# Bone China from Turkey

## *Feyza Ozgundogdu researches bone china artistic production in Turkey*

*Feyza Ozgundogdu. 2003. Bone china.*

BONE CHINA USED IN THE PRODUCTION OF TABLEWARE products industrially has high level of whiteness, smoothness and light translucency properties. This porcelain is used also in artistic applications today because of the aesthetic opportunities it presents. Body composition of bone china is provided by bone ash, felspar and kaolin in its composition. Its recipe known today was developed by Josiah Spode II in England on 1794 and the production of bone china begun at the Spode factory in Staffordshire at that time. The bisque firing temperature of bone china is between 1220ºC – 1280ºC according various factors such as the firing speed and body composition.

Production of industrial bone china, preparation of the clay raw materials, and composition of its clay as well as the formation, firing, glazing and decoration of the product require a special production processes. " Production of bone china is similar to traditional porcelain production. But it requires a sensitive control in the preparation of its raw materials and production steps because it has a lower plasticity and a narrower vitrification range." (Erkalfa 1990: 16)

Bone ash in its composition specifies the white and semi-transparent characteristics of bone china. Bone ash is usually obtained from cattle bones which have a lower iron content. Bone flour is produced by separating the gelatin

*Singer and Singer (1963) define traditional bone china bodies in their book Industrial Ceramics as follows.*
*Bone ash 50 per cent*
*Kaolin 25 per cent*
*Felspar 25 per cent*

*Feyza Ozgundogdu. 2003. Bone china.*

*One of the difference of bone china from other porcelain types is the bisque firing temperature at which the body will be completely vitrified. The first firing at 1220° – 1280°C is followed by the glaze firing at the temperature 1050° –1100°C.*

*Some of the problems faced in industrial bone china are: non-plastic composition of the body negatively affects dry strength and leads to losses during production, without skill and carefulness to prevent such losses in production results in time loss. It is important to determine the firing temperature and regime because of the short range of vitrification. Oxidation rate and heating speed in the furnace atmosphere determine the colour of products. Bone ash is an expensive material compared with other raw materials used in ceramic production. For this reason, procurement of the bone ash is a factor in increasing costs.*

content after scalding the bones in a suitable solvent and cleaning them from their flesh and oil coverage. Bone flour is a raw material used in the production of glues and animal feeds. The accuracy in the calcinations process of the bone flours that will increase the plasticity and give the whiteness characteristics in the bone china production determines the quality of the bone ash. Calcination is performed in electrical furnaces at a temperature of about 800° – 1000°C. The ash obtained is then passed through grinding, ageing and drying operations successively.

Cornish stone is a type of felspar used in the production of bone china. It is a felspathic sodium and potassium rock that is partly kaolinised containing felspar, quartz, kaolin, mica and a small amount of fluorspar. This felspar occurs in the Devon-Cornwall region in England and there is also a similar mine in Carolina region of the US. Plasticity values of the bone ash and Cornish stone existing in the body of bone china are low and this property is added to the composition by kaolin (china clay). Increasing the plasticity will mean an increase the workability and green strength of the composition. Bentonite and ball clay can be added to the body at a rate of 1 - 5 per cent for this purpose.

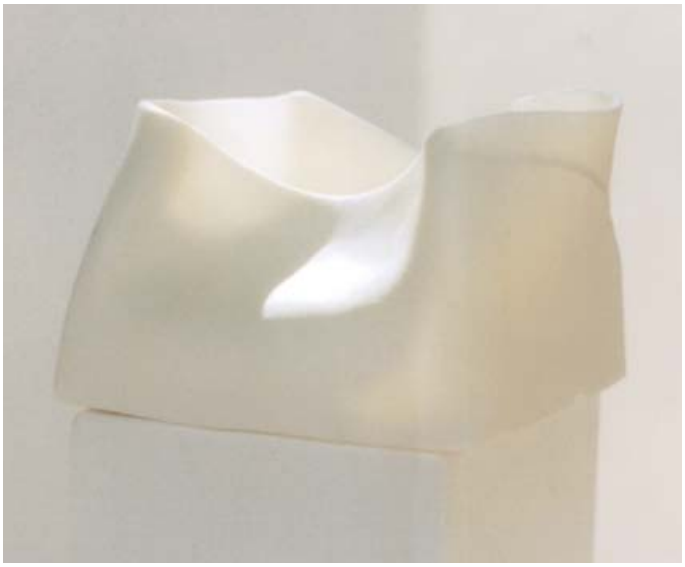
The mixture prepared in the industrial production process is ground in a watery environment in ball mills. The clay is then pressed by using a selected method of formation or shaped at a template lathe. Bone china is suitable for mould formation because of its low plasticity. Selection of electrolyte type and its rate is important in this process. The products that are shaped can be deformed easily because of their composition as they do not have plastic properties. For this reason, bone china products are dried inside the controlled drying chambers with hot air jets called 'dobbins'. Dried products are then placed into the biscuit kilns inside special saggers.

Despite some negative aspects, bone china has a prestigious statue with the aesthetic opportunities it provides. Its aesthetic characteristics have made bone china a special genre in the art of ceramics although its use is not common because of the technical difficulties associated with its use. Bone china is whiter, thinner and more transparent than other porcelain types.

The whiteness of bone china enables us to obtain good quality colour in glaze applications on the surface. But, colour applications are generally avoided in artistic bone china applications because it is mostly preferred to emphasise its pure whiteness. White is the most suitable colour for artists who like to use light in their work. The clean and white colour of bone china facilitates the perception of its smooth and glasslike texture. The surface of bone china is porous when touched compared with a surface having a bright glazed layer. But this composition is at a level that cannot be perceived visually. A bone china body absorbs the light to a certain degree and gives a satiny half-opaque appearance to the surface.

It is a well known fact that bone china has the highest translucency property in standard product thicknesses among all the porcelain types. The artists working with bone china prefer to give attention to the translucency by thinning the surface in a controlled manner in order to emphasise the semi-transparent effects.

Ceramic artists working with clay bodies having plastic and technical diffi-



*Feyza Ozgundogdu. 2003. Bone China.*

culties such as bone china have developed various methods for clay preparation, formation and firing. Body recipes have been created, formation techniques have been developed and various firing schedules have been experimented with for the purpose of artistic applications during this research.

I have experimented with various firing schedules have been tried for the calcination of the bone ash in electric furnaces during the body formation phase. The ash obtained from the calcination process made with a speed of 100°C per hour and a soaking period of 1 hour at 900°C was ground afterwards in a ball mill with ash:ball: water ratio of 1:1:2 for a duration of 12 hours. The ground bone ash was passed through a 100-mesh sieve and stored in water for a period five weeks to improve its plasticity. The ash was then dried in a furnace after this ageing process. It was decided that, after this process, suitable ventilation conditions should be provided in the environment for calcinations to be performed under studio conditions.

Five per cent of gum arabic was added to the mixture and then it was ground in the ball mill for a further six hours at a rate of 40 per cent. Various electrolytes were tried in the preparation of the slip clay and it has been determined that the best result was obtained with sodium dispex of three per cent.

I chose to add gum arabic to assist in the workable properties of my bone china. However because the slabs were very thin and the wet strength of the clay was low, the slab cracked while bending it. To overcome this I layed the slab down on a thin piece of cloth and then it was possible to lift the slab with the help of the cloth. These technical limitations determined the character and the artistic application for my work.

In shaping works, it was observed that the dry strength is low after the controlled drying process. Thus, a preliminary firing process of 1000°C was applied for retouching and thinning certain parts; and retouching may easily be achieved afterwards by using sandpaper.

The relation between the body firing speed and translucency of bone china is another factor that should be taken into consideration. Firings made at slow speeds increase its translucency. Another determining factor is soaking. Deformations were detected related to the structure of formation (especially when saggers were not used) at the degree where the body became viscous. Thus, it has been observed that firing with saggers at 125°C/hour speed with a soaking period of one hour and sintering at 1260°C gave positive results with regard to translucency and strength.

These conclusions were made in my study examining the aesthetic characteristics and usability of bone china, for artistic applications; and the following results have been obtained: Characteristic aesthetic properties like whiteness, smooth texture and translucency differentiates bone china from other traditional porcelain used in ceramic art.

Production of bone ash for the formation of bone china body that may be used in the direction of artistic targets require a further series of personal research activities.

Pureness of kaolin and felspar are needed for the white colour of the porcelain.

***The House.***
*Feyza Ozgundogdu.2004. Bone China.*

*Experiments were made using different firing speeds and soaking periods at temperatures, 1250°C, 1260°C, 1265°C and 1280°C. In order to avoid the losses in the shapes, special saggars were made from hard porcelain fired at 1300°C. Bone china forms were buried in aluminum oxide inside these saggars for firing.*

*Bone china bowl, buried in aluminum oxide, placed in a high-fired porcelain form.*

Additives like gum arabic and CMC are able to increase the workability of the non-plastic bone china clay to a limited degree for the purpose of formating artistic works.

Loss of shape increased with the increase in sintering. For this reason, the balances between firing speed, firing temperature and sintering duration should be controlled. Design of suitable saggers is required to protect the shapes of bone china products.

I have tried to bring the characteristic properties of bone china to the foreground through artistic applications. Aesthetic concepts supported by the language of thecomposition like whiteness, feeling of thinness and translucency have been examined in the shapes formed. It was determined that technical and aesthetic characteristics are giving direction to the language of the designs; and searches in the designs are aimed at pure styles.

It is not possible for the art of ceramics to avoid dynamic scientific processes because its background is based on technology. Basic knowledge of raw materials and production technology is a tool required for a ceramic artist for exhibiting his/her artistic proficiency. Development of this information will also develop the language of the material while also enlarging the field of expression for the artist.

It has been observed that it will be possible to create further industrial opportunities and gain new dimensions in the expressive language of the artists with further studies to be made in the future on bone china.

*Recipes recommended in the previous studies were tried and the following recipe has been created with good plasticity*
*Ash/Tri-calcium phosphate 45 per cent*
*Potassium felspar 22.8 per cent*
*Grolleg kaolin 30 per cent*
*Quartz 2.2 per cent*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***Tower**. 2003. Fired at 1350°c. Isolator Clay. 27 x 13 x 12 cm.*

*Flame in a reductive environment has a longer, slowly spreading, red-coloured and smoky appearance and character. The characteristics of the firing are determined through the chemical analysis carried out on the burned gases in the kiln atmosphere. The larger the materials produced and the thicker its wall thickness, the more important it is to control the temperature and structure of the reduction environment.*

# Artistic Researches In Reduction Kiln Atmospheres

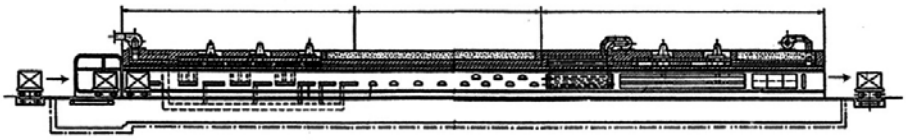
*Feyza Cakir Ozgundogdu explores the outcome of this firing process*

MANY LIVING CREATURES ON EARTH live in an atmospheric environment consisting of various gases. Elements that form the earth, as well as humans, animals and plants, are also sensitive to gases that the atmosphere. The most important atmospheric element in the respiration of mammals is also an important element for many soil-based raw materials used in ceramics. Only 1/1000 of the oxygen is available in the atmosphere in a gas state. The remaining part is available in rock compounds, water and organic materials.

The role of oxygen is especially important in the firing stage for ceramic raw materials. Clay and glaze undergo transformation due to the effect of heat in kiln. Such transformations are seen as follows sequentially: Gas is disemminated because of the decomposition of the compounds. ($H_2O$ and CO leave the clay structure). At the same time, some chemicals melt and form fixing agents or new compounds harden the product or form crystals during cooling. All such transformations are stable phases in the firing processes based on factors such as composition of the structure, temperature reached during firing and firing rate. Another significant factor in the firing process is the structure of the atmosphere containing gases in the kiln in which the firing is carried out.

The quality of the atmosphere in the kiln is the determining factor in regard to ensuring the colour, porosity, electrical and mechanical specifications aimed at, based on the type of product that will be fired. The atmosphere in the kiln varies according to the ratio of the oxygen in the environment, such as reduction, oxidation or neutral. The environment, where a sufficient amount of oxygen input is ensured in order that the fuel in the kiln atmosphere can be fired completely, is called an oxidising environment. The atmosphere, where oxygen input is restricted, is a reduction atmosphere.

The objective of reduction firing is to reduce the atoms of $Fe_2O_3$ to FeO in order to ensure that the yellow-pink colour, created in the structure in an oxidation environment by $Fe_2O_3$, the most available compound found in the raw materials in nature is changed. FeO gives blue-green colour in silicates and



facilitates the whiteness desired in the porcelain structure. Reduction firing also influences the behaviours of alkali in the clay and ensures that the clay hardens and the pores in it are removed.

Reduction firing, used for different product types in industry, is also used in firing electro-porcelain in tunnel kilns in Çanakkale Ceramic Factory. The firing process in tunnel kilns are carried out with the wagons passing through the stationary fire area with a defined speed. In tunnel kilns straight wagons enter the tunnel after loading with periodical intervals cause each other to move and they pass preheating, firing and cooling areas sequentially.

The moisture in the structure of electro-porcelain products shaped on lathes is removed completely by air jets after they are taken into the drying chambers. The products, which are then glazed, are loaded in the kilns with firing programs appropriate to their dimensions.

In standard products, the colour effects of the reduction atmosphere on the clay are invisible since such products are fired after being glazed completely. However, in examinations carried out for aesthetics purposes, some genuine textures and colour results have been observed in the structure caused by such firing. The works in the photographs are fired in tunnel kiln #10 in the Çanakkale Ceramics Factory.

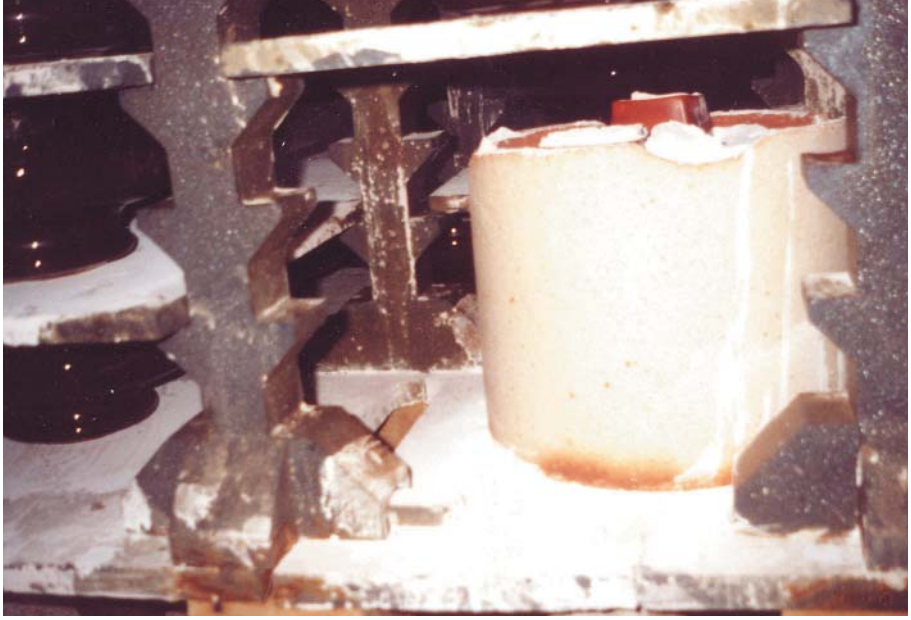
The length of kiln #10 is 105 m. The firing time from cold to cold in this kiln that can contain 52 wagons in the tunnel is 50 hours. Wagons are taken into the tunnel kiln every 58 minutes.

The tunnel kiln consists of five separate parts: Preheating area, oxidation area, reduction area: reduction is commenced at 1000°C. Carbon Monoxide in the environment is reduced to approximately 2-5 per cent by limiting the oxygen inlet. In the neutral phase, the atmosphere is neutral or in low reduction. This environment continues approximately from 1250°C to 1350°C. Therefore the completely melded felspar vitrifies and melds the quartz by absorbing it. Cooling area: This area also includes slow, normal and fast cooling intervals. In the tunnel kilns in the factory, the products are fired with direct heating through the use of natural gas (open flame). Heat controls are carried out with seger cones the firing is taken to 1350°C (12 SK). Thicker products are fired more slowly.

Since the artistic works that will be fired in tunnel kilns are shaped with electro-porcelain casting clay, they have thin walls when compared with standard products. These works are not placed into the kiln directly because they deform easily. I search for firing success by supporting the internal and external hollows in the works in order to ensure that such thin pieces can be fired at 1350°C. By supporting their structures I fire such forms by embedding them in aluminum oxide in saggars.

The thickness of the saggars formed by a high-ratio grog additive and refractory clay can be up to 20 mm and their form can be circular, oval or with corners. The history of such protective walls that allow firing by protecting the product from flame goes back to the traditional porcelain kilns in the Far East. Saggars have been used in tableware porcelain industry in Europe until the 1930s in order to prevent deformation in the firing of special products. The products embedded in aluminum oxide are fired in saggars placed on each other. However, such a firing method means loss of space and increased time

*Top left: Diagram of a Tunnel kiln. Vertical section.*
*Top:* ***Flame Shadow.*** *2003. Fired at 1350°C. Porcelain. 25 x 15 x 11 cm.*
*Above:* ***Flame.*** *2003. Fired at 1350°C. Porcelain. 27 x 13 x 12 cm.*



*Top right: Saggar placed in the tunnel kiln wagon. Top:* ***House****. 2003. Fired at 1350°C. 25 x 14 x 17 cm. Above:* ***Game****. 2003. Fired at 1350°C. 23 x 14 x 11 cm.*

and energy consumption because of the heating and cooling processes; the cost increases. With the development of technology, saggars have not been used after the introduction of kiln cassettes which are more functional.

Today, saggars can be used in special implementations for ensuring different carbon spots on the structure in artistic works (See Genç, Bakıran 2003).

In firings carried out in tunnel kilns, the internal spaces of works placed in the saggars are filled with aluminum oxide up to a definite level. Therefore, internal and external surfaces of the forms are supported against such deformation possibilities. Such saggars used for calcination of ceramic pigments of the glazes used in the factory have allowed a firing in the tunnel kiln.

Firing stains with different colours from yellow to orange to red have been achieved on the products. Since the stains provided with this firing method are more visible on simple forms and smooth surfaces, geometrical forms have been used in the compositions. Architectural construction forms and elements have inspired the pyramidal formed works.

The colour values which occur on the forms provide associations based on the experiences and observations of the spectator. The tones of orange and red give metaphorical traces related with the environment in which the works are fired. The evidence of the kiln environment continues to be reflected in the works.

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# Color Research on Porcelain Surfaces with Metal Salts

*A. Feyza Cakir Ozgundogdu conducts research on the effects of soluble salts on porcelain*

*Image 1:* ***Calmness.*** *2006. Modular composition, porcelain, coloured by cobalt chloride.*

*The aesthetic effects that water soluble colorants have on white, colour diffusing porcelain materials offer a wide range of research topics for ceramic artists. Therefore this study summarizes my first steps in my attempt to follow the wide scale pointed out by Åse. It is believed that aesthetic pursuits using water soluble colorants and technology when combined with the creativity of inquisitive artists will create richer results.*

WATER SOLUBLE COLORANTS ARE METAL SALTS such as sulphate, nitrate and chloride that can give colour on ceramic surfaces at about 1250ºC and above and that can dissolve in water. Due to their transparency, these colorants give many colour and dimension usage possibilities to artists working with semi-transparent porcelain. The extensive research of Arne Åse about these water soluble solutions are presented in the book titled *Watercolour on Porcelain*. The 'spring cleaning' with which Åse symbolizes a divergence from the stoneware tradition of the 1960s has moved him on to lighter, simpler materials. This famous book by Åse, is an example of intellectual and methodological questioning and application for artists researching the concept of research and related analyses in the field of ceramic art.

The research that you will read below is an exercise on a very short section of the process to which Åse hints in detail. A similar destiny of an "Aesthetic quest for a more refined colour and dimension possibility on ceramic products" and the methodological trial that was carried out following in the footsteps of Åse has led me to the process described below and resulted in the illustrated studies. This study will illustrate the usage possibilities of water soluble colorants that have characteristic colour and depth qualities in porcelain forms (Image 1).

The general characteristics of porcelain; its smooth texture, pure whiteness, semi-transparency and thinness, allow original forms of expression and production for ceramic artists. In ceramic products, semi-transparency is the quality of hardened bodies to transmit light to a certain extent. Due to this quality, glazed or unglazed thin porcelains


filter light to some extent. The absorption of light allows 'illusions' related to the volume of the body as well. Due to the closing pores on porcelain materials, light gives the surface a semi-opaque glittering texture. On this texture, light and shadow effects also gain a visible effect (Image 2).

An artist adopting such a style may avoid using glaze or a dominant colour. Because even if it is coloured or transparent, when a thin surface is glazed, the glaze becomes a different layer covering the original glassy texture. On the other hand, water soluble colorants are materials that offer aesthetic qualities which support the texture and semi-transparency qualities of the porcelain. Since these solutions are absorbed by the pores of the material, they create permeable colour values instead of a layered effect (Image 3).

The metal salts that are stated to be water soluble and which are treated in the scope of this research are colorant solutions of chloride, sulphate and nitrate. Also potassium dichromate and phosphoric acid solutions, which are not salts of metal and are not water soluble, create special aesthetic effects when used together with colorants. Due to the fact that water soluble colorants are not commonly used in comparison with the other oxide and carbonates used in the ceramic industry, there were some difficulties in procuring the raw materials for the study carried out in workshop conditions (Image 4).

The colorants that were used in the research are limited to solutions of iron chloride, cobalt chloride, copper sulphate and iron sulphate. Solutions of these colorants at different ratios and solutions of these colorants were applied to hard porcelain and bone china. At the same time potassium dichromate and phosphoric acid and their solutions were prepared and these were either applied directly or by mixing in to different solutions onto the surfaces coloured with different solutions.

Hard porcelain and bone china pieces were preheated at 1000ºC: the solutions were applied using a brush, sponge, effusion and immersion techniques. The surface absorption of the solution applied to the biscuit material was observed to be dependant upon the application method and the speed. Therefore, first results for the quantity of the solution to be applied may be misleading. That is why the ideal thickness that will be applied can only be decided by the artist based on his/her personal experience.

After a one layer application by the brush, the colour effect obtained by firing can be seen in the example. In applications where the solution was poured into the interior space of the cast, the solution was absorbed more. During the application, the liquid overflowed and this effect

*Top left: Image 2:* ***Spring.*** *2006. Coloured by iron chloride and coper chloride.*
*Top right: Image 3:* ***Landscape (Detail).*** *Porcelain coloured by iron chloride and phosphoric acid.*
*Above centre: Image 4:* ***View of Dry Metal Salts.***
*Above: Image 5:* ***Colour effect of brush application (iron chloride).***

was visible after firing (Image 5). This appearance is an interesting experience causing random marks to appear on the other surface. This technique forms textures based on the piece's hardness and thinness. Potassium dichromate has made it easier for the applied colorant to be seen from the other surface and also made the expected reflection to appear on either the interior or the exterior surface. When the solutions prepared by using these salts are applied to the surface, they colour the piece's profile and hence its other surface without creating extra thickness (Image 6).

After the porcelain is fired, the solution becomes semi-transparent. Depending on the combination of different salts, application method and thickness and also the desired visual effect, the salt density in the solution must be controlled by the artist. It is also possible to apply the solutions to the fired material (Image 7). However, for the solution to be able to hold on to the hardened surface, thickeners such as CMC or Arabic gum may be applied with control by brush. Therefore it is possible to create original colours and textures by applying such colorants on top of each other.

The firing of hard porcelain and bone china applications were performed at cone eight to 10 temperatures in an electrical kiln and in a reducing environment in a gas kiln. It was observed that the firing temperature and atmosphere is effective on the colour and texture of the parts on which the solutions are applied. It was observed that as the material hardens the colour quality is affected in a positive way, whereas there may be some deformations in the structure due to temperature and reduction. The choice of these variables is again up to the artist.

Two important safety related points that have to be kept in mind when working with metal salts are their toxic effects and the corrosion that they cause on equipment such as brushes, sponges and plastic cases. When working with solutions, direct contact should be avoided. No residue should be left in the environment and the environment should be ventilated properly during firing so that gases that are emitted are not inhaled.

The aesthetic effects that water soluble colorants have on white, colour diffusing porcelain materials offer a wide

range of research topics for ceramic artists (Images 8, 9 and 10). Therefore this study summarizes my first steps in my attempt to follow the wide scale pointed out by Åse. It is believed that aesthetic pursuits using water soluble colorants and technology when combined with the creativity of inquisitive artists will create richer results.

*Facing page top left: Image 6.* ***Colour effect of infusion application (copper chloride).***
*Facing page top right: Image 7.* ***Application of solution on bone china surface.***
*Facing page lower left: Image 8.* ***Sisters.*** *2006. Porcelain coloured by iron chloride.*
*Above left: Image 9.* ***Greensward.*** *2007. Porcelain coloured by copper nitrate.*
*Above right: Image 10.* ***Porcelain pieces coloured by iron chloride, iron sulphate, cobalt chloride.***

**Solutions prepared and used in the research**

| Colorants used in research | Grams per 100 ml/water |
|---|---|
| Iron Sulphate | 100 |
| Iron Sulphate | 80 |
| Copper Sulphate | 30 |
| Copper Sulphate | 20 |
| Iron Chloride | 20 |
| Iron Chloride | 40 |
| Cobalt Chloride | 10 |
| Potassium Dichromate | 12 |
| Iron Sulphate + Copper Sulphate | 50+15 |
| Iron Chloride + Copper Sulphate | 15+15 |
| Copper Sulphate + Cobalt Chloride | 15+5 |
| Iron Sulphate + Potassium Dichromate | 50+6 |
| Copper Sulphate + Potassium Dichromate | 15+6 |
| Cobalt Chloride + Potassium Dichromate | 5+6 |

*The extensive research of Arne Åse about these water soluble solutions are presented in the book titled Watercolour on Porcelain. The 'spring cleaning' with which Åse symbolizes a divergence from the stoneware tradition of the 1960s has moved him on to lighter, simpler materials. This famous book by Åse, is an example of intellectual and methodological questioning and application for artists researching the concept of research and related analyses in the field of ceramic art.*

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# Translucency as an Aesthetic Expression in Ceramic Art

*A. Feyza Çakir Ozgundogdu*

*in the midst of light and dark*

*Above: Angela Mellor.* ***Arctic Light*** *III. 2002. Bone China.*

CERAMIC ART HAS CONTINUED TO DEVELOP in a dynamic process since the early years of 20th century, with contributions from modern artistic craft and improved ceramic technology. Diversified raw materials and production methods allowed new modern concepts and tastes in the ceramics arts to develop in addition to traditional preferences.

Ceramic artists have continued wondering, researching and freely experimenting other possibilities to express feelings using the clay in the hands. Together with the advanced and fast communication facilities, it becomes possible to examine easily and share the products and characteristic aesthetic tastes of other ceramic cultures in any region of the world, such as Far East, Europe and

*"Crude light can make us blind as much as darkness. The path of a philosopher passes through 'aesthesis', that is, a sensation test area before ideas and essences. But maybe this path is more important than anywhere that one is expected to reach."*
*(Maurice Merlau-Ponty)*

*William Lungas.* ***Archi-type 1****. 2006. Porcelain*

*" We are satisfied with this modest life created with the outer light, which is almost invisible, maintains a bit of the remaining life and hold on to surfaces of the walls painted with the colours of sunset. For us, this lightness on a wall is more valuable than all ornamentations of the world and this never tires us" (Junichiro Tanizaki)*

America. With the development of technology, diversified ceramic raw materials, easy supply of such materials and availability of different firing methods provided a space for ceramics artists for questioning and expressing ideas in a brave way. Various factors are determinant in ceramics works, such as visual and conceptual methods of expression, choice of clay and glaze, methods of construction and ways of exhibiting. Artists produce products with different styles based on their individual emotions and preferences. In this article, the handling of light permeability in the works of art and use of it in ceramic works as an aesthetic element will be discussed.

Judgments about existence and absence of 'light' are generally opposites. Light is an element that ensures our vision of the world, but sometimes it obstructs such vision. A visual world comes into being with not only the light that lightens the night but also the darkness that shades the light.

Light and shadow began being used in the pictorial art history upon discovery of space based on perspective. An effect of the shadow, which was used as an illusion tool until the Baroque period, became an abstract tool of expression in this period. Shadow had been one of the main areas of interest in the works of art at the end of Renaissance and especially in Baroque arts and was deemed as a step taken towards modern art. This abstract element, which breaks off the object with the colouring of shadow, has introduced new ways and points of view for some areas of art.

Author Junichiro Tanizaki devoted his book named *In Praise of Shadows* to the place of shadows in Far East architectural aesthetics. He says that impermeable shadow dominates the indoors of Japanese houses. This concept is concealed in all kinds of details, especially in architecture. Light passing through paper walls indoors is used and composed by different methods. This 'shadow aesthetics' discovered for indoors practice is an art of handling the

*Les Blakebrough.* ***Bowl****, Southern Ice Porcelain.*

light by filtering, using light beams under control and re-editing light. The sense of perception, which becomes dull gradually with the semi-darkness, causes us to perceive an uneasy silence, but also a feeling of interest.

The shadow aesthetics created by filtering of light greets us through the clouds and leaves. And sometimes it flows through the curtains of a room and creates a acquaintance and peaceful association. Filtered light and the shadow effect it creates is an independent existence beyond material. It wraps the audience and invites them to enjoy a simple mysterious silence.

In various published literature, it is specified that the first practice of editing the translucency in an aesthetic manner was an Eastern one that originated in performing arts known as 'dream play'. In this performance, flying shadows appear and disappear on a translucent screen. Visual language is used only as illustration. This characteristic is one of the elements of visual composition in modern performing arts.

Light's filtering and creating of a semi-transparency effect introduces the audience with the object behind the visible screen. This reality is behind the bright daylight. Therefore, while the ceramic works 'speaking the language of colours' exists in the light, a translucent bone china work exists in the shadows. A form that is not translucent reflects the light. But a bone china form borrows some part of the light, absorbs and filters the light. Thereby, the shadow is created within the bone china form.

When we look at the bone china works of Angela Mellor, we directly see the form. *Arctic Light* is like a living organism. We see and feel that the form becomes thinner and thicker with the differences in the walls of the forms. Supporting this illusion, her works are considerably thin and fragile but strong and elegant. In the works of Les Blakebrough, the illusion created with the light permeability is brought to the limits of the fineness he achieves.

*Top: A. F. Ozgundogdu.* ***House 11****. 2004. Bone China.*
*Above: A. F. Ozgundogdu.* ***Cocoon****. 2004. Bone china.*

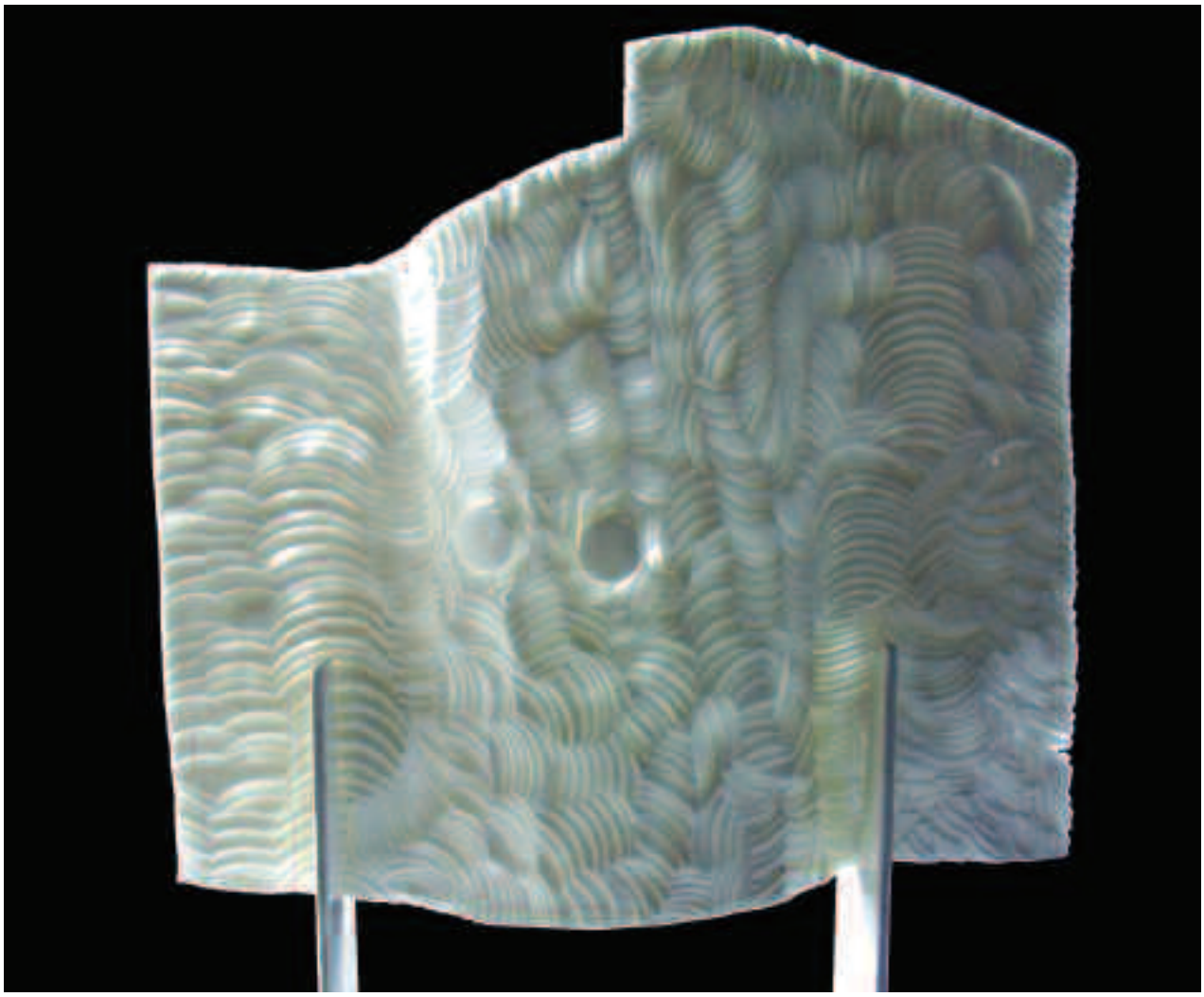
The porcelain works of Willam Lungas, with similar illusions and associations were exhibited in a exhibition called *Palimpsest* in 2006. Palimpsest[1] is a word selected by the artist for his exhibition by which he means a kind of paper that can be reused by deleting the sketches on it, a form used mainly by Albert Dürer and Leonardo Da Vinci in the history of art.

As a result of such use, the shadows and sketches drawn and deleted before created overlapping layers on the paper in time. Such drawings, frequently seen in the sketches of Renaissance, are also interesting for the art historian since they include traces of the working process of artists.

Lungas arranges fragile flaky-thin plates back-to-back and creates layers by lightening them in *Archi-type 1.* While history resounds in such forms, a inspirational reality is felt. In *Archi-type 1*, Lungas intends that the pyramidal towers with memories in layers that remind is of historical monuments or lived-in but deserted buildings. "The user/audience should suspect that each part of a design has another concealed meaning in order to save expression during the design process as much as creating suspicion – that is, transforming a kind of illusion to the information that all kinds of meanings are infinitive; designs conceal rather than telling or showing, the ambition of the user/audience is to capture the fact that the designs will tell/show everything – even other than the meanings that the designers wishes that which his design reveals. Let's call it a kind of discovery. Once what is deemed as the meaning of the design is found, we know that it is not the real meaning. Real meaning is the shifted meaning. Possibly hylics[2] are the ones who finish the interpretation processes by saying 'yes I understood'… A real user is the one that the mystery of a design is the space of the design" (Pehlivanlıoglu).

Translucent porcelains address the feelings of the audience, beyond the visual sensation. My *House* series addresses the places where people live. Observing such structures only from the outside is not sufficient for envisaging the house concept in our minds. Therefore, artificial lighting in such works helps the audience to arouse their sensual experiences. With this shadow play created, it is aimed at strengthening the meanings attributed to *House* and bringing such meanings in the work. Life is 'felt' in the bone porcelain houses.

Shadows reflecting on the walls give some clues about life together with the planned relationships they conceal. Fired resistant porcelain form appears to be fragile and subtle while telling the story of a fluid and transparent cover that seems as a shadow. This makes the semi-transparent porcelain works beyond objective reality, a temporary world of imagination - edited by the artist and shared by the audience. In this way it creates interest, dependent on lightness and darkness and exists in shadow.



*A. F. Ozgundogdu.* ***Angel****. 2007. Bone China.*

*" We defend that beauty should be searched in the shadow play occurring between objects in semi-darkness not in itself. Like a phosphorous stone that glares in the darkness but looses all of its attraction as a jewel in daylight, I think that there will be no beauty without the effect of shadow" (Tanizaki ).*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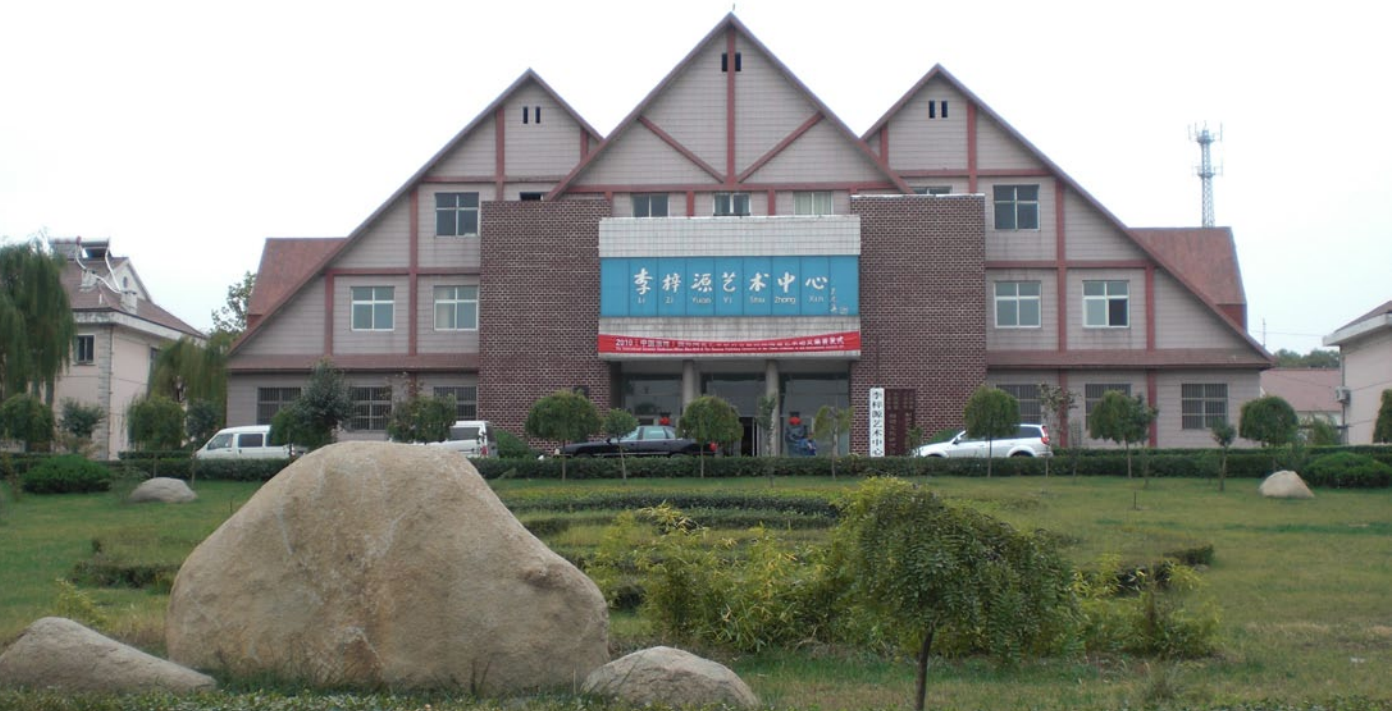



# 2014 Forum of the International Ceramic Artists Association

## August 23 - September 3 2014 , Shandong, Zibo City

*A road brings one not to a place but to a perception.* ~ Henry Miller.

*Above:* ***Li Ziyuan Art Center****.*
*Below left:* ***Vilma Villaverde****. 2008.*
*Below right:* ***Kim Yong Moon****. 2008.*

*A Feyza Çakir Ozgundogdu relates the experience of a forum in China*

ALAS, IT IS IN THE AFTERMATH OF THIS SYMPOSIUM AND SERIES OF WORKSHOPS, run with the participation of ceramics artists and technicians from all over the world, that one is left with such a 'new perception'. In order to benefit from such interactive environments, it is indeed necessary for artists to travel all corners of the world to convene, share experiences, discuss the challenges they face around the work benches, solve problems, ask questions, attempt to find answers and discuss the process of building kilns and designing ceramics. Only in this way can artists and designers develop themselves, building on their skills and effacing difficulties. The frisson of excitement generated by the journey to the location of such a gathering and the new

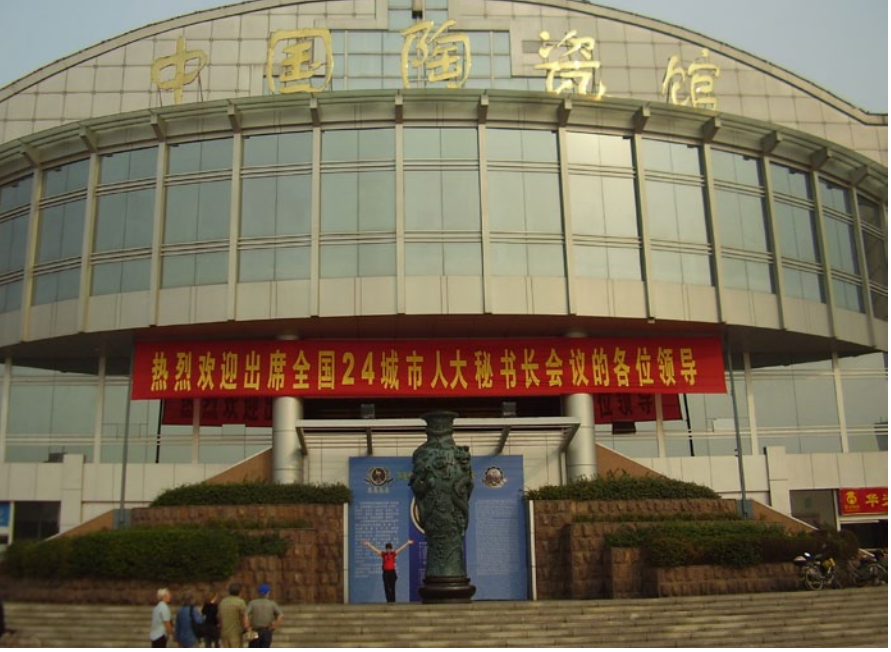
ideas that form and gather momentum on the journey back give participants the opportunity to renew their approaches to their art. In this sense, it can be said that ceramics artists are luckier than artists in other fields. After all, as a ceramics artist, one can work anywhere where there is soil below one's feet.

The origins of The Meeting of International Ceramic Artists in Zibo City, Shandong, China date back to the Macscabal Wood Fire Symposium which was organised in the factory of Zibo Taishan Ceramics Co Ltd in 2005. The symposium, which was organised by Li Ziyuan, Korean artist Kim Yong Moon and Le de quo, the owner of Taishan Factory, featured a woodfire constructed within the factory as a focal point to the workshops carried out therein. The symposium has been carried out on an annual basis ever since. The forum which was organised between 23 August and 3 September, 2014, a great opportunity for ceramics artists occurred in the run-up to this year's Zibo Macscabal Wood Fire Symposium, which occurred from 1–8 September. The forum organised by Li Ziyuan takes place as a separate event.

*Above:* ***General view of the studio****.*
*Below left:* ***Mutlu Baskaya and Iosifina Kosma****. 2010.*
*Below right:* ***The kiln****.*

Our first meeting as founding members of the association was in 2008. The campus where Li Ziyuan Art Center is located is attractive, with intriguing architectural form and located in front of an attractive set of gardens and a museum at the ground floor – not to mention Li Ziyuan's home and personal workroom. Next to this building, a spacious and light ceramics studio has been prepared for artists, containing all the necessary materials and equipment including a woodfire kiln. This year the association carried out its first forum activity with workshop events, opened the museum and first exhibitions and featured a series of presentations, factory tours, local ceramics studio visits and even a tour of Qilu University of Technology and the Zibo Chinese Ceramics Museum.

A catalogue was printed listing the ceramic works produced by the association founding members after the 2008 meeting and the association enriched each new event by publishing new works annually. The 2010 meeting produced a fecund amount of work owing to the participation of new artists and a book was published including not just works, but essays written by association members and information on the latest workshops and exhibitions. The meeting in 2012 took place in India with




*Above:* ***Zibo Chinese ceramics museum****.*
*Below left:* ***M Tuzum Kizilcan****. 2010. View of a ceremony.*
*Below right:* ***Loading the kiln****. 2008. Li Ziyuan and Feyza Ozgundogdu.*

even more participants, which combined with the location created a unique cultural environment in which participating artists could have an even richer experience. Association members came togetherin 2014 in Zibo City for the fourth time. Another important aspect of the forum which took place this year was that the event coincided with the 20th anniversary of the Li Ziyuan Art Center.

We came together this year with a magnificent opening ceremony, meeting new artists, taking part in exciting and delightful workshop studies, traditional firing processes, exhibition opening and the celebration of a new publication. Next year's plans were discussed, out of which the seeds of various new projects were sown. The subject of this year's publication was *Acknowledgement, Aspiration and Creation* and many articles are examinations how local materials affect their work or the work of ceramists in their country generally. Other articles include information on specific types of clays, glazes and additive local materials, along with a related study on how local geology influences designs, sculptures and forms.

The association defines itself legally as such: The International Ceramic Artists Association (ICAA) was founded in November 2008, as a non-profit, professional ceramic art organisation. The association members come from more than tens of nations from across the globe, covering five continents. The principle of the association is to promote inter-communications between the ceramists, art associations, educational organisations, museums and art galleries through events, lectures, the exhibitions and shows, so as to encourage and promote cultural cooperation between countries and to improve the development levels of contemporary ceramic art all over the world.

Lest it be forgotten that Zibo City is the home of one of the world's most important ceramics museums. Zibo City is also known as one of the important industrial cities of Shandong province and the city has the oldest kiln discovered in China. A sample belonging to remnants of this kiln is exhibited in the Zibo Chinese Ceramics Museum which lures


citizens and visitors with its modern architecture in the middle of large city square surrounded by lush greenery and a luminous sky filled with kites. Along the walking trail towards the museum, a fine, long and tranquil pool accompanies you and you see a monumental porcelain vase which becomes more recognisable as you come closer to the building. The museum is designed in four separate sections including an impressive wing devoted to modern ceramics.

Through Li Ziyuan art centre activities and opportunities provided by Zibo City, the International Ceramic Artists Association (ICCA) gives modern ceramics artists the opportunity to meet with their counterparts from other countries, conduct intellectual inquiries, create works and the ICCA continuously moves forward in this endeavour as the participation of ceramics artists expands with every meeting.

Meetings in a ceramics symposium in Italy, while I was working at the International Ceramic Studio in Kecskemet as an Artist in Residence in 2006, made me aware of work being conducted in Cuba, where I continued my work later on. Due to her interest in inviting me to the first forum, I met with dear Vilma Villaverde whom I was so honoured to meet. I also had the pleasure to meet Li Ziyuan and countless other capable ceramics artists. In the ensuing years, we have come together with them and many other new artists. We are continuously on the road with the butterfly effect we create on each other in this world of infinite opportunities, to reach not a place but a perception.

*Above:* ***2010 forum group****.*
*Below left:* ***Opening of the kiln****. 2008.*
*Below right:* ***General view of the permanent collection exhibition of Li Ziyuan Art Center****.*

*In order to benefit from such interactive environments, it is indeed necessary for artists to travel all corners of the world to convene, share experiences, discuss the challenges they face around the work benches, solve problems, ask questions, attempt to find answers and discuss the process of building kilns and designing ceramics.*

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"Gratitude to the new people I look forward to meeting next time and Li Ziyuan and Vilma Villaverde, whom I hope to meet again soon."

# Traces with Layers

## Özgündoğdu's Latest Works In Relation with Nature and Environment

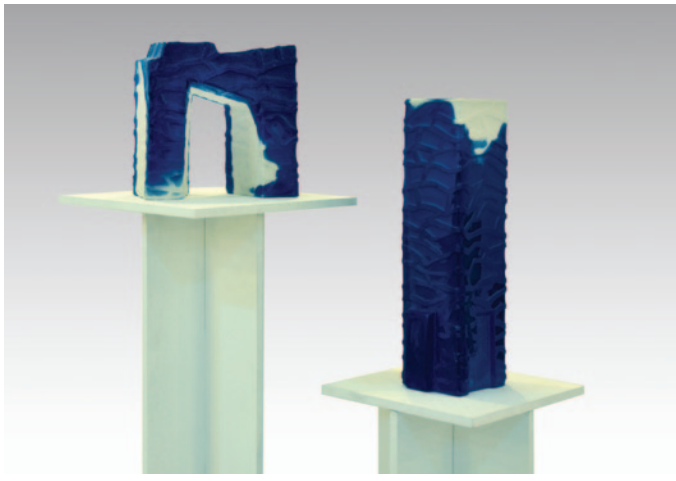
*Article by Burcu Karabey*

Artwork is created by feelings, ideas and questions. And the meanings beyond the artwork appear through these questions. It is possible to feel the personal, internal, peaceful dialogue in Feyza Özgündoğdu's latest exhibition. You can feel the traces of the texture of the Turkish architecture, shadows from life, images from her shadow diaries reflected in her artworks. Besides the theme of architectural structures, one of the major themes in her works is 'shadows'.

Shadows continually create new shapes as a result of the position of light. And these shadows activate her creative process, inspiring images. They reflect the energy of life and the things in life that we can question ourselves. Details disappear in the shadows and when the details disappear we are faced with the reality of ourselves. When the sunlight comes straight down, the shadows disappear. Özgündoğdu associates with traditional shadow puppet theatre in her artistic approach. As she says, "I too try to fix the shadows reflected from the window of my studio to my works on ceramic surfaces. In the end, my shadow diaries that I have been long keeping with passion on photographs or sketches, are finally settling in my recent porcelain structures. I catch the shadows I have borrowed on ceramic surfaces and start to vitalise them on my own curtain just like a shadow play director." (Özgündoğdu, 2013:49)

One of the most important actions of childhood times is playing games in order to understand the outer world. Here in her artworks we feel a similar sense. Repetition of similar forms affirms this childish nature of her artistic approach. Geometric, prismatic form constructions, the peaceful and harmonious combination of space with volume, dramatically decorated surfaces, the colour effect of cobalt carbonate as she defines it as Black Sea blue and reddish colour of the earth with the ferrum sulphate all reflect on her porcelain clay bodies her own land where she lives.

These pictorial effects of metal salts on porcelain surfaces give a result like sepia photography and/or a picturesque effect that is full of life. Anatolian culture has rich sources. The artist seems to be following traces of layers of architectural structures beginning from the neolithic architecture through



*Facing page, Figure 1:* ***Menevişli Geçit/Moiré on the Gate (Left)*** ***Geçit, Denize Karşı/Seascape Gate (Right).*** *2014. 23 x 23 x 10 cm.*
*Top left, Figure 2:* ***Dalga parçaları/Piece of Waves.*** *2014. 38.5 x 12.5 x 10 cm.*
*Top right, Figure 3:* ***Günbatımı köprüsü/Sunset on the Bridge (Left).*** *2014. 23 x 23 x 10 cm.*
***Sunset on the Wall (Right).*** *2014. 38.5 x 12.5 x 10 cm.*
*Above, Figure 4:* ***Karadeniz Köprüsü/Blacksea Bridge (Left).*** *2014. 23 x 23 x 10 cm.* ***Karadeniz mavisi/Blacksea Blue (Right).*** *2014. 38.5 x 12.5 x 10 cm.*

the Traditional Turkish Architecture and the Blacksea region othantic architecture.

Not surprisingly, it is unavoidable to feel the peaceful, calm dialogue behind the artworks even to the contrasting decorated surfaces in some of them. Her earliest works were made of earthenware but the latest ones are bone china and porcelain. On the backstage, by being aware of the possibilities of ceramics techniques and technologies, Özgündoğdu is a deep researcher which is evident from her material selection and her successful material usage. As seen in her last works, she prefers casting methods instead of handbuilding. In her previous works, handbuilding methods were used which was suitable for the neolithic architectural reflections as her subject. Her ambitious efforts can be seen in her artworks, reflecting her curiosity. These works do not have a sense of deceptive simplicity, on the contrary they reflect complex and varied emotions.

In Figure 1, the shapes of the forms are like bridges. Behind her interest in architectural structures and shadows, there may be a connection between physical reality and existence. Her own words support this idea; "On my walls, I wanted to stabilise shadows that prove the existence and transience of time, which appear and disappear on the walls." (Özgündoğdu 2011:99)

Barrett says "Art is a special way of knowing. We can define the world by feelings, emotional intelligence, the intelligence that is shaped by feelings and the feelings that are shaped by the ideas." (Barrett 2012:188) Here, her original artworks give us this opportunity.

These architecturally referenced works show us her dialogue with herself and her environment with which we can be involved. In addition, the use of texture adds value to the colour usage in her formalist artistic approach. Generally Özgündoğdu's works are soft-textured but with the contrasting

*Above, Figure 5:* ***Bekleyiş/Expectancy****. 2014. 26.5 x 19 x 17 x 5 cm.*
*Below, Figure 6:* ***Fragments of Life****. 2014. 30 x 55 x 19 cm.*

colour effects, we may feel them as hard-textured as seen in Figures 2 and 4 .

By being a sensitive observer, her interest is in architectural structures and catching shadows in her previous works. It is seen that her interest and inspiration with architectural reflections and constructive understanding in her artworks has not changed. Her artworks are emotionally charged. In Figure 6 the small pieces placed inside and the outside the surfaces of the forms are reminiscent of figures as connotative details. These details embody her inquisitorial inner world.

According to Shinner, "Art is not only a cluster of concepts and organisations, at the same time that is something that people believe, a source of peace, a love object." (Shinner 2010:26) By defining her artistic approach briefly as "non- materialistic treasures" Feyza Özgündoğdu seems that she chooses to reflect peace and love and something different that we can feel.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All works are cast Limoges porcelain, unglazed, coloured by metal salts. Photos are courtesy of GalleriM Art Gallery and are edited by Eda Balcı.