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**Predicting Meaning: What the Brain tells us about
the Architecture of Language Comprehension
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It is well established that we draw upon our real-world knowledge to predict upcoming events and even individual words. I will discuss evidence that the neurocognitive mechanisms that we engage in retrieving conceptual information associated with incoming words are quite distinct from those engaged when these predictions are disconfirmed by the input. Drawing broad links with computational models conceptualizing language comprehension as an incremental process of belief updating, I will suggest that the engagement of these distinct neurocognitive systems allows for comprehension that is both highly efficient and highly flexible (1).

I will first discuss studies using event-related potentials (ERPs) to examine online brain activity during sentence and discourse comprehension. I will then draw some (still tentative) links between this ERP literature and some relevant fMRI and MEG studies. Finally, I will discuss the advantages of a predictive comprehension system. Predicting correctly clearly offers advantages in terms of computational efficiency. Here I will argue that the costs incurred when we predict incorrectly are also crucial for successful and flexible comprehension. Neurocognitive responses triggered by prediction errors may rescue us from interpretation errors in noisy environments, may allow us learn novel events, and may enable us to flexibly adjust our comprehension strategies in response to ever-changing task and environmental demands.

(1) Kuperberg, G.R. (In Press). The Proactive Comprehender: What Event-Related Potentials tell us about the dynamics of reading comprehension. In: *Unraveling the Behavioral, Neurobiological, and Genetic Components of Reading Comprehension*. Miller, B., Cutting, L., & McCardle, P (Eds): Baltimore: Paul Brookes Publishing