The First Truth Of Cognitive Development

The first of the sixth truths is that cognitive development proceeds as a result of dynamic and reciprocal transaction of internal and external factors (Bjorklund, D., & Causey, K. 2018). This is the nature and nurture debate on if internal factors (nature) or external factors (nurture) influence development. Many things, not only in our textbook but in life around us, happen to involve either nature, nature or both.

Gottlieb's schematic of developmental systems of approach is focused around epigenesis. Epigenesis is the idea that organisms' unique experiences influence activation of genes and cause long-term changes to how DNA is expressed. I find that this topic ties into the nature and nurture debate and the first of six truths because the idea is that during development, structures and functions are present through bidirectional interactions of elements at various levels of organization that being, genes, RNA, and neurons. Researchers argue that you cannot deny that development is constrained by one's genes. This is thought to be true because of our ancestors and parents. They were all born as humans, we cannot develop the same way that chimpanzee embryo can. In addition to genes influencing this system of approach the environment can also constrain development. I chose Gottlieb's schematic of developmental systems approach to tie to the first of six truths because it uses both nature and nurture within itself. The bidirectional influences show that biological and cultural evolution contribute to change throughout an individual's development.

Vygotsky's sociocultural theory suggested that development is guided by adult's interaction with children (Bjorklund, D., & Causey, K. 2018). In other words, throughout an individual's cognitive development a child learns through the culture and the help of an adult. Vygotsky stressed that social interactions is a huge part of cognitive development. In addition, Vygotsky suggested that when evaluating an individual's development, we should use four interrelated levels of interaction within the individual's environment. Thus being, ontogenetic, microgenetic, phylogenetics and sociohistorical. The ontogenetic development is measured on a larger scale and simply means the development of the individual throughout their lifetime. Microgenetic development is measured on a much smaller scale and is the observation of small changes in an individual throughout a relatively short period of time. An example of microgenetic development could be watching a child learn new spelling words. You are likely to see improvement in a short period of time i.e. hours, days or a week. Phylogenetic development, which is also referred to as phylogeny, focuses on changes over a large time period such as thousands or millions of years. Vygotsky proposed an idea here saying that while looking at changes in species over time it may lead to a better understanding of current child development. Lastly, sociohistorical development looks into the changes in prior generations specifically in one's culture as well as values, norms and technologies that history has created. An example of sociohistorical development could be the invention and uses of textbooks, computers and human rights traditions. These are all thought to influence the way they develop, compared to other cultures who may not have these "luxury's". Vygotsky's theory looks into both the genetic and cultural parts of development. He mentions cognitive development through the culture as well as from the adults around you. This seems to fit great into the first truth because of the connection of internal and external influences on cognitive development.

Within chapter 4 of the textbook, a big topic that stuck out to me was core knowledge. This is the idea, brought up by infant researchers, that there's a set of knowledge that young infants process in certain domains including, objects, people and social relations, numbers and quantities, and geometry (Bjorklund, D., & Causey, K. 2018). The reason I am including this topic and trying to tie to the first of the six truths is because, last year I took a nature nurture course and I remember the large question on if babies are born a blank slate or if they have prior knowledge. It's a stretch to connect the topic of core knowledge to the truth on internal and external factors but when you look further into the topic, I think that they have very many similarities. Researchers argue that there is evidence of three core-knowledge systems in infants, object representations, knowledge of people and their actions and ability to represent numbers, or quantities (Bjorklund, D., & Causey, K. 2018). Similar to this evidence of three core-knowledge systems, David Geary made another proposal in which he argued that infants are also born with small sets of skeletal competencies. He thought this was specialized to process information relating to the physical world, biological world, and people. I feel as though the topic of core knowledge is related to the nature/nurture debate because they're explaining knowledge and abilities that infants have as they're born. This conflicts the idea that babies are born a blank slate with no biases.

Although we may not realize, there are many topics in the book and in life in general that interact with the six truths of cognitive development. I chose the first truth which is based around nature and nurture/ internal and external influences because, I am most knowledgeable on this topic. It was interesting to look through the four chapters we have covered so far and find the relation between the six truths. It is very clear to me, after looking for examples relating to the first of the sixths truth, that cognitive development proceeds as a result of dynamic and reciprocal transaction of internal and external factors.

Reference:

1. Bjorklund, D., & Causey, K. (2018). Children's thinking: cognitive development and individual differences.