

## **Adaptation of *Warli* motifs with computer aided designing for its contemporary uses**

**MEENU SRIVASTAVA\* AND SANGEETA VAISHNAV**

Department of Textiles and Apparel Designing, College of Home Science, Maharana Pratap University of Agriculture and Technology, Udaipur (Rajasthan) India

### **ABSTRACT**

The present investigation was undertaken for adaptation of *Warli* folk art motifs with computer aided designing for its contemporary uses. To give fineness and required intricacy, the motifs to be separated from all collected paintings were assessed and further manipulated for its contemporization and colour visualization on computer by using suitable software. A total of sixty designs were developed, 20 each for the three selected categories of furnishing items *i.e.* Dining table cover, Sofa cover set and Diwan cover set for product development followed by selection of three most suitable placements of motifs for each of the selected categories by panel of judges. Corel draw software was used to create customized graphic of selected furnishing articles. The adapted motifs were also simulated on scaled graphics of furnishing articles in different placements.

**Key Words :** Adaptation, *Warli*, Motifs, Computer, Software, Designing, Contemporary, Uses.

### **INTRODUCTION**

Paintings are an integral part of the folk and tribal tradition of India and often mirror their lifestyle. *Warli* art is a beautiful folk art of Maharashtra, traditionally created by the *Warli* tribal women. *Warli* folk paintings are abound with simple designs which source their themes from mystic beliefs depicting gods, goddesses, nature, festivals and human nature. The *Warli* paintings form a precious part of the generational legacy and exemplify the richness and diversity of our country and the artistry of the *Warli* artisans. *Warli* painting used to be etched out on walls of *Warli* houses, but nowadays, they are being painted on paper and canvas. The export market offers a great scope and opportunity for design development using *Warli* folk art designs to budding designers in an era of globalization.

The folk art and the traditional ideas that are the glitter of our culture can be adapted on textiles for commercial gain. Traditional craft skills have to be made relevant and marketable in India. With the above facts in mind, the researcher conducted the present investigation on “Adaptation of *Warli* motifs with computer aided designing for its contemporary uses”. The present study combines the traditional art with the requisites of the modern world to help retain the ethnic value and put to modern day use.

CAD systems allow the designer to add and remove components from a design, alter the scale of the design, put the motif into a variety of repeat types, and explore various colorations of the design according to textile designer Holly Henderson (Joyce, 1993). One of the most fundamental benefits of using CAD systems in the development of printed fabrics is that any changes made to a design or

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repeat can be visualized immediately as CAD systems allow for a design to be magnified or stepped out and immediately printed out on paper or fabric (Holmes, 1993). Designing and editing on computer simulates work efficiency, enables variations, improve intricacy in pattern, retouch and manipulate for further enhancement and made it compact as per requirement. Hence, textile products for furnishing use were simulated by design adaptation of existing *Warli* motifs using CAD technology.

## METHODOLOGY

Since the *Warli* is folk art of Maharashtra, the present study was purposively carried out in Dhanu, Jawahar, Manor and Cosbad Villages of Thane district of Maharashtra based on the higher concentration of the *Warli* artisans in these four villages for preliminary survey and documentation of *Warli* paintings along with exploration of secondary sources. Hence, for the survey work the locale of the study was confined to the Maharashtra and experimental work was conducted at Home Science College, MPUAT, Udaipur.

In the present paper, the focus is on experimental work where, traditional folk motifs used in *Warli* paintings were critically identified and contemporized with the help of suitable software for adaptation on various furnishing articles. Adaptation of motifs was done on computer by using suitable software *i.e.* Adobe Photoshop and Corel draw by making desired changes in original motifs, colours and orientation etc. Sixty folk motifs inspired from *Warli* paintings were identified for developing 20 design each for three different furnishing articles through CAD and finally nine designs were selected for developing screens by a panel of 10 judges comprising of students and staff members of department of Textile and Apparel Designing for their relative ranking.

## RESULTS AND DISCUSSION

As a result of the preliminary survey, the documented designs and *Warli* paintings were critically assessed by the researcher to identify the motifs for adaptation in contemporary forms. Each of the selected motifs was further manipulated for its contemporization, placement and colour visualization on computer by using suitable software *i.e.* Adobe Photoshop and Corel draw. In present study, computerized designing used for adaptation of motifs from *Warli* folk art using suitable soft wares briefly included following steps as pointed below -

- i) Design input through Scanner
- ii) Separation of motif from *Warli* paintings
- iii) Adaptation to contemporized motifs
- iv) Creating customized Graphics for design simulation
- v) Placements of adapted motifs on furnishing articles

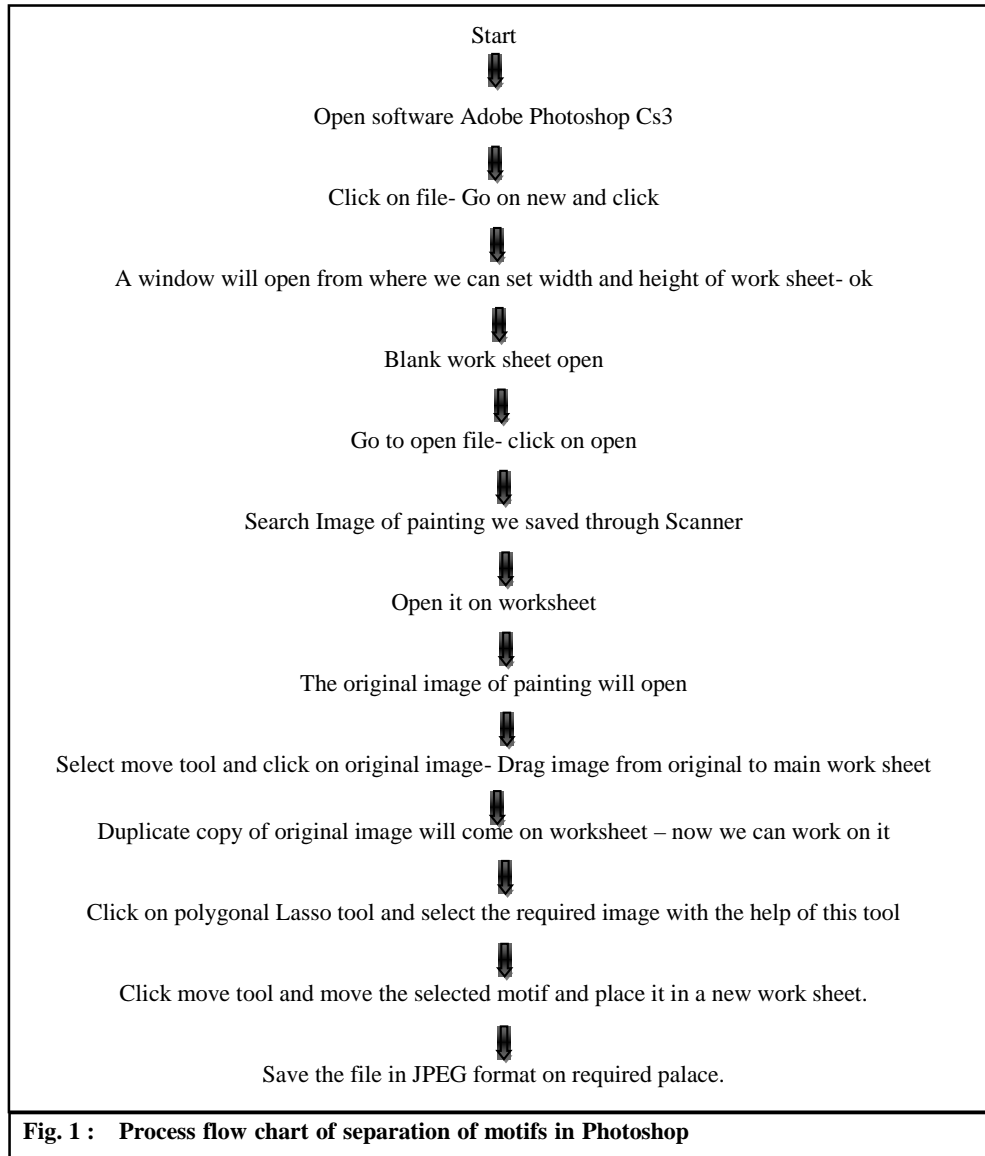
### **Design input through Scanner:**

The first stage is the input of design by copying it through coloured scanner. The scanned design is stored in the computer at appropriate location for later use.

### **Separation of motif from *Warli* paintings:**

To give fineness and required intricacy, the researcher critically identified the motifs to be separated from all collected paintings on computer to make them more appealing by clever use of Photoshop software. Photoshop has a unique user interface for creating customized graphics. In Photoshop, designing is generally done using different layers. The main window of design area was created by selecting new option from file menu. The exact dimensions of width and height of particular article was fed in dialogue box. The resolution was set to be 300 pixels/ inch. As soon as the command to open an existing file is given, a new dialogue box is opened showing the design. The detail outline

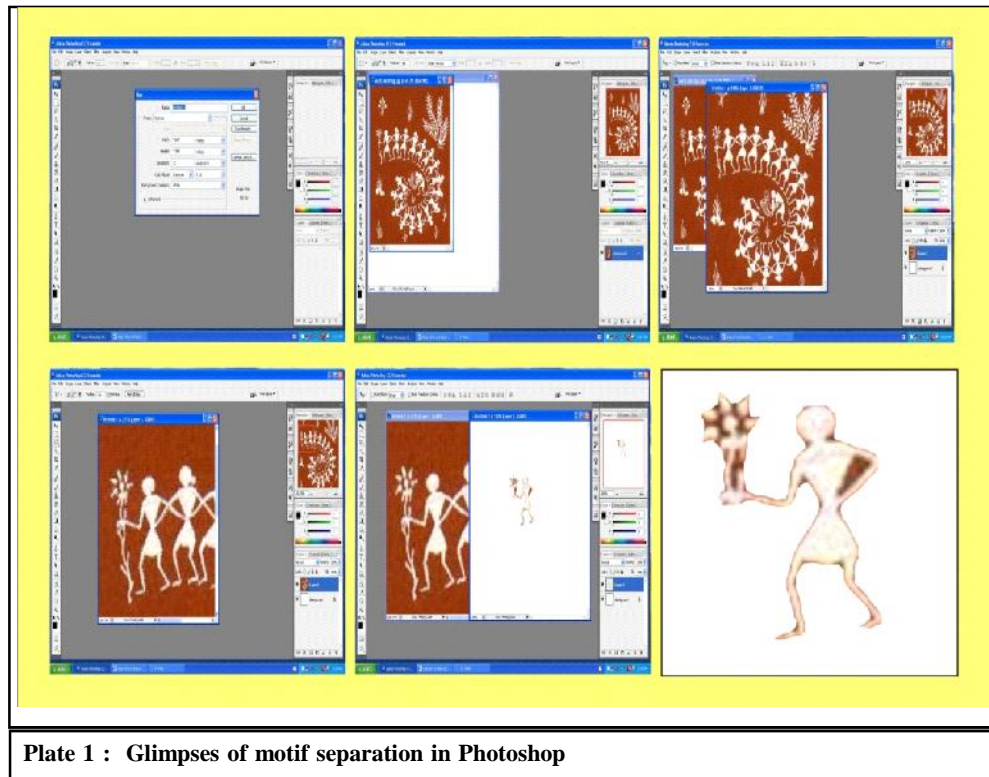
of the process of designing using Photoshop is shown in Fig.1.



A new layer was formed which helped in adjustment of motifs, resizing, colour modification etc. Similarly various layers were created. The colour in particular layer was filled using paint bucket tool. The special effects in motifs were given using various tools. At last, on completion of final designs all layers were merged using Merge Visible option in the Layer menu. It gives the entire design on one layer that can be directly used for printing.

The separated motifs were further undergone the process of manipulation for its contemporization, placement and colour visualization.

In a study on 'Developing Colourways From Rajasthani Miniature Paintings Using CAD Technology', Srivastava and Rajvanshi (2014) also simulate seventy designs of miniature paintings of



**Plate 1 : Glimpses of motif separation in Photoshop**

Rajasthan ,out of which 15 designs were selected by a panel of judges for developing three colourways of the each design with the help of Photoshop software for developing digital embroidery designs.

#### **Adaptation to contemporized motifs using Corel draw:**

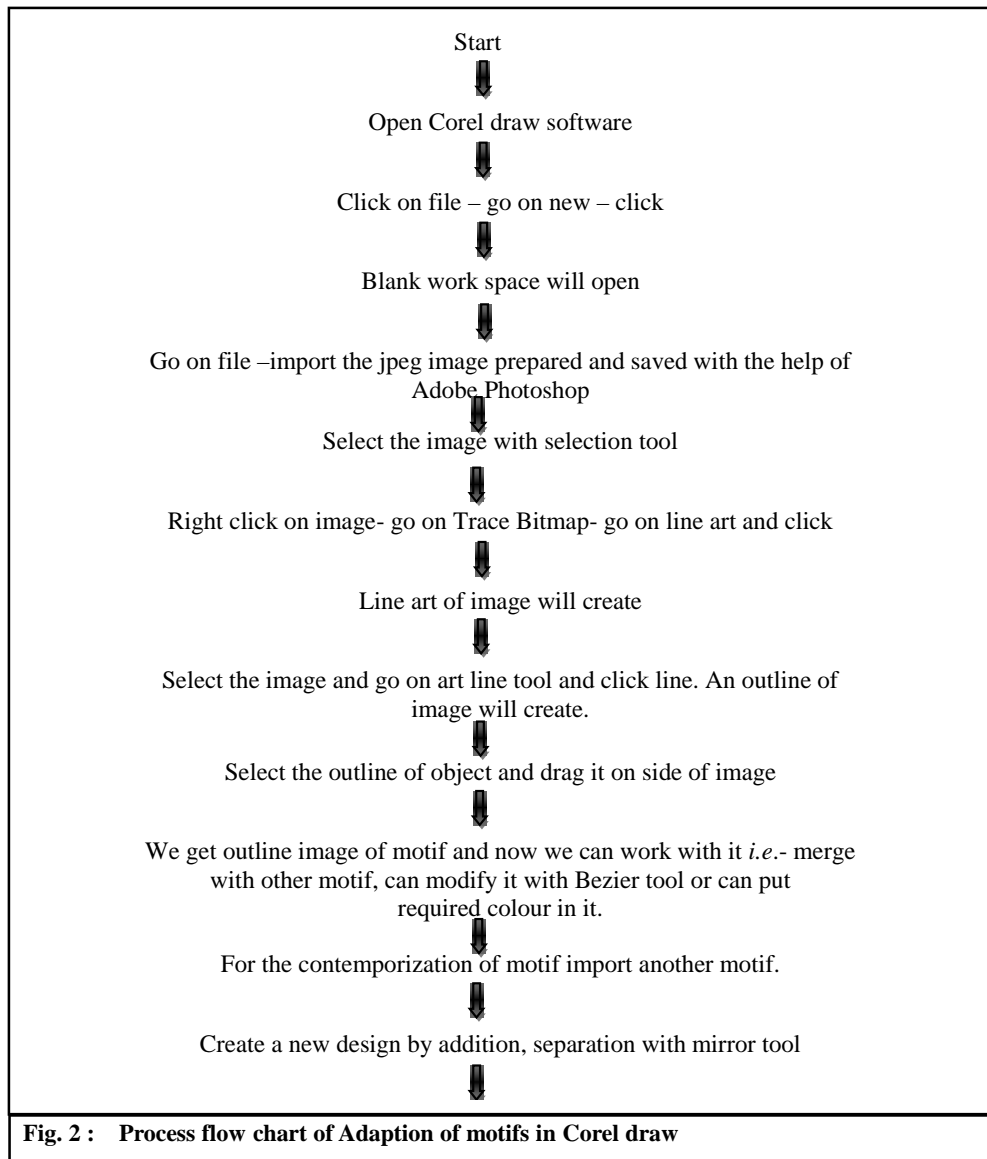
Corel draw is a versatile vector illustration program. The use of Corel draw substantially reduced the time taken to produce contemporized motifs. For development of motif, the entire design can be imported in to the new blank document or by dragging the picture from its location to the task bar icon of Corel draw and dropped on to the new blank document.

While opening the new document, the name of file, height, width, size of paper, primary colour mode, and resolution of the designs have been specified. Width and height of the design is required in specific unit of measurement such as inches, millimeter etc. Soon after giving command, the CDR sheet with given specification is ready for design adaptation including modification, merging, etc. The detail outline of the process of designing using Corel draw is shown in Fig.2.

Plate 2 shows the glimpses of adaptation to contemporized motifs in Corel draw.

#### **Creating Customized Graphics of furnishing articles :**

With the help of Corel draw software, the researcher created customized graphic of selected furnishing articles. The graphics can be scaled until one is satisfied with the desired output. With the help of B-spline tool the outline of desired shapes have been drawn. B-spline tool is used to draw curved lines by setting control points that shaped the curve without breaking in to segments. Required shaping was done by the shape tool. Pen tool, free hand tool and outline pen tool were also used frequently. For final shaping and arrangement many tools from property bar were also used. After completing the graphics, colours were filled with fill tool and colour eye dropper tool to see accuracy



of the complete graphics.

Save the file as CDR or JPEG bitmaps file. For changing the Corel draw file format (CDR) in to JPEG Bitmaps, ready files were exported by changing the format to the preferred location.

**Simulation of adapted motifs on furnishing articles :**

The adapted motifs saved in jpeg format were again opened in Photoshop software for simulation on scaled graphics of furnishing articles in different placements and colourways. Experiments with layouts and colours were continued until a satisfactory balance was found. During the design process the layouts, directions, colour, space, and other elements and principles of design were experimented to find the best results. the adapted contemporized motifs were evaluated by panel of judges to select the designs which have the best balance, colour combination, shape, and most present the ideas and

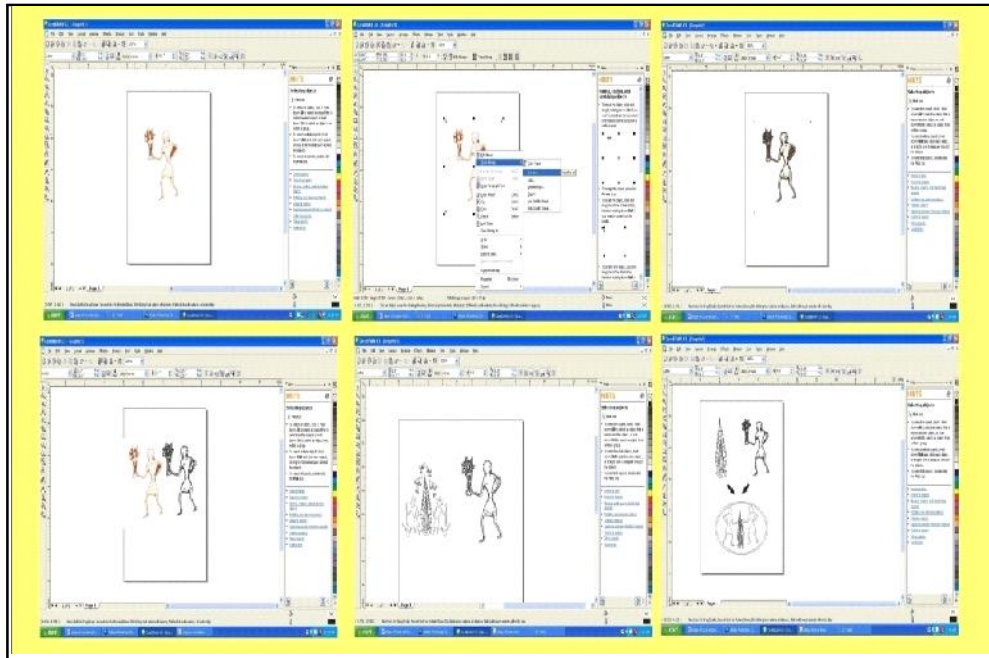


Plate 2 : Glimpses of adaptation to contemporized motifs in Corel draw

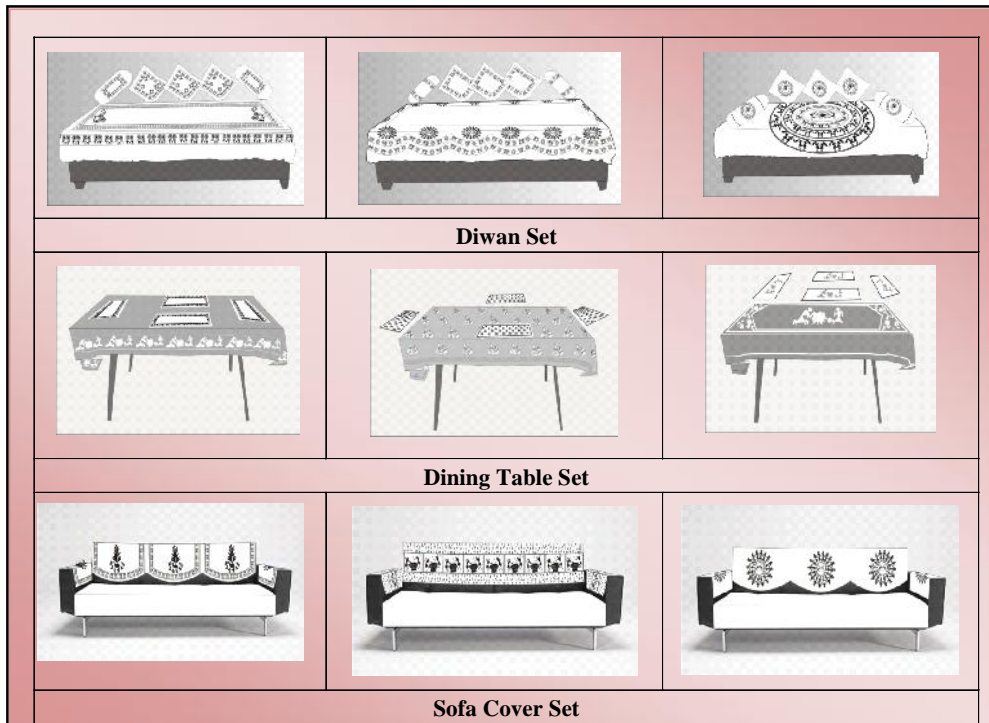


Plate 3 : Customized graphics of furnishing articles

feelings wanted to convey.

Dave (2006) also conducted a study to adapt and modified designs inspired from Mewar painting and their placements for Saree designs. The developed designs and their placements were unique and were very much appreciated by the judges. While Field (2003) stresses CAD's importance for fast visuals, accurate design communication, development, analysis and manufacture, Siodmok (2007) promotes the cost reduction benefits of CAD and its significance for ensuring product design integrity. However implementing new technologies requires addressing new skills and often restructures the user's work environment (Joshi and Lauer, 1998). Selected three designs each for Diwan set, Dining table cover and Sofa cover set

Researcher as a motif adaptor and designer tried to develop contemporized *Warli* motifs with a new concept appropriate for furnishing articles to suit the modern market also. Plate 4 shows first three

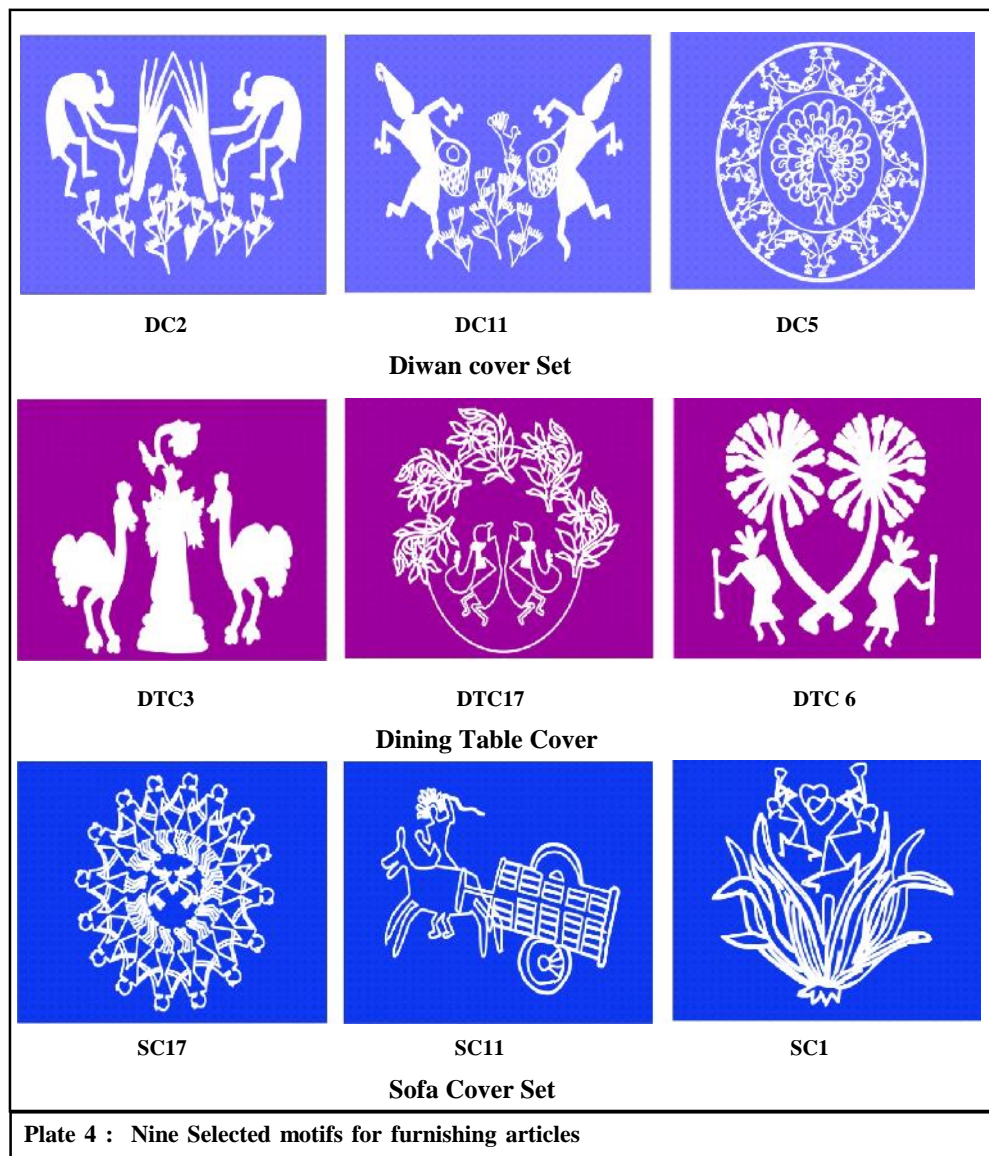


Table 1 : Mean scores of selected motifs for different furnishing articles							
Code No. and Rank	Suitability of motifs	Suitability of colour combination		Overall appearance and acceptability	Mean	SD	CV
		Changing only background colour	Changing only motifs colour				
DC2* I <sup>st</sup> Rank	3.8	3.9	3.9	3.8	3.85	0.058	1.500
DC1 II <sup>nd</sup> Rank	3.6	3.8	3.9	3.7	3.75	0.129	3.443
DC5 III <sup>rd</sup> Rank	3.5	3.7	3.8	3.6	3.65	0.129	3.537
DTC3 I <sup>st</sup> Rank	3.8	3.7	3.9	3.7	3.78	0.096	2.536
DTC17 II <sup>nd</sup> Rank	3.7	3.6	3.8	3.7	3.70	0.082	2.207
DTC6 III <sup>rd</sup> Rank	3.6	3.7	3.8	3.6	3.68	0.096	2.605
SC17 I <sup>st</sup> Rank	3.7	3.9	3.8	3.7	3.78	0.096	2.536
SC11 II <sup>nd</sup> Rank	3.7	3.8	3.7	3.6	3.70	0.082	2.207
SC1 III <sup>rd</sup> Rank	3.7	3.6	3.7	3.6	3.65	0.058	1.582

selected designs for each of the furnishing categories.

The panel members recorded their liking towards all developed contemporized motifs. However, based on the relative rankings, first three motifs were selected for each of the 3 categories of furnishing items as shown in the Table 1.

Table 1 shows in detailed the mean scores of top three ranked furnishing articles on various parameters of selection. Over all mean, SD and coefficient of variance was also tabulated. In the category of Diwan set, code no. DC2 obtained highest mean value and least CV value. It means that all the respondents had given same responses on all parameters. In code no. DC5 high CV% value (3.537) showed varied responses on different parameters. However in the category of Dining table cover ,code no. DTC 17 secured lesser CV% (2.207) value than DTC 3 (2.536) and DTC 6 (2.605). In sofa cover set category, code no. SC1 obtained lesser CV% (1.582) value than SC 17 (2.536) and SC11 (2.207), it clearly showed that somewhat similar responses were obtained for SC1.

Oza (2011) also mentioned in his research work on 'documentation and contemporisation: metal embroidery of Rajasthan' that the new design directory of motifs of metal embroidery created with the help of CAD will be beneficiary to the artisans, designers and people associated in the field of Fashion & Textile. Designing through computer was also done by Naik and Byadgi (2010) who opined that in the present scenario of fast life style, designs with assistance of CAD has not only expanded horizon of designing but also can create any number of designs that could be saved in the library to apply as and when required. CAD systems are more advantageous with respect to the speed, pattern creation, editing, repeating, flexibility, variety, colourways and cost effective.

In a nutshell it may be summarized that the most appropriate motifs selected for Diwan cover set



were (DC2, DC11, DC5 ), for Dining table cover set (DT3, DT17, DT6) and for Sofa cover set (SSC17, SSC11, SSC1). The developed motifs can be applied on a variety of furnishing articles to add variety and ethnic touch to suit the modern taste of consumers.

**Conclusion :**

It can be concluded that the Indian traditional art plays an important role as inspiration in creating new designs. To keep pace with changing demand of the consumers' taste and fashion, the conventional Warli motifs have all the possibilities of change into contemporary end use by applying various computer designing software.

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