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### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

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#### **Permalink**

<https://escholarship.org/uc/item/4003c2jd>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 28(28)

#### **ISSN**

1069-7977

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#### **Publication Date**

2006

Peer reviewed

# Creativity from a Cognitive Developmental Science Perspective

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**Keywords:** Creativity, development

## Creativity Develops

Creativity can be defined as the ability to produce work that is novel (original) and adaptive with respect to task or situational constraints (Sternberg & Lubart, 1995). Based on investigations conducted in our research group, this presentation will synthesize results concerning the development of creative thought in children and adults (Lubart et al., 2003). A multivariate developmental model of creative cognition will be presented.

## Creativity in children

Cross-sectional and longitudinal studies of children indicate three kinds of developmental changes which support a model in which several elementary processes contribute to creativity and the development of these processes are influenced by the broader context of children's cognitive system :

- (a) temporary slumps in the development of creativity at approximately 10 years old suggests interactions between the development of standard logical-reasoning-based thinking ability and creative-thinking ability (Georgsdottir & Lubart 2003; Lubart & Georgsdottir, 2004).
- (b) the strategies used to find new ideas, to seek novel productions drawing on stored knowledge tend to shift from association-based to logically-organized search.
- (c) the specificity or generality of creative cognition at different moments in development varies. For example, in one study we observed that when children complete several creative tasks in various domains (verbal-linguistic, social-interpersonal, etc.) the presence of a general creative capacity is observed for certain age groups but not for others (Mouchiroud & Lubart, 2002), suggesting shifts in the composition of creative abilities (Lubart & Guignard, 2004).

## Creativity in adults

Development of creative thinking continues throughout adulthood and supports a model with several elementary processes which are influenced by the broader context of adults' cognitive system (Lubart & Sternberg, 1998).

Evolutions in terms of creative productivity and the type of creative contributions are observed. In particular there are periods in adulthood that are more productive than others. These active periods are also those in which the most creative contributions are observed. This finding, observed in laboratory settings and real-life work contributions suggests that a stochastic process is part of creative production (Campbell, 1960; Lubart, 2001; Simonton, 1984). The nature

of creative ideas, their specific content, also evolves with age for adults. These changes are situated within a model of interactions between abilities and knowledge, including developmental changes in information processing speed, size and relevancy of the knowledge base, expertise, complex reasoning abilities such as dialectical and post-formal thinking (Lubart & Sternberg, 1998). Implications for training programs to enhance creativity at each age are proposed.

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