



Image to Scale Technique to document and archive Temple Cars and Antique-Vintage furniture in India

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Abstract— India has a long history of woodwork and carving that dates back thousands of years. The best examples of wood work in India are temple cars and traditional furniture. Woodwork is done by artisans who have inherited their profession from their parents, and knowledge transfer occurs through word of mouth and practical training within the community from master craftsman to trainee. Due to urbanisation and a lack of patronage, artisans are being forced to abandon their traditional work and seek alternative employment. Because the work is not documented, there is a high risk of knowledge loss. This paper attempts to document traditional designs by utilising published images of the articles and employing an image to scale technique to capture the form and dimensions so that designs can be preserved.

Index Terms— : Image to Scale, Temple Cars, Antique furniture, Indian wood crafts, wood carving, design archive

1 INTRODUCTION

Temple cars are a long-standing tradition in Indian temples dating back thousands of years. Temple cars are excellent examples of traditional woodwork, with intricate woodcarving and wooden icons (Temple Cars, 2022). As documented by RKK Rajarajna (Rajarajna, December 1998), he has presented an extensive case study of wood carvings in temple cars.

Temple cars are massive structures 35 feet to 100 feet tall and weighing 200-300 tonnes (Navarang, 2015); these structures are similar to 5- 10 storey moving buildings. Maintaining, refurbishing, and preparing them for the annual car festivals necessitates intricate work by hundreds of artisans over the course of several months.

Traditional Indian furniture is fast being replaced by modern factory-made furniture. Due to a lack of demand, traditional woodworkers are ceasing production. Charpai is a woven cot from India (Wikipedia, 2021). It is rapidly disappearing from Indian homes, and we can only find it in villages and roadside eating establishments known as Dhabas. This paper makes an attempt to image scale traditional India Charpai. Also in this paper, an attempt is made to use image to scale technique to obtain key dimensions of a few selected temple cars.

As artisans are leaving their traditional profession due to economic reasons, the designs may be lost due to lack of patronage. This paper attempts to document the overall dimensions of these traditional designs using image-scale techniques using softwares like CAD, SketchUp, Illustrator so that designs are well documented and preserved for the posterity and scaled prototypes can be reproduced.

2 PURI JAGANATH RATH

Puri Jaganath Rath is most famous car festival in India attracting millions of devotees every year. According to documented facts ((Puri, 2022), the temple houses 3 documented temple cars, the three chariots of Jagannath, Balabhadra, and Subhadra are rebuilt every year with wood from specific trees such as phassi, dhausa, and so on. It is said that they are traditionally transported from the former state of Dasapalla by a specialised team of carpenters with hereditary rights and privileges. Traditionally, the logs are set afloat as rafts in the Mahanadi River. And these are collected in the vicinity of Puri and then transported by road. The chariots are lined up across the wide avenue in front of the temple, which is also known as the Sinhadvara. The following table

Chariot Details	Jagannath	Balabhadra	Subhadra
Number of wheels	16	14	12
Total Number of wooden pieces used	832	763	593
Height	44' 2"	43' 3"	42' 3"
Length and breadth	34'6" x 34'6"	33' x 33'	31'6" x 31'6"
Colours of the canopies	Red, Yellow	Red, Bluish green	Red, Black
	(yellow associated with Vishnu)		(Black associated with the Goddess)

and illustration gives us an insight on the size and proportions w.r.t average height of an Indian human man.

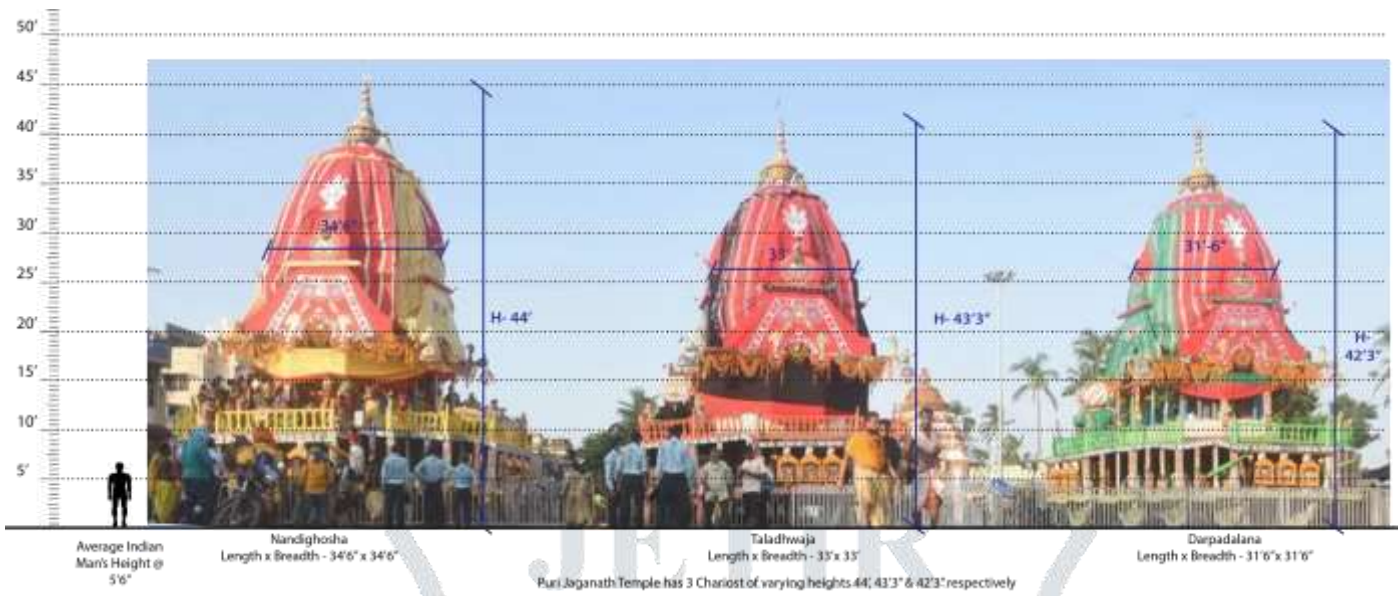


Figure 2 The 3 chariots of Puri Jagannath Temple, an Illustration showing the scale of the 3 structures

2.1 Thiruvarur Temple Car

Thiruvarur Temple car is the the tallest temple car in India (Chariot, 2021). Similar to the Puri Rath Yatra, the festival is held for a period of 25 days and the temple chariots are decorated and brought out at the time of the parade. This chariot is said to be the tallest of its kind in terms of size and height. It stands 96 feet (29 metres) tall and weighs over 300 tonnes. Aside from this grand chariot, there are four additional cars for the lord's (the god of worship) consort, Ganesa, Subramanya, Kamalambikai, and Chandikeswarar.

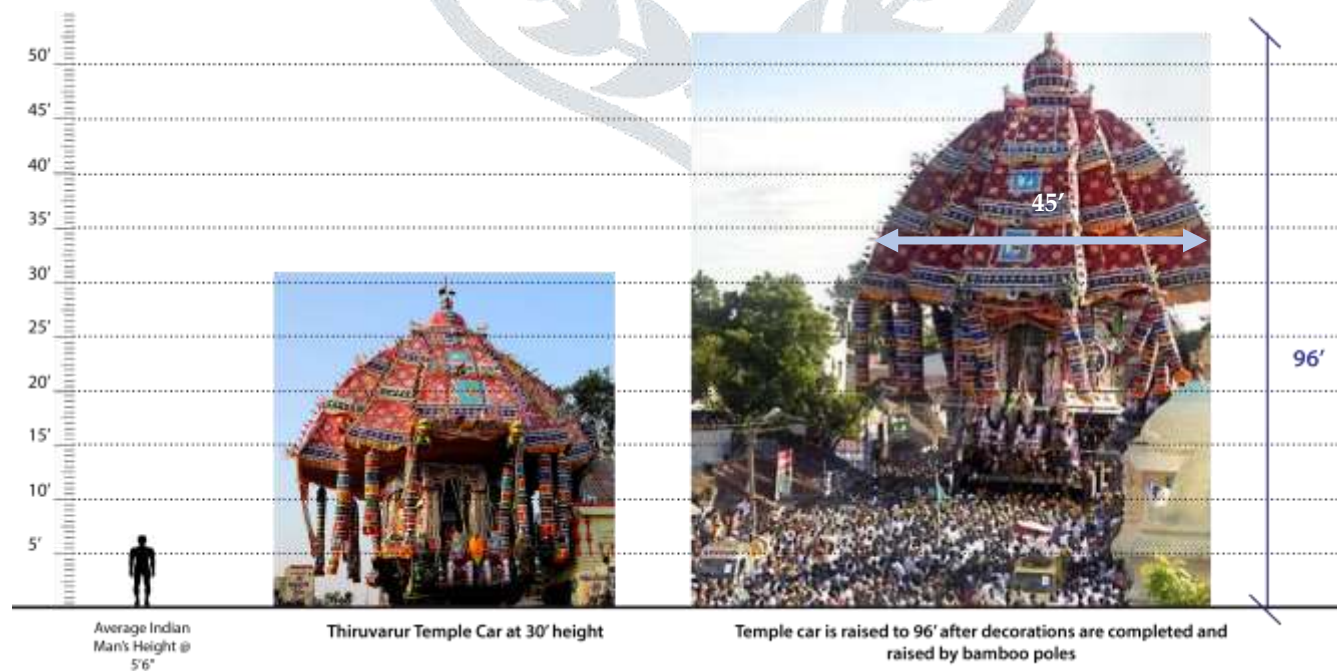


Figure 3 Thiruvarur Temple car, documented to be the tallest in Asia

2.2 Udupi Temple Charriot

It is a well known local fact that the Udupi Shri Krishna Temple is a well-known historic Hindu temple which is dedicated to Lord Krishna and Dvaita Matha in the Karnataka city of Udupi (Krishna Temple, 2022). As per documented facts (Krishna Temple, 2022), the Matha area is reminiscent of a living Aashram, a sacred place for daily devotion and living. There are several temples that surround the Shri Krishna Temple, including the Udupi Anantheshwara Temple, which is said to be over a thousand years old. This temple houses a temple car which stands at a height of 45' (approx.), this can be roughly calculated by stacking the average height of an Indian human whose height is 5'-6". By stacking them one above the other, even through picture documentation, we can roughly calculated the size of the temple chariot.



Figure 4 An Illustration showing the scale of Udupi Krishna Matha's Temple car, Image ref (Vittal)

3 Indian Traditional Charpai

As mentioned in the introduction, Charpai is a traditional woven bed found throughout South Asia. The internet source states that regional differences can be found in Afghanistan and Pakistan, as well as North and Central India, Bihar, and Myanmar (Wikipedia, 2021). According to common sources, the charpai is a simple design that is simple to build. Traditionally, charpais were made of a wooden frame and natural-fiber ropes, but modern charpais may have metal frames and plastic tapes. The frame is made up of four strong vertical posts connected by four horizontal members; the design allows the structure to self-level. Cotton, date leaves, and other natural fibres can be used to make webbing.

An internet article talks about the drying craft of charpai (Post, 2018). As is typical in most cases, the reason for this was the introduction of better and, more importantly, longer-lasting products, such as the wooden double bed. A minor disadvantage of the charpai in comparison to these beds was that with repeated use, the woven portion would sag and eventually stop working. These days, it has vanished even from the majority of rural households because iron and nylon beds are less expensive and easier to obtain. Culture, like all great things, was eventually lost to convenience. Indian furniture like charpais, takhts (divans) peer-ees (low stools), and sandooks (chests) have fast disappeared for many centuries and replaced by Persian and European designs (KHAN). The only way to revive such designs is to study vintage furniture photos and paintings in the absence of well preserved furniture pieces.



Figure 5 Traditional Indian Charpai (Wikipedia, 2021)



(b)



(c)



(d)

Figure 6 (a) Image depicting a traditional Indian chair and the fibre mesh material used in furniture, (b) Scale of a charpai stool next to a human figure, (c) Use of Indian Charpai furniture in the outdoors, the scale and proportion of the furniture can be seen, (d) Dimensions of a Charpai w.r.t human scale (Furnweave, 2021).

4 CONCLUSION

Image to scale technique presented in this paper effectively documents the traditional wood work of India as a design archive. This work will go a long way to preserve the traditional design knowledge for the posterity. With proper encouragement and patronage artisans elsewhere can use this work to replicate the work and preserve the traditional heritage and crafts.

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