



Editorial

Development and learning: A tautology or dichotomy?

The goal of this special issue was to gather together a set of papers focusing on the concepts development and learning. Development and learning is a famous dichotomy, like nature-nurture or heredity-environment. However, depending on the theoretical perspective, they are used interchangeably and do not differ. In fact, there is little agreement regarding the definition of these terms and even whether these are useful concepts for researchers studying change over time. In the last decade a significant increase in publications can be observed with respect to learning experiments in infancy. The habituation and preferential looking paradigm has catalysed this research. The special issue represents a selection of papers of which some are theoretical while others are more data driven.

In June 2001 a symposium took place entitled “Development, Learning and Practice: What is the difference? Different perspectives to understand the nature of movement systems from infancy till elderly”, at the Manchester Metropolitan University in the UK. An international group of scientists with different theoretical perspectives discussed the concepts development, learning and practice. Questions such as “Is it a part of development or learning? How are these related in turn to practice?” were discussed. Four of the symposium contributions, relevant to infancy and the topic of this issue, turned their presentations into papers (Pick; Kaufman; Rosengren; Van der Kamp). Along with these papers several groups were also invited to submit a paper for the special issue, four of these have been accepted.

The first paper by Herbert Pick, provides us with a historical overview of infant motor development using the concepts of learning and development. He describes how in some approaches the two concepts are not treated as different, while in others they are. Where Pick’s historical overview stops, the following three papers continue. From a dynamical systems perspective, Karl Newell, Yeou-The Liu and Gottfried Mayer-Kress address the normative order and timing of activities in infant motor development sequence, using prone progression to illustrate their ideas and arguments. Hypotheses of the theory of attractor landscape dynamics with respect to motor development are provided.

In the third contribution, the TASC-based approach is presented by Karl Rosengren and colleagues as an alternative account for examining change over time. The TASC label stands for a focus on particular Tasks, Adaptation and Selection of behaviours as a function of constraints and is grounded in evolutionary theory. The authors assume that variability, selection and adaptation are central to change over time within individuals.

John van der Kamp and co-authors put forward an ecological psychology perspective on the development of visual control of movements. They use the functional dissociation of the visual system for action and perception as advocated in the work of Milner and Goodale (1995; Goodale & Humphrey, 1998) in which action is defined as the use of vision to control or guide movement, and perception as the use of vision for the creation of an internal representation of the world that can be used in the identification and recognition of objects and events. Within the context of this model, implicit and explicit learning in infancy is discussed.

Jordy Kaufman, Denis Mareschal and Mark Johnson pursue the idea that a dual visual system approach (Milner & Goodale, 1995) is fruitful for interpreting work on infant cognition. Their analysis clarifies apparently conflicting findings.

The last three contributions are experimental in nature and use a similar method. Su-hua Wang, Lisa Kaufman and Renée Baillargeon examine the development of infants' knowledge by looking into infants' expectations about collision events. Teresa Wilcox's experiments support the idea that infants succeed in mapping complex event sequences if they are given information to help them organise and structure the event.

Needham and Baillargeon (1998) show that infants can recognise and demonstrate understanding about a novel situation based on their prior experience with an object. In the last contribution, Dueker, Modi and Needham, show effects of different time delay between prior experience and test performance of the infants.

The papers presented are not representative of all possible approaches to the issue of learning and development. They provide the readers with a flavour of the most recent theoretical perspectives. In that respect, they also present researchers with a challenge while studying these concepts, because they are not limited to the infant period, but throughout the whole life span.

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