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BELIEFS, DESIGN AND ART: ENHANCING CREATIVITY IN EDUCATION AND ORGANIZATIONS

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1. Introduction: Motives and the different methods

This study is about the integrated use of beliefs, design and art for creativity enhancement. "Creativity" is understood as processes or methods of increasing the flow of valuable ideas. Designers are familiar with group and individual processes. Group methods include brainstorming, synectics, enlarging search spaces, reiterative multi-design [Lloveras 1997], etc. The group processes require skills on conducting common efforts, or teamwork abilities. There are also methods applied to better the creativity of individual work. Creativity is often considered as a unique ability of a few highly creative persons - as an inherited or natural property-; we find too different orientations, as we may use other ways to free the creativity potential of individual persons. This paper explains a research work based on this last approach.

Creativity, or the shortage of it, is discussed in professional management and organizational studies. Moreover, the management of mature organizations is a professional challenge: the concept of "creative organization" is perceived as a lifeboat or solution for the acquisition of competition abilities. Theories like "the learning" or "intelligent organization" and "creative organization" have also generated expectations. Adam Smith defined two basic pillars of modern administrative science, task specialization and division. We must recognize the importance of the individuals' full potential and let them act as the "visible hand". Social interactions have many positive outcomes, but like authoritarian organizations try to implement, we may then try to build creativity in captivity. We also may forget about taking care of what individuals' intelligence can make or contribute; intelligence belongs to any individual that look, remember, imagine,…Individuals must develop "freedom" through sensible perception, use the internal representations in conscience and "free thinking". They could deliver "das simliche Scheinen der Idee" (sensible exhibition of ideas) [Hegel 1980].

This research shows how to improve the link between the individual "somebody" and idea [Hubka 1996] that can ignite sparks. The idea and the individual exist together; we can plan a series of actions for the individuals affecting their willingness to generate valuable ideas.

Traditionally education or teaching applies to the study of a large but limited number of series of unique relations of words ("vox") and objects ("res"); but it seldom develops into automatic creativity. The creative processes experiment and findings uses words and language in the teaching of arts to Secondary School students - language is essential for intelligence-. The process requires the ingredient of the specific beliefs – as defined in paragraph 2. - of each student. First step was unlocking their intelligence. Participants were asked to respond individually: who I am? Responses were extremely interesting and attractive; their study opens a set of future research questions

2. Preliminary approach

The term "beliefs", and some of the similarities existing between mature organizations and the groups of Secondary School students, are areas that need additional clarification.

Beliefs are defined as ideas that comprise feelings and life histories. Most of the contents of beliefs are acquired under very different circumstances and situations. Every person is equipped by different blocks of beliefs. Perception, all what a human may perceive, is guided by beliefs, choosing possibilities of stimuli; individual differences or gaps of perceptions are determined by freedom, giving the stimuli a particular meaning. Emotional intelligence, visual intelligence, is intelligence terms using psychological concepts. Moreover, the study will not be on neurons or brains. The study will just show examples on works made by individuals that express sensible ideas.

Secondary School students may be considered as similar in some characteristics to mature organizations' members. The resilience of most of mature organizations to adapt rapidly to changing environments is well known. Mature organization members rarely question the system, frustration is hidden and "child's curiosity" is a rarity. Secondary School students -at that age- create a self-defense pattern. Traditional education is short of innovative improvements; idea and its champions are strange, as they receive the same kind of encouragement as in most of mature organizations. Teaching as some management actions may damage creativity. Obedience or authoritarian models are basis of a part of our educational system like in management; unable to recognize that error, management has used brands used to promote real creativity that then may become euphemistic concepts and hide the actual problem. We worked with groups showing passive and strong resilience to the official authority framework as in mature organizations. Participants were students of secondary school level, with two common traits: sharing common feelings of scholar failure and no previous artistic attitude and skill. Students had special difficulties in areas related to writing and reading. Group interactions were limited and no specific and common target was mentioned. Students began as part of the group that academic year. Students had big socioeconomic differences, a wide spectrum of beliefs; their lives happened in different cities, suburbs, or countryside areas near the city of Barcelona. Nevertheless their individual diverse interests included: cinema, design, art history, law, architecture and other.

3. Objectives and Methodology

The main research objective was obtaining good results from individuals in situations that they can make themselves interesting. We were willing to make them to work beyond the information given.

A second important objective was finding different sets of instructions enabling the individuals to activate imaginative creativity and use of symbolic ideas. Terms from Ogen Open were selected and used [Beljon 1993]. Opening channels could turn on a proactive attitudinal process and boost the level of capabilities required to use their newly recognized symbolic language competences. The surprise was obtaining that kind of responses as they integrated elements of their beliefs area: work was the "make" of their unique expressions. The "Who I am" question responses were delivered only after the activities that are briefly described hereunder. Their responses had also a fresh component on future projects. Special care was exercised in order that short term or initial goal settings or options were acceptable to the interests of every individual student.

The process combined activities inside and outside classroom; first time out was devoted to look at the nearby Ancient and Modernist Barcelona. Afterwards, the class group must follow a program of visits to well-guided Art and Design Exhibitions. The complete set of activities was part of a unique and unbounded system directed to develop creativity and self-esteem for the participants. Lessons included basic concepts on objects and systems design. Discovery, method recognition and idea creation has been explained and applied. Discovery first was based on materials and tools used on the first contact with playing on the "volume" lessons and practice. Method recognition, in the experiment, included the transition between a randomly generated access into an imagined world, followed by the conversion into reality using rationality and projective techniques. Idea generation comprised: symbols random generation, using their translation into real works of basic concepts as volume, skins,

kinds of frames, bindings, tension, movements into real objects. In some case students generated original solutions for the integration of the objects from elementary designs to more complex systems. A limited number of the "sparks" unlocked are briefly explained in this paper.

The works were made using combinations of 3D or 2D Computer designs, showing motion, or by using clay, wood, and other materials. Most of projects were supported with surprisingly clear and well-written textual explanations. Hands and brain activities were visibly integrated. Students proficiently used poetry, metaphors, sensibility, time,… This is the human "art/poetry", the "nous poietikos" of Aristotle, the rhetorical figure for intelligence [Marina 1998]. As that author mentions, Hölderlin adds that mankind lives poetically on earth.

4. Results

4.1 Preliminary

The objective accomplished was enabling the students to make themselves their own interesting situations. Their success is visible through their works and the enormous inventory at our disposal. All of them enjoy explaining in written form the designs they did, overcoming most of their previous language difficulties. An additional motivator was the award of the 2000-2001 National Prize of Creativity in Art from the Miró Foundation of Barcelona named memorial Alex Ferrer Isbert addressed to youth, gained by the resulting works of five secondary school students.

4.2 Propositions and images

A few examples are shown; every student prepared a multiple set of photographs of the objects they made. Figure 1 is a soap bubble pressed by hands, a shape that communicates the concept named "tension"; this student is nowadays following courses in the Cinema School of Catalonia. As an example, the resulting bubble volume could be a basic shape in building design.

Figure 1. Tension: Soap bubble

The following group of pictures refers to an imagined forest (figure 2) – author is a present Cinema student. Main tasks included the design of the imaginary tree, the organization of the forest and the manufacturing of materials. The imagined forest model was finally built following the student's

detailed project. The student exhibited the model in different positions, like film sequences, putting one after the other series of pictures taken in the Botanic Garden of Barcelona.
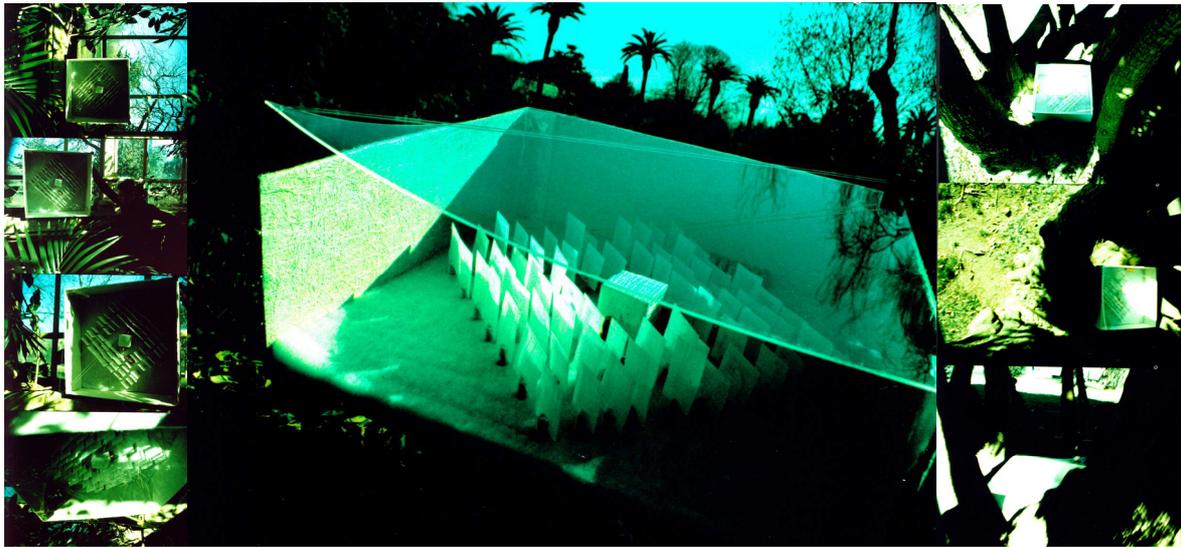
Figure 2. Space creation: The imagined forest

"Knots" meant a way of making assemblies as "bindings"; figures 3 and 4 show examples, named "Knots" and "the Family". Initially the author was neither motivated nor pushed enough to apply for "University studies". The student finally decided a new direction, and is now a successful student of "Beaux Arts", University of Barcelona.


Figure 3. Knots   **Figure 4. Bindings: the Family**

The following examples are from two recent publicity students. The first skin concept developed by one of the students was obtained using many kinds of soap scraps. She prepared the scraps in different ways and colors (like the one that is shown in Figure 5), and made a series of attractive proposals. The second student's work obliged her to prepare wax compositions. She used that material as skin for a simple shape shown in Figure 6. Most of objects need external and internal "skins". Of course, we may use a similar exercise fort specific design tasks and could also find solutions satisfying our perceptual desires.

Figure 5. Sample, Skin material   **Figure 6. Object with skin**
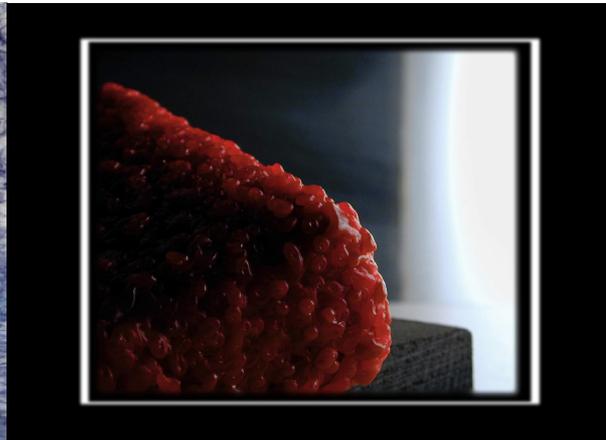
The two examples that follow are designs of a potential or future Architect. Figure 7 object was developed using a DinA4 sheet; the student had to make the transition of an object from 2D to 3D. The same student also designed a suspended ensemble; the concept "tension" was combined with the "piling up" idea. The object decided by the student has a "Zeppelin" shape, and the author decided to equip the work with suspending rods and springs (Fig. 8).


Figure 7. From 2D to 3D   **Figure 8. Tension and piling-up: suspended shape**

The last example as it is shown in the next two pictures of fig. 9 is a group of shapes created by using the limits drawn by the lines of metallic wires. The resulting frame is viewed alone and then as part of the skyline of the city of Barcelona where one can see or imagine similar frames, like cranes and architectural shapes. The objective was using "volume" and "wires".

The collection of students' works has presently hundreds of truly different projects. Every different work is the result of the integrated ideas and hands of every student.
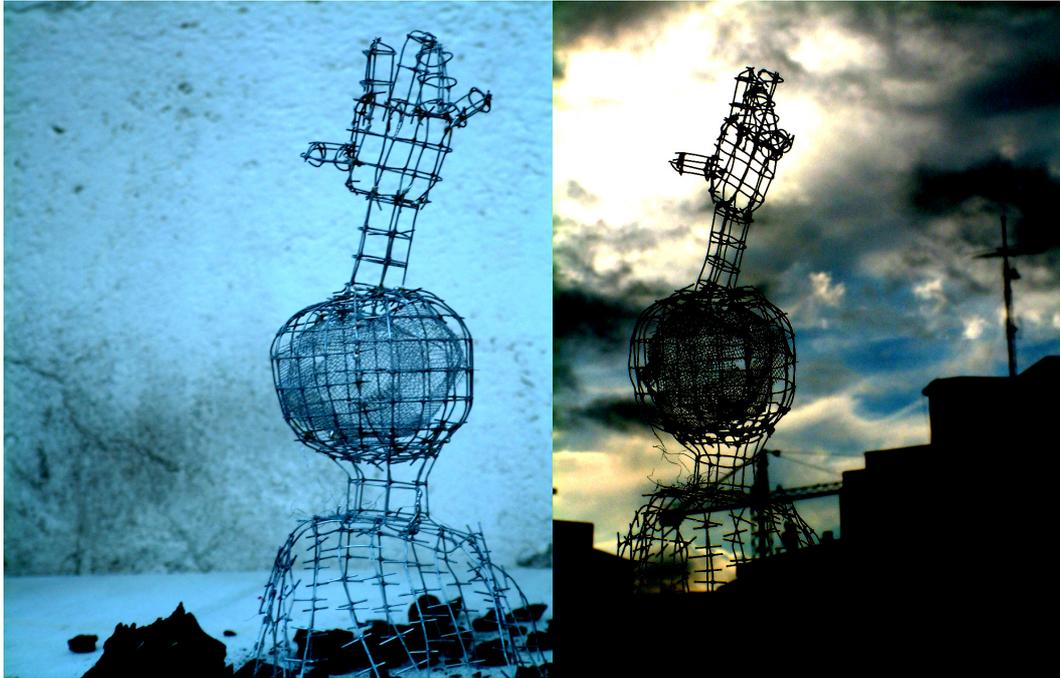
Figure 9. Volume representations

5. Key Conclusions

Beliefs, art, design and creativity can be integrated. The resulting expressions could be applied to design activity.

Intelligent organization and other similar approaches must avoid missing the potential of every unique individual or employee. The method could prevent social loafing or free riding. This method could possibly be adapted to other organizational environments and goals.

A simple method has been described with specific activities, steps and results, where the role of the newly bounded environment and the guidance of the professorial team, can make impressive results. The set of students included in that pattern were persons that otherwise could be sentenced to the gray or dark side of academic exclusion. We should help individual persons to find situations that every individual could make interesting. Language integration with the individual beliefs is a good basis for future research. Belief expression can be used successfully in educational and organizational training for creativity. Implementing the above described principles can deliver solutions for our creative design.

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