

Creativity

- ▶ The word *creativity* comes from the Latin term *creō* which means "to create, make". Creativity can be defined through the following definitions which are comparatively recent:
- ▶ **According to Michael Mumford (2003) defined creativity** as "over the course of the last decade, however, we seem to have reached a general agreement that creativity involves the production of novel, useful products

- ▶ Creativity can also be defined "as the process of producing something that is both original and significant.
- ▶ According to **Csikszentmihalyi (1996)** has defined creativity in terms of those individuals judged to have made significant creative, perhaps domain-changing contributions.

According to Simonton (2002) creativity should fulfill these two conditions

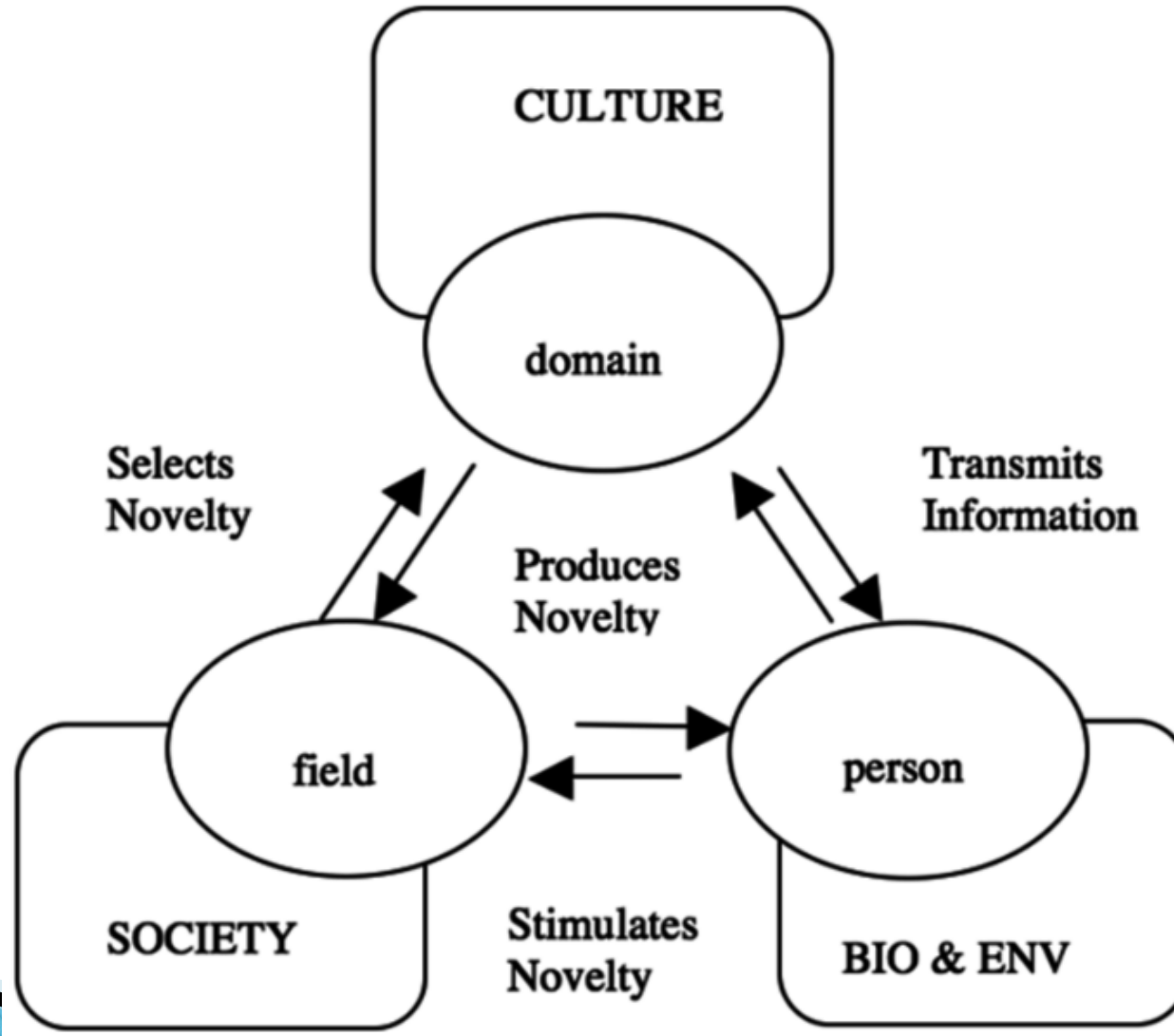
- ▶ 1. Creativity must be *original*. The ideas have to be novel, surprising and unexpected or perhaps even shocking.
- ▶ 2. Creativity must be *adaptive*. The ideas should be specific and relevant to the current needs and the times in which the creativity is being brought about

- ▶ Gestalt psychologists, notably Wertheimer (1945), focused on processes involved in insight learning such as transformation, figure-ground reversal and closure. In the psychometric tradition Guilford (1950, 1967) conceptualized creativity as a set of divergent thinking skills within his Structure of the Intellect Model which incorporated both convergent thinking skills evaluated by traditional IQ tests and divergent thinking skills.

Csikszentmihalyi's systems model of creativity

- ▶ Csikszentmihalyi (1999, 1996) has argued that creativity is most usefully conceptualized as a systemic rather than an individualistic process which involves the dynamic interaction of three distinct systems:
 - ▶ 1. the person with his or her talents, personality traits and motivations;
 - ▶ 2. the domain which consists of the symbol-system, rules, techniques, practices and guiding paradigm; and
 - ▶ 3. the field which consists of people working within the same domain (artists, scientists, critics, journal editors) whose activity is governed by the same domain-specific rules and practices.

Csikszentmihalyi's systems view of creativity



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- ▶ Thus, the creativity process is an interaction between a creative individual who has become immersed in a field and come up with an original idea and an audience who may be ambivalent about accepting the idea. From Figure , it may be seen that for creativity to occur, a set of rules and practices must be transmitted from the domain to the individual. The individual must then produce a novel variation in the content of the domain. Motivation to produce this creative variation occurs when an appropriately talented individual responds to a tension between competing colleagues or critics within a field, or where there is a pronounced gap between the low demands of routine work within a field and the high ability of the person entering the field.

- ▶ The variation must then be selected by the field for inclusion in the domain and must also be transmitted through time if it is to be accepted by the community who make up the field. This is analogous to evolution. To be creative, an idea has to be adapted to its social environment and transmitted through time.

Levels of the Four C Model of Creativity

- ▶ Level of the Four C model of creativity given by **Dr. James C. Kaufman and Dr. Ronald Beghetto.**
- ▶ They have identified four developmental levels of creativity. “In this model, imagine creativity as a life span concept,” says Dr. Kaufman. “We believe that the Four C model has much to say about education. What we believe is that teachers can use some of these ideas along with their own ideas to better nurture creativity in their students.”

Levels of the Four C Model of Creativity

- **The mini- c level of creativity**
- **The little-c level of creativity**
- **The pro-c level of creativity**
- **The Big-C Level of creativity**

Creativity research has traditionally focused on two major types of creative expression: Big-C and little-c creativity. The first type, “Big-C creativity,” describes eminent creativity.

Stages of Creativity

- ▶ The history of research on stages of creativity began with Graham Wallas (1926) who suggested that creative thinking follows four successive steps
- ▶ *Stage of preparation*
- ▶ *Stage of incubation*
- ▶ *Stage of illumination*
- ▶ *Stage of verification*

- ▶ ***Stage of preparation:*** *The subject begins to gather information about the problem to be solved and attempts some solutions. This stage is characterised by a state of trial-and-error in learning. Therefore, the subject is advised to learn as much as possible about the problem area. In preparation the thinker begins recalling personal experiences and investigating in all different directions to gather information about the problem to be solved. The object of defining the focus question of interest is to list all concepts associated with the focus question. Since the goal from this procedure is to generate the largest possible list, the thinker should not worry about redundancy, relative importance, or relationships at this point.*

- ▶ *Stage of incubation: In the second stage the solution exists but is not clear. The subject must not intentionally work on the problem. Instead it is allowed to sink into the unconscious. In this stage the solution exists but is not clear. Therefore, the thinker must not intentionally work on the problem. Instead, he/she should be allowed to sink into the unconscious and the thinker is advised to relax and reflect on his/her focus question which might lead him/her to modification of the focus question.*

- ▶ *Stage of illumination:* In the third stage the subject suddenly experiences insight into the problem when a new solution, idea, or relationship emerges. In other words, the subject attempts to reformulate his/her ideas or to formulate new ones. The subject is more active and more conscious work is needed in this stage. In the stage of illumination the thinker experiences insight into the problem when a new solution, idea, or relationship emerges. Thus, he/she attempts to reformulate his/her ideas or to formulate new ones.

- ▶ ***Stage of verification:*** Finally, the subject tries and checks the solution. In this stage some modification may also occur to ideas reached in the previous stages. In the stage of verification the thinker tests, tries and checks the solution he/she created. Since this stage is the final one, the thinker may well make some modification to his/her ideas which he/she reached in the previous stages. In this stage thinker should rework the structure of his/her map to represent his/her collective understanding of the interrelationships and connections among groupings, which may include adding, subtracting, or changing super-ordinate concepts, thus, he/she may need to review his/her concept map as he/she gains new knowledge or new insights.