Creative cognitive schemata in children; the role of parents

An essay submitted for partial fulfillment of requirements
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Contents:

INTRODUCTION:

Perhaps the most widespread conception of creativity in the scholarly literature is that creativity is manifested in the production of a creative work (for example, a new work of art or a scientific hypothesis) that is both original and useful (Taylor, 1988).

The way in which different societies have formulated the concept of creativity has changed throughout history, as has the term "creativity" itself. The ancient Greeks, who believed that the muses were the source of all inspiration, actually had no terms corresponding to "to create" or "creator." The expression "poiein" ("to make") sufficed. The sole exception was poetry: the poet was seen as making new things — bringing to life a new world — while the artist merely imitated. In Rome, this Greek view was modified, and Horace wrote that not only poets but painters were entitled to the privilege of daring whatever they wished. Unlike Greek, Latin had a term for "creating" ("creatio") and for "creator", and had two expressions for "to make" — "facere" and "creare" (Tatarkiewicz, 1980).

The formal starting point for the scientific study of creativity, from the standpoint of orthodox psychological literature, is generally considered to have been J. P. Guilford's 1950 address to the American Psychological Association, which

helped popularize the topic and focus on a scientific approach to conceptualising creativity and measuring it by means such as psychometric testing (Sternberg, 1999).

J. P. Guilford's group, which pioneered the modern psychometric study of creativity, constructed several tests to measure creativity in 1967 (Guilford, 1967). Building on Guilford's work, Torrance developed the Torrance Tests of Creative Thinking in 1974. They involved simple tests of divergent thinking and other problem-solving skills (Torrance, 1974).

Thinking is a mental process that allows human beings to model the world and to deal with it effectively according to their objectives, plans, ends and desires. It involves the cerebral manipulation of information, as when we form concepts, engage in problem solving, reason and make decisions. Thinking outside the box is a cliché or catchphrase used to refer to looking at a problem from a new perspective without preconceptions, sometimes called a process of lateral thought (Eric Baum, 2004).

We help gifted children to develop their creative abilities when we respond constructively to their tremendous curiosity, when we encourage their experiments and artistic endeavors, and, importantly, when we teach them that; setbacks are part of the creative process. In order to help children to think, we must first let them think. As early as their development and maturity

permit (relatively early for many gifted children), they should not only be allowed, but encouraged to solve their own problems and make their own decisions. Parental guidance is of course called for, especially with younger children (Fred M. Newman, 1990).

RATIONALE:

Daniel Pink, in his 2005 book A Whole New Mind, repeating arguments posed throughout the 20th century, argues that we are entering a new age where creativity is becoming increasingly important. He argued that in this conceptual age, we will need to foster and encourage right-directed thinking (representing creativity and emotion) over left-directed thinking (representing logical, analytical thought).

Today, creativity forms the core activity of a growing section of the global economy — the so-called "creative industries" — capitalistically generating (generally non-tangible) wealth through the creation and exploitation of intellectual property or through the provision of creative services. The Creative Industries Mapping Document 2001 provides an overview of the creative industries in the UK.

Creative professions include writing, art, design, theater, television, radio, motion pictures, related crafts, as well as marketing, strategy, some aspects of scientific research and

development, product development, some types of teaching and curriculum design, and more. Since many creative professionals (actors and writers, for example) are also employed in secondary professions, estimates of creative professionals are often inaccurate. By some estimates, approximately 10 million US workers are creative professionals; depending upon the depth and breadth of the definition, this estimate may be double.

Creativity is also seen as being increasingly important in a variety of other professions. Architecture and industrial design are the fields most often associated with creativity, and more generally the fields of design and design research. These fields explicitly value creativity, and journals such as Design Studies have published many studies on creativity and creative problem solving (Dorst et al., 2001).

Simonton shows how some of the major scientific advances of the 20th century can be attributed to the creativity of individuals (Simonton, 1999). This ability will also be seen as increasingly important for engineers in years to come (National Academy of Engineering 2005).

When children are young, schools begin to analyze the youngsters' abilities and sort them into clusters based on their predicted success. The system labels the cream of the crop as gifted. Clark (2002) defines giftedness as "only a label that society gives to those who have actualized their ability to an

unusually high degree or give evidence that such achievement is imminent". So what exactly is this quality that schools are seeking out? The American government defines giftedness as "students, children or youth who give evidence of high performance capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who require services or activities not ordinarily provided by the school in order to fully develop such capabilities" (Clark, 2002).

Much of the thinking done in formal education emphasizes the skills of analysis--teaching students how to understand claims, follow or create a logical argument, figure out the answer, eliminate the incorrect paths and focus on the correct one. However, there is another kind of thinking, one that focuses on exploring ideas, generating possibilities, looking for many right answers rather than just one. Both of these kinds of thinking are vital to a successful working life, yet the latter one tends to be ignored until after college. In practice, both kinds of thinking operate together much of the time and are not really independent of each other (Robert Harris, 2002).

According to the 2006 Egyptian census figures; number of family members under 6-years of age stand at 10,224,256 (14.09% of the entire population); the number of 6-to-10-year-olds are put at 5,043,247 (6.95%); 10-to-15-year-olds at

7,796,386 (10.7%) forming a high ratio of children to general population (Egypt state information service, 2006). Most education programs in Egypt don't target to develop creative thinking; thus put the burden of this on parents.

HYPOTHESIS:

Supposing that, parents have an important role in development of creative thinking in their children. This role should be explained with clarification of applicable practical methods guiding them to better performance.

AIM OF THE ESSAY:

1) To define creative thinking and relevant expressions.

2) To detect methods for evaluation of child creativity.

3) To clarify the importance of role of parents in development of child creative thinking.

4) To detect other factors influencing child creativity.

5) To give practical and applicable examples helping parents to carry out their role in developing creative thinking in children.

CHAPTER 1: DEFINITIONS AND HISTORY

I) DEFINITIONS:

1) DEFINITION OF CREATIVITY:

Some definitions of creativity focus on characteristics of individuals whose work is determined to be creative (What is a creative person like?), whereas others consider the work itself (What makes this creative?). In either case, most definitions have two major criteria for judging creativity: novelty and appropriateness. For example, Perkins (1988a) defined creativity as follows: "(a) A creative result is a result both original and appropriate, (b) A creative person—a person with creativity—is a person who fairly routinely produces creative results".

Novelty and originality may be the characteristics most immediately associated with creativity. The key dilemma is, new to whom? Must elementary school children devise ideas that are unique in the world before their efforts can be considered creative? To be considered creative, a product or idea must be original or novel to the individual creator. But it is important to recognize that the issues regarding novelty are not ultimately resolved (Lubart, 1999; Sternberg, 1990).

The second aspect of creativity is appropriateness. One important factor in determining appropriateness is the cultural context in which the creativity is based. Just as intelligence is viewed differently in various cultures, so the vehicles and focus of creativity vary from culture to culture and across time. Works by van Gogh that 19th-century audiences rejected are considered masterpieces today (Lubart, 1999; Sternberg, 1990).

Cultures in fact, differ in their conceptions of the nature of creativity itself. The product-oriented, originality-based phenomenon is a Western orientation, whereas some Eastern or traditional cultures conceptualize creativity as a process of individual growth, spiritual journey, or evolution (rather than revolution) in shared community culture (Liep, 2001; Lubart, 1990, 1999; Weiner, 2000).

2) DEFINITION OF COGNITIVE SCHEMA:

A schema (pl. schemata), in psychology and cognitive science, is a mental structure that represents some aspect of the world. Schemata were initially introduced into psychology and education through the work of the British psychologist Sir Frederic Bartlett (1886–1969) (Bartlett, 1932).

II) HISTORY OF THE CREATIVITY CONCEPT:

What is creativity and how does it work? Answers to these two questions have ranged as far as creative thought itself often does.

1) THE BICAMERAL MIND

The earliest explanation was that the mind is composed of two quite separate chambers (this concept is unrelated to the current knowledge that the brain is composed of two hemispheres). The first scholarly treatise to document this view was written by psychologist Julian Jaynes. He coined the term ‘‘bicameral mind’’ as a label for this phenomenon. Throughout early human history, Jaynes posits, people uniformly believed the chamber of the mind in which new thoughts occur was controlled by the gods. Thus they thought that all creative ideas come from the gods, usually through the mediation of a muse, a sort of intermediary for the gods. The purpose of the second chamber of the mind was to express inspiration through the more ordinary mechanisms of speech and writing. It was considered to be the public representative of the first chamber (Runco and Pritzker, 1999).

Many early thinkers, Plato and Aristotle among them, believed that the ‘‘creativity’’ chamber also housed madness

when the spirit of the Muse was present. This ‘‘madness’’ was not the same as insanity, however. As Eysenck (1995) points out, ‘‘in Latin there is no linguistic distinction between *madness* and *inspiration. Mania* and *furor* are terms that cover many different non-rational states like anger, passion, inspiration and insanity’’.

2) PAGANISM VERSUS FUNDAMENTALIST RELIGION: THE GREEKS

Hadas (1965) compares classical Greece and its pagan beliefs to medieval Europe and its fundamentalist Christian orientation. He argues that it was not so much the restrictive teachings of early Christianity or the ‘‘otherworldliness’’ of the religion that caused inhibition of creative thought throughout the medieval period (the end of the 4th through the 12th centuries), but its claim to exclusive validity. In its struggle to gain acceptance and then dominance, early Christianity was harsh in its rejection of deviant ideas, which were considered heretical. Beginning with the execution of Arias and continuing through the use of several forms of inquisition, the Church dealt harshly with the progenitors of such thinking.

Perhaps the clearest view of the Greek ideal can be seen in their emulation of heroes, as compared to Christian attitudes toward saints. A Greek hero was ‘‘any deceased person worthy

of a cult, that is, of receiving offerings of flowers or wine on his special anniversary'' (Hadas 1965).The offerings were not meant to appease him or her, but to serve the people. For example, Hadas (1965) points out, ''we eat cherry pies and chocolate hatchets [on George Washington's birthday] to serve ourselves, not our first president''. The main distinction, he argues, is that ''a man approaches sainthood to the degree that he *suppresses* the impulses of ordinary humanity and assimilates himself to a pattern outside humanity. A man becomes a hero to the degree that he emphasizes his human attributes'' (Hadas, 1965). Hence Greek pagans were encouraged to perceive excellence as a more readily attainable goal than were medieval Christians.

3) PAGANISM VERSUS FUNDAMENTALIST RELIGION: THE MEDIEVAL EUROPEANS

The situation in the Western world in the fifth century was rather grim, as Dawson (1954) so succinctly described it. He disagrees with Hadas' position that fundamentalism was the major cause of the lack of creative output, however, After all, he argues, the Moslems were as rigidly fundamentalist as the Christians and yet the Moslems made many creative contributions. Rather, he ascribes the superiority in creative output of the Greek and Moslem cultures over the medieval Christian culture as the result of the Christians having been