More than a third of the autistic population does not develop functional spoken language. Yet, mounting case studies and neuroimaging evidence suggest that their language comprehension and semantic processing may be preserved. This raises the question of which cognitive processes are disrupted in the language comprehension-to-production pathways. Using and machine learning approaches on neuroimaging data (e.g., EEG, MEG), we propose to examine the content, timing and exchange of information in the brain while language is processed and transformed into motor commands. This will be crucial both to inform neurobiological theories of language and motor control, and for shaping future interventions in the minimally-verbal autistic population.