**Debrief Summary:**

The question we are trying to answer is whether or not there is a significant difference in behavioral performance and localized EEG activity between when the background noise is scrambled or unscrambled.

Whenever we listen to sound around us, our ears are picking up everything, whether that is surrounding conversations, the A/C running, or footsteps from another room. Our ears, like a microphone, pick up everything they can, and it is up to our brains to filter that sound and prioritize certain sounds over others so that we are able to *focus* on one sound.

Let’s say you are trying to focus on one sound, but some other sound is taking over because you got distracted by it. This is called “masking” (like putting a mask over the target sound). When you are able to actually focus on whichever sound you wanted to, this is called masking release. Whatever sound is trying to distract you can vary, and the characteristics of that distracting sound itself can change how your brain processes it. We want to look at various background noises according to their intelligibility (can you tell what they’re saying, like the askljclakd versus real words). We think that the EEG signal associated with the start of color words changes between high intelligibility and low intelligibility masking sounds. The reason we are studying this, in addition to understanding how it works, is that there are great implications for hearing aid users, where auditory processing is supplemented by machinery, and masking release is difficult.