4.13: Neo-Piagetians

As previously discussed, Piaget’s theory has been criticized on many fronts, and updates to reflect more current research have been provided by the Neo-Piagetians, or those theorists who provide “new” interpretations of Piaget’s theory. Morra, Gobbo, Marini and Sheese (2008) reviewed Neo-Piagetian theories, which were first presented in the 1970s, and identified how these “new” theories combined Piagetian concepts with those found in Information Processing. Similar to Piaget’s theory, Neo-Piagetian theories believe in constructivism, assume cognitive development can be separated into different stages with qualitatively different characteristics, and advocate that children’s thinking becomes more complex in advanced stages. Unlike Piaget, Neo-Piagetians believe that aspects of information processing change the complexity of each stage, not logic as determined by Piaget.

Neo-Piagetians propose that working memory capacity is affected by biological maturation, and therefore restricts young children’s ability to acquire complex thinking and reasoning skills. Increases in working memory performance and cognitive skills development coincide with the timing of several neurodevelopmental processes. These include myelination, axonal and synaptic pruning, changes in cerebral metabolism, and changes in brain activity (Morra et al., 2008). Myelination especially occurs in waves between birth and adolescence, and the degree of myelination in particular areas explains the increasing efficiency of certain skills. Therefore, brain maturation, which occurs in spurts, affects how and when cognitive skills develop. Additionally, all Neo-Piagetian theories support that experience and learning interact with biological maturation in shaping cognitive development.