

The Basic Principles of Traditional Knowledge for Carving Fruit and Veggies

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Abstract— This ethnographic investigation documents Thailand's current condition of fruit and vegetable carving practices using a participatory research approach. The findings demonstrate how basic and simple it is to learn successfully inherited ancient carving designs. More complex patterns are not typically inherited; rather, they exist and die as the creative imprint of the particular artisan. The displays' complexity will correspond with the calibre and prominence of the occasions they are displayed at, which are mostly hotel dinners and competitions. The foundation of all contemporary fruit and vegetable carving exhibitions is derived from ancestral customs. The traditional craft has issues in six main areas: materials, designers, sculptors, design development, inheritance, and creation of additional value.

Index Terms- Fruit, Vegetable, Carving, Food Art, Thailand

I. INTRODUCTION

Thai culinary tradition is an area of national culture that must be developed in harmony with modern society. Fruit and vegetable carving is a national heritage that has been handed down from generation to generation for hundreds of years (Paitaiyawat, 1995). In fact, there is no evidence to determine when this craft appeared, although it dates from the beginning of the Sukhothai Kingdom (1238-1438) (Hongwiwat, 2003). In the past, fruit and vegetable carving was used to offer food to monks and elders. The pumpkin was one of the first vegetables used for sculpture and was decorated with flowers for ceremonial display. From these origins, the craft developed and more fruits and vegetables were used to decorate ceremonial sites. Fruit and vegetable carving was included in the Thai high school curriculum in 1934 by Ajarn Yeuan Panutat and has been part of adolescent studies ever since (Jantanapalin, 2003). Nowadays fruit and vegetable carving is more developed and complex. There are sculpting courses from secondary to tertiary level and fruit and vegetable

carving is considered a profession. The growth of the tourism industry has led to increased competition between hotels. High-end hotels try to gain an edge over their competitors and hire fruit and vegetable carvers to make special decorations on their banquettes and plates. This gives them a competitive edge and highlights Thai heritage to passing tourists (Hongwiwat, 2003). Periodically, national sculpture competitions are also organized to showcase the talent of sculptors. However, due to the competitive nature of the craft, a systematic overview of the traditional knowledge surrounding the principles and techniques of carving is lacking. Furthermore, given the international popularity of Thai cuisine and the increasing homogenization of global society, it is possible that in the near future Thai cuisine and Thai culture will become disconnected. By integrating fruit and vegetable carving into the presentation of Thai cuisine, the traditional identity of Thai culture is preserved. It is also a way to add cultural and economic value to Thai cuisine. For these reasons, the research team undertook this investigation to document the principles and traditional knowledge behind fruit and vegetable carving in Thailand, identify problems related to the craft, and suggest solutions to ensure its continuity and sustainability for future generations.

II. METHODOLOGY

This is a qualitative study that used a participatory research method to examine traditional knowledge of Thai fruit and vegetable carving. The research period was from April 2009 to April 2010. The research area was specifically chosen to be Bangkok Municipality because it is the capital of Thailand, the heart of commerce, business and tourism, and the center of the knowledge of fruit and vegetable carving. The research sample of 150 people was divided into three groups. The first group, key informants, consisted of ten government experts in education, tourism and

diplomacy and twenty tourism experts from the private sector. The second group, case informants, consisted of thirty teachers and thirty people working in the fruit and vegetable carving industry. The third group, the general informants, consisted of thirty tourists and thirty guests at the banquet. The survey used data from desk research and field studies. Field data collection was done using four methods: participant observation, interview, group discussion and workshop. Structured interviews were conducted with all groups. The interviews were done in three parts. The first part asked for personal information about the respondent and general information about the interview. The second part asked for information on the basics of fruit and vegetable carving and the development of display models. The third part sought suggestions to create a management model for fruit and vegetable carving at national banquets. Unstructured interviews were conducted with all groups to complement the information gathered during the structured interviews. French The content of the unstructured interview mainly concerned the models and forms of presentation design. During participant observation, the research team recorded data in seven categories: materials, designs, sculptors, design development, heritage, value added creation and management. Group discussions were used to outline a business model for fruit and vegetable carving, which was finalized in a workshop. The seven points of the management model were management form, location, materials, designs, sculptures, value creation and banquet management. Data collection was done in four stages: field validation, recording, classification and content validation. Data validation was performed using four triangulation methods: data triangulation, research triangulation, theoretical triangulation and methodological triangulation. Then a typological analysis was made based on the objectives of the research: to identify the traditional principles at the base of the carving of fruits and vegetables and to describe a management model of the carving of fruits and vegetables based on to issues related to the use of traditional knowledge. The results are presented here in the form of a descriptive analysis.

III. RESULTS

The lotus blossom served as the foundational design element for carving fruits and vegetables (Figure 1). It

has a nice scent and is connected to the exotic. The lotus is also valuable and significant in society since it is a sacrifice made in Buddhist devotion. Many Thai works of art have drawn inspiration from the lotus flower, whose straight lines can overlap in countless ways to produce a final form that is both simple and visually attractive. The closed lotus shape was opened up and modified to be more detailed as sculptors gained confidence, adventure, and talent. Various natural inspirations, including leaves, flowers, and animals, were used as inspiration (Figure 2). Utilising naturally occurring shapes, drawing influence from the past, and applying geometric shapes were the three main development directions.

- Traditional Principles of Fruit and Vegetable Carving

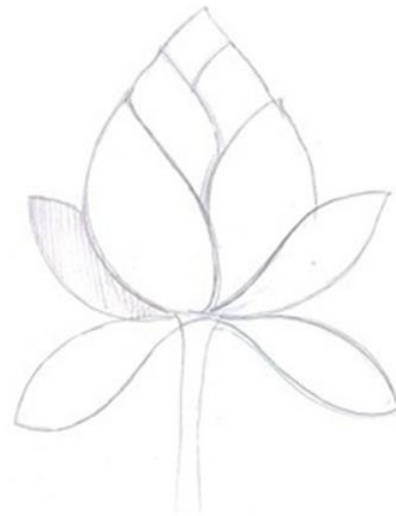


Figure 1. Traditional lotus leaf carving design

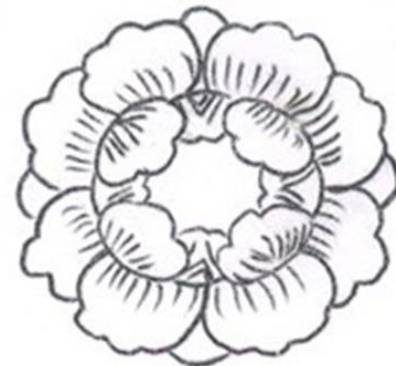


Figure 2. Design based on the form of the Hibiscus mutabilis

Sculpting patterns and techniques can be mixed and combined as much as the sculptor deems necessary. This is how the patterns develop and each expert artisan makes his artistic mark on the display. It is important that artisans remain flexible. ‘Some events do not require over-elaborate carvings because the emphasis is on speed, although the quality must remain high.’ (Danoi S, personal communication, 2010). For these events, it is extremely important to choose the correct carving designs, which is when the sculptors’ knowledge and experience prove invaluable. (Mukura W, personal communication, 2010) Some designs are therefore too intricate and confusing. The easiest designs are the ones that will be inherited from one generation to the next because they are the most useful and can be used on dinner plates (Figure 3). Although the basic principles of each design come from observations in nature, they are adapted to reflect local beliefs, customs and commission specifications. It is this last factor that has become increasingly important in sculpting for banquets because the artisan must use the practical purpose of the carvings to select the design. If the sculptors do not develop their designs constantly, they will not be offered work. At the same time, they must not forget the traditional knowledge in design creation because these are the principles that all sculptures are based on.



Figure 3. Fruit and vegetable carvings used on dinner plates

- Traditional Table Displays

Not all carvings are created for the plate; sculpted displays are made to decorate tables and dining rooms too. There are three standard, traditional table displays that have been used throughout the history of fruit and vegetable carving in Thailand (Figure 4). In the past,

carvings were not extravagant and were easy to create. The emphasis was on beauty and fresh colours; it was not popular to make high-level artistically detailed sculptures. A small number of important and durable Thai flowers were added to the displays. ‘In the early table designs, artists started to use banana leaf art.’ (Sittitrai, n.d.). The materials were arranged in groups by colour tone and were well spread out. Only a few fruits and vegetables were used in the display because diners considered it a waste to throw away good, edible produce. For this reason, artists created designs that could be eaten and table sculptures were limited to the most important tables (Jongjit, 2007). Gradually, the art became more developed and the artists experimented with levels. Models were incorporated into the displays to create a complete picture and western styles became more influential (Buapan & Kornsinisit, 2009).

Table displays used today are variants of the original designs (Figure 5). They are often stronger in their depiction of Thai identity and heritage, with elephants and Thai flowers prominent themes, yet contain elements of international design (Sawangasuk P, personal communication, 2010). The fresh materials are usually grouped together by type. Boats are often heavily featured in the displays because they are easy to design with, are part of Thai identity and refer to the everyday life and history of Thai people. Despite the boldness of the displays, there are delicate carvings throughout. The styles have become more daring and intricate because the displays are now judged as part of a competition, whereas before they were merely for show. Now the displays must be fashioned according to the specifications and demands of the particular competition or event. The modern displays are intended to reveal the relationship between humanity, nature and the universe (Rodbun, 1975). Despite the developments, ‘the majority of designers prefer to stay true to traditional methods and styles with only slight modifications and modernizations. This is because the original designs are a) our heritage and b) simplistic perfection.’ (Lazaribis A, personal communication, 2010).



Figure 4. Traditional fruit and vegetable table display designs



Figure 5. Modern fruit and vegetable table display designs

There are now four categories of table design: natural, original, geometric and abstract. The category chosen will depend on the event, concept of the designer and materials available. If the event is a particularly grand and important ceremonial occasion, the displays must reflect this. Figure 6 is an example of modern table display interpretations incorporating traditional principles, contemporary developments and Thai identity.



Figure 6. Modern fruit and vegetable table displays

Problems with Contemporary Fruit and Vegetable Carving in Thailand

Despite the developments in traditional fruit and vegetable carving in Thailand, there are a number of problems. These problems are illustrated in the following table (Table 1).

Table 1. Problems with fruit and vegetable carving in Thailand Problem

Category	Detail
Materials vegetables	<ul style="list-style-type: none"> The large events take too long to prepare for, so the fruits and used develop an unpleasant odour by the end of the carving process.
	<ul style="list-style-type: none"> Fruits and vegetables are not fresh, affecting the display life of thesculptures. It is difficult to find fruit and vegetables with appropriate properties and quality.
Designers	<ul style="list-style-type: none"> The most suitable fruits and vegetables are not always in season. Designers do not have sculpting knowledge, causing conflicts between the designers and sculptors.

	<ul style="list-style-type: none"> • Designers do not design based on real objects. • Sculptors lack expertise and are unable to create delicate carvings. • Sculptors cannot design. • Sculptors are difficult to find, so quickly organised events are difficult to achieve
Design development	<ul style="list-style-type: none"> • Developers lack knowledge in adaptation. • Names of new designs are not appropriate. • Developments do not consider the objectives of the event. • There is a lack of support for modern developments, especially among traditional teachers.
Inheritance	<ul style="list-style-type: none"> • Designers do not communicate with sculptors, so do not know the sculptors' needs. • Designs and placements are not compatible. • Designs are developed too much and lack beauty. • Teachers instruct in basic principles rather than technique variety. • People lose interest in the craft because it is time-consuming. • The craft is viewed by outsiders as a pointless, time-consuming and eccentric hobby rather than an important part of national culture.
	<ul style="list-style-type: none"> • Young people see conservation as the responsibility of the older generations. • There is very little electronic information available. • There are no demonstrative exhibitions.
Value creation	<ul style="list-style-type: none"> • Foreign tourists are willing to pay extra for the art but some groups of Thai people see the additional cost as an unnecessary expense. • Some people view the value of the sculpted work the same as an ordinary fruit or vegetable. • The value is limited to Thai cuisine because foreign cuisine has its own decoration style. • The products cannot command a high price and the creation period is lengthy. • The worth of the art is dependent upon the mentality of the viewer. • The contests are expensive to enter.

Management Model of Fruit and Vegetable Carving for National Banquets Using Traditional Knowledge
 From observation, interviews and focus group discussions a seven-point management model for fruit and vegetable carving was determined to combat problems with the craft. The categories in the model are management form, location, materials, designs, sculptors, added-value creation and management at banquets. The content of the model will now be summarized.

The form of arrangement should be in the form of a boat, literary construct, natural phenomenon or physical representation of Thai identity and must integrate traditional knowledge and modern techniques. The displays should be shown in a traditional Thai-style building or an important place associated with Thai identity. The target group observing the displays must be tourists, philosophers and creative thinkers with a variety of occupational backgrounds, as well as important media personnel to disseminate public information. Traditional basic designs are most appropriate for the displays, such as the *Alpinia galangal* and *Oxalis purpurea* flowers, rice ears, rose buds and blossoms, dahlias (*Dahlia*), buttercups (*Ranunculaceae*) and white champaca (*Magnolia×alba*). Materials for carving must be selected according to the location of the event and the season because certain fruits and vegetables will spoil quickly if not carefully chosen. Good examples of suitable fruits and vegetables are watermelon, cantaloupe, beetroot, taro, pumpkin, carrot, mango and papaya but they should be appropriate for the design and the length of time required. Artisans should be well-trained but creative and pragmatic in their design concepts.

IV. DISCUSSION

New developments to traditional fruit and vegetable carving displays must be made continually. If the artisans do not develop, their work may disappear. However, at the same time, the original knowledge and traditional designs must not be lost. It is important that these fundamental principles are incorporated into every work of art. Although the inherited traditions are basic, sculpted displays at the national level and for important ceremonies must be intricately developed and meticulously planned to achieve appropriate

levels of beauty and detail, while maintaining Thai identity (Tongyaem N, personal communication, 2010). It is necessary for the artisans to continually practice their handicraft and develop an original and unique artistic signature to impress and amaze observers. If the designers and sculptors can achieve this, they may increase the public interest in traditional fruit and vegetable sculpting. ‘It is extremely important that the designers consider modern preferences. Then they will be able to take traditional knowledge into the next generation.’ (Lazaribis A, personal communication, 2010).

In this research, six categories of problems were identified: materials, designers, sculptors, design development, inheritance and value creation. In response to the problems found, the research team makes the following suggestions (Table 2).

Table 2. Suggestions for fruit and vegetable carving in Thailand Problem

Category	Suggestions
Materials	<ul style="list-style-type: none"> • Colourful containers and banana-leaf art should be used to supplement the displays. • Seasonal fruit and vegetables must be used in the display, even if they were not part of the original design. • Materials selected for use must be appropriate for the event and have the correct dimensions.
Designers	<ul style="list-style-type: none"> • Sculptors should choose and buy the materials themselves. • Designers must communicate with sculptors during the design process. • Designs must accurately reflect nature.

Sculptors	<ul style="list-style-type: none"> • Sculptors must train regularly and consistently. • Sculptors must continually develop their handicraft style. • Sculptors must actively study throughout their career. • Sculptors must combine traditional knowledge and modern innovations. • Sculptors must be creative and model their work to fit the occasion.
Design development	<ul style="list-style-type: none"> • Designs should incorporate traditional Thai kranok, krueatao and pum thep phanom patterns to emphasise the expertise of the sculptor and traditional Thai heritage. • Thai identity must be a major part of the design so that the work and the event are recognised for their importance by guests. • Designs must be developed to be more beautiful and appropriate for the event. • The designer must understand the components of the design and how they are used. • New designs must combine traditional knowledge and new features.

	<ul style="list-style-type: none"> • Designers and sculptors must communicate on the detail of the designs. • The designs must be based on nature. • The designs must incorporate a mixture of sizes. There should also be big, bold uses of colour and finely detailed carvings.
	<ul style="list-style-type: none"> • Teachers must be sincere and genuinely love their art. • The government and ministry of culture should establish study of the craft among young people in such a way that stirs pride in Thai cultural heritage. • At events, officials must be designated to maintain and take care of table sculptures. • Fruit and vegetable carving demonstrations should be organised to teach young people the steps and stages of the handicraft. • Teachers must teach design concepts and sculpting techniques, encouraging students to innovate new designs based on traditional knowledge. • Related organisations should support and sponsor the inheritance of

	traditional knowledge.
Value creation	<ul style="list-style-type: none"> • Modern media must be used to advertise and promote traditional fruit and vegetable sculpting. • People must be made aware that this is a handicraft that can promote Thai culture and identity across the world. • Designs must be created that are easy to make, small and require only a few sculptors. This will temporarily remedy a shortage of skilled artisans. • Fruit and vegetable sculpting must be promoted as a profession rather than a hobby to encourage young people to pursue their interest. • Fruit and vegetable carving must be used more frequently at events across the country and abroad.

CONCLUSION

To maximize the effect of traditional knowledge in Thai fruit and vegetable carving, seasonal, colourful and suitable materials must be chosen for inclusion in the displays. Artisans, both designers and sculptors, must continually develop their artistic signature to remain modern. All designs must be based on the simple and efficient traditional knowledge passed from generation to generation. At an institutional level, fruit and vegetable carving must be promoted as an important part of Thai cultural heritage and a viable vehicle for the preservation of Thai identity worldwide.

To conclude the discussion on the basic principles of traditional knowledge for carving fruits and vegetables, particularly in the context of Thai fruit and vegetable carving, several key insights emerge from the research.

- **Traditional Knowledge and Cultural Heritage**
 Thai fruit and vegetable carving is deeply rooted in cultural heritage, with a history that can be traced back to the Sukhothai Kingdom. This art form not only serves aesthetic purposes but also embodies cultural significance, often reflecting social values and religious practices, such as the use of the lotus flower in designs due to its association with purity and beauty.

- **Principles of Carving**
 The foundational principles of traditional carving emphasize simplicity and accessibility. Successful designs are often simple enough for beginners to learn, while more intricate patterns tend to be unique to individual artisans, highlighting personal artistry and skill. This duality allows for both the preservation of traditional techniques and the encouragement of innovation within the craft

- **Challenges and Opportunities**
 Despite its rich tradition, Thai fruit and vegetable carving faces several challenges, including:
 Material Quality**: The availability of fresh, high-quality fruits and vegetables is crucial for successful carvings.

Knowledge Transmission***: There is a need for better transmission of skills and knowledge between generations of artisans to ensure that traditional techniques are not lost.

Market Demand***: As modern culinary practices evolve, there is an increasing demand for visually appealing food presentations, which can be met through innovative carving techniques

Future Directions

To maximize the impact of traditional knowledge in this art form, it is essential to embrace both the educational aspects of carving and its application in contemporary culinary settings. Workshops and training programs can help cultivate new talent while ensuring that traditional practices are maintained. Moreover, integrating modern design concepts with traditional methods can enhance the appeal of fruit and vegetable carving in today's culinary landscape. In summary, the art of fruit and vegetable carving represents a vibrant intersection of tradition and modernity. By understanding its principles, addressing current challenges, and fostering innovation, this ancient craft can continue to thrive in contemporary society.

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