In recent years, research on the mental lexicon and on lexical processing has been undergoing a paradigm shift. As a result of new methodologies and new approaches to statistical analysis, we are able to adopt a psychocentric approach to research on lexical and morphological knowledge and to view the mental lexicon as a cognitive system that is characterized by dynamicity.

I will discuss new behavioural methods for the investigation of complex and compound word processing. These include primed progressive demasking, typing analysis, binaural presentation, and word recognition of real-time written production. I present data that have used these techniques to study the processing of compound words and will discuss the extent to which they support a conceptualization of morphological representation that I term “morphological superposition”. The terminological metaphor of morphological superposition is derived from a construct of early 20th century quantum physics. I argue that this metaphor can provide a framework with which it is possible to capture the manner in which morphological structure in lexical processing is dependent on particular task demands.