Ethnographical Study of Pottery:
A Contribution in Pottery Technology, Distribution and Consumption in the Selective Samples of Peninsula Malaysia

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PREFACE

University of Malaya Book Series on Research in Visual Art is a collection of peer reviewed papers by local and international scholars. This book aims to disseminate current research to both academicians and tertiary visual arts student. In this series, our contributors are Faeza Ahmed Al Dhamari, Dr. Sabzali Musa Kahn, Jaffri Hanafi, and Nik Nairan Abdullah who are local and international researchers. This book draws upon insightful observation and analysis into Ethnographical Study of Pottery: A Contribution in Pottery Technology, Distribution and Consumption in the Selective Samples of Peninsula Malaysia.
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CHAPTER 1

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A CONTRIBUTION IN POTTERY TECHNOLOGY, DISTRIBUTION AND CONSUMPTION IN THE SELECTIVE SAMPLES OF PENINSULA MALAYSIA

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Introduction

The portions of this volume are elucidated from prior archaeological, archaeometric, and ethno-archaeological researches to be organized in a new format of creative study, and investigate either persistent technological pattern is often identified into regional system of west coastal pottery technology. Presented information in such volume provides a background to interpret the new localized technological data about samples of potteries selected from Peninsula Malaysia within the wider context of north coastal ceramic technology.

This volume has been integrated in a format to systematically investigate where sequential chronometric potters’ styles made for technological choices in paste composition, forming, surface treatment, and firing methods; beside, how the technology relates to culture and potters’ behavior. The technological background in this study comes sequentially with discussion about the socio-political organization of the cultures represented in the Peninsula Malaysia pottery manufacture.
Indigenous cultural development in the west coast, which has been followed through a trajectory of increasing expansion and socio-political complexity, is a concern point in this study. The leaders of each society used the skills of artisans to communicate the power of nature, to transmit status and values through statements of art messages, and to promote corporate ideologies. Ceramic technology also played an important role in achieving these goals as potters manufactured ceramics with distinctive appearances that were identified with each ruling power.

The first examination theme in current volume is to verifying the relationship between ceramic manufacture and the environment with a brief review of the geology and the positive feedback mechanisms for ceramic manufacture in Peninsula Malaysia’s regions in order to illustrate the mechanisms for ceramic manufacture in several Malaysian regions of Peninsula Malaysia and illuminate the systemic relationship between ceramic and the environment. The technological operations in ceramic manufacture are drawn scholarly from many sources with discussion about how each technological sequence relates to culture and potters’ behavior.

**Background of Study**

An overview of the important points contained in this study, being embedded at set of investigations debate the aspects of life cycle of pottery production that are typically derived from social sciences. Initially significant aspects of life cycle, which applied presumably in behavioral sequence of flow model suggested by Schiffer (1997) in addition, flow chains of operatories described by Leroi-Gourhan (1993), sequence of the stages of production initiate with first production stage as a prelude, then flow with stratified stages such as procurement of raw materials, surface treatment, forming, firing of the pottery.
It is therefore going on the techniques of distribution of the pottery, to eventually latest stage of consumption that might contain use, reuse, and ultimate discard of pottery, repair and maintenance.

Having a terminological background is regarded establishment stage in the study of a pottery group for the relevant aspects of production, distribution or consumption. That space of knowledge has been broadly interpreted in order to provide a better understanding of the behavior of the people who produced, distributed, or used the pottery and, thus, recent studies were often met with basic aim, which is “not to describe micro-scale prehistoric activities, but to understand micro-scale social processes” (Dobres & Hoffman, 1994). At this stage, the puzzled questions being asked include, typically, how the phenomena of pottery production or distribution were organized and what the reasons were pushed potters towards technological innovation and technological choice.

A starting point for such a study is the material paradigms mentioned in social science (W. Kingery, 1996), which is indicated to the material procurement of raw materials in the process of pottery production. Material procurement give rise to properties on which depend the performance characteristics of the artifact in distribution and, more importantly, in use. Thus, in modern materials science, the raw materials and processes are varied in order to achieve a structure and composition which result in the required properties of the finished products.

Eventually, this study is contextually orientated to contribute at enriching the systematic outcomes of pottery which contain a chain of pottery dimensions, shape, and surface decoration of the pottery, the archaeological context in the use of pottery.

**Pottery Production and the Methods in Use**
Initially, Ceramic ethno-archaeology, which involves the direct observation and study by archaeologists of variability in ceramic production, distribution, and consumption and its relation to human behavior and organization among extant societies, has a potentially very valuable contribution to make at the interpretation stage (W. Longacre, 1991). In particular, ethno-archaeological studies are valuable in exposing us to other ways of thinking about the material world and reminding us that pottery is used in creating and expressing social relationships and the rites, myths, and taboos can be associated with its production, distribution, and consumption (Lindahl & Stilborg, 1995). In addition, the application of the methods of physical examination to ethnographic pottery, for which information on production, distribution, and consumption is already available, provides some check on the validity of the results obtained when these same methods are applied in an archaeological context (O. Gosselain, 1995).

The construction process of pottery including manufacturing techniques all are assigned to be built upon a combination of phases which are: first, utilizing of raw materials and the way of preparation clay and other inclusions, second, the methods using in treating surfaces, forming body, and fired. Accordingly, with possibility, conducting the fieldwork of archaeology and specialized excavations is often associated with construction process of production for the purpose of specifying locations of pottery production where the kilns and workshops were found. Despite, in the worldwide of pottery interested even including southwest American, the precise evidence obtained from pottery production pursue is still rare of details or features that might show some signs of organizing production (Sullivan III, 1988).
In the field of ethno-archaeology most cases of study are concentrated on the significant point of studies contained several themes such as production, distribution and consumption, with specialize the material paradigms that thought to benefit the process of artifact selections usefulness either in production, distribution or in use (W. D. Kingery, 1991). Therefore, the processes of production and material are typically varied in the way that harmonizes with reconstruction and compositions are also suited with required properties of potteries. Contextually, the studies of surfaces treatment often debate the role of pottery in reconstructing life cycle, which occasionally is inferred from different evidences such as residues and wear came out from use and production. Yet, pottery production was habitually considered with throwing the light intensively on surface decoration, pottery different dimensions and shapes, and association pottery to archaeological statements and its broad correlation and intervention with other samples of abandoned pottery.

Moreover, at the interpretation stage, archaeologists with ethno-archaeologists endeavor to present ethnographical contextual demonstrating about sequential stages of production, distribution and consumption. Thus, for the purpose to access required response for the interrelationships ruled those three themes, it is necessary to consider the full range of contextual aspects from the environmental and technological constrains, through the subsistence and economic base and the social and political organization, to the religious and belief systems of the peoples under consideration. That is one needs to adopt the ceramic ecology approach, first proposed by Matson (1965) and subsequently modified by Arnold (1988) and Kolb (1988), which attempts to link pottery production to the environment in all the methodology for establishing links with socio-cultural processes being, as yet, the least well developed.
In the context of potteries famed in peninsula Malaysia’s regions, cord marked pottery is the most salient type of pottery that is consistently attributed to the other peninsula Malaysia’s scattered sites such as Jenederam Hilir in Selangor and Gua BatuTukang in Perak conducted by Leong (1991; 2003), beside the study conducted by Zuraina in (1996) and Zolkurnian in (1989) at the residential sites such Gua Teluk Kelawar and further burial sites of Gua Harimau in Lenggong, Perak have been supplied to support the idea of culture contact through analyzing the characteristic of cord-marked and plain sherds of pottery and earthenware measured by using radiocarbon method applied on the selective coastal shells. Such type of pottery historically is considered the first manufactured pottery appeared chronometrically before the end of Pleistocene, provides a similar example of early middle Holocene cultural conservatism in the whole regions of east and Southeast Asia.

All evidences obtained from fieldwork excavations signify to the northern origin as significant site assembled most samples of origin resource, however reversely, it is believed that the tropical forest life in the southern Peninsula Malaysia was the first site for producing and manufacturing the cord-marked by the people adapted with the geographical nature of nature of forest life.

**The Most Significant Theories of Pottery Production**

Association the pottery with agricultural fields in various cases drove earlier scholars to postulate that it materialized from the earth unexpectedly or may be explored on ancient items (Abramowicz, 1981), as among the notions introduced in pottery field recently the thought of that paying attention in what inspired of clay types issues extracted of “soil crusts” (Goffer, 1980). Among the more questionable points in such scope are the propositions; however it is
better to take attention that such discussed theories are often confined in specific studies.

**The Hypothesis of Architecture:** it is proved recently that the role of architecture is not only bounded in construction of building but rather such theory is suggest to be based on parallel relation between the general bases of construction, in other meaning correlation between construction of building out of clay and construction the pot bodied out of clay. Thus, the finding came out of earlier study is notified in terminology aside the method of “architectural hypothesis” illustrated by the analysis conducted in compositional and forming techniques set with vegetal and chaff-tempered coarse-ware. The distinctive way of pottery manufacture was relied on the “sequential slab construction”, therefore, presumably the techniques followed are derived from architectural construction methods which the clay in use typically mixture and other materials such as mud-brick, daub, straw, and puddle adobe (or Pisé). Vandiver (1987) postulated a new method in her innovation of ceramic technology, as some elements in the performing of pottery set without standard sizes to be stacked on top of one another,” there are two distinctive steps in such proposed technological innovation as mentioned:

…two steps process in which forming developed first and independently of firing. A period of time when people did not choose or did not know how to make pottery was followed by a period when clay vessels were formed and sun-baked, without being consolidated by firing. This was followed by the emergence of pottery as a mature pyrotechnical craft (ca. 5500 B.C.)

In the hypothesis of architectural technology, the similarities between two materials such as clay and plaster, which frequently being in use during forming process, might have inspired her to postulate that there is absolutely a link between clay and plaster, as she summarized that “pottery technology probably
developed out of pre-pottery Neolithic technology or along with architectural technology” (Vandiver, 1987). In such statement Moore (1995) confirmed the ideas in which he states the revolution came out of a set of transitions occurred gradually along with construction of pyrotechnical knowledge defining calcining calcite or gypsum to make plaster (Gourdin & Kingery, 1975; Pavlů, 1996). In fact, it explored that earliest type of pottery manufacture might be made of plaster molds to build in larger shape of storage jars in purpose of storage facilities (Marechal, 1982).

…often formed in molds made of baskets or other materials. The walls were built up in thin layers…the greatest of [these jars] were made in the few centuries before and after 8000bp….this abundance suggests that the need for large, durable containers to store foodstuffs indoors increased significantly during the ninth millennium, providing one reason, perhaps, for the invention of pottery. (Moore, 1995)

**Culinary Hypotheses**: This hypothesis is deemed one of significant traditional hypotheses used to remedy the origins issues in pottery manufacture. Pottery containers have been taken as a sample of kitchen items in culinary hypothesis based on the previous views introduced in hypotheses culinary which treat particularly with sun-baked type of clay dedicated to obtain a rigid surface of container specializing for storage and featuring a durability and capability in holding the liquids and putting over a fire. Most of ideas centered in innovation pose in the function of clay properties, as mostly used for lining either ovens and/or fire-pits or even lining baskets to not let permeability (Childe, 1936; Linné & Leijer, 1925; Morgan, 1985; Morris, 1927; Wormington, 1965), the important to mention that the nature of clay relates to the degree of temperature that plays role in grand clay over hardness during applying of heat (Amiran, 1965).
The compositions of chemical and mineralogical materials, which are deemed silent inclusion of pottery compositions, are often explored clays’ properties; such as example what observed evidently in plate-like shape, layered structure, and small size. Clay typically contains in its surface and edge amount of particles observed between two contiguous layers and possesses negative electrical charges, compositions such as Cations-especially Mg, Ca, etc, that might occupy these loci. Interest point is that the properties in pottery making such as thickeners, binders, decolourizers, fillers, gelling agents in lubricants, and strengthening agents would be subjective in preparation pottery in general modern industry. In addition, such materials are currently associated with other process of pollution control for adsorbing biocides, clearing water, and so on (Singh, Huang, Hammer, & Liaw, 1996).

The thought of that many countries, which have mimics shapes of pottery containers designed as food containers and made from mixture of materials, is strengthened in which relates to culinary origins’ issues of pottery. In ancient time, it was believed that early type of pots might have been copied in familiar forms of containers made often from similar materials, “Pots were generally made by women and for women, and women are particularly suspicious of radical innovations …[clay pots would then] look less new-fangled and outlandish to the prudent housewife!” (Childe, 1936); Longacre (1995), "... Pottery was invented by women and remained a woman's technology for millennia. ... Pottery is one of the few technologies controlled by women."; Hoopes and Barnett (1995) going on further: "Women, as gatherers and as the individuals most closely associated with households, might also have been closer to the technologies and materials for making pottery and better able to organize the diverse tasks necessary for manufacturing ceramics."Sassaman, Skibo and Schiffer (1995), and Vitelli (1989, 1995); and see also Crown and
Wills (1995) and Wright (1991) have introduced further supports in the same issue. From other side, pressing was the followed method in shaping pots that are habitually take the same mold’s shape through pressing, i.e., pressing moist clay inside or outside these disposable natural molds, this way might help obtaining morphological similarities and swing from old models of pots to bottle gourds (Flannery & Marcus, 1994). Yet, pottery in its interior decorated by cord-marked method. Brown (1986) illuminated the way of pottery manufacturing "over an armature whose presence left traces in horizontal cord-marks on the vessel interiors."

Consensually, the occurrences of innovation attributed closely to “Neolithic transition”, which returned back to transformations occurred in the beginning of the Holocene (Childe, 1936), and two divisions of lifestyle included style of sedentarization and the natural process and types of traditional food, reinforced the idea of origins of pottery embedded explicitly in culinary hypothesis. In context of west-side societies, which Perak geographically located in western side of peninsular Malaysia, most of informative theories have grounded with bases of debates expressed for western-side reconstructions of origins of civilization of societies. The fact of west-side societies is matched with that belief of the origins of such societies are rooted typically to the nature temperate (arid riverine- and/or highland) areas. Habitually, west-side areas rely in its economic resources on farm crops such cultivated cereals (barley, corn, and wheat) and based on well-built strategy in the way of storing surpluses of food to distribute sufficiently to all populations. Thus, pottery as a necessary part in some life-sides, is often observed incorporated with Neolithic complex in its distinctive function such boiling different grains, from other side, the system of sedentary village life has affected on the use and elaboration of these fragile vessels.
The drawn category of Brown (1989), which is defined through two significant intellectual trends “enabling” and “adaptationist”, contains expressions presented in the invention of culinary pottery context and subsequent adaption. Adaption strategies utilized in the broad collecting of spectrum was directed to get used to the changed environments at the period of Pleistocene. In the case of certain circumstances, fried clay would be more advantage for the process of pottery manufacture, among its aspects: (1) increasing efficiency in preparing new food items, especially cereals (barley, wheat, maize), by toasting or by direct or “indirect” boiling (stone-boiling) (2) enhancing capacity and security of long-term storage of grains and pulses; (3) improving nutrition delivery to children, nursing mothers, and the elderly by permitting preparation of soft cooked foods, e.g., for weaning (Crown & Wills, 1995; Hoopes & Barnett, 1995); (4) widening the range of resources that could be used as food in the postglacial period, effectively increasing the carrying capacity of the environment (Ikawa-Smith, 1976); (5) reducing the time spent in tending or pot-watching (Schiffer & Skibo, 1987), compared to containers of gourds, stone, bark, skin, or basketry used for stone-boiling; and (6) allowing processing of foods containing toxins or that otherwise could not have been incorporated into the diet without prolonged soaking or cooking (D. E. Arnold, 1988).

Recent trends of pottery origins have motivated raising inquiries toward culinary hypotheses of pottery origins (Vitelli, 1989) and its adaptionist/functional rationales. Most tendencies in illuminating technological processes, particularly in what has been debated in the issues of origins pottery, have been apparently launched from archaeologists and anthropologists, therefore, it is noted that the technologies accomplished in ceramic, stone tools, and agriculture might appeared improved due to its evident aspects that associated with early humans (Pfaffenberger, 1992). Traditional “Neolithic revolution” is not able to illuminate the pottery origins; however, pottery
manufacture, agriculture, and sedentarization in various decades ago have been treated as independent phenomena (Childe, 1936; Linton, 1944), despite it seems not readily to solve the several troubles resulted from various causes such as sedentary village lifestyle and appearance of food production.

**Resource intensification:** in the explainer theories of pottery origins, this kind of theory is assigned for clarify the transformation occurred in which belongs to subsistence strategies at the period of Pleistocene/early Holocene transitions. These theories latterly provide scientific concepts of intensification during dealing with hunter-gatherer groups, as well as rely on set of processes such as expectations and observation accomplished in resource abundance, seasonality, human reaction toward the increasing sedentarization phenomena, and distribution. The main influences of its theory is concentrated on agricultural origins, elaborates in discoursing the factors affected in rich environments’ resources through addressing the complex of hunter-gatherers at the course of Pleistocene.

Continuity in pottery issues, Hayden could combine in his model of competitive feasting between two aspects of clarification “culinary” and “symbolic”, however, his model featured as remedying the pottery issues such as origins and capacity to adaption through possessing more durable implications. Yet, concentration on function of pottery, which would be one of most significant discussion among pottery manufacturing, the technology applied in pottery making is often considered as significant role played particularly in the part that exposes feasting occasions and discourses the distinctive functions of pottery in which certainly made for serving and holding the consumable items such as carbohydrate-rich, alcoholic, fatty or oily foods, and so on of other stimulants. Such model is advantaged as useful indicator utilizes for exploring the areas suggested to have earliest samples of pottery or postulated to be silent resource
for generation of surpluses, and semi-sedentary population at the period of the Pleistocene. Oyuela-Caycedo (1995) believes that the provided model of intensification would be major cause in reducing the mobility phenomena (including the duration of longer settlement occurred in such reliable resources) with concerning of socioeconomic intensification (consisting the processes of feasting and changes in food). Thus, in his handling to the signs he used in his model, he suggests that pottery is just a tool that is invented or adopted to cope with source scarcity (Oyuela-Caycedo, 1995). However, Hoopes (1995) endorses Hayden’s model despite he believes that pottery would possess significance in potential demand in the areas characterized by subsistence strategies concentrate on the sources such as (shellfish, fruit, and seeds). In his explanation the importance of pottery would embedded in the purpose of serving starches, oils, fruits, and juices and drinks extracted from seasonally abundant tree crops, especially palms, servicing in the occasion of feasts.

Kelly (1991), expresses the significant role of mobility does not confined only on reduce the opportunities of sedentarization, but rather require a high level of storage, however, the changed occurrences might possess the same significant particularly among the social relations appeared in the neighboring groups as well, for instance, mobility of high group of interact individually (via trade exchange, marriage, etc.) with another individual groups.

Argument in restricting mobility states that such individuals groups, which influenced in declining a number of mobility, affectively dominate on social relations through intergroup, as well as marriage alliances, occasions and/or feastings that consume particular stored resources. Therefore, the significance of pottery would be reinforced increasingly in which relates to social identities and/or boundaries.
Summarily the distinctive characteristics of such early pottery containers are represented by competitive model of feasting samples and constituted from the intensification resources as following:

1- Most hypotheses provide early pottery from the view of such kind of pottery observed frequently in scattered seasonal occasions more than fully resident settlement.

2- Early pottery vessels are a good representative for whether invention or adoption among a combination of hunter-gatherer groups and are considered as part of emerging social rank distinction.

3- in context of function, mentioned vessels might present special-purpose, which commonly relate to the purposes such as storing, serving, preparing, and accumulating, and serving a particular type of food that associate closely to the rich-environments of protein such carbohydrates or oil and fats growing in the areas where predominantly starchy diets.

4- Considering to vessel elements such as number of vessels and specific sizes, and its durability and capacities should be high to be more useful for serving, storage of consumable contents and so on of other function.

5- The functioned vessels assigned for introducing feast foods are guessed to be ornamented by various stylistic elements appeared in larger social group.

**Social/Symbolic Elaboration:** The conceptual meaning of this hypothesis is centralized on the chief idea of developing pottery origins out of concepts which have been formulated by social organization of hunter-gatherers presented in past and present (Aldenderfer, 1993; J. E. Arnold, 1996; Bender, 1981; Cashdan, 1980; Gregg, 1991; Ingold, Riches, & Woodburn, 1988; Layton et al.,
Gathered data in such theory is often built in order to orientate the attentions toward symbolic elaborations, and the symbolic style of hunter-gatherer. Measuring to Moore’s admit (Hodder, 1988) the objects of unfired clay is accounted one of the set of miniature vessels, spindle whorls, beads, and figurines, rather than “practical”, utilitarian (e.g., culinary). The comparing study of Vitelli has obtained from the similarities of gathering and finding in both plant materials and pottery resources and matching the findings with existence specialist knowledge of resources.

Rising the seasonal complexity and namely the rate of groups of hunter-gatherer might have often been escorted together through exchange process of exotics and the apparent prestige of technologies which habitually combing with displaying of identity, production, the objects made of clay for specific ritual-issues, and emergence of specialists potters. In context of religious matters, one of believable presumption among ancient tribes of Peninsular Malaysia’s states and many of further societies is about attributing the conceptual belief of magical powers to creator-beings whose their samples of creation are produced particularly from clay; tribes such as Quiche Maya, Tzakol/Bitol.

Along with all previous mentioned of interpretations, more interest point to be noted is the amount of ancient founds of pottery discovered in scattered sites of the world were made with distinctive parallels and infinitely elaborate as well were festooned in its surfaces with distinctive embellishments. Yet, certain circumstance has directed attention toward symbolic functions of fired pottery containers found extensively in the complex of hunter-gatherer societies, as this kind of functions have been interpreted by two ways. One is extension of the same lines based mainly on the stylistic analyses of other artifacts excavated by archaeologists, domination theory in such line is the information theory, and
interaction theory, etc. (Plog, 1978; Wiessner, 1983; Wobst, 1977), however, the other line associates with the social feasting and intensification.

**Conclusion**

Ceramic ethno-archaeology since the initial origination has notably concentrated on a range of behavioral diversity is relatively interpreted through pottery-making societies. Ethno-archaeologists during addressing the issues of pottery did not deviate from the correlation between style and ethnic groups sometimes, or sometimes measuring the skill increase with age, or many times it was interpreted ethno-archaeologically that potters mostly learned from kin or from others such as ethnic groups or regional affiliations.

Ethno-archaeologists have recently strived theoretically and empirically to make sense of the variability and elucidate valuable modal patterns. Despite some recent investigations still lack possessing straightforward relationship between pottery style and social interaction.

This chapter was designed to compose some issues of pottery such as review of brief background about pottery origination, and the process of pottery production, as well the most significant theories have been taken in mind by ethno-archaeologists and scholars are interested in the field of pottery.
References


CHAPTER 2

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THE PROCESS OF POTTERY MANUFACTURE
IN PENINSULA MALAYSIA

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Introduction

Traditional pottery procedure is the most sensitive productions as it needs to be undergone systematically through several proper disciplines. Creating a visual form in the artistic process conducted in visual art would get complete notably through the experiences, yet, it proves that there is a mutual relation between feelings and the process of creating art, which in turn reflects the phenomenon of developing a personal maturity. And this would assist individually to improve all three domains; cognitive, psychomotor and affective.

Emphasizing on the anticipated relations between potters’ feelings and the process of creating art some technological studies were conducted in decorative style in the cases of Chistopher Donna McClelland (2000) are prepared here to confirm such issue; McClelland in his experiment has emphasized that there was a relation between painters’ propensity and a freedom, as it is playing a
salient role in most of their painting. Thus, accordingly we can fall such assumption on the painted pottery in peninsula Malaysia which notably possesses a salient role in social status that was more than the workers’ achievements attributed closely to less skilled operations during common ceramic manufacture.

Continually, in proving the role of culture and environment on the pottery manufacture, it is evident through the context of some studies conducted in relating of manufacturing techniques, that falling under mutual influencing between the environment and the choice materials with the craftsmen who might be influenced strongly by culture and choices which are rarely restricted by environmental constraints (Lechtman, 1994; Van der Leeuw, 1993). From other side, cultural effects that are interpreted as ecological constrains, regarded main constraints on technological processes, whereas the major constraint on technology as it is defined a major constraint on technology minimizes the dominance of the environment, from the case of west coastal areas of peninsular Malaysia.

Other researchers such as the path of associating pottery to culture and environmental constrains Halir and Flusser (1997) in their new method illustrate as where formal representation of a pot through assisting the symmetrical nature and reflecting such criteria on manufacturing pottery would be restructured in some cases by using a potter’s wheel. Yet, finding of their method has proven that volumetric representation is often generated in the process of shaping form and is not equal with correct orientation that is considered fundamentally a main condition in such process.

In terms of technology Peninsular Malaysia has been famed by certain methods of pottery manufacture such as slow wheel, hand molding, segmentation and the coiling methods. Accordingly, most sites of peninsular Malaysia have been
decorated by using common type of pottery such as the cord-marked designs, plain and burnished surfaces, In addition to red-slipped and incised designs. the decorated surface of plain and Cord-marked are often found in majority of burial sites and were represented the earliest type of pottery, whereas, the further type of pottery distinguished by polished surface habitually found in sites such as Gua Harimau and Gua Cha, main point might be focused on the Bukit Tengku Lembu decorated as polished way and smudging some spots of pottery body with black carbon. Red-slipped pottery often appeared in sites such as Gua Cha, Gua Kechil, Gua kajang.

Among the types of pottery famed in peninsula Malaysia is the earthenware that has been considered as pottery in traditional industries and falls under the Malay pottery. The most significant elements in Malay traditional industry are of clay that constitutes a main source for making a pottery in traditional way which requires low temperature. Some technical studies conducted in peninsular Malaysia displaying samples of pottery and/or earthenware could reveal that these potteries were mostly produced by using low kaolinite clays and the technique of firing was done as open fire, at low temperature approximately between 600-800 degrees Celsius (Chia, 1997). Pure and natural clay often dug from earth, which enriches with the different materials, found in the soil of river bed, therefore the color of the pottery during the firing process is being determined naturally by the type of soil exists in river bed. For instance, the silted soil that contains a distinctive type of clay consists iron mostly results a reddish black and grey color during firing. Tempering was interestingly added into clay, this tempering typically comprises common materials such sand and sometimes grog (crushed sherds). A point to mention is that all processes of making traditional pottery are habitually made by hand. (Kendut, 2006)
In context of developing in the technique of pottery manufactured in peninsula Malaysia, the results obtained of Chia’s study (1997) pointed out that the technological development of prehistoric pottery was notably occurred slowly and the changes happened in pottery technology over several thousands of years was measured little which emphasize that most sherds indicate that the main aim of producing pottery in peninsular Malaysia was not the bartering or trading as long as have been used as household vessels or burial goods but rather to highlight the distinguished elements in shape and decoration of vessels. The process of pottery manufacture typically consists of several elements

**Raw Materials**

The most common way initiates with specify certain clay for pottery production, as in case study of Malaysia raw materials have been varied according to the region supplied its own raw materials. The potters of Sayong obtain their clay from Temong, a place higher up stream. It comes down the river in boats, packed in small mat bags, and is sold to the potters. It is fine stiff clay, and is found on a changkat or hillock some way from the river. There are many roots in it, proving its purely superficial character. It is of a grey-brown color and looks like fine grained river silt, and is doubtless of a very recent geological date.

Preparation step for use constituted as follows: the contents of one or more bags are turned out on to a large mengkuang mat, spread out in the sun on the ground, and the clay is allowed to remain there until it is dry, the larger lumps being broken up to facilitate the process. It is then pounded in a common rice-pounder, either of the pestle-and-mortar type (lesong tangan), or of the tilt-hammer (lesong kaki) type. From time to time the clay is taken out of the mortar, and sifted through a fine brass wire sieve of about sixty meshes to the
linear inch. This separates the roots, sand, and other impurities from the finer portions of the clay. The step of ensuring from purity of the dumb that should be sufficiently flexible before starting shaping. In the case of dried clay, it’ll shrinkage and results cracking in the body. Therefore, traditional potters of several regions of Peninsula Malaysia trying to achieve balance between the mineral existing inside the body and the contents of non-plastic inserted in the body. Therefore, traditional potters of several regions of Peninsula Malaysia trying to achieve balance between the mineral existing inside the body and the contents of non-plastic inserted in the body. Thus, potters when access clay locations they try to refine the clay (refine process is ridding of unnecessary contents of non-plastic inclusions or inserted temper e.g., sand, grog (i.e., crushed sherd), organic material (e.g., chaff), crushed flint, shell, or limestone), occasionally potters were mixing their clay with other sorts of clay obtained from different regions to obtain unique clay.

The non-plastic inclusions in the pottery can be identified and their particle size distribution estimated by thin-section petrography. Further, it is sometimes possible, in the case of mineral or rock inclusions, to distinguish between inclusions intrinsic to the clay and those added as temper on the basis of whether they are rounded or angular respectively. Alternatively, the addition of temper can sometimes be established as a result of the presence of inclusions with two distinct particle size ranges, one associated with intrinsic inclusions and the other with added temper (Rye, 1981). However, both criterions are necessarily valid, and it is frequently impossible to establish whether the inclusions are intrinsic or added neither the plasticity nor the drying shrinkage of the original clay can be estimated from measurements on the pottery. Such estimates (Gordon, 1986) are possible only when raw clay samples, which can be shown by chemical analysis and petrography to have been used in the
production of the pottery, are available either from the pottery production site itself or from local clay sources.

In the last step of pottery remediing, formerly the clay was sun-dried and pounded, and the impurities were picked out by hand; but as this could only be done in an imperfect manner, much loss through breakage resulted when the wares came to be fired.

![Fig 1](image.jpg)

**Figure 1:** Showing several kinds of pottery collected from scattered sites of Malaysia, made by different techniques and decorated in different ways.

**Forming**

A wide range of methods has been used in forming pottery vessels, sometimes with different methods being used for different parts of a vessel or sometimes with two or more methods being used sequentially (Rice, 1987; Rye, 1981).

The primary techniques, which transform the shapeless clay into the basic shape, include modeling from a lump of clay by pinching, drawing, or beating using a paddle and anvil; pressing or pounding into a mould; building up from coils or slabs; and throwing on a wheel. The secondary techniques, which are
subsequently used to modify the basic shape, include scraping, trimming, and, again, beating using a paddle and anvil (Fig. 1). In considering the use of a wheel, it is important to distinguish the slowly rotating turntable or tournette, which is used to aid hand building and finishing pottery, from the fast wheel, which is used for primary forming. Only in the latter case is the speed of rotation sufficiently fast for the centripetal force to push the clay against the hands of the potter, so that he/she can squeeze the clay and lift it to form the vessel. Here is a detail of all techniques used in pottery of several regions of peninsula Malaysia.

Figure 2: Splits to A,B. (A) Outline shape of a crud vessel made at Gua Cha site. (B), outline shape of a jar made in a site of Gua Cha.

*The Slow Wheel:* undoubtedly the most puzzle impression appears from repaid round in different shapes of traditional design of pottery is evident there is a notable increase in technical skill and superiority in shaping the design.
The increasingly sophistication in design returns outline shape of a jar made in a site of Gua Chain doubt to the frequency use of wheel for forming some types of pottery with existence some types that might be considered exceptional such Crude vessels like the jars from Gua Cha seen in the (Fig.2a,b), however, we may note some differences in the formed shapes of vessels but still visually the materials used for all sites are equal which could record a high standard in short period. The method of surface finishing in most samples of vessels observed tend to remain much of evidences vague or ambiguous. Beside, rim of pottery in most vessels tends also to be lift without decoration.
Moreover, through precision observation the traits and advantages of wheel appears evidently, as the apparatus of wheel is more elaborate and sufficient than a simple turn-table, as the apparatus of the wheel might achieve the regularity and thinness of pottery walls and pleasing symmetry.

Figure 5: Outline Shape of a Unique Design of Amphora Like Vessel Modeled by hand at the site of Pulau Tuba

*Hand Modeling:* This simple technique relied on the hand extensively, which more could observe in the jar obtained from Gua Cha, this method assist to shape big volume of jars and particularly large containers (Gua Cha, Fig. 3atoc; Gua Musang, Fig. 4a, b). In addition to observe a unique design of amphorala-like vessel from Pulau Tuba that has been modeled mostly by hand (Fig. 5).
Figure 6: Outline shape of vessel made by segmentation method; such model contains three separated segmentations of rims installed on the body one above other.

Segmentation: This method is posed by assemblage a combination of segmentations in one pottery body to eventually obtain complicated shapes. As in peninsula Malaysia samples of pottery observed were the ring and rim shaping separately first then add to complete the body in last step of manufacturing process. Thus, the samples of pots made in GuaMusang (Fig. 6) are regarded representative samples for such method which conveys three separated segmentations of rims installed on the body one above other.

To distinguish between different slabs have been used a fixed or concrete bound made by cord-marking were lined contiguously in opposite surfaces of vessels, however, using mating striations as a mean for holding the finished pot has been proved by Malaysian potters to the best way for handling assembly process. GuaKerbau which has illustrated by Evans to be subjected a best example which its ring foot often being attached by this way (Evans, 1928). In other instance, conical leg of Kodiang tripods are thought to be assembled all its units by using mating striations for the best contact.
**Coiling:** coiling process can be observed evidently in certain parts of Kodiang tripod vessels’ body such legs that is regarded the only evidence of using such method in Malaysian manufacturing pottery entirely. By concentration on the body parts of completed cones, it is emerged that outside part of cones is covered with fine cord-marking, however the hollow interiors part of cones are lift as unfinished and rough, and evidently a spiral path constituted by less or more continuous strip of clay are shown.

**Surface Finishing:** this method is used often in the last phase of pottery manufacture that most potters adhere to conduct it in order to obtain a fine surface.

![Figure 7: Divides to (A,B) outline of different shapes made by slipped technique observed in the site of Gua Cha.](image)

In such method remained joints resulted from assembly process are intentionally concealed under a thick layer of clay that is constituted a thick slip. The whole parts of pots are often treated by cord marked method before apply the concealment layer of thick slip as the outer skin was often covered as a thick
skin and was used to obscured the final contour of the vessels. The outer layer of Kodiang tripod was treated by occurring accentuation in order to balance the shoulders of vessels, and from other side to trimming the joints came saliently in the outer layer of the legs.

Figure 8: Outline of shape made by slipped technique. Vessel is made with thick slip and fine texture slipped upon coarse layer sat on the surface, Site of Gua Musang.

In most mentioned cases it is occasionally difficult to ensure about the types of slips and its function, despite particularly one unique slipped might be distributed widely (Gua Cha, Fig. 7a, b.; Gua Musang, Fig. 8). Thus, distinction is in fact suggested for some intrusive type (Tweedie, 1940). Such goods have been given a concretely thick slip of fine texture upon the coarse core to be finished with a bright red sat on the outer surface, the body of pots are relatively undecorated.

**Firing Procedures**

The two basic regimes were normally employed for firing unglazed earthenware. The first, in which the rise in temperature is extremely rapid and the time at maximum temperature is very short, involves an open firing with no
permanent structure, such as a bonfire. The second, in which the rise in temperature is much slower and the time at maximum temperature is much longer, involves firing in a closed structure, such as a kiln, sometimes with separation between the fuel and the pottery. Extensive data on the actual temperatures measured during experimental and ethno-archaeological studies of open firings and kiln firings have been brought together by Gosselain (1992).

In the case of open fire illustrated in at Sayong region, the kiln emerged simply at Sayong in a square shape-like hole, dug in the ground, of any required size; one, measured by the writer, was 31 feet square by 18 inches deep. In this is laid a layer of pieces of wood, in size from 3 inches in diameter downwards. Over the wood is put a layer of jars lying on their sides, the interstices between the jars being filled up with small pieces of wood; and then the jars are covered with a complete layer of wood on which go more jars, and so on, until the hole is filled up; a hole of the size given being sufficient to take thirty to forty jars. When all is ready, the wood is lighted, and is left to burn out, which takes from two to three hours. The clay, by this time, is of a light red color; but if it is wished to blacken the ware, as is usually the case, the hot jars are lifted out of the kiln and buried in a mass of *padi husk*, which quickly blackens them. Whether blackened or not, it is customary to glaze the bottoms of the jars with dammar to render them waterproof.

In the case of kiln firings, which is resulted of higher thermal mass, the process distribution of fuel in the pottery’s body is typically required an hour or sometimes more to reach maximum temperature and it is advised to maintain the temperature after firing at least 30 min. yet, sealing all kiln’s holes carefully is specialized habitually for controlling kiln’s atmosphere and obtain oxidizing status and reducing the temperature. This control habitually with the longer period of temperature assists to separate the fuel and pottery and meant to
produce oxidized pottery burned typically with organic materials. Instead, when the kiln sealed after temperature of kiln reached to the maximum level, this will provide reduced temperature pottery, as well when slow down the rates of heating it also brings both fine-textured and coarse textured pottery as heating steadily in the kiln.

Firing phase captured the attention of most researchers whose efforts to measure firing temperature (Heimann & Franklin, 1979; Tite, 1995) or to reveal the relationship between firing temperature and changes occurred in sometimes in mineralogy or in some other cases in microstructure of the pottery. The later is assigned to use several methods such as x-ray diffraction (Maggetti, 1982), and in existence iron the best method is of Mossbauer spectroscopy (Wagner, Wagner, & Riederer, 1986), however in the phase of microstructural changes, which associate all variables consist of phenomena of vitrification of clay matrix and sintering, measurements are easy to observed, beside, examination sections of pottery’s body is used through SEM (Maniatis & Tite, 1981), or is conducted indirectly through changes of properties are related to microstructure such as shrinkage, or thermal expansion, hardness and porosity (i.e., dilatometry).
Conclusion

Pottery production is the most effective thread among ethnoarchaeological presented issues. Yet, the more repeated disciplines are available in pottery production as decorative style, production technology, compositions, as well a set of implications of the variables are designed for interpretations of social and economic processes.

Style, which is mostly emphasized in the phase of finishing surface, is accomplished in different ways and can be observed mostly in the decorative wares, however decoration is not to be separated from the production technology; and similarly composition is a product of organization and technology of production as well as the geology of the raw materials.

In such chapter several threads comprehensive process of pottery production followed in Peninsula Malaysia in particular were demonstrated including with the bulk steps of pottery manufacture such as selecting raw materials, forming, and firing procedure.
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CHAPTER 3

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INFLUENTIAL FACTORS IN POTTERY MANUFACTURE WITH ETHNO-ARCHAEOLOGICAL STUDIES

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Introduction

Recent studies in the field of ethno-archaeology have reported that recent techniques of pottery production applied in scattered regions of Peninsula Malaysia are ruled by economic factors that are often regarded terminologies of efficiency and competition are restricted by the economic situations. As a simple example, Arnold (1999) in his trying to prove the role of firing through his precision of analysis of choice stresses that the analysis of pottery production habitually is built upon a combination of environmental and material factors such as micro-environmental conditions, space, scheduling, time scheduling, and fuel availability.

In most studies presented in the ceramic’s field particularly (Dobres & Hoffman, 1999; Stark, 1998), was evident that the social dimensions of technology are not only a significant source for archaeologists but rather being reflected on the ethno-archaeological studies as well, archaeologists and
anthropologists were therefore concentrated on the social dimensions in the technologies of pottery. Additionally, the formulation of social correlation points out the bulk usefulness of ethno-archaeology for archaeological studies through recent works that are conducted in the scope of technological choice. In such bases, ethno-archaeologists often stress the various contexts of factors such as political, social, and economic affect on the selected technology of pottery production.

In general review of ethno-archaeological studies structure, pottery through its different themes especially the dynamic choices of pottery technology is more varied by different kinds that evidently reflect the issues of social and economic behavior as influential factors (Costin & Hagstrum, 1995). Additionally, the Gosselain’s classification (2000) of the steps executed in pottery manufacture is regarded a more obvious paradigm, as he divides these steps into three different categories measured practically by the perception of involvement of pottery technology, the mutual correlation between consumers and producers, the potters’ performance similar with the surrounded environments, and the degree of technical malleability that those categories are thought to associate with varied attributes of social relationship and identity.

Longacre (2000) corroborated his approach of San Juan Bautista’s pottery by innovative of extra materials and time which are met with the market demands and make it more distinctive. In other hand, experimental studies of pots, which possess same attributes, emphasized that the kind of smudged and slipped vessels are more distinctive and effective during the processing of ceramic than those are treated simply.

Continually, more about the factors affecting pottery production Gosselain’s suggestion (2000) of the samples of African pottery supported that the process
and tools of making pottery are relied on conscious operations in creating a style, therefore, from his opinion the technological patterns of pottery production do not characterized by internal coherence, while, this statement encounter contradictory with the observation of Lechtman (1984a, 1984b), who discourses that the powerful of technical system is embodied by crossing the material boundaries by cross-culture, Andean people were a paradigm cited by Lechtman to substantiate that their technology of artwork in most cases were not appreciated or perceived when it is looked at the works’ surfaces superficially. She adds technological system in some artworks particularly Andean people’s artificial products are required ideological affinity to immerse in the essence of things. Confirmation of the submitted studies, ethno-archaeological studies (Costin & Hagstrum, 1995) indicate from different views to the concept of variation occurred in the different potteries’ attributes might affiliate to variation the aspects of economic and social behavior. In the following sections details of influential factors are illustrated.

The Regional System of Peninsula Malaysia and Pottery Production

In the integrated regional system of peninsula Malaysia, many of ethno-archaeological studies have been comprised the themes of community specialization and settlement patterns are investigated repeatedly from multi perspectives at the peninsular Malaysia selective regions such as Kota Tempan (Perak), Kodiang (Kedah), and Jenderam Hilir (Selangor) (Fig, 9). Linked by the establishment and maintenance of two parts south and north of Peninsula Malaysia tradition of community-based specialization and intra-regional trade have well-developed. As the two portions south and north that geographically constitute the backbone of peninsular Malaysia are shaped by a chain of Granite Mountain, in addition to other ranges and extensive of granite constitute the hill country which is located near to Thai border. However, in the east coastal site
there is a sequence of Sandstone Mountains, as these geologically stretch along Taman Negara national park, consist the highest peak of peninsula. The natural topographic of Sandstone Mountains are holistically steeper than the granite domes of main range.

Figure 9: Map Displays the Pottery Sites of Peninsular Malaysia

Many of cliffs with various shapes such as scarred, soaring, and sheer with formation of pudding and rounded are shaped to exist hills distributed in around Ipoh are known as distinctive limestone outcrops. This concurrently forms three sides of Kinta Valley. These cliffs in somehow associated to population centers as this phenomenon nowhere can be seen in elsewhere of peninsula.
In regard to the statement of the professor Dr. Ibrahim Komoo, the specialist of geology, he states the outcrops are “only the reduced exposures of limestone plateau that stood 1000 feet above present valley floor”. Limestone formed of great thickness when the valley has covered by warm seas and marine life in over 400 million years ago. Yet, most of hills we seen today are worn away through millions of years of continual erosion.

Thus one of Limestone features is that its ability of dissolving so easily in acidic water, and then changing into karst, and initially forming the unique physical feature of sculptured gigantic rock that are located in the Kinta Valley, and recently there is assumption that composite might being used in such regional artifacts. Approximately there are 15 limestone outcrops around Ipoh with caves, underground rivers and other karts features. (Shah, 2006)

The interest point to be mentioned is that most habitants of agriculture were stinting pottery as another profession and they have settled in the alluvial plains surrounded the mountains, which might indicate to existence a relation between potters’ settlement and the nature of ecology ruled their raw material. Thus according to the generated soil, the expansion of materials take a form of fertile land which was created by erosion of hill slopes over the centuries, while, the action of ocean has a informative role in bringing out the phenomenon of accumulation of marine sediments and sand. Longley, the strep of coastal west’s territories, which is surrounded by silt of mangrove trees, has shaped a natural landfill that has shifted the coastline outwards (Pelzer, 1971).

Remarkably, populations adapted to, and later partially controlled, the environment of the Perak north coast to develop dense populations and build the
largest concentration of architectural monuments and centers in the western hemisphere.

The peoples who had settled in mainland Peninsula Malaysia over the centuries are thought to be mostly craftsmen who have adapted themselves to the particular geographical features of the region. Most of the area is characterized by high temperatures and monsoonal rainfall, but both rainfall and temperature have significant local variations owing to the differences in wind patterns and relief (Keyes, 1977).

The Correlation between Geological Environment and Potters’ Choices

The first point, which received many attentions in what regards the material choices of pottery, is the environmental changes. As there are amount of factors might cause of variability in pottery’s paste are represented mainly in the natural variability inherent appeared in ceramic raw materials (DE Arnold, 1972; D. E. Arnold, 1971; Bishop, 1980; Bishop, Rands, & Holley, 1982; Pool, 1992). Thus, the local geological environment is the chief factor affects variety of pottery’s paste. Thus, the variability occurred in domestic clay deposit, the certain amount of source and their distributional sites and so on of other factors might affect the variability aspects of pottery’s paste. The ceramic raw materials, local geology, the variability existence inherently in clay deposits, and topography are broadly varied.

According to the effected environmental factors on variability, perhaps among more affected factors of natural forces that influence directly in changing and/or varying resources is erosion (DE Arnold, 1975; D. E. Arnold, 1988; Kolb, 1996). Regarding some sates of peninsula Malaysia particularly the west coastal regions and the obtained samples taken of their soil, obviously the population
density in such regions would be centralized around and/or near the highly eroded land, potters as well prefer to stay in the fertilized land where particularly being adjusted within a set of natures’ variables such as sheet erosion and stream cutting. Probably this potters’ action is reflected of their own absolute understanding toward the natural processes that are considered more significant in providing and/or creating the sources of ceramic materials, other processes such as sheet erosion, stream cutting, and fertilized mines assigned for raw materials collapse have capacity in creating new sources. Holistically those mentioned processes would cause in diversity of resources. Collapsing the mine of clay forces the potters to seek about clay from other sources, as such occurrence might cause alteration particularly in mining location and eventually affect constituting the mining areas, and these new constitutions and changes occurred in influenced areas might assist in arising the rate of paste variability.

A type of pottery paste contains set of chemical and mineralogical materials often would be dealt as certain descriptive groups by archaeologists, a set of salient properties of clay paste such as existence of a crystalline substance (D. E. Arnold, 1971), color (D. E. Arnold, 1971), the presence of gold-like particles (DE Arnold, 1972; D. E. Arnold, 2003), specifying by the kind of clay whether salty in taste or its touching is more sticky (D. E. Arnold, 1971), concerning of two distinctive processes such as firing and drying, are displayed in such categories. Thus, the abundant materials comprises natural chemical and mineralogical variability possess strengthen role in affect and differ the paste composition profoundly. Interestingly the variability of clays result of diverse geological setting in the states peninsula Malaysia, which are featured by abundance the sources of clay and temper and distributing them over the regions (DE Arnold, 1972; D. E. Arnold, 2003)
Perak valley as an example of Peninsula Malaysia states has been taken here due to its famous historical background that has famed from long period ago by specific environmental circumstances, which might be considered a more affective reference for pottery manufacture, conveys various sources of clay, fuel, temper, consume and demand for productive potteries. Excavation processes have had a profound role in disclosure a huge amount of ceramics discovered particularly at ceremonial, administrative, residential, and mortuary sites located in and around the valley.

Environmental factors are one of the most important elements in which relates to potters’ acquisitions of materials because of their importance in devising the development stages of the evolution of pottery manufacture at scattered regions of Peninsula Malaysia. The positive correlation shaped between environment and pottery in ancient time has being observed in the form of indicators assist the access to raw materials, the rates of demand the products, and the rank of sedentariness.

From other side of view, environment possesses negative influences of weather or decay of skilled handcrafts and manpower which might be affected by technological innovations (D. E. Arnold, 1988). Therefore, the chief advantage of development ceramic manufacture returns back to strong positive environmental relation that leads ceramic development process improve by participating in complexity and the style of settlement.

There are combination of geological factors such as rich marine resources, productive irrigated land, and desert climate able to grant appropriate conditions for developing distinctive type of full-time and/or year round ceramic (D. E. Arnold, 1988, 2003). For instance, among other salient environmental conditions that are preferred by potters and assist in developing pottery manufacture,
settlement and stability of population and irrigation agriculture are considered the more affective conditions in the coastal areas in particular. Additionally, semi-residential life shaped in coastal areas that out-came from movement of the transition between two different lifestyles i.e., from maritime subsistence to agriculture, is accounted a most significant factor affected the development process of ceramics, in the time of presence of raw materials and proper climate, and the significant elements utilized in pottery manufacture (D. E. Arnold, 1988). Thus, during the period of later time where ceramic has being practiced, sequential training that continued till recent time, could supply potentiality for potters to transfer their own knowledge to holistic new generation (Tschauner, 2001).

The evident aspect of coastal pottery is represented by its capability in taking advantage from the positive influences of the technological innovations of potters, especially in the techniques of mould production that have affected in developing ceramic technology and make the wares are more perfect.

Alluvial deposits gushing in the valley, and by far the easily accessing the fuel resources were one of a set of positive environmental factors affected directly the ceramic manufacture. Collapsing process might constitute stronger factor of nature’s factors as might assist to bring the raw materials (special materials for pottery making) from long distances and gathered them in around the sedimentary lands in which can make it accessible and trouble-free of transportation for a potter (Dean Arnold, 2005).

**Cultural Contacts and the Influential Factors**

It has been believed that the process of exchange could contribute widely in the development of indigenous/ traditional pottery. Archaeological studies are the
most responsible studies conducted in this arena to give evident proofs and pursuing the changes occurred in subsistence, organization and socio-political, settlement patterns, trades routes, foreigner influence, and its affection on modulation of pottery styles and techniques (Anderson, 1987; DT Bayard, Charoenwongsa, & Ruttin, 1986; Bhumadhon, 1999; Higham, Kijngam, & Chantaratiyakarn, 1984; Mudar, 1993; S. Natapintu, 1988; Nitta, 1991; Santoni, Pautreau, & Prishanchit, 1990; Shoocongdej, 2000; White, 1996; Wilen, 1987). However, mentioned studies are confined in such faults: limitation of chronometric dating of sites, and/or inability to connecting samples to the appropriate proposed samples of pottery with selecting specific period (e.g. Prehistoric, Bronze and Iron Age). Thus, as consequence, it confirms the believe of that not enough orientations towards majority of archaeological evidences, and developing precise chronologies designed in the types studies of chronometric dating techniques, stratigraphy, and stylistic analysis investigates systematically on the common changes of pottery design. Yet, most archaeological researches conducting in several regions of peninsular Malaysia concentrate on such topics trade/exchange patterns (Welch, 1989; White, 1996) settlement patterns (Higham, et al., 1984; Mudar, 1993) cultural interaction (Lertrit, 2000). Chronological dating is the best criteria used in the studies of settlement patterns and for explicating the cultural changes occurred in a society. However, many of chronological studies encountering with strong overlapping and contrast during dating that mostly resulted of scholar’s view of point. Controversies have risen over the construction of cultural chronologies. (D. Bayard, 1992).

The period of huge transition initiated from prehistoric and coincided continuity till proto-historic in proximately (2000 B.C. to ca. A.D. 500), and manifested in Southeast Asia holistically and Malaysia in particular, as this period witness of a number of new developments such as expansion of trade networks, adoption
to certain foreign characteristics, and affection in development of early urban remote societies. for instance, there was a combination of changes resulted of shaft from upland settlements in late period of prehistoric extended to moated settlement near river valleys in early historic times (Mudar, 1993; Vanasin & Supajanya, 1980). Additionally, a further kind of change also occurred in the patterns of lifestyle and subsistence swing from collecting, hunting, and cultivating early plant domestication to cultivating rice intensively in the remote areas. (Bronson & Dales, 1973; Mudar, 1995; Surapol Natapintu, 1995). Thus, patterns of settlement and a various forms of lifestyle hierarchy was salient example of new development related to sociopolitical reorganization during this time (Mudar, 1999). Among the influential factors, agriculture is deemed the most prime important factor assists to development of remote/abandoned and/or rural areas such some villages in Perak valley. Despite, it is confirmed broadly in regard to all developing countries that improbable achievement in such areas would not rely solely on one sector such agriculture. From other hand, the agriculture association with other approaches such as social and economic might constitute integrated correlation apparently (Austin, 1981). Continuously, some assumption centralized on the idea of that significant contribution assigned for improving the rural regions in peninsular Malaysia would be made evidently by industrialization that increasingly supplied through production and productivity, as well as the bases of preparing opportunities and employment it in the artifacts and pottery production, and strengthen its linkages with other influential sectors such economy, and finally measuring the rates of satisfaction on the average of basic needs (Hogg, 1978).

Meanwhile, accordingly the correlation between economic sector and techniques of industries would be more explicated through Wellisz’s statement in which written: “Technological progress is the prime mover of economic development”. (Wellisz, 1966)Therefore, previous mentioned factors presumed
to have a strong affection on such enterprise sectors (e.g. handcrafts, cottage industries, small scale rural industries) and might have a salient role in the implementation of a development strategy.

Further factor is represented in “Human resources”, called Human factors that include combination of distinctive factors which may be able to hold or constrain the key to future plan of development and changes. However, physical resources are added to previous factors, which constitute basically fundamental or capital to expose the new technology employed through investment typically. Concluding to that all, most technological methods could prove the significant progress of investment factors

Arney (1987) could associate ethnic groups with indigenous people of Malays through investigation in crafts such Batik and pottery, in his study was proved that all of the industries such as Batik, Pottery, and so on, follow distinctively traditional technologies and management. Accordance to that, apparently distinctive elements in the industries would give a clear depiction of the process followed in their developmental industries. For instance, in the beginning of any enterprise will be supported either development or enlarging gradually nor shrinking. Thus, paradigms of small crafts produced in modern way are attributed by appropriate use of efficient machines, good plan, precise in manufacture, and controlling during the products’ processes, broad knowledge about market analysis, and business planning and budgeting, cost accounting and so on. (Staley & Morse, 1965)

Further factors such as socio-psychological aspects, physical resources, economic background, physical resource and personality of entrepreneur are thought to be linked into industries and contributors in developing process tangibly.
The idea of mutual contact among cultures also emphasized through compositional studies, which in some cases the differentiation in using composite materials was also shown, same studies indicated that peninsular Malaysia’ regions are distinguished by their own specific type of clay. Meanwhile, Graves in his introduced study tried to prove contrastingly that there is no notable difference in his selective samples of pottery composition when the rate of composition measured to other sample from similar group. Thus, he postulates that there cannot be seen a bartering or exchange of pottery among his selective sites evidently. Eventually, this might points to the scarcity in existence interaction among studied sort of pottery (Graves, Hunt, & Moore, 1990).

Reversely, the previous fragmental studies of pottery imply resembles among apparent morphological and technological characteristics including with low firing temperature (500 °C to 600 °C), in addition to type of decoration such cord-marking, and finally inclusion materials (for example quartz and grog tempers) and shapes such Pedestalled vessels. As consequence, similar mentioned attributes in pottery often support the idea of culture contact and probably confirmed in the form of exchange inspiration that appeared evidently into a sites of peninsular Malaysia, as Kota Tampan (Perak), Kodiang (Kedah), and Jenderam Hilir (Selangor), which are represented a good examples for supporting the idea of exchange studied in the tripod pottery as distinctive sample in particular. however, in such study it is believed that during making pottery, potters prefer to choose their own clay locally to obtain a distinctive aspect in their products, and this is applied mutually on the samples of tripod pottery found in Jenederam Hilir in Selangor, Gua BatuTukang, and Gua Dayak in Perak included low rates of certain composites such as Carbon, Calcium, and Iron, whereas, compositional gradient utilized in Kodiang pottery might not give equal results, as it requires a higher rates of Iron and Calcium, despite their
location is situated approximately 400 Kilometers apart, but they provide same kind of pottery (Tripod pottery) which might assist to assume the similarities between mentioned sites resulted of the exchange and transmission occurred between those sites, rather than bartering, as the bartering idea did not have approval prove among the compositional studies particularly in the west coast (e.g. Lenggong) and east coast (e.g. Gua Cha) areas of peninsular Malaysia that seem be difficult due to their topographic nature known as mountainous terrain-main range of mountains separate those sites out.

**Conclusion**

Most reflective aspects into the pottery design are the socio-economic dimensions that have been inspired not only in ethno-archeological studies but rather in anthropological and archaeological studies.

The ceramic raw materials explicitly express a set of factors might be affective in the variability of pottery’s paste. From this point, predictably it is evident that the there is obvious correlation between geological environment and the changes occurred in pottery’s paste. Therefore, there are also other factors are thought to affect on the pottery’s paste such the combination of deposits inserting in particularly the domestic clay of pottery.

Moreover, the bartering and exchange are postulated to affect indirectly on developmental movement of indigenous pottery. This chapter considerably covers the most important part of current research that is represented in the affective influential factors on the domestic pottery production such as the unstable situation of sociopolitical settlement and its affection on pottery style and techniques.
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CHAPTER 4

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PENINSULAR MALAYSIA’S POTTERY AND CULTURAL INTERACTION

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Introduction

Studying pottery has taken various shapes based on its different frameworks built on, thus, the issue of cultural transition neither is considered to debate pottery as static markers of group affiliation nor displayed backdrop of the cultural communication, in both cases it is employed as vital domain reflecting cultural construction and revolution at multiple sides of daily life.

A combination of factors are represented in thematic studies concern pottery from different social phenomenon, as salient factor is of human factors or “Human resources” that include combination of distinctive factors which may be able to hold or constrain the key to future plan of development and changes. However, physical resources are increasingly visible and considered interestingly with the previous factors and have been employed as technological method constructing typically upon investment factors.
From other concept, Arney (1987) could associate ethnic groups with indigenous people of Malays through investigation in crafts such as Batik and pottery, such study was proved that all of the industries such as Batik, Pottery, and so on, follow distinctively traditional technologies and management. Accordance to that, apparently distinctive elements in such industries would give a clear depiction of the process followed in their developmental industries. For instance, in the beginning of any enterprise will be supported either development or enlarging gradually or shrinking. Thus, paradigms of small crafts produced in modern way are attributed by appropriate use of efficient machines, good plan, precise in manufacture, and controlling during the products’ processes, broad knowledge about market analysis, and business planning and budgeting, cost accounting and so on. (Staley & Morse, 1965) Further factors such as socio-psychological aspects, physical resources, economic background, physical resource and personality of entrepreneur are thought to be linked into industries and contributors in developing productive process tangibly.

The idea of mutual contact among cultures also emphasized through compositional studies, which in some cases the differentiation in using composite materials was also used as indicators to the style and type of clay utilizing in some regions of peninsula Malaysia. Meanwhile, Graves et al (1990) in his study tried to prove contrastingly that there is no notable difference in his selective samples of pottery composition when the rate of composition is measuring for other sample from similar group. Thus, he postulates that there cannot be seen a bartering or exchange of pottery among his selective sites evidently. Consequently, personality such case might points to existence paradigms of studies relative social interaction and pottery were not abundance.
Reversely, the previous fragmental studies of pottery imply resembles among apparent morphological and technological characteristics including with low firing temperature (500 °C to 600 °C), in addition to type of decoration such cord-marking, and finally inclusion materials (for example quartz and grog tempers) and shapes such pedestalled vessels. As consequence, it is inferred precisely existing similarities among mentioned attributes of pottery often support the idea of culture contact and probably confirmed in the form of exchange inspiration that appeared evidently into sites of peninsular Malaysia, as Kota Tempan (Perak), Kodiaing (Kedah), and Jenderam Hilir (Selangor), which are firmly a good examples for supporting the idea of exchange studied in the tripod pottery particularly as distinctive sample. however, in such study it is believed that during making pottery, potters prefer to choose their own clay locally to obtain a distinctive aspect in their products, and this is applied mutually on the samples of tripod pottery found in Jenderam Hilir in Selangor, Gua Batu Tukang, and Gua Dayak in Perak included low rates of certain composites such as Carbon, Calcium, and Iron, whereas, compositional gradient utilized in Kodiaing pottery might not give equal results, as it requires a higher rates of Iron and Calcium, despite their location is situated approximately 400 Kilometers apart, but they provide same kind of pottery (Tripod pottery) which might push us to assume existing similarities between mentioned sites that might have resulted of exchange and transmission occurred between those sites, rather than bartering, as the bartering idea did not have approval prove among the compositional studies particularly in the west coast (e.g. Lenggong) and east coast (e.g. Gua Cha) areas of peninsular Malaysia that seem to be difficult due to their topographic nature known as mountainous terrain- main range of mountains separate those sites out.
Further factor, which is thought to have affective role in the pottery evolution track, is of the role of government, generally, in addition to ideological and economic interests, are motivation for a range of specifically short-term political, social and bureaucratic interests (Leacock, 1982), furthermore, given specific political and bureaucratic interests, the impact of government intervention-sometimes contradictory and inconsistent in themselves-often initiate significant changes in the live of Orang Asli. The changes habitually conform to state interests and frequently productive crafts.

Studies, which concentrate on the factors affecting ceramic production, signify to production as single products of pottery over any other sectors have been undertaken their consideration precisely (Jayne, 2004), as he accentuates the efforts on the idle role played by workers and bosses. In other meaning, Jayne argues to stress the role of contemporary economic situation in the state, “economy has an identifiable lack of middle-class representation and the consumption paces of the city are dominated by working-class interests”.

**Relation Between Economic and Pottery Production**

Researches in archaeological field conducted for studying impact of regional economic on products producing in each region at separated parts of Peninsula Malaysia reveal the potential of this material class to inform us about issues of socio-political, economic and class relations in the continuously changing indigenous peoples of peninsula Malaysia (Cruz, 2003; Gijanto, 2011; K. G. Kelly & Norman, 2006; Stahl & Cruz, 1998), as for the instance illustrated by Ogundiran (2001) in which relates to Oyo imperial and their societal trends surveyed through precision study of their local pottery; as he stresses the role of potters in shaping the socio-political and economic dynamics of Oyo (large jar)
imperial expansion through ceramic production, including the potter’s personal identity.

As many of the researches collected in this volume debate indirectly the affective role of economic situation on local pottery, as all demonstrate changes occurred in particularly west coastal parts of peninsula Malaysia’s ceramics during several phases resulted varied regionally and often occurring transformations based accordingly on political and economic circumstances. In other word, such collections mostly have described the relations between social and economic tensions to be closely associated. Changes in social structure may coincide changes occurred in economic organization and result of that stress on productive capacity of a society’s sections. On the other hand, economic stress often requires strengthen association with neighborhood ties and relay on unite the sections of society or reversely increase dichotomy between such groups. For instance, if stress is generated on the contextual adaptation of environment, social relations posed between groups it might let to emerge economic competition for such contextual resources. Stress, which has been established by internal structure of society, can be more observed in the economic and social relations sources of society. In other side, a part of material culture patterns that is constituted of culture contact might be in turn generated from those aspects of social structure instituted typically under stress. Therefore, such society aspects might be visible readily for archaeologists if there have been existed a combination of recovery and survival archaeological evidences.

Nevertheless, in magnificent instance mostly taken in archaeologists in count among a combination of archaeological references is ceremonial gift exchange which is thought to incorporate closely to economy, society, and culture’s tensions. Strathern asserted that ceremonial gift exchange is griped socially with the high value of prestige items handed down between competing groups of
society (Strathern & Strathern, 1971). Using the reference of Mr. Hagen, New Guinea, defined the valuable status of ceremonial exchanges spread between groups as: “are ostensibly made to keep the peace; but they contain a latent rivalry, expressed in the size of gifts, in speeches, and in [bodily] decorations” (Strathern & Strathern, 1971).

From other context, different types of tensions and stress at the society are thought to relate with religious and ritual. More illustrations are clarified by Renferw’s instance (1976) whose suggestion of that the drawn association between religious and ceremonial gift items is embodied through the explorations of outstanding monuments buried over ancient decades that are reflective of such symbols of groups’ lineages and their locally aspects of competing groups. Thus, religious is regarded the mutual link between those competing groups which constitutes the neutral context of social exchange. Lewis and Stevens infer their instance through the temples built by tribes of Roman Gaul and Britain that bear the same similarities with those observed in Britain (Lewis, 1966; Stevens, 1940), they more even suggested that those samples are thought to associate with border markets. Therefore, as result we can generally infer that stress improved between societies’ groups and religious from other side are regarded importantly a strategy of accepting a group through constrains posed by another.

Production, Social Organization, and Style

Some groups in archaeological studies were stimulator factor for confining some interests in the organization of ceramic production through recent perspectives presented in the new world (Deetz, 1965; Hill, 1970; W. A. Longacre, 1970). Therefore, such studies were inferred in their measurements on a combination of assumptions such as interaction, learning, and stylistic
variability (Graves, 1981; Plog, 1978; Whallon, 1968). It was assumed that women were occasionally produce pottery for several purposes such as production itself, learning, and/or household use; beside, existing some limitations in women movement and/or mobility will lead to stylistic homogeneity resulted of their movement, provided facilities, and settlements which in turn resulting identification of social units. Interestingly, most literature of ceramic production in present days confirm the pacific role of women in communities such as Southeast Asia, Africa woman in such societies is appeared to be dominant, while men occupy the same position and are dominant in what relatives controlling the craft in the societies of Mediterranean and Aegean, South Asia, Middle East, and Japan, however, some parts of Africa, Latin America, and the Middle East men and women have the equal position and form the vessel at the same stage. It suggests that further themes contain correlations of learning, distribution the labor based on age, and spatial measurements of different shapes of vessels all need to be investigated. However in some ethno-archaeological studies, those themes have met with extreme attention.

Predictably, in what regard to women position as potters not all women have ability to remain in their natal societies on marrying, as the position with out-marrying female is quite different as they are still depended on their family thus they cannot necessarily shift very far from their families of orientation (David & Hennig, 1972; W. Longacre, 1981; Stolmaker, 1976; Weigand, 1969). In the principle of learning followed by potters often observation or imitation are the best ways for potters to learn that in such methods they are not confined verbal or manual instructions given by various people ranging from different ages (David & Hennig, 1972; Scheans, 1969; Specht, 1972; Stanislawski & Stanislawski, 1974; Waane, 1977; Weigand, 1969). Potters are sometimes incorporated with groups whose composition typically is applied with
household members, however can consist an elite of non-kin as well (Graves, 1981; Groves, 1960; Linne, 1965; Stanislawski & Stanislawski, 1974). Continually, it is obvious through observing a household system one vessel can be formed or decorated by more than one person, as a vessel was sometimes decorated by visitors, specialists hired for the task, neighbors, or even vendors involving purchasing process (Charlton, 1976; Friedrich, 1970; Kaplan, 1976; Wahlman, 1972).

In context to division the turns between men and women, notably in societies where women occupy the main role men also have knowledge about certain parts of manufacturing process, in contrast, in societies where men handle whole phase of pottery making women still involve in some other phases of productive process despite in such societies women are fairly not allowed to touch the wheel, in other case where the matter of absent any one of potters under any cause their women are being replaced instead of their husbands, as women’s role in such case are limited to giving verbal instructions and observing the young son’s works and/or launching judgments to the experiments of throwing vessel conducted by young son (Wahlman, 1972).

Non-far awhile, potters’ skills and repertories are assimilated through variety of age. Thus, the assumption of existence a relation between skill and age, as skill occasionally increases with age (Curtis, 1962; Groves, 1960; Specht, 1972; Waane, 1977; Weigand, 1969). Therefore, recognized that production of older potters are not equal with their production conducted in their youth (Thompson, 1958), in result, it is thought also that it will include decorative production that is vary with differences of ages (Graves, 1981; Lathrap, 1983; Linares de Sapir, 1969). In exhibiting some paradigms of salient issues ruled pottery over-world, Hopi-Tewa of Arizona as taken example illustrated by Stanislawski whose observation concentrated on design but in general expression, he demonstrates
that Hopi potters typically involve in same elements of design (such presumably is noted in both motifs and configuration), that given their work the common pattern, therefore, design according to their production is obviously not considered particular prosperities to pacific individuals, clans, families, or even work group (Friedrich, 1970; Lauer, 1974; Specht, 1972; Wahlman, 1972; Weigand, 1969).

Unfortunately, Stanislawski has not given precise features of the style used by potters, thus, by predicting on his interpretation, we can judge that his work more focuses on displaying the role has been played by consumers to guiding to factors of selecting potter to their designs. In other side, Grave’s work (Graves, 1980, 1981) conducted in Kalinga’s design of pottery, he is thought that design is vary according to birth cohort, regardless to attribution of kin or membership of work group or variation of women age. Waane, like Stanislawski examines the basic elements of social organization and social groups, and demonstrates that it is difficult to measure the social organization, and social groups constituted from regional distribution of ceramic. In turn, the combination work of Arnold (D. E. Arnold, 1983, 1984) in Peru and Hardin (Friedrich, 1970; Hardin, 1977, 1983) in Mexico are unique in which endeavor to determine the compositional components of a single ceramic style. Arnold contented with studying several samples of potteries produced in Michoacan village, while, Hardin concentrates in his work on the spatial organization of decorative vessel and on configuring form (combinations of individual design elements). She again explains some elements of design indicate diagnostic features of individuals’ panting.

Arnold illustrates the Quinua Potters through interpretation of decorative system and presumes that the neutrality of social environment affects on potters’ interpretation of purpose of use and/or their concepts of organization of surface
treatment. Additionally, Arnold and Hardin presented obvious explanation of their selective samples of ware whose collections were often in large assemblages’ size. In addition, they mostly concentrate on how to discriminate the compositional components of their samples of wares by focusing on the ways used to differentiate similar wares from others and also styles producing in neighboring societies. yet, among a wide-range of review, study of David & Hennig in what relate to Cameroon village (David & Hennig, 1972) they debate some samples of pottery produced by female potters and discriminate them from three distinctive ethnic groups, however also describe the points of differences in form and surface treatment of vessels. Contrastingly, Hodder has established a new regional perspective in recent samples of studies handle societies of Africa (Hodder, 1977, 1982).

**Conclusion**

The most factors are ruled various interpretations of pottery is of human resources, from this concept, several threads of ceramic have been measured from the impact of regional economic on pottery production is generated continually in the different regions of Peninsula Malaysia. Habitually, the profound interpretation of pottery reveals the significance of these materials that unintentionally signify the issues such as socio-political, economic, and diffusion and regional migration of peninsula Malaysia indigenous peoples.

This chapter handles some important relations such as relative correlation links pottery production to the status of economic of Malaysian society. Additionally, a combination of themes such as the systematic process of pottery production and its virtual association with social organization and style were justified precisely in such chapter.
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CHAPTER 5

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THE GENERAL DEFINITION OF MALAYSIAN MOTIFS AND DECORATION

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Introduction

Pottery as a part of handicrafts was largely considered such important resource of nature. From that principle, Malay artifacts including pottery have been formulating with visual elements of particular culture. Prof Shamsu (Mohamad, 2005) has summarized a certain definition of Malaysian traditional handicrafts as following:

Malay visual art is a metamorphosis of objects form the natural world to a form which gives shape to the soul of creator. The art works, which are realized from environment vision and imagination, are the creation of the soul transformed from dream, reflecting the harmonious relationship between man and nature.

Pottery is one of the most traditional industries significance in majority of Southeast Asia primarily and Malaysia’s regions. With a perspective to get a
hold of these artisans in an organizational fold and build up their productivity and earning through a greater adoption of technology (Sreedevi, 2010).

The definition of “motif” is often expressed as an image to be employed in order to formulate a decoration and to complete the surface decoration of craft work. Aesthetic values deem one of the elements that fall into evaluating the design of motifs. These values enable to bring out the beautiful meanings from motifs formulated by composition that will manifest a set of patterns and considered as a significant tool used to arrange the forms established from the thoughts, feelings, and ideas of an artistic or creator. Dr. Siti Zainon Ismail refers to Ruskin in this regard (1860):

A good decoration normally is coming from feeling which technically lunched as “motif” in which all lines and shapes tend to relate and exist along with the process of the design. (Ismail & dan Pustaka, 1997)

With following the previous statement, it is clarified that patterns typically result of arrangement of motifs, which in turn during producing design in the design process of an object, motifs would be brought out. Thus, patterns are called holistically, within which motif are defined as part of theme. Therefore, pattern which cover the style of motif, are both function to provide a certain kind of ornamentation.

In order to get definition of decoration, it seems to define the motif first that is regarded one of vital elements in creating the decoration. Habitually, craft products are ornamented within decoration basis. For this, decoration is based on the beauty and inserts it to the external form of an object. Interestingly, the process of arrangement of motifs and patterns is one of significant theme for determining the kind of decoration. And these are accounted as vital elements in creating decoration. The reaction leaded to creating harvested by one has
willing to ornament, pursue his or her visual preferences. The style of
decoration, particularly in craft production, divides from certain values. In
which contain both cultural and beliefs creator and show them in form of
motifs.

It is not easy to describe the meaning of a certain decoration for the same form
may have dissimilar meanings. For example, a form of decoration used by
Arabs and one used by Indians may have similar forms but different concept.
Decoration often has similar forms found among many different races but
significance varies in terms of time and space. Here is a further explanation of
Adolf Bastian’s theory named Elementatgedan (1826-1905) as referred by Dr.
Siti Zainon Ismail (1997):

This thing cannot be assumed as the influence of the tradition
but the foundation is human soul are all the same, thus, leading
towards similar ideas. The development of thinking could
happen concurrently following the existing environment and
nature.

There are three basic aspects in creating a motif. Through the arrangement of
visual elements, motifs produce composition which, in traditional Malay craft is
known as patterns. The development of motifs from the elements, such as dots,
lines and colors, motif has long been a part of Semenanjung culture with clear
motifs found on works of the prehistoric period. One of these are dots, a very
basic visual element, which was further develop as horizontal or vertical lines,
curve, knots and alternating designs which combine these components.

**History of the Early Malay Traditional Decoration**

To understand the meaning of decoration, one should also be aware of the
meaning, in terms of function and cultural history. Through the aesthetic
observation, decoration often involves not only in beautifying the forms, but is also related to individual role, communities and nature. The beliefs practiced by certain communities also play important role. The beliefs which are considered a part of social organization, would also be one of the important elements appeared in nomad villages assist to obtain cultural knowledge. Today as in the past, participating in the activities showed up the people’s beliefs may witness on the rituals performed during producing the commodities or doing a labor.

Figure 10: Showing the Similarities Between Crafts and Nature in Malaysia, and the Extent of Affecting Potters There by Their Nature and Religions Which Reflects Evidently on Their Crafts.

Every village of Perak has its ritual cycle consisting of collective rites that marks changes in the season and in the organization of labor. From such perception, it was inferred personally that the social beliefs, which were interpreted as salient part of customs, have and still being used in pottery manufactures, equally with the some rites were done in purpose of effect a cure. Some other associated with the birth. These rites are dealt as important source of cultural knowledge distinguishes most villagers form each other (Keyes, 1977).
Reflecting those social activities on Malay traditional craft, which is broadly centralized on wood carving, batik, fabric weaving (tenunan songket), and mat weaving (anyaman pandan or mengkuang) and pottery/ceramics (Fig. 10), would be clearly noted that these handicrafts are shaped using simple methods that are inherited by craftsmen and obtained from their forefathers, but there are also forms that have developed and evolved in style and appearance.

Archaeologists and per-historians who worked traditionally in Malaysia have considered the prehistoric earthenware as obvious indicator of the “Neolithic” cultural steps associated with sedentary lifestyle. On the emergent of it, the immigration would play salient role in producing the sophisticated tools which appear to suggest that tools consisted to earthenware were made long before in Africa and Europe by archaic humans, for instance in Africa the oldest human generation of ancestor dated back about 3-5 million years ago, and those forebears moved out from Africa and left their prehistoric remains in all over Asia and Europe. Additionally, both Java and Peking man, who generated about 300,000 years ago, is regarded strong evidence in mixing the origins of people with the other nations in context the role they played in improving the pottery design. In addition, it could open a doorway formerly into time and people who lost in history as that way would have been closed if such remains like those reburied without study or encountering with different expert of anthropologists. This identical hypothesis will meet with assumption of existence resemblance between the type of earthenware found in Thailand and peninsular Malaysia which sound to emphasize the kind of cultural contact or link in terms of the form of trade, exchange and movement of people. As it is proven, technical and compositional studies have confirmed that tripod pottery found in southeast Thailand approximately has the same aspect with peninsular Malaysia’ products. Such discoveries would support this argument that prehistoric earthenware-making technology was brought to peninsular Malaysia by people
as opposed to trade or exchange from north. (Chia, 1997; Srisuchat, 2003). Thus, prehistoric times in peninsular Malaysia commonly and Perak valley particularly and the traces have been discovered there have witnessed the presence of different layers of human culture, primarily, it is expected that *Homo erectus* initial sort of hominids may have passed through here as they migrated to Southeast Asia and settled in Java about one million years ago, however no exact traces have confirmed in the peninsular Malaysia and scholars are still in doubt whether the Chinese and Java population were the ancestors, or an extinct side line of evolution. (council, 2007)

Additionally, excavations revealed that dating of earliest prehistoric earthenware in Malaysia dated back to approximately 4,000 years ago. through the cultural levels, the sherds of plain earthenware and cord-marked were radiocarbon dated by mostly using riverine shells measured to 6,890 +/- 80 bp and 4,920 +/- 270 bp at the location of burial site of Gua Harimau in Lenggong, Perak, (Majid & Malaysia, 1996; Zolkurnain, 1989). Gua Harimau earthenware has been placed and dated back by using the charcoal to about 3,170 bp or 1,440 BC through the re-excavations and re-dating processes of earthenware (Chia & Hassan, 2005; Zolkurnain, 1989).

![Figure 11: Different Designs and Styles of Labu Sayong – All are made for Ornamental Purpose.](image)
Nineteenth century was the postulated date considered for manifesting *Homo erectus* ancestors; this generation was traced back to approximately 1.7 million years or less to perhaps 500,000 BP. In trying to prove the correlation between *Homo erectus* and peninsular Malaysia, the theory of human evolution in the “regional continuity” or “multiregional” principle has provided evidence in the argument of that multiregional evolution requires the existence of large population for long period. In one sense, some of modern artifact tools, which are used by modern human, are assumed to be oldest evidence would reveal precisely the movement of African man to southeast Asia, particularly to some sites in Perak such Kota Tampan. It is therefore expected that initial ancestors of the Australians left Africa and arrived in Malaysia before approximately the great Toba explosion in their beachcombing trail, which in turn, could occur intermarriage in the techniques of pottery manufacture.

In studying the development of the Malay society and civilization, pottery could be considered as a unique creation of art and symbolic meanings. However, the traditional Malaysian culture could be attributed to the functional and decorative items. Yet, the most traditional samples of ceramic or pottery produced from clay have been found in Perak in large quantities, particularly in Sayong, Perak. This state of Perak is famous for its pitcher known locally as Labu Sayong. Labu means vessel or pitcher while Sayong is a name of a small village near a river in the royal town of Kuala Kangsar.

The most popular Malays pottery is from Sayong, Perak. Labu Sayong is a trademark for pottery handicraft of Perak (Fig. 11). This village is the production centre of the fame Labu Sayong, it is a remarkable gourd-shaped earthenware, black and glossy surface with impressed and relief decorations. There are about five villages which actively produce Labu Sayong namely Kepala Bendang, Bukit Laba, Pottery products are used for utilitarian purposes,
but for display on the shelves or as a gift items. These products are vases, pitcher jugs, egg baskets, potpourri pots and garden decoration forms.

Historically, Labu Sayong was used by Malay for storing drinking water, the form and decorations of Labu Sayong remains but the production technique has changed. Old generation of Malay potters prefer to use coiling technique and wood firing in pottery making. Most of the new generation of Sayong potters use casting and throwing wheel techniques in order to speed up their production and these techniques enables the pottery to be sold at a lower price. Most of the buyers do not bother about the techniques used by the potters, as long as they can purchase the item at a low price.

Decoration of Malaysian Pottery

Malaysian pottery is not only remarkable as ambiguous decoration; its charm that is considerable and lies rather in attractive shapes and satisfying proportions. The following methods were employed to produce a narrow range of simple designs.

*Cord-marking:* Cord-marked pottery has been found in all the sites so far investigated in Malaya and in greater abundance than any other type. So common it is that it may almost be regarded as an essential feature more utilitarian than decorative in intent, since it provided a firm grip on rounded surfaces otherwise slippery and difficult to handle. There can be no doubt that cord-marking was applied by means of a beater or paddle wrapped with cord. Sometimes the cord-wrapped paddle was applied so as to leave clearly defined blocks of impressions which were either haphazard or arranged in orderly patterns, most frequently, however, successive applications overlapped to cover the whole surface evenly with the lines of cords running in the same direction.
There was much variation in the thickness of the cords used, some being particularly heavy, but there does not seem to be a mutually exclusive distribution of fine and coarse types. Different ways of winding the cord on the paddle seem to have been used to give different patterns. Close and open spacing of the cords have been observed and it is possible that the cords were sometimes wound on in criss-cross fashion. The use of corrugated or otherwise carved beaters in decorating Malayan prehistoric pottery is rare. The patterns produced by these instruments are in many cases so similar to those made by the cord-wrapped beater that the distinction is an exceedingly fine one. However, in most Malayan pottery the twist of cord is clearly visible, though naturally some borderline cases occur where judgment is less sure. A distinctive specimen of patterning pottery by lattice design known mostly in GuaKerbau has been illustrated by Evans (Callenfels)

*Impressed and Incised Decoration:* Forms of decoration other than cord-marking are of relatively rare occurrence. They are limited almost exclusively to impressions with various tools often in combination with incised lines. The tools most commonly employed to give these impressed patterns were:

- A pointed instrument.
- The teeth of comb (or perhaps a specially made tool with serrated edge).
- The wavy edge of a shell.

Designs of wavy lines made with the edge of a shell have so far been found only on sherds in Perlis, Kedah and Perak or in other words on the west coast. Cord-marking, point impressions and faceting or indenting of the rim. Lines of points produced by pressing the tips of a toothed instrument or comb into the clay have
been used to great effect on vessels from a number of sites throughout the country.

![Figure 12: Outline of Shapes of Vessels Produced by Perforation Model Which May be Made Intentionally For the Purpose of Suspension and Give More Beautiful Sense. Most such models Observed Frequently in the Site of Gua Cha.](image)

These ‘comb-impressions’ enclosed by incised lines and forming a pattern of spirals and chevrons were used to embellish the most elaborately decorated and in many ways the most ever to be found intact in Malaysia. Samples of specimens observed in the sites of Gua Cha by Sieveking and further by Tweedie (1940) who described the method of comb-impression used in most samples seen at Gua Musang and Gua Madu which are not far from Gua Cha. Only one instance of the decorative use of finger-tip impressions is known from Malaya.

*Carving:* The decoration of pottery by removal of clay, that is to say by carving, is not commonly seen in Malaya. There are however two very important types in which the technique finds a limited application. In one, small sections of the rim or lip were sliced off to form numerous facets round the circumference. In
the other, V-shaped notches were cut out if the rim to produce a serrated or frill effect.

*Perforation:* There are a number of sites, particularly Gua Cha, where vessels with perforations occur. It is hard to say whether these were decorative or functional or perhaps a combination of the two. Certainly the arrangement of the holes in some of the perforated vessels from Gua Cha points to rather more than merely a device for suspension. (Figs. 12)

*Painting:* No class of pottery with painted designs has been found in Malaya, vessels of very similar ware produced with little differences such as slipped ware and bright red ware observed at Gua Debu, Bukit Baling by Collings (1936)

**Conclusion**

A considerable volume of investigations presented in the scope of pottery are directed to assess uplifting the quality of ceramic studies, dealt as significant part of social sciences, and in fact are aimed to create a new design available to get a real answer in which puzzle all ethno-archaeologists in pottery’s field, among recent investigations colorful and varied tendency in present most precise questions lead beyond of technology, distribution, and consumption of pottery.

With abundance tendency for interpreting the social science data in varied analyses, it was natural to throw the lighton influential factors such environmental, economic, technological, cultural-ideological, socio-political, and historical context on the pottery production. Such study came to discern the importance of ethno-archaeological theories, archaeological fieldwork, and
excavation’s results in complete the understanding of other relevant issues of pottery, and alternatively reformulate it by making use of ethno-archaeological perspective. It is therefore, important to make a closer use of methods and knowledge of pottery’s technologies.

Regarding the benefice of such study, it is directed primarily to reveal the values of technologies conducted in pottery production, constrains obstacle pottery production and distribution, as well their effects on consumption with other significant themes associating Malaysian pottery in order to present an understanding of Malaysian pottery in simple interpretations.
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