Individual Differences across Statistical Learning and Language

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Differences in language skills across individuals are substantial and widespread. Equally ubiquitous in our environment are rich statistical regularities, which children and adults might use to discover and predict meaningful structure in language. Connecting these two observations, this talk investigates how individual differences in sensitivity to such statistical patterns may importantly contribute to variations in how humans process linguistic dependencies on-line. Studies are presented involving an AGL-SRT experimental paradigm, psycholinguistic data, and neural network simulations to investigate variation in statistical learning of both *adjacent* and *nonadjacent* predictive relationships. The empirical findings support a positive link between language processing and statistical learning abilities. They further suggest, however, that specific biases in learning adjacent or nonadjacent dependencies may relate to on-line language patterns in more nuanced—and sometimes counterintuitive—ways than traditionally assumed.