Development of screen printing designs for saree using chinese motifs

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■**ABSTRACT :** Colour and designs have been used to enhance the intrinsic beauty of textiles from ancient time. It is believed that ornamentation by dyeing and printing developed earlier than the use of clothing itself. Design is the knowledgeable selection and application of the basic art elements *i.e.*, line, shape, colour and texture to produce a unified expressive visual statement. Screen printing is a versatile process for design applications on textiles. The present study was conducted to develop designs for saree suitable for screen printing. Thirty one Chinese motifs were identified for application in textiles comprising of 11 geometrical, 12 floral and 8 animal/birds motifs and created on computer using software Corel DRAW 9. Created motifs were got evaluated from 30 experts and 5 top ranked motifs were selected from each category. Selected motifs were used for development of 22 designs suitable for application on saree-blouse through screen printing. Out of 22 designs, 6 designs were finally selected for application on saree which were placed with all possible variations. These design arrangements were again shown to the experts to seek their preferences. Placement of saree border with scattered motifs (4.60) was preferred most followed by overall placement (3.96) and border placement (3.94).

■**KEY WORDS :** Chinese motifs, Saree, Screen printing, Computer aided designing

Clothing is the second skin and clothes are an outward expression of how people feel about themselves and the world around them. Adornment later grew as one of the necessities since one's appearance affected not only feelings and behaviour but also served as a non-verbal symbol, projecting and revealing impression to those with whom one came in contact (Vastrad and Naik, 2005). With the dawn of civilization, man has felt the urge to decorate textiles by means of weaving, dyeing, printing and embroidery. Colour and designs have been used to enhance the intrinsic beauty of textiles from ancient time. The dyeing and printing were used for fabric decoration even earlier than the use of clothing itself. The art of ornamentation of textile fabric with screen printing was one of the earliest of human inventions. Due to change in fashion scenario, demand for new designs and style in clothing has increased now a day. To develop design by conventional method *i.e.* manual is tedious, time consuming and very laborious. The entire process of designing has been revolutionized by introduction of computer based software's related to design development. The designers instead of graph paper and stencils simply play with a mouse or stylus pen to come out with innovative designs. This has resulted not only in increase of speed but greater accuracy than the manual process (Perumul, 2008).

The development in IT and Computer Aided Design (CAD) has enhanced the apparel designing capabilities. The impact of CAD highlighted both effect and design process. It was pointed that the competitive advantages achieved through successful design innovation are being undermanaged by an increase in the speed of designing. The use of CAD, challenges in design process and protect practices as technical development improves both the accuracy and application of CAD to the design process (Dickson, 1999).

In the present study, an attempt has been made to develop the designs for saree inspired from Chinese motifs using Computer Aided Designing for screen printing technique.

■ RESEARCH METHODS

For the present study thirty one Chinese motifs under

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three categories *i.e.* geometrical (11), floral (12) animal/birds (8) inspired from Chinese textiles were sketched manually in black and white. Thirty experts *i.e.*, fifteen scientists and fifteen students having knowledge of screen printing were selected for evaluation of designs from I.C. College of Home Science, CCS Haryana Agricultural University, Hisar, Haryana. As per expert's suggestion, five motifs from each category were selected for design development. Twenty two designs were developed using selected motifs. The motifs were made manually on sheets and were created on the computer in software Corel DRAW-9 (vector based programme) to get the required intricacy and fineness. Out of twenty two developed designs, six designs were selected by advisor and researchers for placements on saree. Placement of designs with all possible variations like border, border with scattered motifs, overall horizontal and vertical placement were made for saree. Designs with various placements were shown to the respondents in black and white and preferences were sought in the developed preferential choice index. Three best

placements for saree were selected for printing. The collected data were coded, tabulated and analyzed using weighted mean score to draw the meaningful inferences.

■ RESEARCH FINDINGS AND DISCUSSION

The results of the present study have been discussed and presented as follows:

Selection of motifs for Saree :

This section comprised of preferences of respondents for Chinese motifs under different categories *i.e.* geometrical, floral, animal and birds on saree. The data have been presented from Table 1 to 3.

Preferential choice of sketched motifs :
Geometrical motifs :

On the basis of weighted mean scores as per scientists and students preference has been depicted in Table 1 which

Table 1: Preferential choice of sketched geometrical motifs for saree			(n=30)
Motif No.	Scientists (WMS)	Students (WMS)	Average mean score	Rank order
1	5.86	6.66	6.26	V
2	6.33	6.40	6.36	IV
3	5.60	5.06	5.33	IX
4	6.40	6.59	6.49	II
5	5.73	4.96	5.34	VIII
6	6.06	5.80	5.93	VI
7	5.66	6.13	5.89	VII
8	6.73	6.86	6.79	I
9	5.56	4.40	4.98	X
10	6.49	6.33	6.41	III
11	5.06	4.26	4.66	XI

WMS = Weighted mean score

Table 2: Preferential choice of sketched floral motifs for saree			(n=30)
Motif No.	Scientists (WMS)	Students (WMS)	Average mean score	Rank order
1	5.06	5.26	5.16	XI
2	5.60	5.16	5.38	X
3	6.99	6.40	6.74	IV
4	7.13	6.98	7.05	I
5	6.86	6.69	6.77	II
6	6.58	5.99	6.28	VII
7	6.53	6.79	6.66	VI
8	4.98	5.14	5.01	XII
9	6.60	6.92	6.76	III
10	6.46	6.99	6.72	V
11	5.26	5.76	5.51	VIII
12	5.39	5.46	5.47	IX

WMS = Weighted mean score

highlighted that motif number 8 got Ist rank (6.79), followed by motif 4 (6.49) at rank II and motif number 10 rank III (6.41). Rest of the motifs in descending order were motif number 2(6.36), 1(6.26), 6(5.93), 7(5.89), 5(5.34), 3(5.33) and 9(4.98). The least preferred motif was 11(4.66) ranked XI.

Five top ranked geometrical motifs *i.e.*, motif number 1, 2, 4, 8 and 10 were selected for development of designs.

Floral motifs :

The average of weighted mean score on the basis of preferences of scientists and students is depicted in Table 2, which highlighted that motif number 4 ranked I scoring 7.05, followed by motif number 5(6.77) ranked II and motif number 9

ranked III (6.76). Other motifs in descending order were 3(6.74), 5(6.72), 7(6.66), 6 (6.28), 11(5.51), 12 (5.47), 2 (5.38), 1 (5.16). The least preferred motif was 8 (5.01) ranked XII.

Five top ranked floral motifs *i.e.*, motif number 3, 4, 5, 9 and 10 and were selected for development of designs.

Animal/bird motifs :

The average of weighted mean scores given by scientists and students have been depicted in Table 3 and Fig 1 which revealed that motif number 3 ranked I scoring 6.14, followed by motif number 8(5.78) ranked II and motif number 1(5.64) ranked III. The rest of the motif in descending order were motif number 2 (5.08) ranked IV, 6 (4.53) ranked V, 7(4.46) ranked VI, 5 (4.33) ranked VII. The eighth rank was given to motif
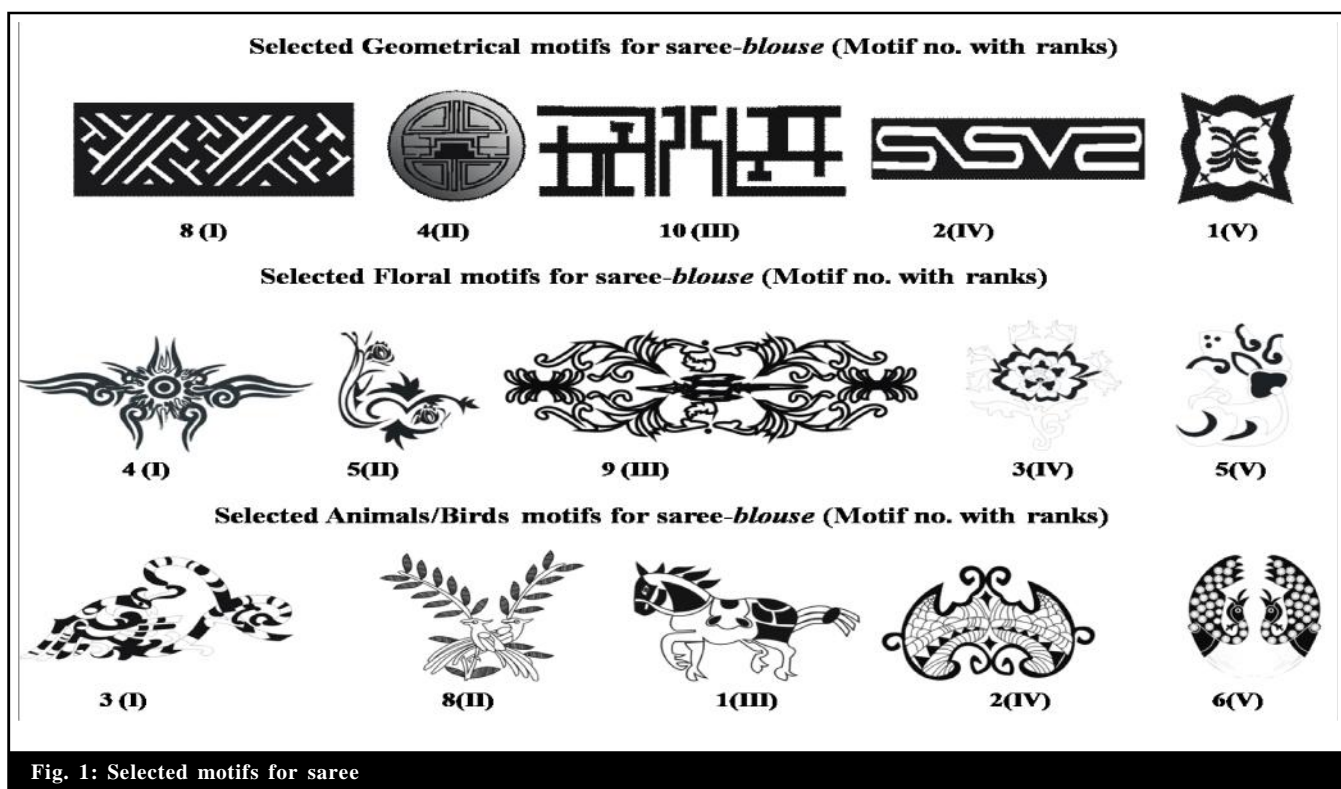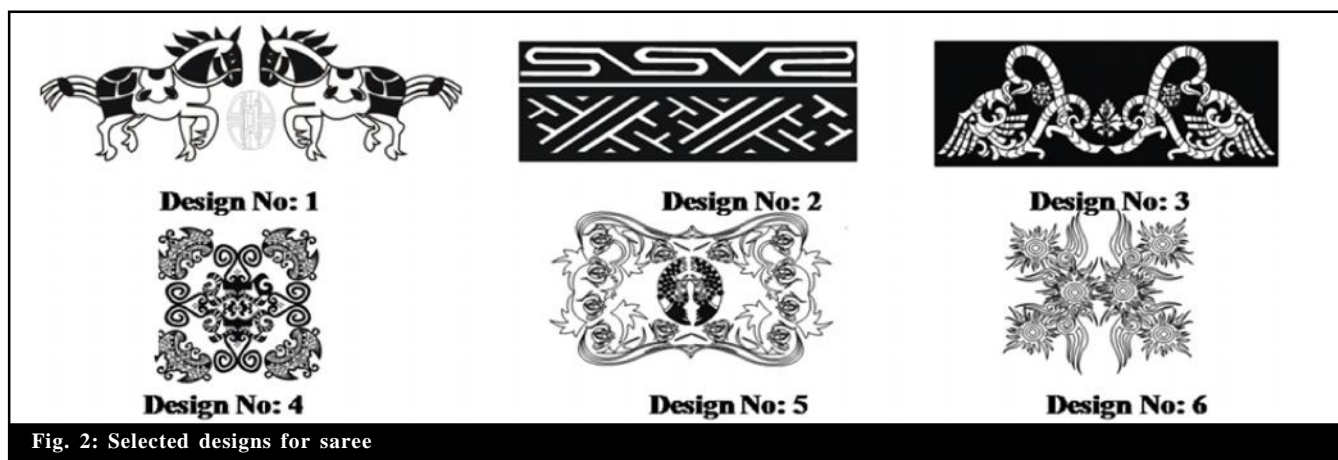

Fig. 1: Selected motifs for saree

Table 3: Preferential choice of sketched animal/bird motifs for saree (n=30)			
Motif No.	Scientists (WMS)	Students (WMS)	Average mean score	Rank order
1	5.52	5.76	5.64	III
2	5.23	4.93	5.08	IV
3	5.96	6.33	6.14	I
4	3.02	3.26	3.14	VIII
5	4.06	4.60	4.33	VII
6	4.66	4.40	4.53	V
7	4.80	4.13	4.46	VI
8	5.86	5.60	5.78	II

WMS = Weighted mean score

Design No.	Border (Mean score)	Border with scattered motifs (Mean score)	Overall (Mean score)	Horizontal (Mean score)	Vertical (Mean score)	Average (Mean score)	Rank
1.	2.96	3.86	3.15	2.74	3.65	3.27	V
2.	3.60	4.60	3.36	2.65	2.61	3.36	I
3.	3.18	3.46	3.96	2.98	3.01	3.32	II
4.	3.69	3.90	3.33	2.53	2.76	3.25	VI
5.	3.93	3.53	3.72	2.91	2.38	3.29	IV
6.	3.94	3.23	3.53	3.55	2.38	3.31	III

Table 4 : Preferential choice for placement of designs for saree (n=30)

Fig. 2: Selected designs for saree

number 4 scoring 3.14. Five top ranked animal/bird motifs *i.e.*, motif number 1, 2, 3, 6 and 8 were selected for development of designs.

Development and selection of designs :

As an inspiration from Chinese textiles, 22 designs suitable for saree were developed by mixing of selected motifs. Out of 22 developed designs, 6 designs were selected by advisor and researchers for saree-blouse as shown in Fig 2.
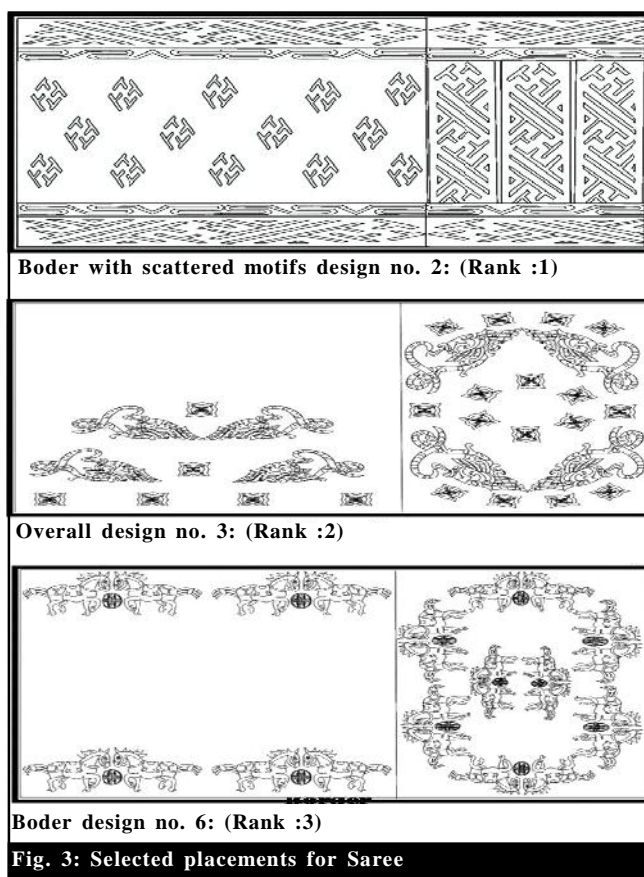
Placement of designs on saree :

This section included preferential choice for placements of selected designs for saree. Data in Table 4 reveal that design number 2 with weighted mean score 3.36 ranked I followed by design number 3 (3.32), 6 (3.31), 5 (3.29), 1 (3.27) and 4 (3.25) ranking II, III, IV, V and VI, respectively.

It is thus, concluded from the data given in Table 4 that respondents preferred design number 2 with border with scattered motifs placement, followed by design number 3 with overall placement and 6 with border placement; hence these were used for printing the saree (Fig. 3).

Conclusion :

It can be concluded from the results of the study that it is possible to develop designs from traditional motifs to make them suitable for screen printing technique of colour application on textiles. The developed designs can be utilized

Boder with scattered motifs design no. 2: (Rank :1)

Overall design no. 3: (Rank :2)

Boder design no. 6: (Rank :3)

Fig. 3: Selected placements for Saree

for production of different apparels, household articles and other textile products by the use of screen printing technique. The design placements can be prepared with selected designs for different articles and applied by screen printing to increase the marketability of the products. This effort might help in producing textile items of greater demand in market both at national and international levels.

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■ REFERENCES

Perumul, R.S. (2008). Seminar on computerized acquired design from concept to punch-cards. *Textile Trends*, **40** (12): 21.

Vastrad, J.V. and Naik, D.S. (2005). The story of weaving contrast bordered poly cotton sarees. *Textiles Industry & Trade J.*, **43** (3-4): 63.

■ WEBLIOGRAPHY

Dickson (1999). Use of computers in textile and apparel industry. *www.use of computers in textile and apparel industry*. html

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