

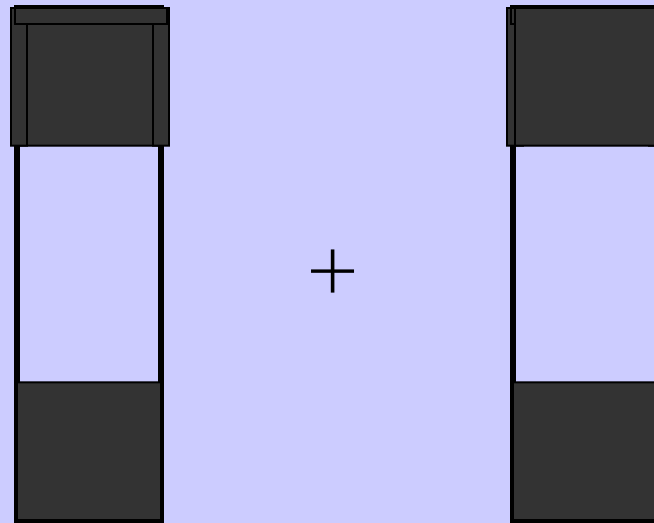
Attentional Cueing, Attentional Focusing, and Object-Based versus Space-Based Selection

**Morris Goldsmith and Menahem Yeari
University of Haifa**

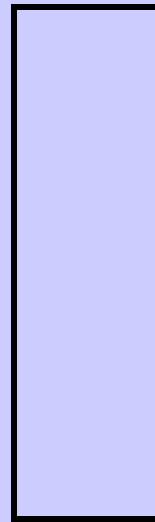
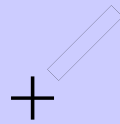
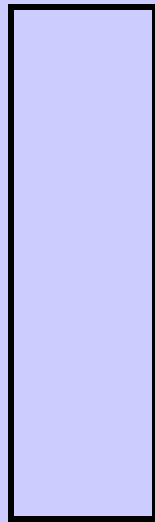
Two Models of Attention Allocation

- **What is the nature of the unit that attention selects?**
- **Space-Based Model:**
 - **attention selects unparsed regions of space.**
- **Object-Based Model :**
 - **attention is allocated to objects that are defined by uniform connectedness (Palmer & Rock, 1994) and Gestalt grouping, rather than to unparsed regions of space.**

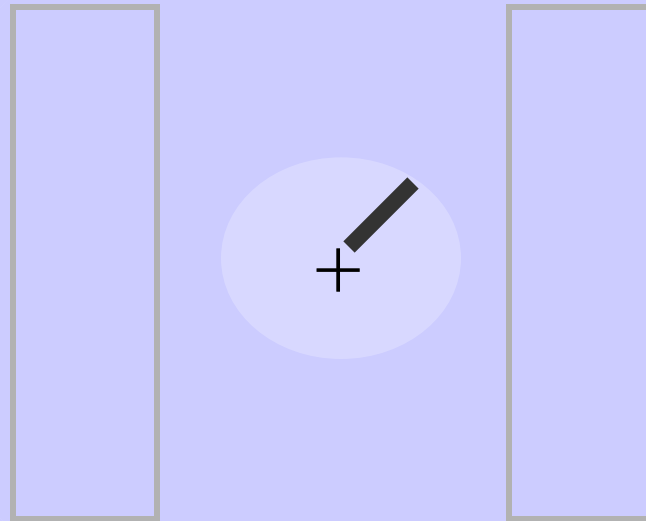
Egly's et al. (1997) Paradigm - Combination of The Two Model's Paradigm

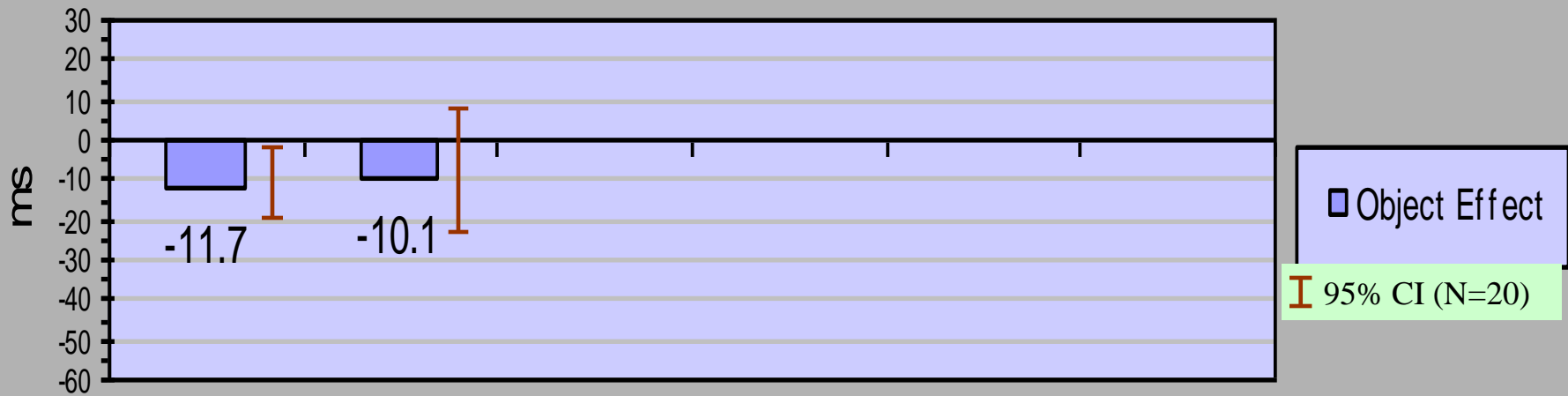
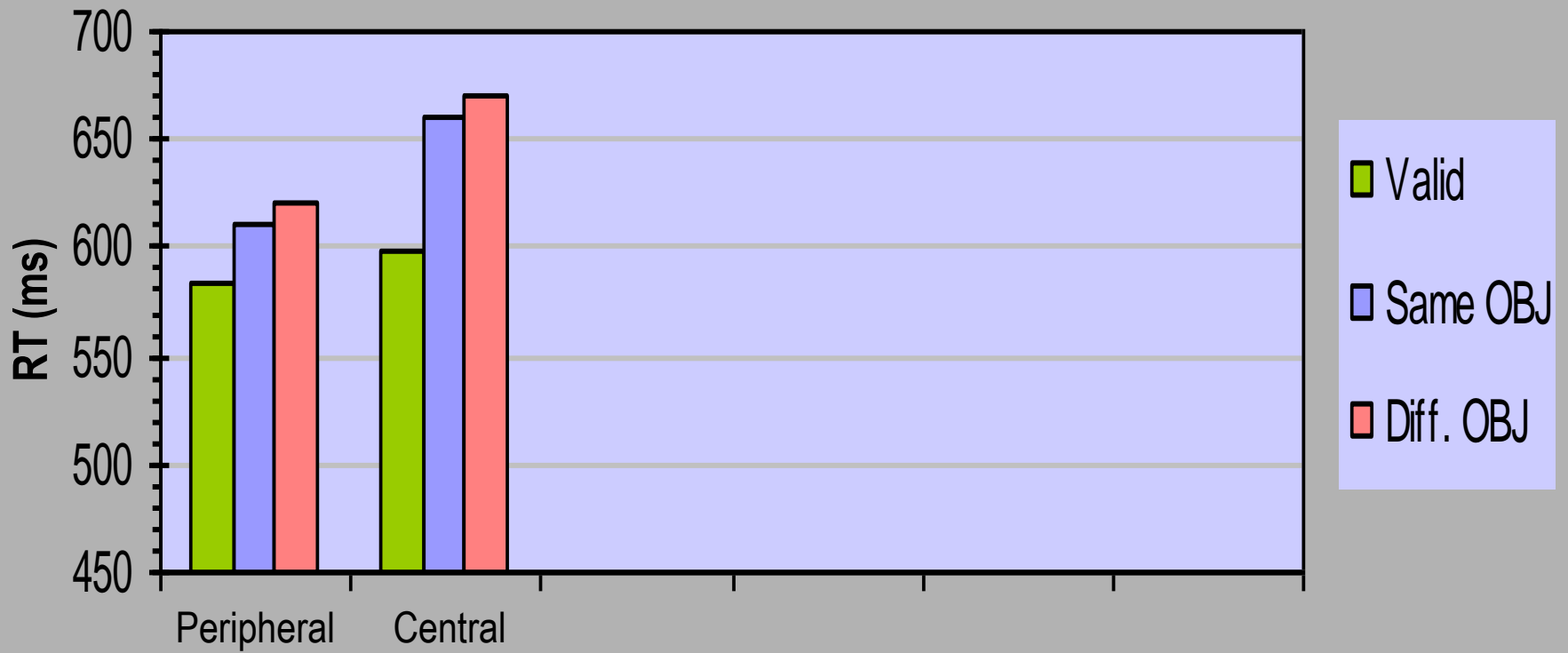


Macqistan's (1997) Adaptation



FOCUS CONFOUND

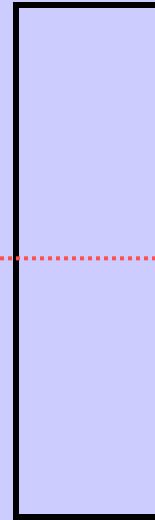
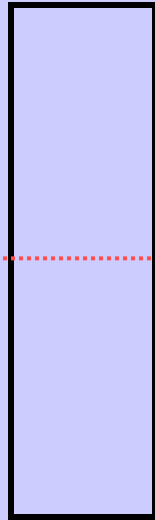




Auditory Digit Cue

1

2



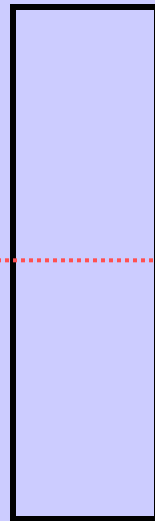
4

3



Auditory Tone Cue

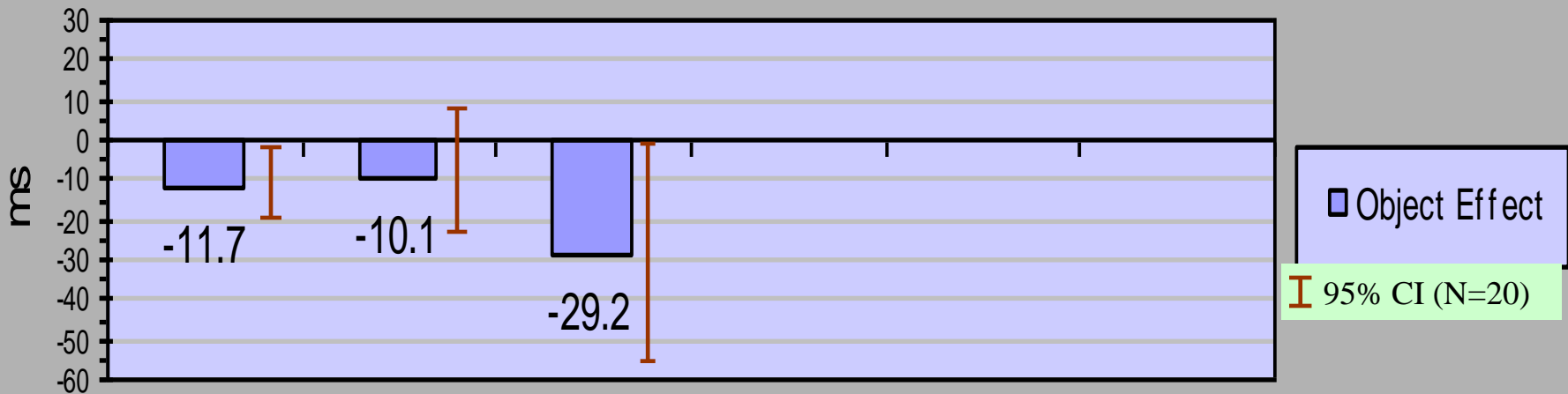
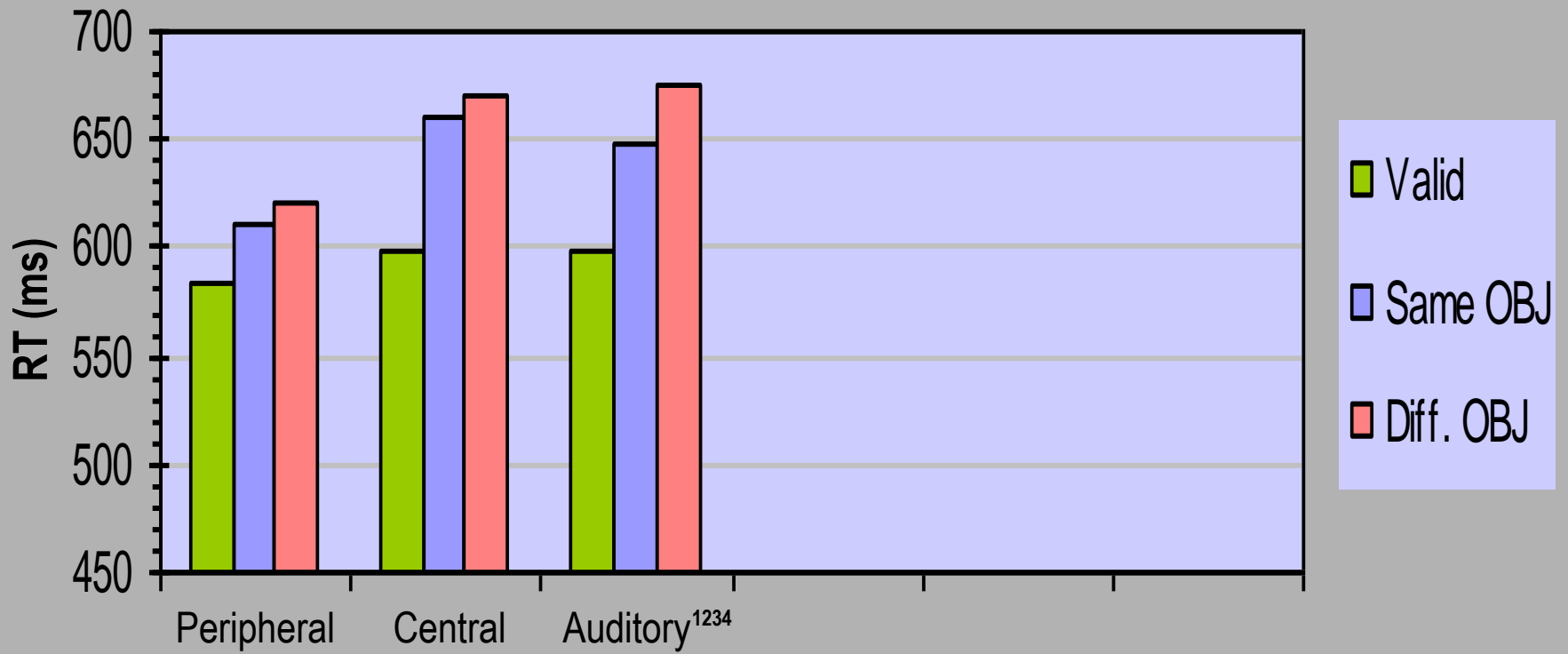
High pitch
presented to
the left ear

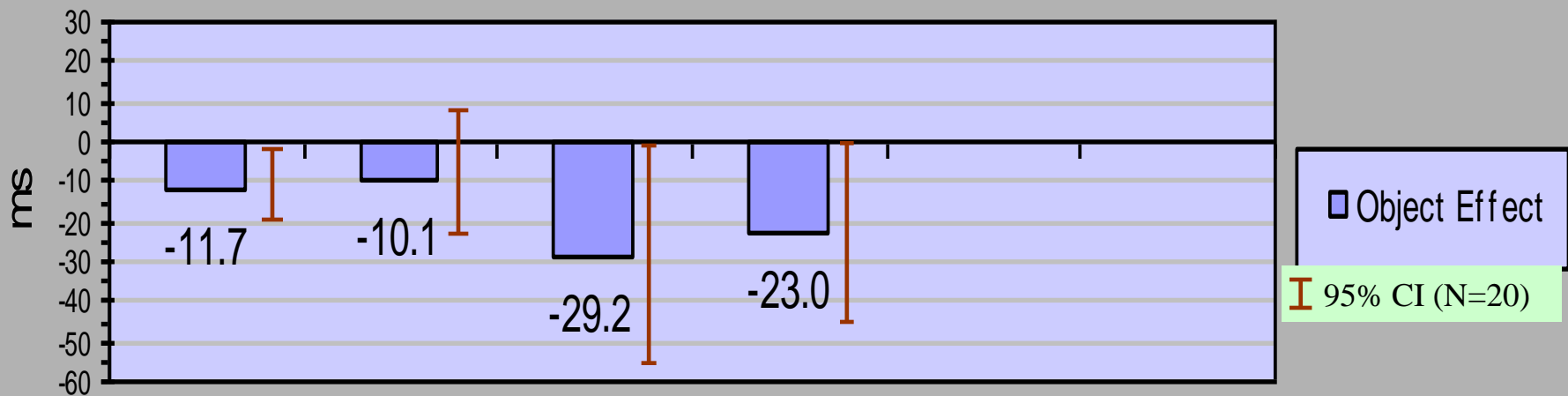
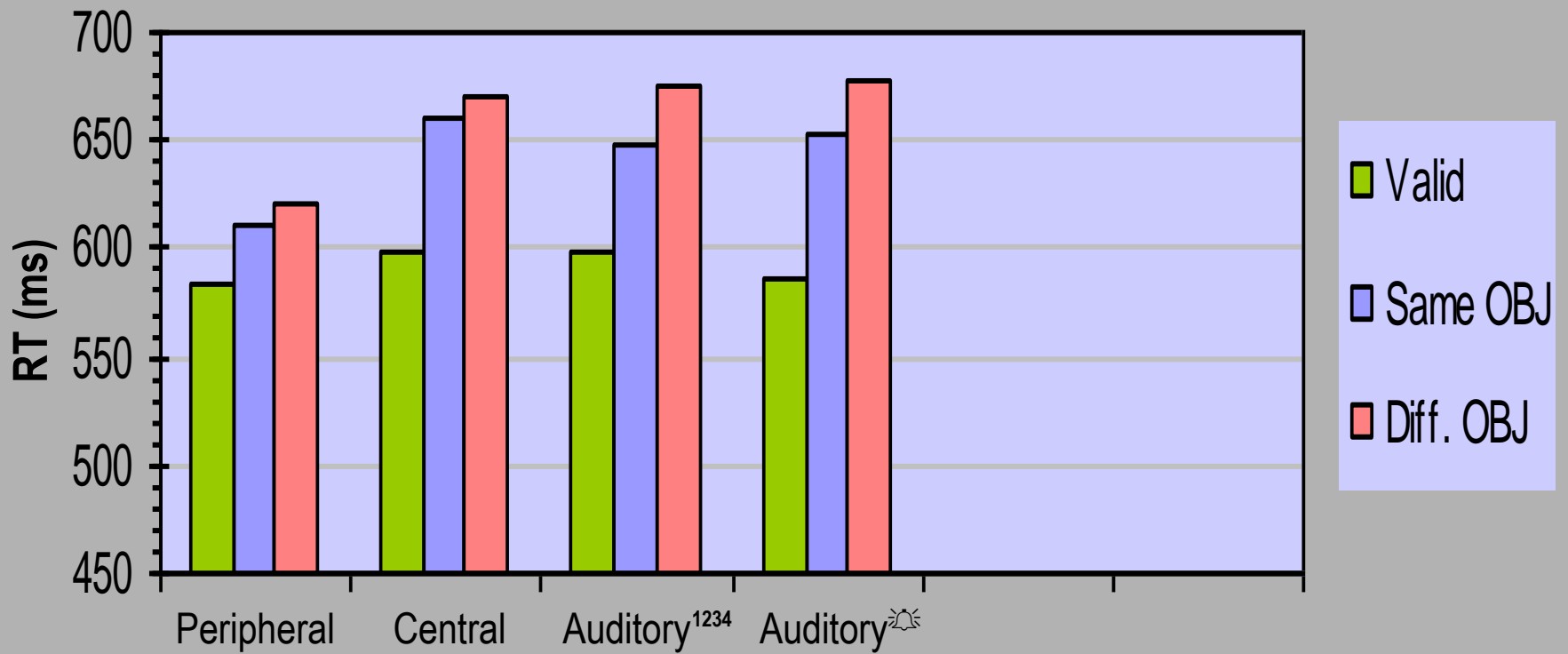


High pitch
presented to
the right ear

Low pitch
presented to
the left ear

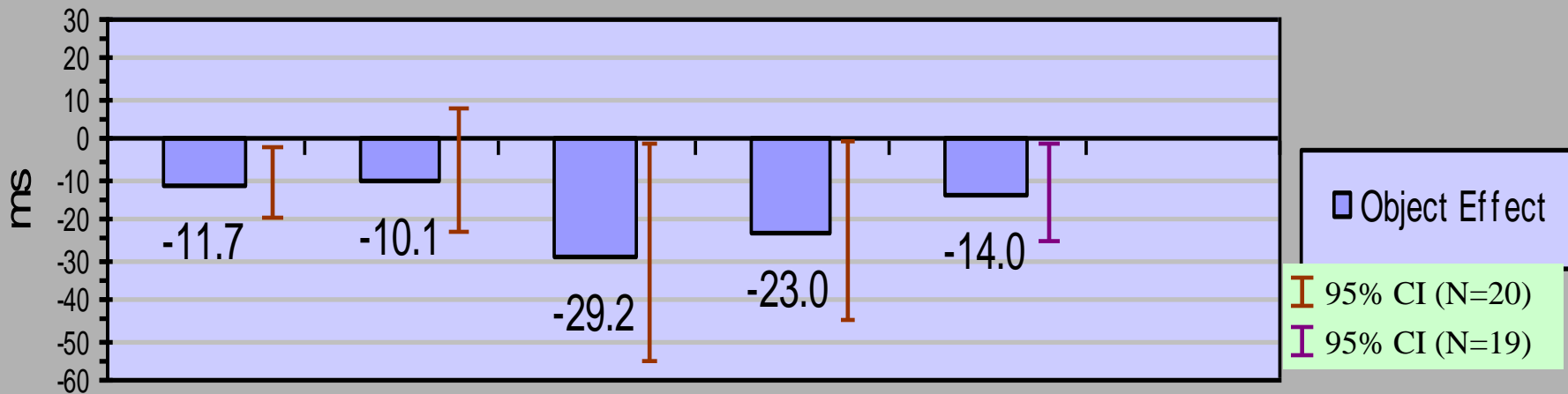
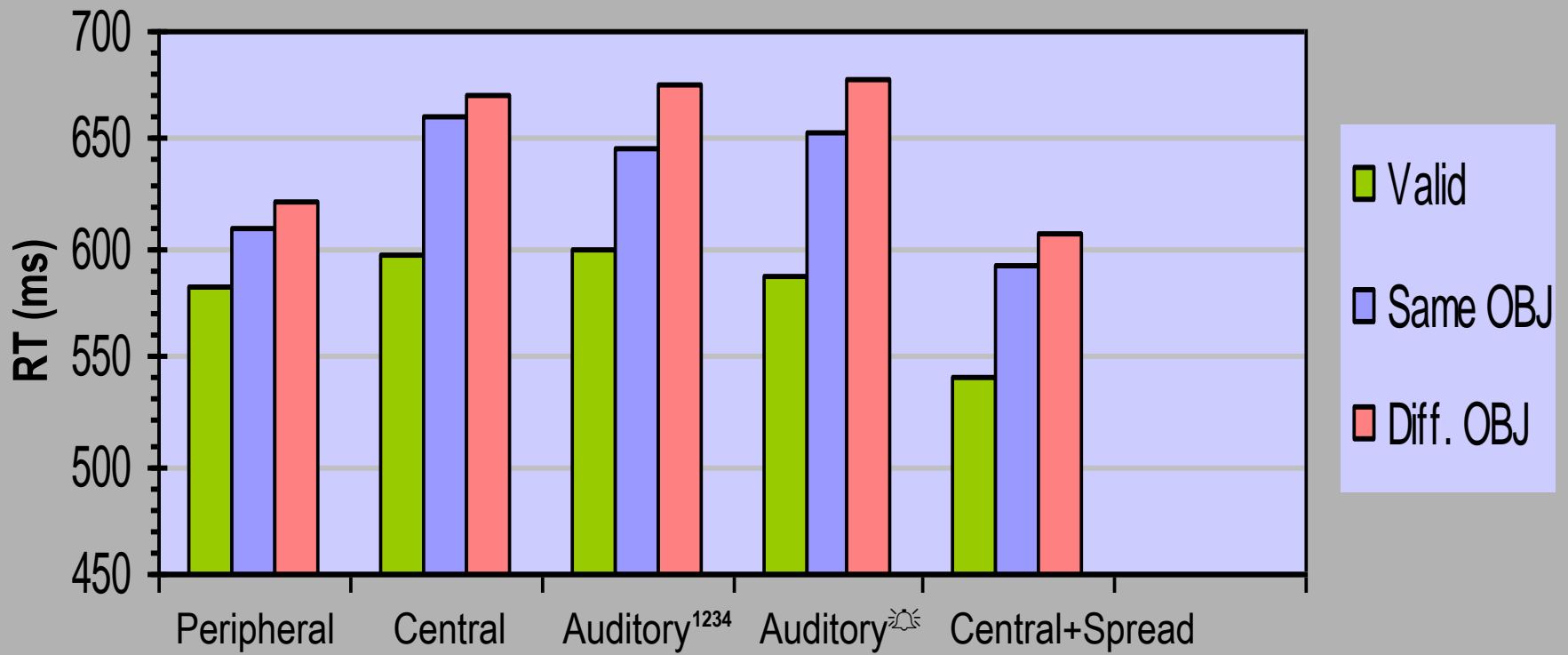
Low pitch
presented to
the right ear



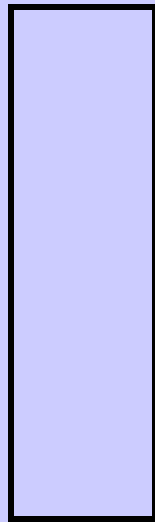


Central Cue with Spread Attention Instructions

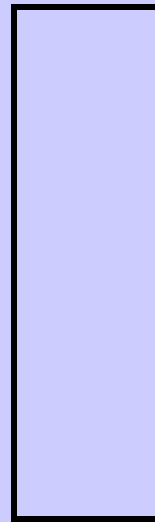
- **Try to spread your gaze across the surfaces of the two rectangles (because that is where the target will eventually appear).**
- **Of course you should take advantage of the arrow cue, but try to pick up the direction of the cue without moving your gaze or concentration to the arrow itself.**
- **Concentrate on the surfaces of the rectangles continuously until the target appears.**

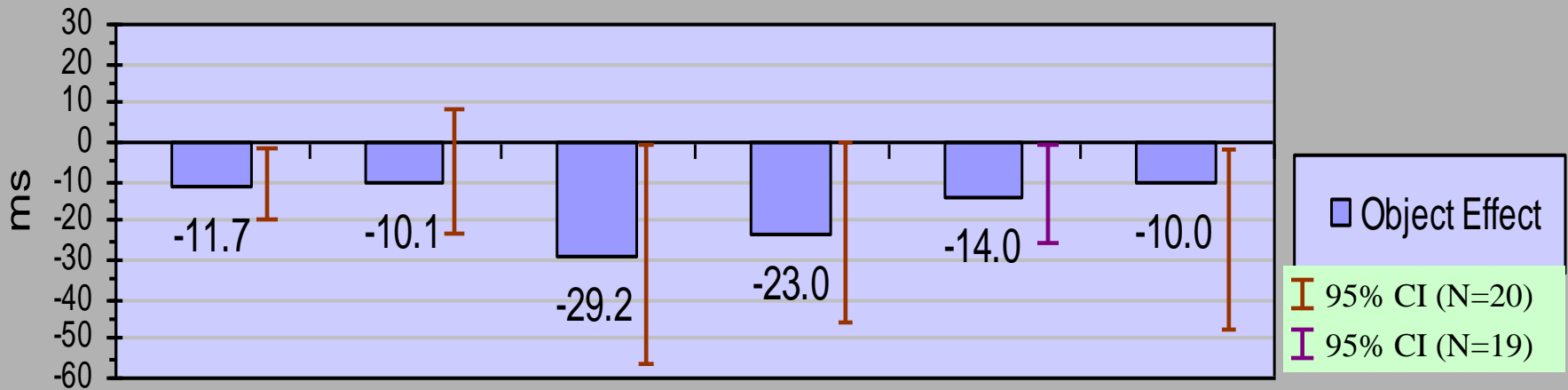
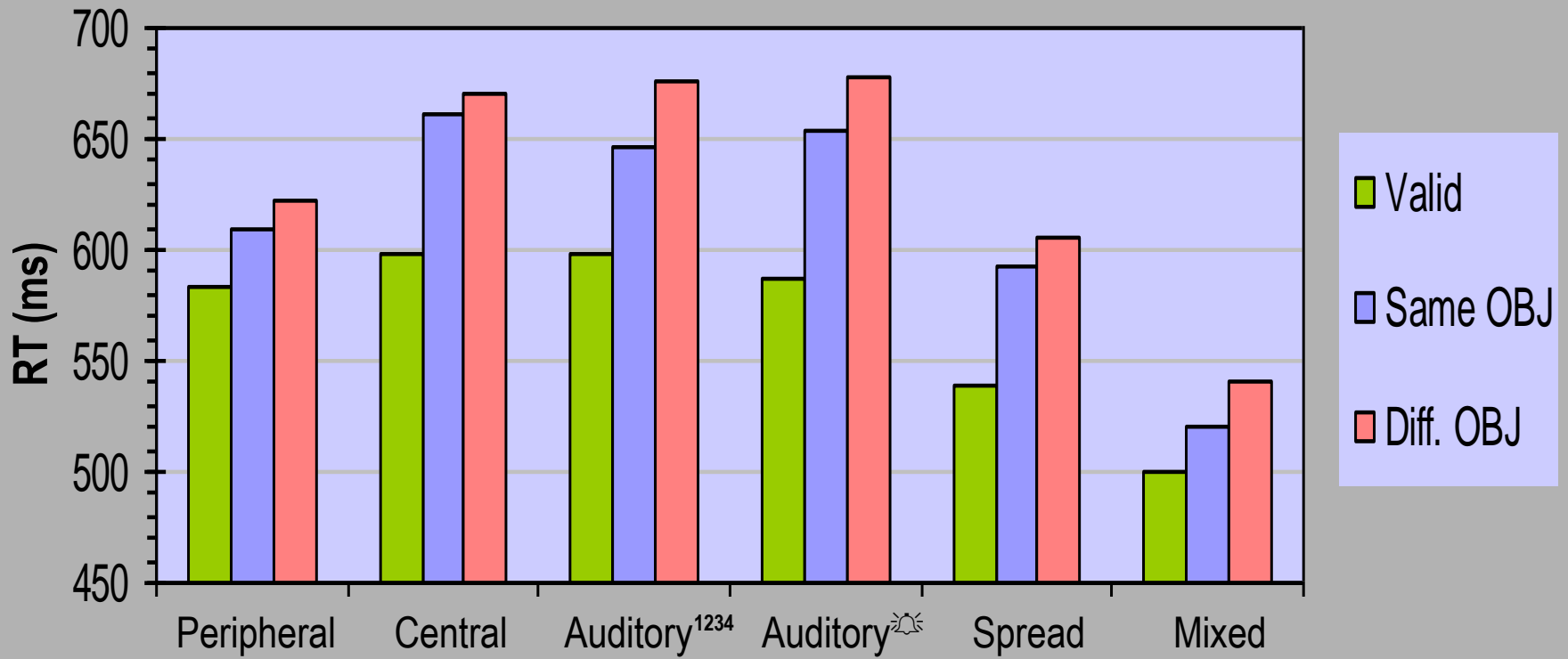


Mixed Trials



+





Conclusions

- **Initial focus of attention is a critical variable modulating object-based effects under endogenous cueing.**
- **It does not appear that endogenous orienting is inherently space-based.**