Incrementality in Deterministic Dependency Parsing:

Incrementality in parsing is important since human parsing is incremental and updated analysis is required. Many do not use it for various reasons and strict incrementally is not achievable. Dependency parsing conditions: unique label, single head, acyclic, connected and projective. Strict incrementality results in multiple heads and hence cannot be achieved. Arc eager parsing algorithm is close approximation to incremental parsing and is robust and efficient.

A Fast and Accurate Dependency Parser using Neural Networks:

Neural network based parsers are faster and more accurate. There is also pre computation trick which speeds up parsing. This precomputation is done for most frequent words. Only few dense features are captured.

Globally Normalized Transition-Based Neural Networks:

Due to label bias problem, global normalisation is better than local normalisation in accuracy. Simple feed forward networks without recurrence and with global normalisation can outperform LSTMs.

Universal Dependencies: A cross-linguistic typology:

Lexicalist hypothesis is adopted where syntactical relations to build words is important and grammar is used to tie phrases/words.