

## PART III

# Construction of a Language Processor

*Nature and Nature's laws lay hid in night: God said "Let Newton be!" and all was light. It did not last: the Devil howling "Ho! Let Einstein be!" restored the status quo.*

Alexander Pope and Sir John Squire

Theoretical positions and approaches toward the development of models for language comprehension can be divided roughly into three, some overlaps notwithstanding: *linguistic*, *conceptual*, and *perceptual*. Moyne and Kaniklidis (1981) proposed a framework for the classification of such models, and in this study we have given surveys of the underlying theoretical views and methodologies in the three approaches. Linguistics-based models (sometimes referred to as "theory-based") normally include a substantial grammar, together with a parser and a semantic component. Processing within each component is usually autonomous. Even the more recent models, which allow interaction for disambiguation, reanalysis, and backtracking, do processing in an essentially serial manner, in that the syntactic analysis of a sentence or a clause is complete and is then referred to the semantic/inductive component(s) for verification and possible reanalysis. The question of autonomy has been of interest also in theoretical linguistics and has generated debate. The "standard theory" in generative transformational linguistics essentially advocated autonomous processing in various components of a grammar: syntax, semantics, and so on, and Katz has continued to support the view of semantic autonomy (cf. Jackendoff, 1981). In what amounts to an aside comment at the end of this part, I have taken the position that all human mental processes, particularly language perception and use, are interactive, on-line activities. As aptly stated by Kent