The conceptual processes relevant to the formation and interpretation of phrases involving noun modification, including ADJ-Noun (dirty shoes, healthy budget) or Noun-Noun combinations (dirt road, health care), have been the subject of periodic debate in linguistics. Formalist approaches to language that posit the separation of semantics and pragmatics typically consider the interpretation of such phrases to be fully compositional, assuming that each item has an inherent, context-free meaning, and that the meanings of the two combine in a predictable rule-governed way (Ladusaw 1988, Enç 1988, Lappin 2001). However, empirical investigations of this claim for English noun combinations (Downing 1977, Ryder 1994) have indicated that there is no limited set of predictable rules that adequately describes the relationships speakers use in interpreting these combinations. Cognitive linguistic research (Langacker 1991, Turner & Fauconnier 1995, and Sweetser 1999) analyzes these structures as entailing analogical, categorical, metaphorical or generic blending of the two mental spaces named by the nouns. They also acknowledge a possible role of context in meaning composition, suggesting that either conventional lexical meaning or context may indicate overlap in conceptual structures. Moder (2004), in a study of metaphorical N-N combinations, found that context was an important aspect of the interpretation of such combinations, but that even conventional combinations could take on new mappings within a specific discourse context and seemingly similar structures could result in very dissimilar mappings. These findings suggest that noun modification patterns might productively be analyzed within the framework of grammatical construction theory (Goldberg, 1995, 2006; Tomasello, 2003; Croft 2001) using a usage-based approach. Recent usage-based approaches to construction grammar have suggested that type–token frequency patterns are critical to our understanding of constituent structure (Bybee 2007) and that collostructional analysis provides further detailed insights into the patterning of lexical items in constructions (Gries & Stefanowitsch 2004; Gries, Hampe & Schönefeld 2005)

This study examines the effects of frequency, distinctive co-lexeme analysis, and context on the use of N-N versus ADJ-Noun combinations within similar semantic domains (dirt road, dirty work; health care, healthy growth). The corpus for the study was a set of tapes and transcripts of spoken American English taken from National Public Radio news programs (500,000 words) and a related written American English corpus of 2 million words of text from The New York Times. The study examined expressions which took the form of ADJ-N or N-N combinations, focusing on items in which there were related noun and adjective modifiers (health, health; dirt, dirty; noise, noisy; sleep, sleepy). The corpus was examined for instances of these modification constructions and then context, frequency, and colloccational analyses were used to consider the extent to which expressions were being lexicalized with a particular meaning or grammaticized in a particular construction.

The results indicated distinctive association patterns for N-N versus ADJ-Noun constructions. Furthermore, noun and adjective modifiers tended to evidence different type and token frequency patterns that contributed to their lexicalizing different meanings. In general, noun forms in the modifier slot had lower token frequency than the corresponding adjective forms and were typically more restricted in the type frequency of the nouns with which they co-occurred. Further evidence of the greater flexibility of the adjective modifiers was that they were generally much more likely to be used in metaphorical combinations than noun modifiers. There is also evidence that very high frequency combinations may be autonomous and evince different associations from other items in a constructional pattern. The implications of these findings for an integrated construction-based theory of noun modification will be discussed.