

**Domen Zupančič**  
**SYMMETRY OF CORBELLED STONE**  
**STRUCTURES : SACRED WELL IN SARDINIA**

**Symmetry: Art and Science**

**International Society for the Indisciplinary Study of Symmetry ISIS**

**14. – 19. september 2009, Wrocław – Cracow, Poland**

Mednarodna znanstvena konferenca Symmetry of Forms and Structures se je odvijala na temo umetnosti in prostorskih struktur. Symmetry konferenca združuje znanstvenike z različnih področij, kjer se pojavlja simetrija. Na teh srečanjih se srečujemo arhitekti, fiziki, gradbeniki, urbanisti, arheologi, ki se praktično ukvarjamo na realnih primerih. Namen konference je v povezovanju idej, vedenja in utrjevanju misli o ravnovesju, naj bo to arhitektura ali fizika.

**Izvleček**

Sardinia abounds with megalithic towers of Nuraghe culture, tombs devoted to giants, necropolises and other structures as sacred wells. Unified presence of the wells undoubtedly implies that they originate upon the template scheme. The common attributes are underground corbelled stone space with narrow steps toward the ground and above the corbelled dome is positioned the circular hole. There are many hypotheses why the wells are named sacred, however there are no graphical presentation of the explanations. The most common idea is the wells are sources of water and they were used as telescope mirrors. Mirror has much in common with symmetry – mirrored picture is symmetrical presence of reality. Technically the mirror collect the rays of light and reflect them back, the angle of inclination is symmetrical to reflected angle.

Paper presents the sacred well of St Anastasia in Sardara using architectural sketch analysed and evaluated upon the hypothesis the wells are some kind of mirrors. As analysis positively shows the hypothesis of reflecting rays the real experiment was made on the site in the 2003 and rechecked in the 2009. With symmetry we may be able to explain the meaning the adjective word sacred. However the questions remain: how the ray of light was observed and what kind of rituals were enrolled. Some wells on the island have additional structure above the central top hole – some kind camera obscura. Probably the principle of symmetry of construction may be able to give some new answer to new assumptions.

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**Domen Zupančič**  
**CARDBOARD MODELLING METHODS**

**MOTIVATION (for) INNOVATION and CREATIVITY of YOUTH \* MICY2009**

**Association of the Slovene Fine Artists Societies (visual arts education section)**

**The National Institute of Education (visual arts department)**

**International Society for Education through Art (InSEA)**

**14. – 17. oktober 2009, Piran - Ljubljana, Slovenija**

Mednarodni znanstveno – praktični kolokvij na temo kreativnosti in inovativnosti pri uvajanju likovne in umetniške ustvarjalnosti mlade populacije (vrtni, osnovne šole in srednje šole). V štirih dneh je bilo predstavljenih mnogo referatov z vsega sveta. Ob referatih so bile organizirane praktične delavnice za pedagoške delavce in muzejske kustose. S kolegico Beatriz Tomšič Čerkez sva ob predstavitvi referata vodila delavnico na temo : problem based learning (PBL) workshop. Osnovno gradivo je bil enojno valovit karton, problematika je bila: uporabna struktura in umetnost. Pri delavnici je sodelovalo 25 oseb. Končni rezultati so bili javno predstavljeni na razstavi v mestni hiši občine Ljubljana.

**Izvleček**

The creative process in the architecture workshops depends on the kind of task, on individuals, on mentors and on the cultural framework of all participants.

The motivation is based on the following steps: discovering the problem and becoming familiar with it, and establishing easy and open, multidirectional communication. Each task requires, firstly, becoming acquainted with general issues, from the basics to individual existing solutions, and, secondly, passing to the next stage i.e. becoming acquainted with concrete issues. In terms of methodology, this means: working; a workshop participant passes from theory to practice (idea – concretisation), whereas the mentor stimulates, observes and synthesises the participants' flow of thoughts (concretisation – idea). The analogy of the relationship between the mentor and the participant lies in chemical reactions where catalysts are used to accelerate reactions.

The fundamental concrete problems were sitting and cardboard. The abstract problem of the workshop extends into the field of psychology, revealing fixed intellectually self-grounded attitudes (provincial mentality). The motivation was based on the following steps: discovering the problem and becoming familiar with it, and establishing easy and open multidirectional communication. The purpose of the workshop was two-fold: interactive intergenerational collaboration, and revealing clichés through a selected medium – the utility of cardboard in designing furniture. We successfully overcame the mental frameworks and also introduced a measure of creative excitement into the educational process.