COVID-19 affect what managers do? Evidence from time-Use studies

Goal: To understand how managers used their time while working from home.

Method:

We analyzed pre-pandemic and post-pandemic data from an online time-use survey with data on 1,192 knowledge workers.

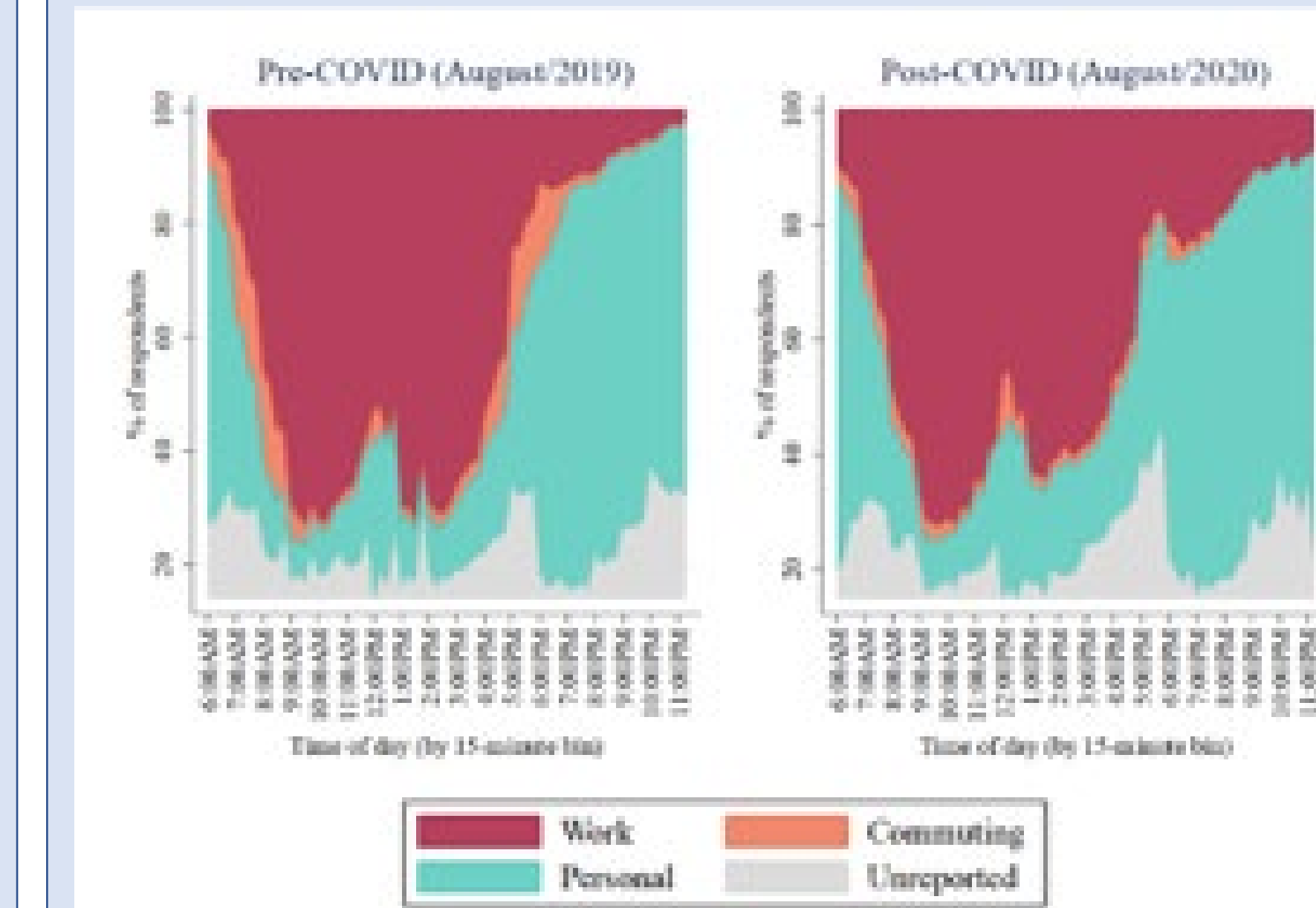


Figure: Time-Use Map: share of respondents commuting, working, engaging in personal activities, or with unreported activities by time of day.

Findings:

The transition to working from home due to the pandemic caused a drastic reduction in commuting time for managers, but also an increase in time spent in work rather than on personal activities.