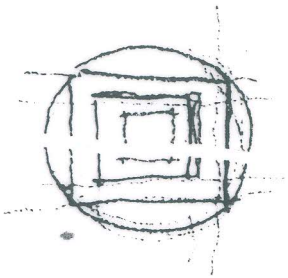
EXPLORING BUTTON FORMS IN BAMBOO AND OTHER NATURAL MATERIALS

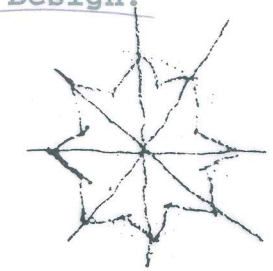
Special Project Report 2000

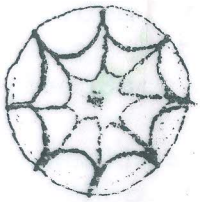
Guide: Prof. A.G. Rao
Submitted by: Neeti Gupta

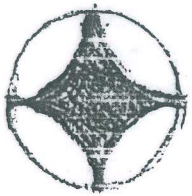
This Special project titled

'Exploring Button forms in Bamboo' is approved for the partial fulfilment of the requirements for the post graduate degree in Industrial Design.









Guide: Prof. A.G. Rao

22/6/2010

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Acknowledgements

The project idea was sparked of by Prof. A.G. Rao; I thank him for the invaluable feedback and discussions.

I thank Mr. Wankhede for his help in the wood workshop. Thanks to friends and IDC staff for their timely help. Vineet and Praveen for providing their support at all time.

Neeti Gupta
March 25, 2000

Introduction

" Button Forms" as a special project defines the creative way of looking at buttons. Buttons have always been a part of our lives since childhood. They are seen in various shapes, forms, colours, textures, materials and sizes. They form a vital part of our dresses, as fashion accessories and in apparel design.

Buttons in bamboo and other natural materials have taken a back seat in the market after the flood of plastic buttons, which are available in variety of designs. However, designer clothes have opened a market for buttons in ceramics, wood, bamboo and other natural materials. In this project one also looks at the various potential markets for marketing of these button forms.

In the project, the buttons were required to be of functional type, which separates it from bead type function of mere ornamentation. Hence a functional button will be

different from an ornamental or a collector's button.

- Documentation of the available mass produced , of natural material, existing button

1. Available (if any)
2. Literature study or Museum study

- An exploration in the workshop was the main part of the study that resulted in actual making of the buttons.

1. Materials and the machines
2. Button forms

- Compilation in form of a report.

This project helped me to understand the practical aspect to making and also formulate my own understanding of button forms.

A brief introduction to history of buttons in the world

Buttons have been widely used both as fasteners and decoration since the sixth century A.D. Originating with the introduction of fitted clothing in the Middle East, they have followed fashions in both dress and upholstery ever since. It was only in eighteenth and nineteenth centuries buttons for first males and then female costume achieved greater prominence. Uniform buttons originated wherever military activity existed during the period when fitted clothes. Buttons on every person's clothes have a history of 200 years. (Peacock, P.Discovering Old Buttons. Buckinghamshire:Shires Publications. 1996.pg 3.) It is beyond the scope of this study to discuss each and every button ever made. However, a visual survey of buttons made from natural materials is given as precedent study.

Buttons in India

Traditional clothing in India did not require buttons as most of them were simply wrapped around unstitched in fascinating ways. Strings acted as fastener wherever required. Beads, mirrors, thread, gem and pearls were used for decoration.

Buttons probably would have arrived in India with the British traders though without proper evidence nothing can be ascertained.

Wooden buttons are still seen in the markets though the plastic buttons still dominates. Growing contemporary fashion market provides a market. A collectors market in the west also can be targeted.

Materials

Bamboo as a material

Most important aspect of the exploration was to understand the versatility of the bamboo itself. Bamboo has various usable parts.

a. The skin: Strips can be prepared which can be dyed or used in he natural form.
b. The rhizome: The root can also be used as it is also hard enough and gives a smooth texture on turning.
c. The nodes: The nodes give good texture and spotted appearance on turning and finishing.

1. Sawdust
2. Bamboo pulp (can make paper mache buttons)

Coconut as a material

In the coconut the useful parts are:

a. Coconut fibre: This can be woven together or glued together to create forms
b. Coconut shell: It gives good finish on treatment. Various curves

of the coconut can also be incorporated in the design.

Combinations with other materials possible in buttons

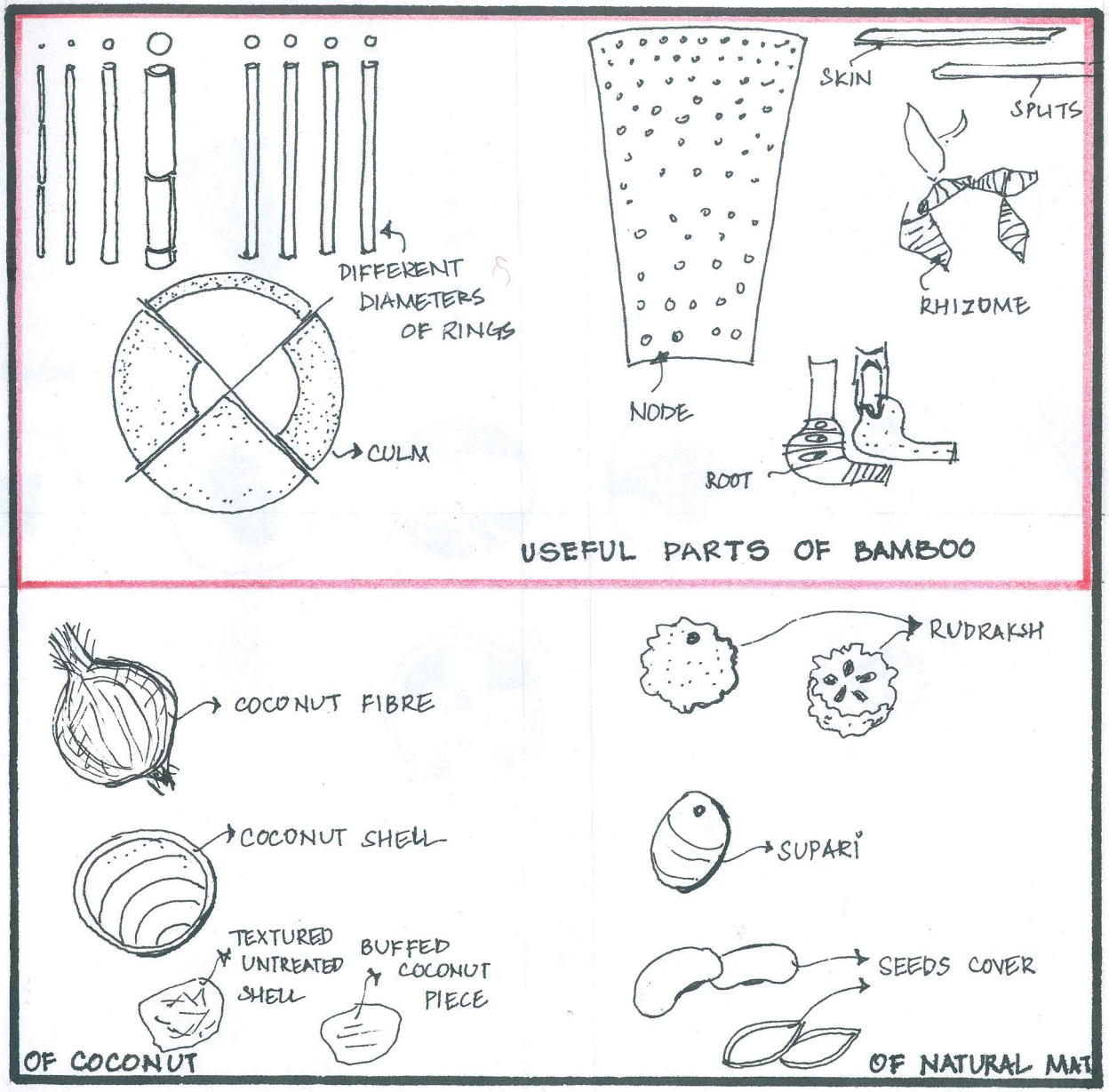
1. Wood
2. Metal/silver/gold
3. Paint
4. Coconut
5. Paper
6. Plastic

Potential of other natural materials

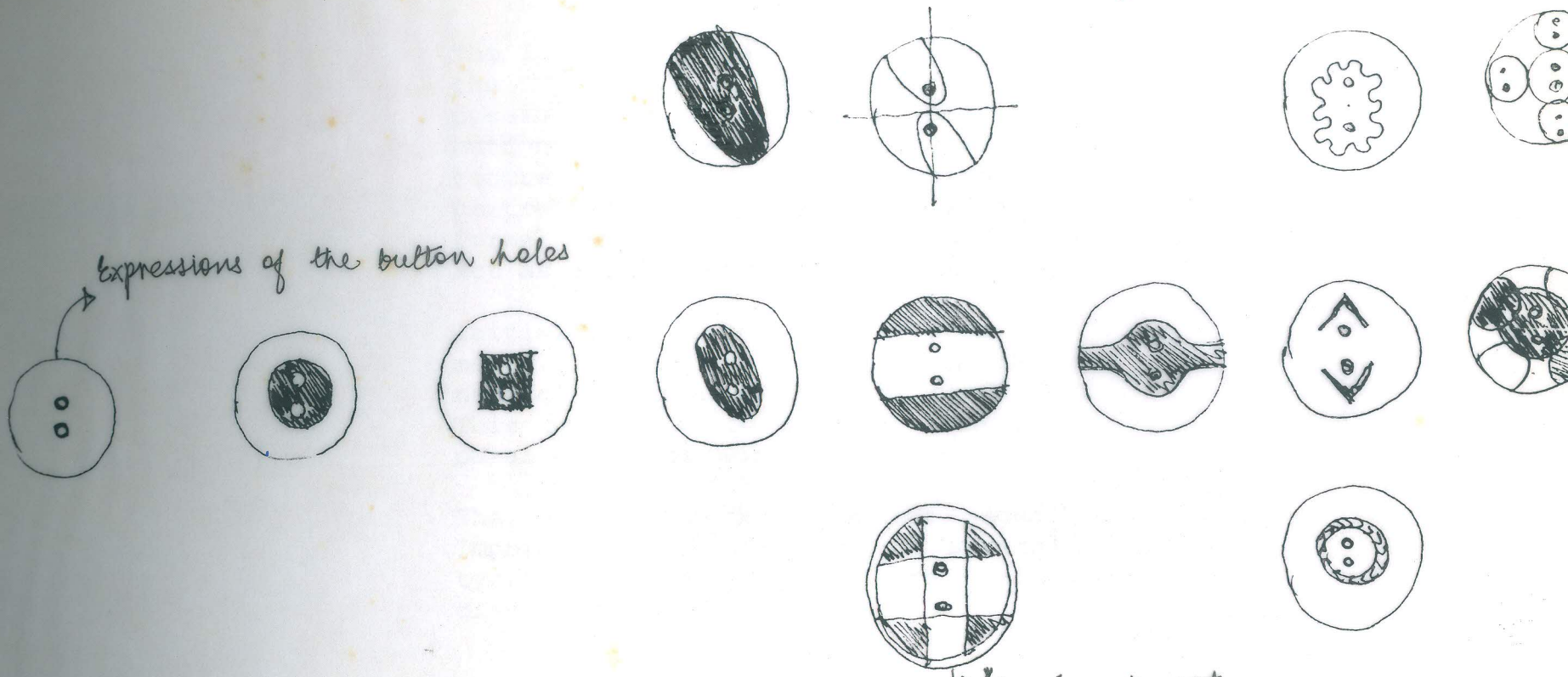
Useful parts of coconut

1. Coconut fibre
2. Coconut shell

The other natural material like seeds, supari etc also provides useful parts.


DIFFERENT DIAMETERS OF RINGS
CULM
SKIN
SPLITS
RHIZOME
NODE
ROOT
USEFUL PARTS OF BAMBOO
COCONUT FIBRE
RUDRAKSH
COCONUT SHELL
SUPARI
TEXTURED UNTREATED SHELL
BUFFED COCONUT PIECE
SEEDS COVER
OF COCONUT
OF NATURAL MAT

Expressions of the button holes



framing to get
the pattern & texture
in focus.

Visual Analysis of Button Form

Visual Analysis of Button Form

Visual Analysis of the button forms

The following pages show analysis of the button forms and form possibilities. In the later half the button is discussed as a form with a centre and various ways in which the centre can be played with to achieve formal variation. Also how it can act as a composition in a frame.

Initially, a closer look at form and material and its translation into natural material button is studied. This helped me to develop forms in parallel in the workshop.

The button backs are of equal importance and can be of several types. These types are also discussed visually.

PRIMARY RIM
SECONDARY ORNAMENTAL RIM
CENTRAL GEM
TIEING PATTERN

VARIATION IN SHAPES

FUNCTIONAL RIM
CONNECTION TO CLOTH
CENTRAL GEM

BREAKING CENTRE
OUTER LINKING GEOMETRY

FORM ANALYSIS

METAL RIM
BAMBOO ROOT
METAL INSERT

WOODEN/BAMBOO PART
DIFFERENT COLOUR WOOD

HOLLOW BAMBOO ROOT
SMALL BAMBOO RIM

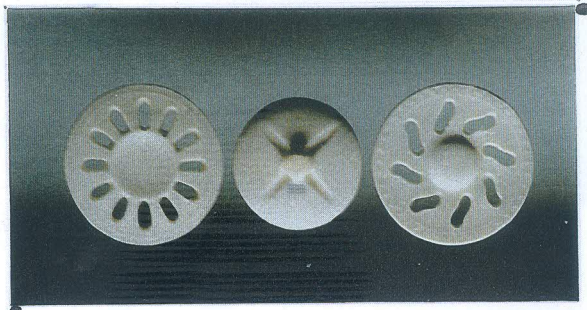
TWO PART
SECTION

WOODEN PART

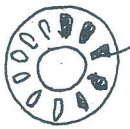
LAMINATE BLACK
LAMINATES

AVAILABLE METAL INSERTS

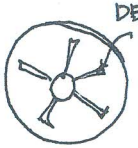
POSSIBILITES IN BAMBOO & NATURAL MATERIALS



• SIDE ELEV. SHOWING CREATION OF FORM FROM 2D TO 3D



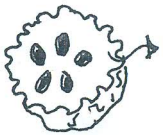
NEGATIVE
POSITIVE



DEPRESSION CREATING VARIATION IN FORM

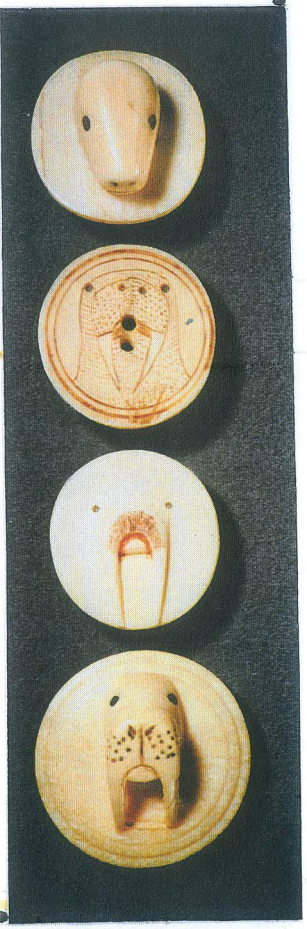
FORM ANALYSIS

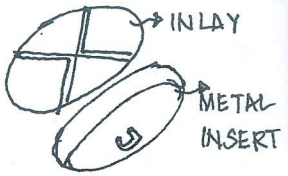
CREATING RELIEF BY LAYERING IN BAMBOO/ WOOD

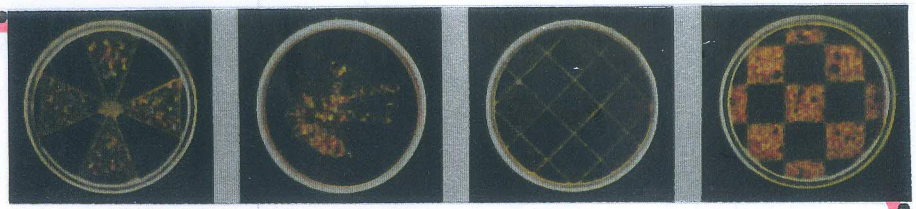


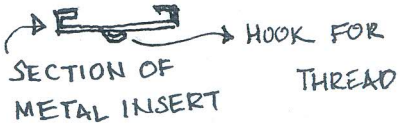
CREATING NEGATIVE POSITIVE IN NATURAL MATERIALS LIKE RUDRAKSH & SUPARI

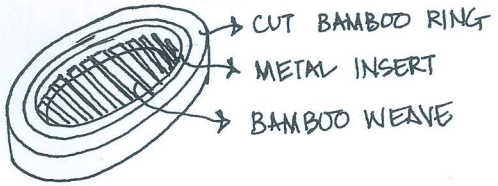
FORM POSSIBILITES



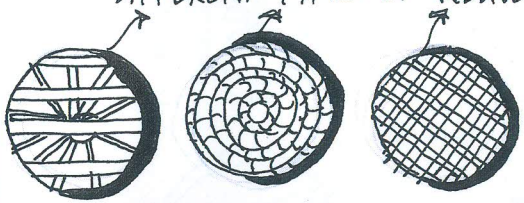


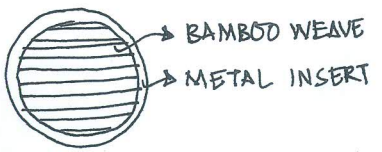


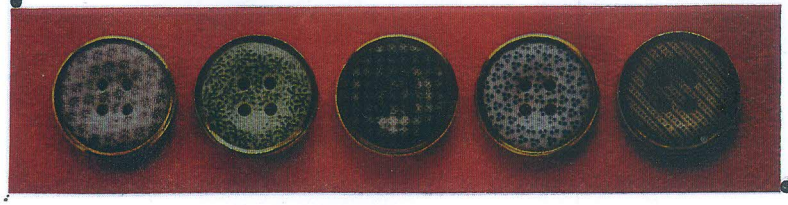




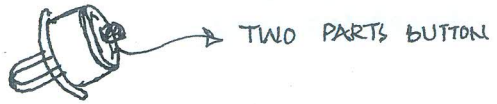
DIFFERENT TYPES OF WEAVES

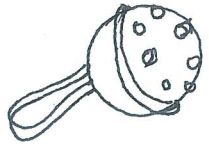


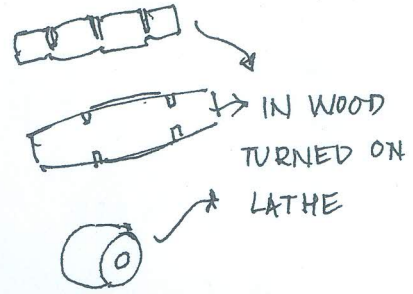




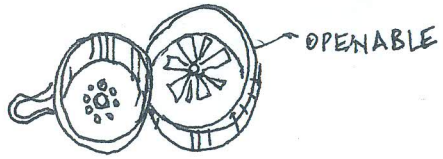
ANALYSIS OF FORMS

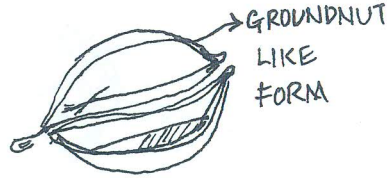




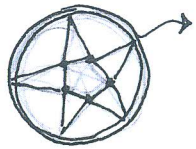


FORMS POSSIBLE IN BAMBOO

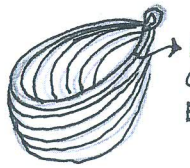




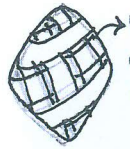
METAL RIM BRAIDED GIVING TEXTURED ROUGH EDGE



BAMBOO EDGE

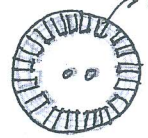


BINDING CREATES EDGE

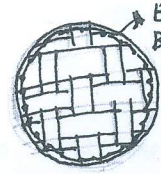


WEAVING CREATES EDGE

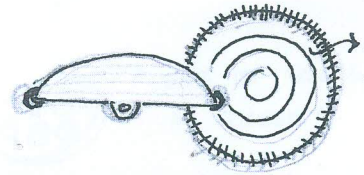
SPIRALLING EDGE



THICKER METAL WEAVE

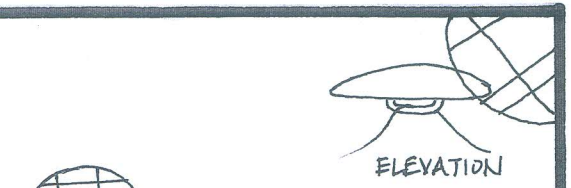


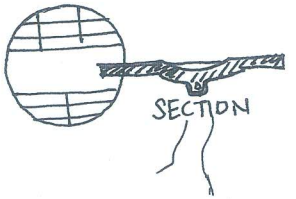
BAMBOO BRAIDING

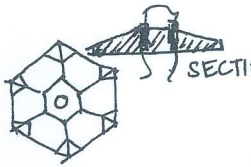


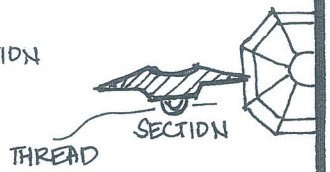
LAMINATES EDGED

FORM POSSIBILITES

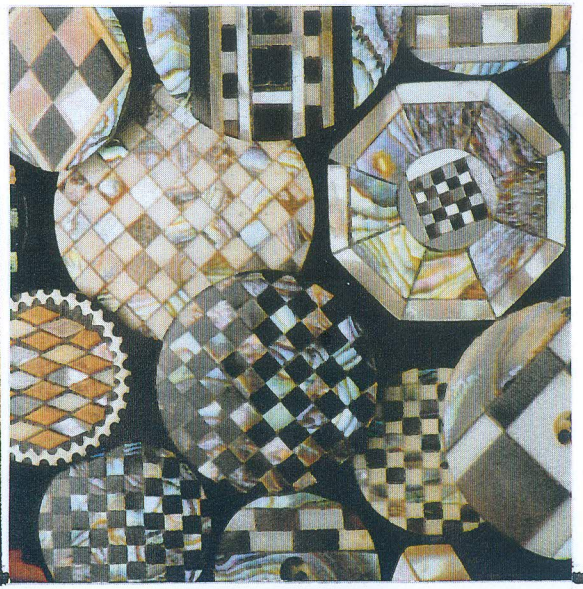


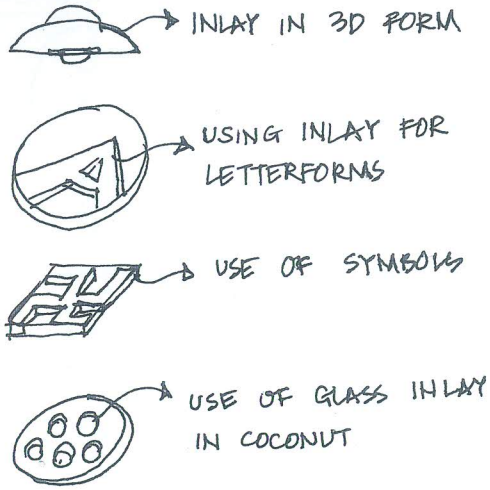




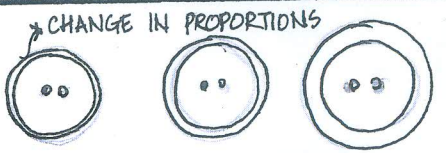


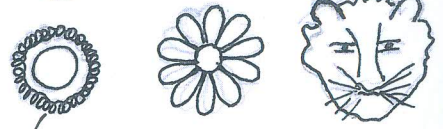
FORM ANALYSIS





FORM POSSIBILITES

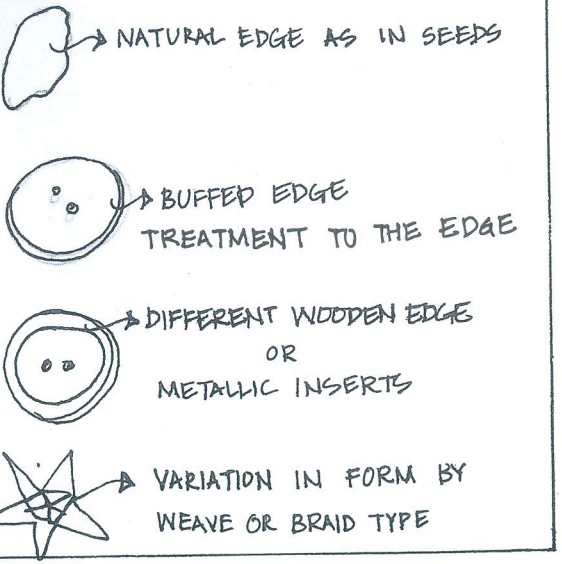


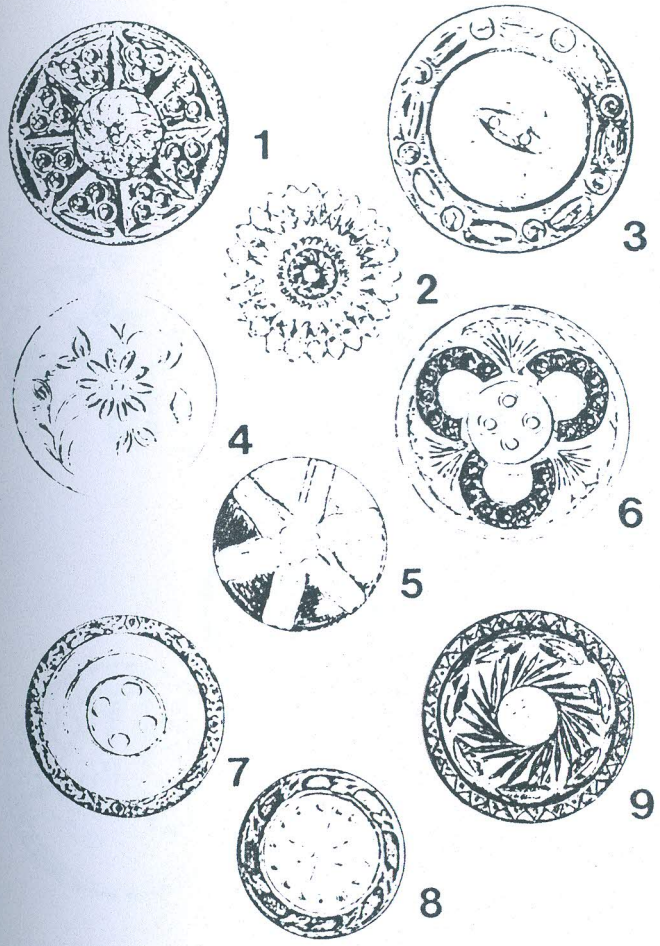


DIFFERENT FORMS AND EXPRESSIONS

FORM ANALYSIS

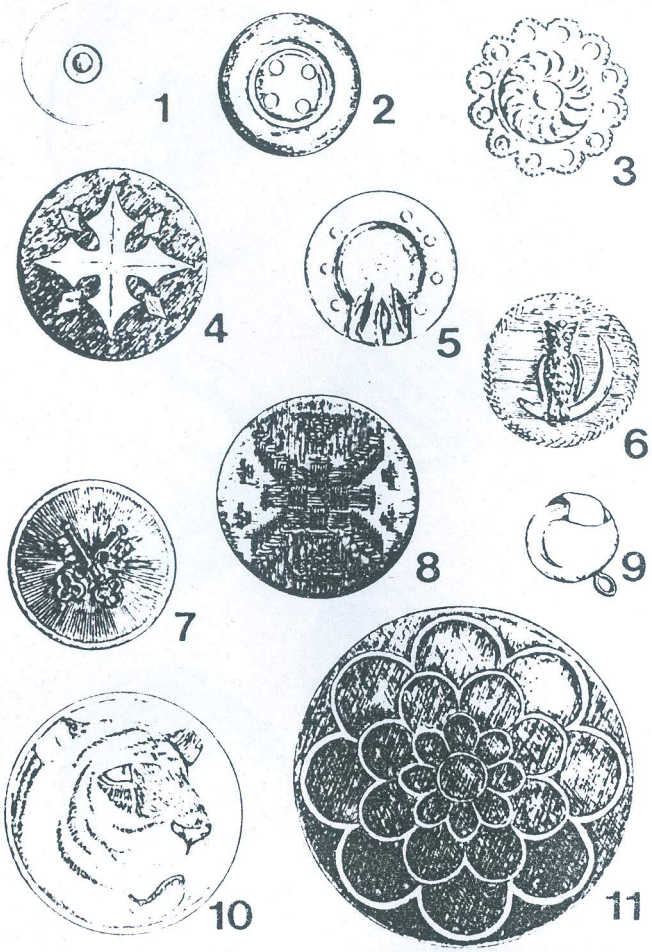
FORMS POSSIBLE IN BAMBOO





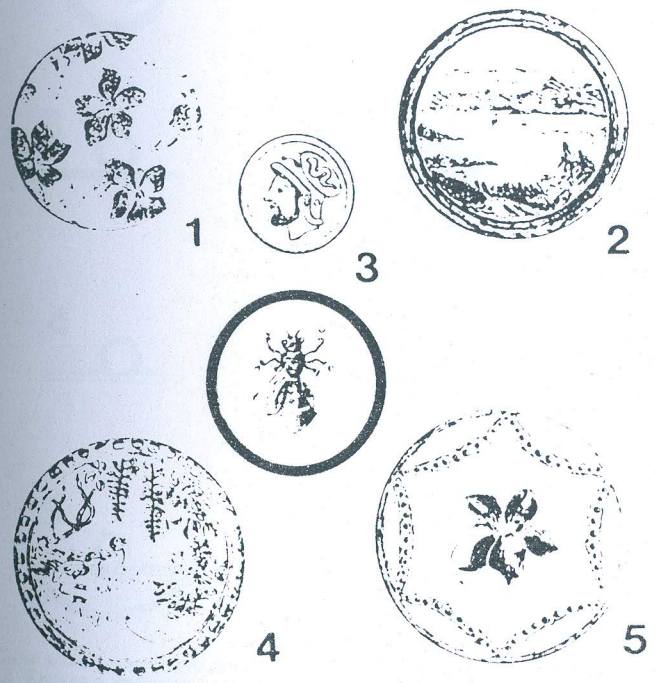
SHELL BUTTONS

1. Machine-carved white and smoked combination; British, nineteenth century. 2. Eighteenth-century hand-carved shell with paste centre; British. 3. Machine carving on tinted shell; twentieth century. 4. Hand engraving on gold iridescent shell; nineteenth century. 5. Surface-dyed shell with machine cutting; early twentieth century. 6. White shell set with steel studs; British, nineteenth century. 7. Tinted shell with brass rim; probably American, late nineteenth century. 8 and 9. Two-piece metal buttons with shell centres; early twentieth century.



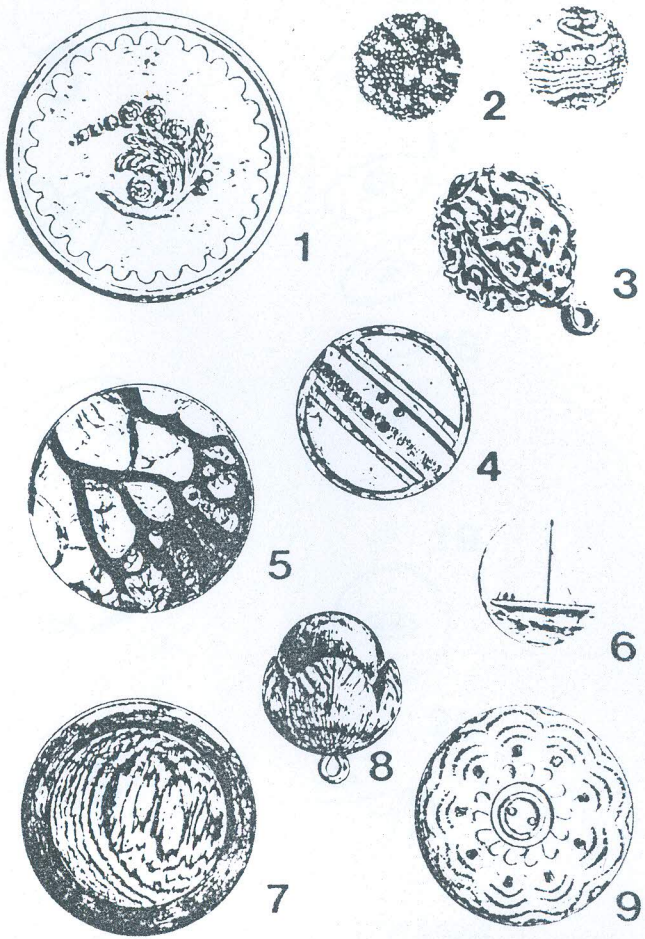
HORN AND BONE BUTTONS

1. Turned bone with pin-head shank; British, nineteenth century. 2. Turned bone dyed brown; British, nineteenth century. 3. Carved bone; British, nineteenth century (R. Godsell). 4. Natural horn inlaid with pieces of shell; British, nineteenth century. 5. Turned natural horn with brass studs; British, nineteenth century. 6. Modern die-stamped natural horn imitating earlier style; British. 7 and 8. Dyed horn die-stamped; British, nineteenth century. 9. Carved ivory; probably Chinese, nineteenth century. 10. Engraved design on ivory; probably Japanese, early twentieth century (M. Jones). 11. Inlaid tortoiseshell; probably French, nineteenth century (M. Jones).



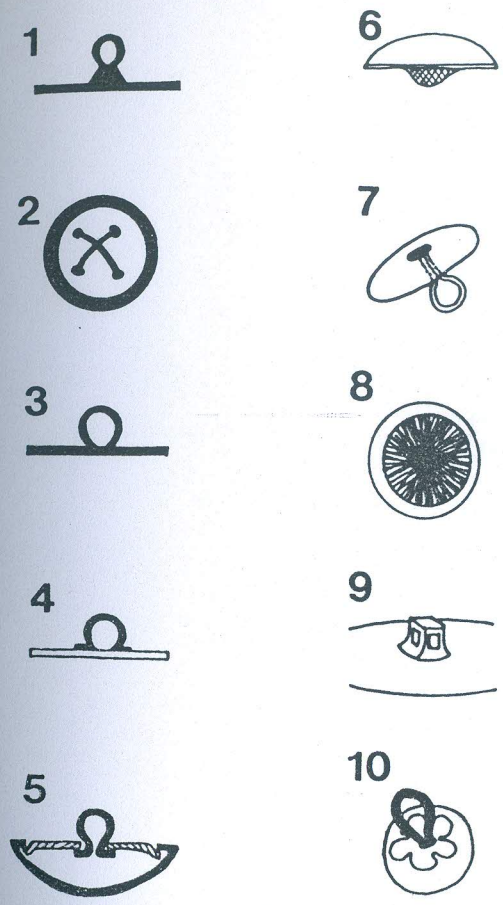
CERAMIC BUTTONS

1. Transfer printed; probably European, c. 1910. 2. Amateur painting on a ceramic blank; British, c. 1890. 3. Two examples of transfer printed porcelain in metal mounts; probably French, nineteenth century (sometimes known as Liverpool transfers). 4. Japanese faience or Satsuma ware; late nineteenth century. 5. Hand-painted porcelain from a large set; probably French, late nineteenth century (R. Godsell).



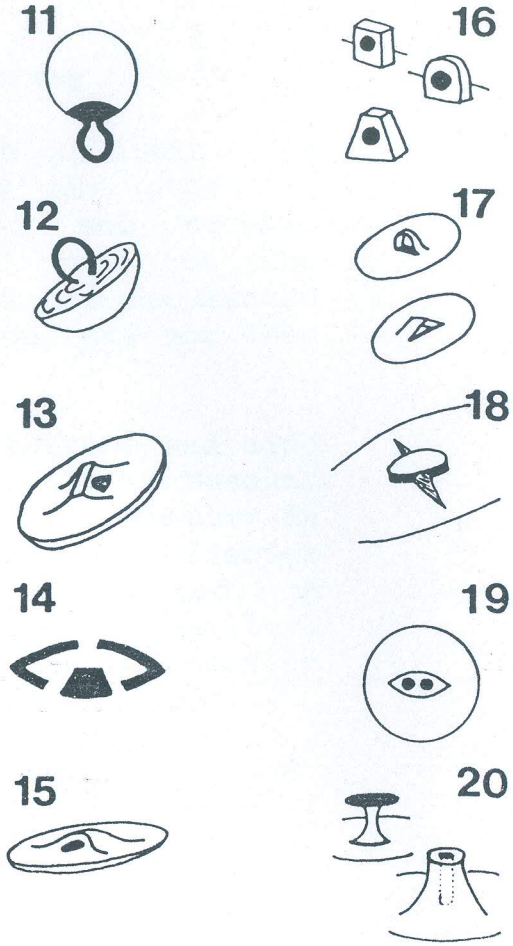
WOODEN BUTTONS

1. Wood veneer in metal shell with escutcheon decoration; European, c. 1910. 2. Two examples of glass beading on wood; 1930s. 3. Chinese cupressus nut in metal mount; late nineteenth century. 4. Coconut shell reversed; German, 1935 (Gans Collection). 5. Machine marbling on wood; 1920s. 6. Hand-painting on beech wood; twentieth century. 7. Inlaid woods by Rademacher of Berlin, c. 1930 (Gans Collection). 8. Hand-carved mahogany. 9. Machine-turned wood; Bohemia, 1930s (Gans Collection).



BUTTON BACKS

1. Cone shank, metal; pre nineteenth century (tombac) (see also plate 1). 2. Crossed catgut loops, metal sheet over wood mould; usually pre nineteenth century. 3. Alpha-type shank, metal; from 1800. 4. Omega-type shank, metal; from 1800. 5. Sanders construction, metal; from 1802. 6. Flexible cloth shank; from 1825 (see also fig. 10, no. 4). 7. Pin-head shank, various materials; from seventeenth century (see also fig. 13 no. 1). 8. Thread back, cloth or combination; from sixteenth century to about 1930. 9. Metal-box four-way metal shank usually on glass; nineteenth or early twentieth century (see also fig. 6 no. 1) (applied birdcage). 10. Metal loop shank with rosette back-plate, generally on glass; nineteenth and early twentieth century (rosette back).



BUTTON BACKS

11. Loop shank with metal backplate, often on glass; many variations occur; nineteenth and twentieth centuries. 12. Embedded metal shank with swirled glass back, glass; nineteenth and early twentieth centuries (swirl back). 13. Built-up self shank of type usually seen in glass; twentieth century. 14. Whistle construction, vegetable ivory, pressed clay, compositions, etc; variations known; mid nineteenth to early twentieth century. 15. Self shank of type usually seen in pottery or porcelain; from late nineteenth century (similar style found on modern pressed metals). 16. Three examples of modern metal shanks; usually after Second World War. 17. Two examples of modern metal cut-out shanks; usually after First World War. 18. Detail of modern synthetic shank with thread guide; may be in one or two pieces, stuck, moulded or pressed. 19. Fisheye; nineteenth-century shell and many modern buttons. 20. A stud back and glass hatpin-head back — items frequently confused with buttons; generally c. 1880-1920.

Market Survey

The two markets were studied. One market in Pune and the other in Bombay, India. Wood and coconut buttons were still seen in the market. A few of them are documented here but bamboo buttons are not seen in the market.

A collection of old buttons was also seen at Victoria and Albert Museum, London and various other museums in England. These form the collector buttons and are well documented. A few are discussed visually earlier. The details of other can be found in the book give in the bibliography.

The workshop experience

Since the aim of the project was to develop utilitarian functional mass-produced buttons. It was important to use the appropriate process and make the buttons using the right tools.

The lathe: Most of the turning was done on the lathe. The appropriate bamboo part had to be chopped and prepared to fit into the lathe hold. On turning it had to worked on with a tool. The illustration shows the arrangement. Some of the button backs were also made on the lathe.

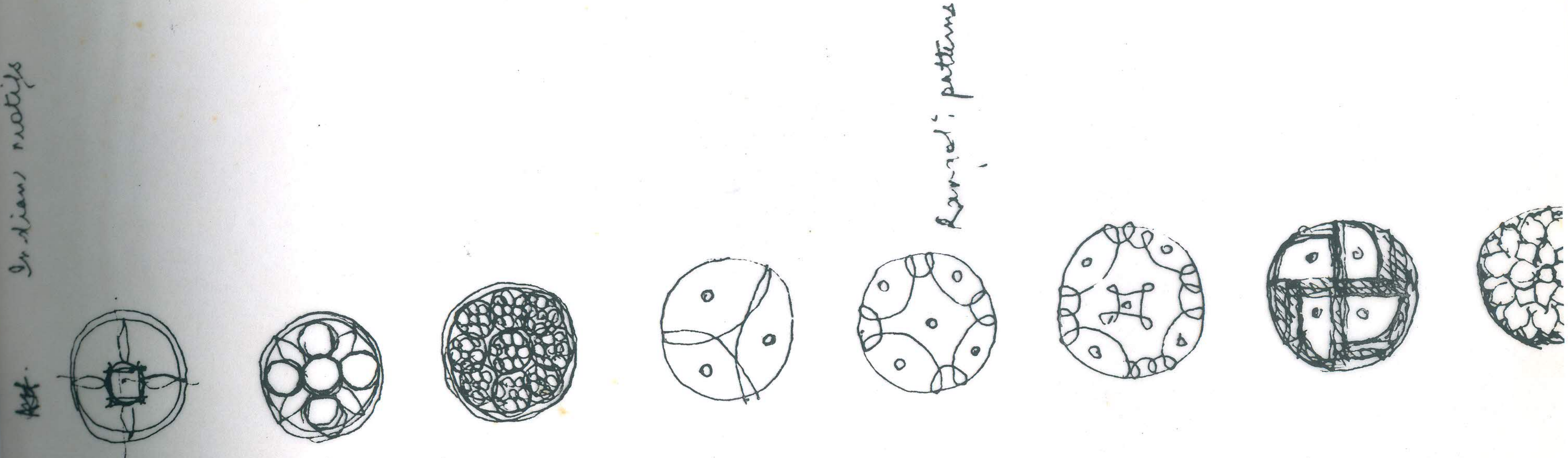
The drill: The drill was used to make holes. It required careful marking and precision to get the right hole.

Making Bamboo stips and dyeing process.

Peeling the skin and the layers of the stem makes the bamboo strips. Consistent pressure is maintained to get even thickness. A simple skin-peeling device appropriated in the workshop also aids the peeling process.

The strips of approximately 10- 12- cm in length are boiled in water with natural dyes to add colour. Different dyes are prepared with different composition and treatment and also different boiling times.

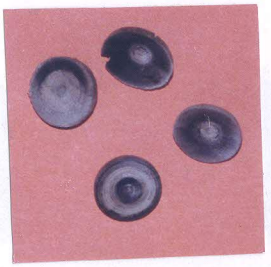
The different coloured strips are sun dried before starting to work. Bamboo buttons with weave type are developed with the strip. The frame is metallic.

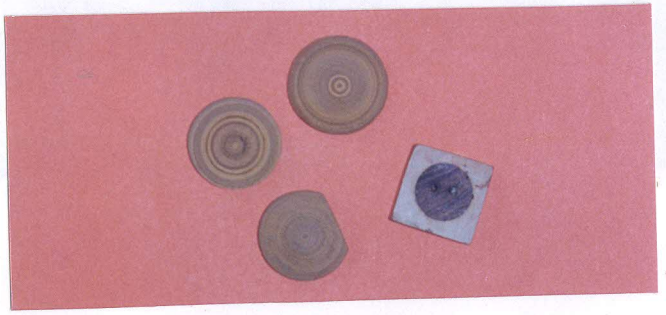


Forms made in the workshop

Forms made in the workshop

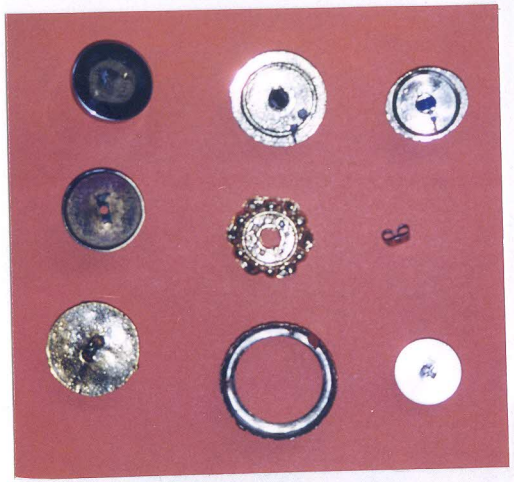
Buttons developed from wood by turning



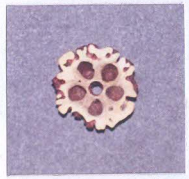


Buttons from wood by gluing two
different types of wood and by
inserting different types of wood.

Different frames and button backs in the market used in the project

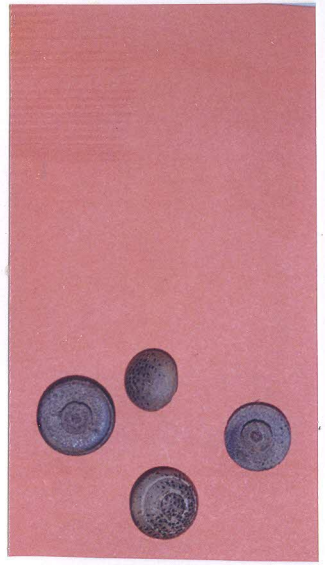


Buttons developed from kaari and cupressusus nut

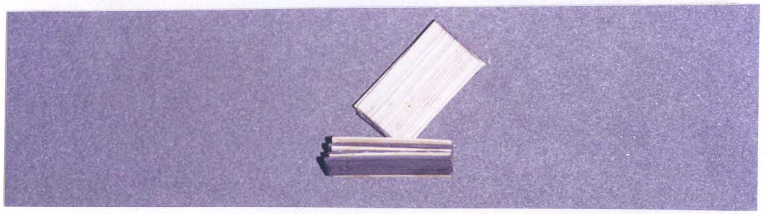


Buttons developed from coconut shell

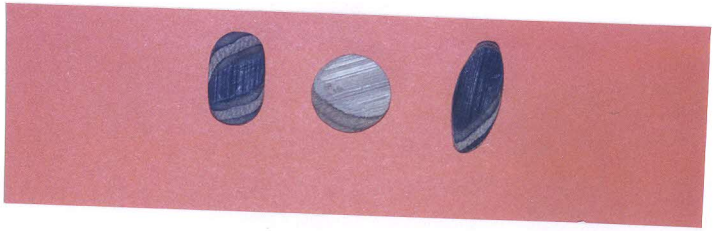
Examples of Bamboo buttons developed from Bamboo node

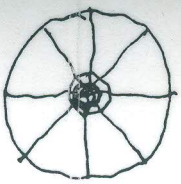


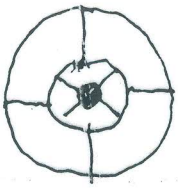
Examples of Bamboo buttons developed from strips

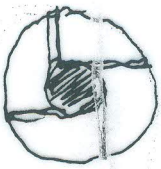


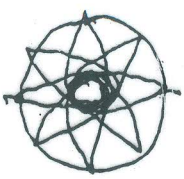
Examples of Bamboo buttons developed from laminates











Movement of the centre

Conclusions

Conclusion

The exploration and the study helped in understanding the potential of natural materials and also the market. In the process of collecting buttons, I got connected to British Button society, which is devoted to study and collecting of buttons internationally. Hence, the button making has opened new grounds of collecting and making buttons.

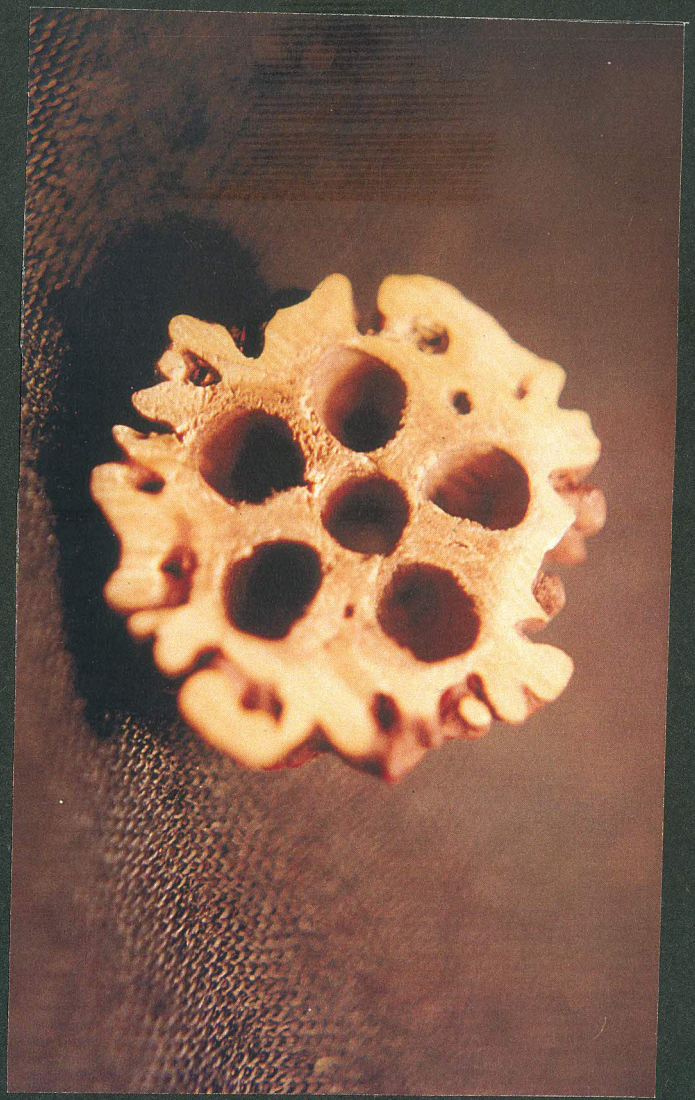
The analysis of form helped me to understand various parts of simple things like buttons and various processes of making it. Being a practical study it helped me to understand the limitations and constraints involved in production of button making. The formal investigation also helped me to formulate my own design ideas.

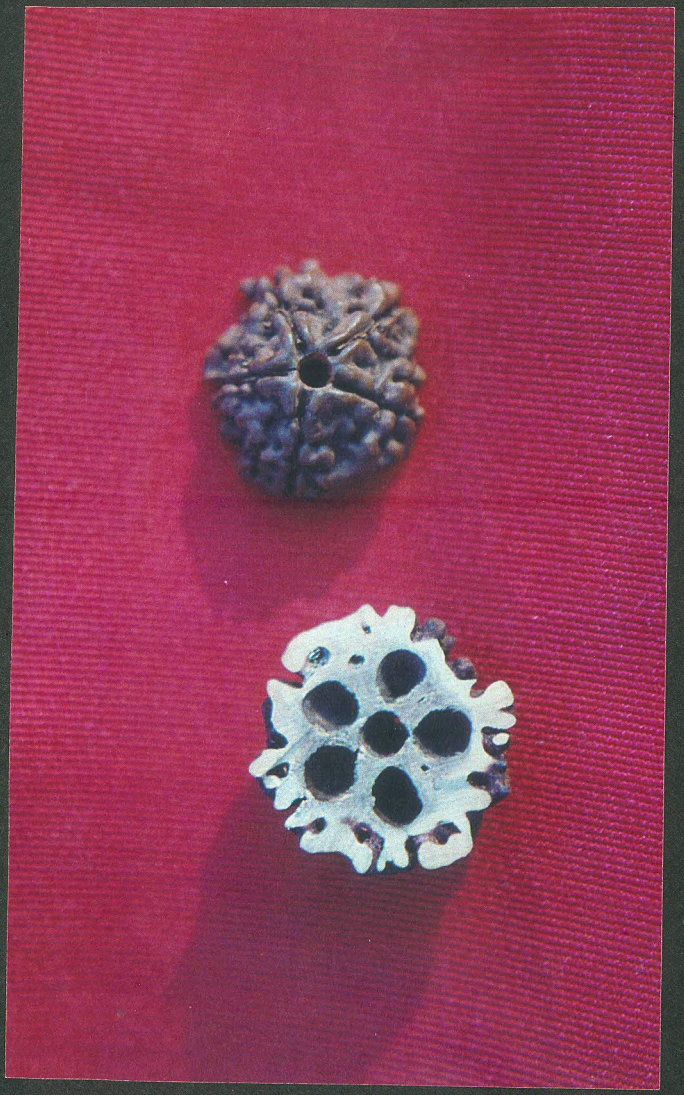
For anyone taking the research further following directions will be helpful

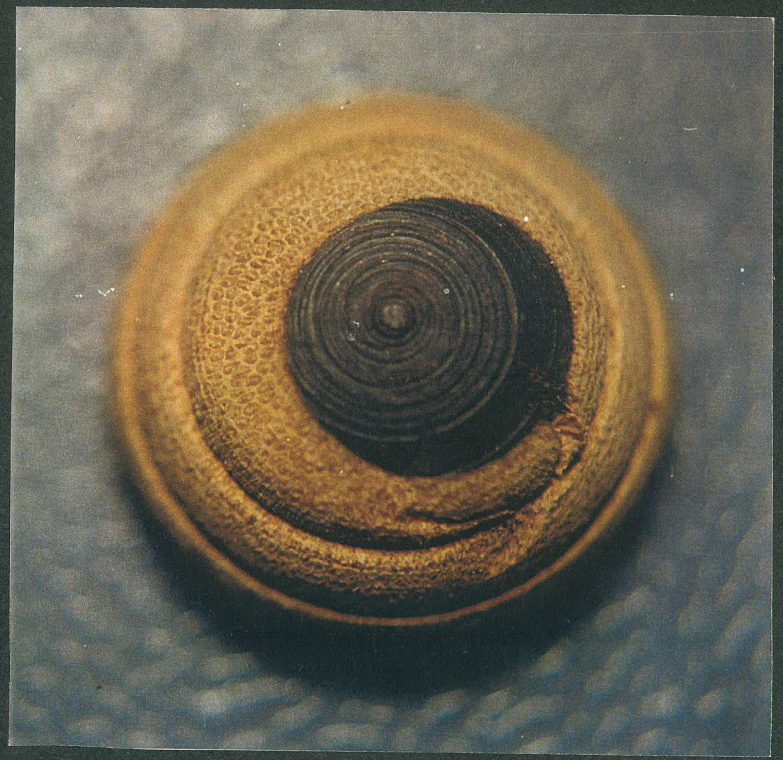
1. Etching / engraving and delicate craving can be used to increase value of the product.

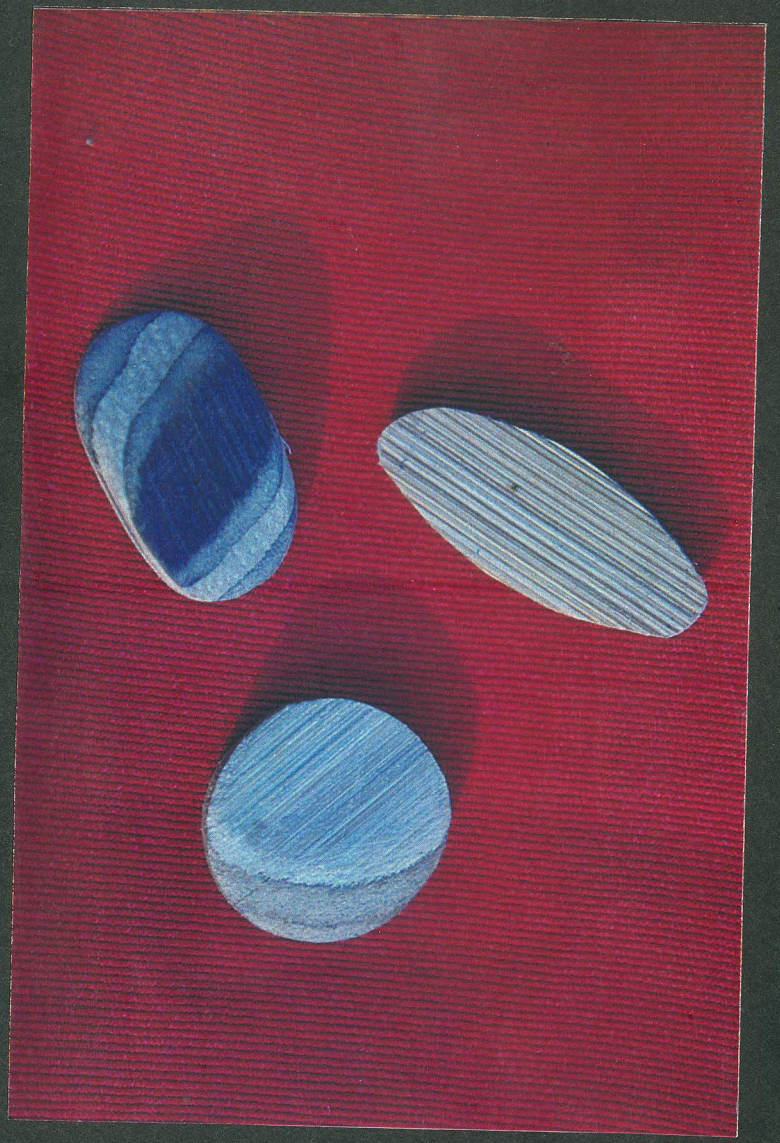
2. The frames can be self make to get the desired finish
3. Bamboo dust or pulp can be mould by using good adhesive
4. Hand painting can be done on buttons using miniature painting technique.
5. Glass coating can be given to finish the products
6. Permanent colouring can be done to achieve marbling effect.
7. Efficient tools can be also designed for making the strips.
8. Buttons for collectors market and as an art form can also designed.

Final Photographs









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