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Imprints and Impressions: a study of Javanese stūpika

by

Sophia V. Z. Warshall

A dissertation submitted in partial satisfaction of the

Requirements for the degree of

Doctor of Philosophy

in

South and Southeast Asian Studies

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Penelope Edwards, Chair
Professor Robert Goldman
Professor Sugata Ray

Abstract

Echoes and Imprints: a study of Javanese stūpika

by

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Doctor of Philosophy in South and Southeast Asian Studies

University of California, Berkeley

Professor Penelope Edwards, Chair

This dissertation examines a significant subset of the premodern miniature Buddhist reliquaries—*stūpika*—found in Java, Indonesia to contribute granularity to our understanding 9th-11th century Javanese life. Methodologically, this project explores the productivity of leveraging an ecocritical lens to gain clarity around obscured histories. This approach, in our case, adds significant texture to our understanding of sites of manufacturing, cultural priorities and social power relations during a time of significant local change and across the flows of Monsoon Asia. Specifically, by examining stūpika from a variety of angles—as objects of space, of text, of iconography, of metal molds and of clay— this project allows stūpika to sketch their own ecology of meaning. This dissertation reads that stūpikaic space as a landscaped representation of the materialities impacting their creation. In doing so, this dissertation paints a picture of Java in which sites of metal and clay production were highly specialized but collaborative centers of tinkering. Further, this project highlights local, contemporary perspectives on Buddhism, architecture, iconography and gender roles. Together, stūpika reflect for our view all the complexities of this process of change at the hands of the many.

For Jeff. Thank you.

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Chapter 1: Introduction

This dissertation examines premodern miniature Buddhist reliquaries—stūpika—found in Java, Indonesia. In doing so, I achieve two ends: (a) to add granularity to our understanding of the lived realities of that region around the turn of the millennium within and across the flows of Monsoon Asia, and (b) to explore the possibilities of leveraging an ecocritical lens in search of obscured historical narratives. I am interested in considering how this dataset via this methodology can offer new perspectives on the history of Southeast Asia, looking from Java outward rather that from outside back onto Java, moving forward disciplinary debates surrounding the transregional vs. hyperlocal scales of history, sketching the socio-religious world of classical era Java through the various trajectories of stūpikaic identity. To this end, chapters are dedicated to unpacking the identity of Javanese stūpika from various angles: as objects of space, of text, of iconography, of metal molds and of clay. Within and between these tangents of inquiry, we see a vision of classical Java living and breathing, individually and collectively, while undergoing a fundamental shift in transregional economic relations that refracted religious, productive, consumptive, artistic and gendered practices.

Common Narrative of Stūpika

There is a clear, well-attested narrative associated with the presence of stūpika in premodern Asia: they are evidence of local participation in Mahāyāṇa Buddhist traditions that crisscrossed maritime Asia. Within that dominant narrative, stūpikas are one way in which followers of the Buddha were able to access his efficacy after his death. They functioned as reliquaries and relics themselves, able to bridge the gap between phenomenal truth and ultimate truth, a form of 'skillful means' (*upāya*) to aid devotees along the path to enlightenment (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images", 249).[1] It is a true perspective but also one that simplifies the dataset to such an extent that it closes the discussion. Further, while stūpika do represent a clear category of object, there is great variety within this genre, a variety that is significant and interesting. This dissertation focuses on the possibilities of asking what else stūpika are and to what else they bear witness.

Overview

Javanese stūpika are small lumps of local clay, molded into egg-shaped stūpa form using copper alloy molds. They bear ornamentation (lines, stūpa profiles, figures, etc.) and, in at least a significant minority, short texts either enclosed within or upon their outer surface (most commonly, the *pratītyasamutpāda gāthā* in Sanskrit stamped in *siddhamātṛkā* or sometimes incised in *kawi* script). They are generally brown in color, ranging into greys and reds depending on local soil compositions. While small and fragile, these objects have some weight to them, offering a pleasant hand-feel of a solid, very dense piece of earth, similar to a delicate stone.

This dissertation examines Javanese stūpikas—engages with their variety—with two broad objectives. First, this project is about the history of Java. Through our examination of a significant subset of the extant stūpikas of Java, we see a picture of Java alive with social, political, economic and religious activity, engaged internationally and simmering with change

[1] Stūpika are not unique to Java. Within wider Buddhist Studies scholarship, they are often referred to as votive stūpa or *tsa-tsa* and continue in use in some parts of the Buddhist world (e.g. Nepal). For further discussion of the role of relic, access to Buddha-ness and the historical Buddha via stūpika, see (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images"; Bentor "The Content of StūPas and Images and the Indo-Tibetan Concept of Relics"; Salomon; Taddei; Tucci *"Mc'od Rten" E "Ts'a Ts'a" Nel Tibet Indiano Ed Occidentale*).

locally. Second, this is a methodological project. My engagement with stūpikas provides a case study into how one might approach the study of other "lost" historical narratives by invoking an ecocritical approach, to see the past materialities ossified in those materials.

Fieldwork

The bulk of the field research conducted in support of this dissertation occurred in 2015-2017. I spent a month in the archives of Leiden before relocating to Java. Throughout, I rotated amongst three core activities.

I spent time in archives at Leiden University Archives, Pusat Penelitian Arkeologi Nasional (Jakarta), Museum Negeri Sonobudoyo (Yogyakarta), Museum Majapahit (Trawulan, Mojokerto) and Museum Bali (Denpasar). There, I read widely about the archaeological research conducted in and on Indonesia. Emphasis was placed on materials pertaining to stūpikas themselves, to locations where stūpikas were found and to excavations of sites dating from time period in which they were created (i.e. roughly the 9th to 11th centuries CE), but I also read more broadly. This foundation of secondary research played a significant role in setting both the historical and the historiographic stage for my project.

From archival materials, I gleaned information about archaeological discoveries, many of which were smaller, less publicized and/or unexcavated. With that information, I built maps and from those maps, I plotted preliminary travel itineraries. These provided the basis for rambling travels across Java with forays into southern Sumatra and Bali. Inevitably, I would find other sites of interest along my way in talking with locals. It was on these trips that I learned to see the history of Java in place, in space and in all its complexity of identity.

Finally, I found and gained access to collections of stūpika held in Indonesia. Upon receiving official permission to view a collection, I took detailed photographs of the collection. Most of the analysis was then done based off of those photographs.[2]

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[2] As many have noted, photography, despite its claims to *truth*, is as fraught with biases as any other means of representation. As Susan Sontag writes, "To photograph is to appropriate the thing photographed. It means putting oneself into a certain relation to the world that feels like knowledge—and, therefore, like power" (Sontag, 174). E. H. Gombrich views machine-made images, such as photographs, as "arrested images" providing "eye-witness" accounts, but those testimonies are not inherently endowed with all the contours of the creator's identity, position and context. This interpretation is distilled, for him, to the *negative eye-witness principle*. As he writes,

> It [the eye-witness principle] is the principle which has usually been described in the light of ancient aesthetics as one of mimesis, the imitation of nature. But in my view, this formation diverts attention from the most important corollary of the eye-witness principle which is so often neglected; I refer to the negative rule that the artist must not include in his image anything the eye-witness could not have seen from a particular point at a particular moment. While complete mimesis will always be a will-o'-the-whisp—for where should it ever stop?—the negative rule will immediately lead to a study of aspects, of foreshortening, and of perspective (Gombrich, 246).

Studying a photograph is not the same as studying the original objects (Burgin; Gombrich; Mnookin; G. Pollock; Snyder; Sontag). In the field, I did interact directly with the original stūpika objects whenever possible. That experience of holding, seeing and experiencing stūpika added significantly to my understanding and appreciation of the genre. Still, much of my work was done based off of photographs after leaving the field. While not ideal, it was not feasible to spend more time with the objects, given that (a) museums needed to either assign significant manpower to my project to ensure the safety of these delicate objects, or (b) I was relying upon the kindness of colleagues who also had other responsibilities. Photography was, therefore, a necessary methodological tool. A silver lining to this situation was that I was able to share the images of the stūpika with the holding organizations. It is worth nothing, however, that while replication is engaged as part of the theoretical framing of this project, I have chosen to not deal heavily within the confines of this dissertation with questions surrounding my usage of photographs (in concert with hands-on study) as part of my own methodology.

This research—as conducted in the archives, in museums, in government offices and in the literal field or mountains—framed out a basis of understanding of the space of the study of the premodern within Indonesia. Reading secondary scholarship from a variety of eras and authors contextualized my own position and aims in relation to the stūpika of Java and Southeast Asian Studies. Traveling through rural Java, Bali and South Sumatra provide a sense of the geography, places and spaces in which stūpika functioned. This approach (at the time, unwittingly) provided the ground work for and inspired me to view stūpika from multiple, different and less disciplinarily-expected angles. This dissertation follows that methodological foundation.

Theory

Thomas Kuhn's *The Structures of Scientific Revolution* (Kuhn) argues that within a science (and for Kuhn, it is all about the sciences) a paradigm exists, a foundation of belief, of action and reaction, that binds a group together. What are viable data, how can said data be manipulated, and how are the outcomes determined, discussed and disseminated are all predetermined. While Kuhn himself might have balked at the application of such ideas to the humanities, the fundamental lesson is transferable. Questions, approaches or interpretations are seen as *interesting* or *productive* (or not) based off our own, disciplinary preconceptions and traditions of paradigm. Everything could be useful, given a different end or paradigm. In the case of stūpika, such a paradigm-driven approach plays out in compartmentalization of Javanese stūpika as (just) markers of that region's participation in Mahāyāṇa Buddhist ritual and the Sanskrit cosmopolis.[3] By remaining within that paradigm, that space of discussion, one misses the opportunity to add something new to the conversation. The outcomes are prefigured. This dissertation strives to consider what else can be said about stūpika in Java if we reorient them, examining them across multiple, other paradigms.

I situate my work of inquiry alongside that of art historian Finbarr Flood, literary scholar Ronit Ricci and cultural historian Ashley Thompson. Each of these authors contributes significantly to their fields, but the influencing aspects of their work for my current purposes all revolve around their usage of theory and data across disciplinary boundaries. Flood applies the theory of translation to art and architectural histories to provide a vocabulary with which to engage with the shifting diversities and realities of people (Flood). Ricci also invokes literary theory and the concept of translation, stitching together a vision of history based on the appearance, reappearance and reinterpretation of narratives across time and space (Ricci). Ashley Thompson leverages gender theory towards a more nuanced reading of source material, using feminist theory not to see the women (necessarily) but to frame her approach to the data to see pasts and humans more broadly (Thompson). While presenting very different projects, on different parts of the world and looking at different genres of materials, I see commonality in their crossings of geographic and disciplinary divides and their application of theory in ways that work for their specific investigations rather any one disciplinary tradition.

The work of Kaya McGowan also presents a very similar aim—if somewhat different method[4]—to the current dissertation. McGowan looks at sacred space in Bali by following the

[3] I will return to the concept of the Sanskrit cosmopolis in chapter 2 "Of Space". For now, see (S. Pollock "The Cosmopolitan Vernacular"; S. Pollock *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India*)

[4] McGowan relies upon modern ethnographic work, as corroborated by extant archeological remains, to inform our understanding of the premodern, while I focus on artifacts contemporary to the time under investigation.

thread of *manik* (beads) across time. She premises this investigation by arguing that the category of *manik* is fundamentally dependent on social context. As she describes her engagement with that dataset, she states,

> What I hope will become obvious is how the culturally constructed, and continually negotiated, reality of manik shifts and alters with each encounter…It is this very mutability of localized concerns in an historically real context, the ebbs and flows of information and its indeterminacy, that is meant to be felt within (and between) the lines of the text. It suggests that reality construction for any culture reflects a series of, not always conscious, choices (McGowan, 10-11).

What intrigues McGowan—and me—is not simply the object of study, but how that object is conceived by those who engage with it. This project strives not just to see the data (stūpika) as of the context (premodern Java), but also the context (premodern Java) through the data (stūpika). They are mutually constitutive and viewable.

This perspective found expression, for me, most clearly in the field of eco-critical investigation. Ecocritical Theory is a wide field, and I do not claim to engage all facets of that space.[5] This genre of theory falls generally into two (sometimes overlapping) categories: those focused on issues of the environment itself and those focused on more general (historical) questions that level a lens inclusive of non-human agents towards those investigations. My work falls into the second category.

This project draws inspiration from the lessons of Jane Bennett and her argument for the need to overcorrect in the face of dominant (anthropocentric) narratives. As she frames her work,

> I will emphasize, even overemphasize, the agentic contributions of nonhuman forces (operating in nature, in the human body, and in human artifacts) in an attempt to counter the narcissistic reflex of human language and thought. We need to cultivate a bit of anthropomorphism—the idea that human agency has some echoes in nonhuman nature—to counter the narcissism of humans in charge of the world (Bennett, xvi).

By allowing for the possibility of nonhuman actants, the observer is forced to consider power as coming from a wider range of sources. Data, therefore, can and must be seen not as the statement of just a small group of elite humans, but as encompassing the messaging of a wider swathe of participants, human and nonhuman alike. Even the most elite, esoteric or generally "understood" of data, therefore, contains the possibility of speaking to the broader experience of the past.

The work of Tim Ingold provides a practical methodology with which to frame and leverage such a perspective. Ingold differentiates between the material of the world (i.e. what exists) and its materiality (i.e. human perception or conception thereof).[6] By taking seriously the testimony of the material, one can see the materiality of a given moment with more clarity because one is not relying on the human to self-report. For Ingold, the tangents or *lines* between entities, between these materials and materialities, are the ecologies. This project, therefore, is directed at looking at stūpika (the material) to gain purchase on their contemporary moment and the human therein (i.e. the materiality). This is possible by surfing the lines defining the ecology or space of stūpika (Ingold "Materials against Materiality"; Ingold *Lines: A Brief History*).

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[5] See Sugata Ray's overview of ecologically-engaged art history and the concept of geoaesthetics (Ray, 17-22).

[6] I read this differentiation as highlighting effectively the same perspective as suggested by McGowan above (McGowan, 10-11). Both Ingold and McGowan argue for the ability to see the wider human experience through the evidence of its material remains.

Sugata Ray demonstrates the utility of such an approach in his book, *Climate Change and the Art of Devotion: Geoaesthetics in the Land of Krishna, 1550-1850.* By centering the issue of geoaesthetics, by asking how nature (geology, plants, animals, etc.) worked in tandem with humans to shape art and architecture, he provides new insight into Braj history. As he writes,

> As a transcript of the aesthetics of such entanglements, geoaesthetics unmoors art history's epistemological scope, given the anthropocentric exceptionalism that is allocated by art history to the conceptual category called the human. Eco art history is the name of that which we stand to gain from this unmooring (Ray, 23).

Far from erasing the human, this methodology rediscovers the many humans of the past, in so far as it was the many that engaged with the nonhuman.[7]

This approach can also be expressed, in a less material sense, in the vocabulary of Area Studies. Central to the history of Southeast Asian Studies is the historiographic narrative of scholarship moving from the externalist/colonial histories with their emphasis on the (salvific) role of outsiders to the corrective autonomous histories that championed local significance.[8] This ecocritical approach to study of stūpika presents an autonomous history of stūpika. Rather than shedding the prescriptive explanations of colonial externalism, this project divests the discussion

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[7] See Ray chapter 3 *Forest* for an example of how this theoretical perspective plays out (Ray, 97-131).

[8] Externalist history is generally associated with colonial perspectives, but also with post-colonial nationalist waves from other countries such as the Greater India Movement. Even in work of those who clearly hold the past of Southeast Asia and/or the Malay Archipelago in very high esteem, the undercurrent of outsider (whether that be European, South Asian, etc.) superiority looms. For example, see the work of G. Coedès, B. Kempers, H. Kern, N.J. Krom, D.G.E. Hall etc.

Autonomous history (starting with the work of J.C. van Leur and B. Schrieke and then flourishing in English language scholarship of the 20th century with microhistories, etc.) see gained ground in the mid-20th century in reaction to the World Wars, the quick decline of colonialism and the subsequent concerns of the Cold War. With this wave, scholars turned their attention to finding the significance of the local. While externalist history is well-accepted to be a rather passé perspective, it is worth noting that many of the underlying assumptions of this externalist or colonial perspective live on in scholarship founded (intentionally or not) upon related neo-colonial perspectives, even as it strives to fulfill this autonomous dream. The emphasis on colonial or Indic powers might be reduced, but yet even as scholars strive to find that which is valuable to the narratives of Southeast Asia and Java, they do so through the lens of history forged within these problematic, externalist narratives. (See (Schrieke; Smail; Van Leur) and the scholarship of microhistories in line with Carlo Ginzburg's work on the importance of the "trivial details" (Ginzburg *Clues, Myths, and the Historical Method;* Ginzburg "Microhistory: Two or Three Things I Know About It").)

Other waves of scholarship have been delineated by scholars (see (Lieberman)). One primary genre argues that commerce provides a less problematic center: the desire for goods and wealth drove exchange which then spun out into the complexities of social, political and religious interrelations. Most primarily associated with the Age of Commerce work of Anthony Reid, many other scholars can be associated with this perspective as well, see for example the work of Bennet Bronson, John Miksic, Jan Wissenman Christie, Oliver Wolters, etc. I might also add the work of Amitav Ghosh here for his highlighting of the intermingled forces associated with climate change and the human experience, as well as his specific emphasis on the role of Java and the associated spice trade, see (Ghosh).

In even more recent decades, scholars have shifted their attention back out to the scale of the Indian Ocean world, while continuing to integrate evidence local to insular Southeast Asia. The important role played by insular Southeast Asia in the premodern is more widely recognized as the region shakes off its identity as a purely interstitial space between the nodes of India and China. Still much work remains to be done. Compared with India and China, whose history has been mined for significantly longer and with much greater financial support, the study of premodern insular Southeast Asia remains full of holes. So many questions remain. So many sources untouched. So many sites unexcavated. The vast majority of attention has been places in Java, a problem this dissertation does nothing to correct.

from the prescriptive explanations of human-centric externalism, including the extant narratives of Mahāyāṇa Buddhism.

This dissertation invokes ecocritical scholarship in foundational claims. (1) Humans do not function in a vacuum. They are not the only agents of decision or action. At minimum, humans are influenced by the realities of the world around them, and drawing the line between who/what is agentful and who/what is not is a challenge with no clear answer or purpose relevant to this current project. Whether or not one believes that dirt, for example, has agency in any active way, the realities of that dirt (or copper, or rock, or volcanos, etc.) impact the way life is lived around them. (2) Viewing data from a perspective open to the agency of nonhuman entities is analytically productive. This is especially true in contexts where common interpretation is that relevant data is thin. Hanging on to myopic notions of the human blinds us to veins of inquiry—other sources, other questions—that have the potential to widen our understanding of the environment, the past and the human as existed therein.

Replication/portability

Stūpikas are caught in a space of contradiction with regard to replication and portability. They are both representations of stūpa, and they are their own entity. They are unified in form but also diverse. Their molds are highly portable, making the potential of "the same" stūpika very movable. Stūpika, themselves, however, are not portable due to their fragility.[9]

In this discussion, I am not focused on seeing stūpika as replica in order to link it with any (real or imagined) original. Rather, the lenses of replication and portability provide a vocabulary with which to explore the ecocritical implications of our data. If they are replicas, I am asking both *of what they are replicas*, but also, even more so, *how are they replicas* or *how do they replica*(*te*)? What do they tell us about the movement of knowledge, about the context in with they were created, of the movements and ideas and choices inherent to that space?[10]

In his study of the Tamu-mai/Gurung people in central Nepal and in diaspora, Christopher Evans examines how cultural knowledge was and is transported and transferred using small replicas. In doing so, he presents two ideas of relevance to my current project. First, he points to a fundamental problem in scholarship, namely that the academy is forever trying to categorize the uncategorizable complexity of existence and this leads to an inevitable appearance of failure or disjuncture when the labels and the data do not map on to one another perfectly (Evans, 380-381). His solution is to embrace the concept of *tinkering*. As he writes, responding to the tendency of scholars to rely on the concept *failure* to explain instances that do not fit into the prescribed categories,

> This is not a matter of adjudicating failure/success, but that the merits of the 'non-success' need to be appreciated in their own right. For me, bound up with the Gurung's remarkable husking mortar 'mock-up', this instance tells us that in the past some people 'pushed things' and, on occasion, tried something different. The alternative is to see the past as only evincing slow-/uniform-accrued change or 'tinkering' and as directly comparable long-term biological evolution (Evans, 381).

This perspective encourages one to discuss the movement or portability of ideas/practices/forms/

[9] Even in placement, they break. Dutch colonial scholars moved a significant number of stūpika, bringing examples back to Europe. Many stūpika broke in that transit.

[10] This point ties in closely with the issues of the theoretical lens of *style*. As many others have pointed out, much scholarship focuses around defining things (objects, ideas, etc.) in terms of origin via style. This approach both valuates some producers or cultures over others and also closes off analytically productive analysis. For further discussion on the problems of style, see (Elsner "Style"; Ginzburg "Style as Inclusion, Style as Exclusion").

traditions/etc. without emphasizing the origins or the end goals.

I read Evans's idea of *tinkering* in parallel with Oliver Wolters' concept of *localization*. Wolters argues for studying the movement of knowledge across space via this lens so as to allow one to perceive the *something else* that is new or different—the local—in each iteration as distinct from the standard *foreign* (Wolters *History, Culture, and Region in Southeast Asian Perspectives,* 57).[11] The ever-evolving tinkering as presented by Evans is the process of localization as presented by Wolters but with emphasis on the fact that this localization is ever-more-gradual and continual in all places and at all times. There is no non-local production; there is no fixed foreign; there is only tinkering.

In other words, this dissertation is still discussing the same reality of people and ideas moving between regions and across time that is well attested and accepted. I am not, however, defining that process in terms of some perfected source-tradition (e.g. Pala style art) that was shared and then gradually localized until it became something else (e.g. East Javanese style). [12] Rather, all parties are in constant evolution: taking what they know, what they have seen, what they want and figuring things out. They are all tinkering.

Second, Evans builds upon the work of Lévi-Strauss with regards to the significance of the move to the miniature. As Lévi-Strauss wrote,

> What is the virtue of reduction either of scale or in the number of properties? It seems to result from a sort of reversal in the process of understanding. To understand a real object in its totality we always tend to work from its parts. The resistance it offers us is overcome by dividing it. Reduction in scale reverses this situation. Being small, the object as a whole seems less formidable. By being quantitatively diminished, it seems to us qualitatively simplified… In the case of miniatures, in contrast to what happens when we try to understand an object or living creature of real dimensions, knowledge of the whole precedes knowledge of the part ((Lévi-Strauss, 23-24) as cited by (Evans, 382)).

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[11] Wolters is well known for his engagement with the concept of the maṇḍala for understanding the organizational systems of Southeast Asian politics and power (Wolters *History, Culture, and Region in Southeast Asian Perspectives*). Although this is not the forum to necessarily make this argument in full, I do believe that some comment upon this vision of the region's history is warranted. So much of this project revolves around breaking free of the disciplinary strictures imposed on a given dataset, allowing the information to lead us as it will rather than assume what outcomes are even possible preemptively based on our academic department. In this vein, it must be noted that this continued emphasis on viewing Southeast Asia through the lens of the maṇḍala and great men is an approach that can only survive within the cloistered world of Southeast Asian Studies. These visions of the past of the Indian Ocean world have been thoroughly argued against by scholars focusing on South Asia. (For example, I might point readers to the tension between and subsequent scholarly reactions to/against the work of Nilakanta Sanstri and Burton Stein in their struggles to balance prescriptive visions of centralized power and the lived realities of decentralized, charisma-based polities e.g. (Sastri; Stein). I do not wish to fall back into Greater India-esque arguments positing that the only way to understand Southeast Asia is to look at South Asia. Still, it is equally important to take this tradition of scholarship seriously. At the point where the evidence remains the same across both regions at the time period under discussion, if the only variation is one an analytical position, we must consider whether it might not be time to apply that more honed position to our contest looking at Southeast Asia.

[12] In referencing the "process" of culture/community/nation-building, I am also reminded of Prasenjit Duara's challenge of Benedict Anderson's conception of modern nation-building as compared with premodern cultural spaces. While Anderson highlights the distinction of the modern nation state for its leveraging of print technology to refigure concepts of shared time and identity to create a *new* sense of unity, Duara points out that premodern individual and social identity was far from flat or restricted to either the hyper-local or transregional blankets of religion. Rather, even in the premodern, people experienced a sense of community across and between multiple cultural, thought spaces (Anderson; Duara, 781-784).

In seeing the miniature, we interrupt the view and perception of the creator towards their inspiration and/or surroundings. We see not just *what* they saw but *how* they saw it. The meaning of the seen is distilled to be seen again. The object is translated, the total nuance erased in favor of the individual interpretation.

Reflecting these ideas back upon the stūpika of Java, this dissertation sees the diversity of object as evidence of constant individual tinkering as done in conversation with local and translocal flows of knowledge, resources and people. Further, the stūpika of Java present a moment of miniaturing, wherein we can see how those tinkerers viewed the world around them: what they saw, what they prioritized, etc. We see how production spaces functioned and how stūpa-ness (of Buddha-ness, of power, of worth, of labor division, or object categories, etc.) was defined. To use the terminology of eco-critical scholarship again, we are looking for the materiality of the past as defined by Ingold.

This approach finds parallel expression in the work of Eva Hoffman (Hoffman). In her article, "Pathways of Portability: Islamic and Christian interchange from the tenth to the twelfth century", she argues that the movement of objects communicated culture and created space for the rearticulation and creation of ideas as well as the re-expression/redefining of human groups, both in terms of self-determination and in the eyes of others (Hoffman, 17).[13] She encourages scholars to embrace this complexity as an opportunity rather than a difficulty. Rather than continue to hit one's head against the wall of "origin" and forever being distressed that a given object does not fit needly into some expected yet fictive pigeon hole, she suggests flipping the paradigm. As she writes,

> Localization along multiple axes acknowledges the continual interchange and interactivity of portable works within the representational practices of these cultures. Instead of asking where objects came from, the question might be reformulated to ask what were the implications of portability and how were objects used and perceived interculturally? (Hoffman, 21).

She continues, summing up her argument thus,

> What is proposed here is a reconceptualization of cultural space, predicated on the notion that movement is inherent in the nature of the object and that through movement the coordinates for identity may be defined. This approach offers a more complex and expansive view of the object; highlighting its dynamic potential and defining it, not simply as a static product of culture contained within physical and geographical boundaries, but rather as an active agent engaged in self-definition and in shaping the contours of culture. The object may literally traverse cultural and geographical distances. The object itself also serves as a point of departure for a journey leading in many directions, following continuous and changing relationships and connections over space and time. The implications of portability,

[13] Launching her project by looking at museum collections, Hoffman is quick to set the stage: it is not productive to engage with these museum-held objects if one is simply going to categorize them as "of" one group, as having a clear and precise origin. (A) such provenance is hard to prove in many cases. And (b) striving for such labels is unproductive as it superimposes modern, colonial/outsider perspectives on non-Western pasts. Again, we hit the problem of styles (Hoffman, 18-20). Reverting constantly to arguments of a given object being of this style or not of that style misses the point, muting the vast majority of information a given object broadcasts. Hoffman goes on to note in her data set of religious objects from tenth to twelfth century Mediterranean region that it is often very challenging to determine exact origin of an artifact as so many different sites made similar objects, multiple production sites existed and things moved (Hoffman, 21). In this, as in many ways, the Mediterranean world runs parallel to that of Monsoon Asia.

> therefore, allow the object to extend beyond its literal self to an expandable field of identifications and meanings. Identity is relational. Through its exchanges, the object both defines and is defined by its relation to other objects, people and representational practices along its pathway of portability (Hoffman, 42).

Like Hoffman, I am interested in exploring how the identities of objects are tied to their relations with portability and replication and considering how we might plumb that sociability enjoyed by objects.

This perspective also runs parallel to the approach of Richard Fox in his book *More Than Words*. Fox's aim is to consider (in the more recent history) how one can more appropriately and productively comprehend the local, Balinese understanding of writing and how that adds to our view of that local context and the wider space of textuality. I will return to Fox's engagement with text in chapter three, but here I wish to point out the theoretical parallel. As he frames his argument, that project—focused around the written sources of Bali— "explores the aims and desires embodied in the production and use of palm-leave manuscripts, amulets, and other inscribed objects" (Fox, 2). Within that discussion, he highlights both the deep interconnectivity and the great diversity present within the space of text usage, allowing for both the trend and the individual iteration to hold value and truth. To use some of his terminology, paraphrased, text expresses and creates an ecological system but that system is not singular, as we see it ranging far out from the simplified "center", more aptly described as a "long tail" (Fox, 34, 51-53, 179-182).

Stūpika, in their iterative, material form, are ossifications of moments within all that agentful action. They are the product of any number of other forces (human, clay, metal, etc.) all coming together in a constant process of engagement and negotiation, of interpretation and re-expression, of replication, of making materiality material, and of tinkering. They present us with glimpses of that relational past. One might strive to define its center, but I contend that sitting with their "long tail" offers greater potential.

Structure

This dissertation is divided up into thematic chapters, seeing stūpika as objects of space, of text, of iconography, of metal molds and of clay. Through each one, I explore the narrative of the past as presented by stūpika in terms of that aspect of their identity. The premise of this dissertation is that breaking these elements of identity down and apart forces one to approach the breadth of information presented by stūpika in a more analytically inclusive fashion.

These categories quite obviously are not independent from one another.[14] There is overlap. It can be messy. Further, these are just four of the many perspectives that could have

[14] For example, clay and bronze were in conversation with one another, overlapping spaces in premodern Java, frequently. In Indonesia, clay vessels were used to melt metal. The molds used for "lost-wax" casting, while formed using wax, were of clay. Artisans would have been carving and baking clay in order to create molds of bronze which would then have been used to mold clay again. The space of bronze (and other caste-able metals) and the space of clay were deeply linked, overlapping, if not one and the same. For example, at Boyolangu a metal-smelting crucible is found made of clay. This container was placed over incredibly high heat, even 100 degrees hotter than the melting point of bronze to allow for the metal held within to reach that point (1100 degrees C). At such temperatures, the iron and glass elements found in the clay itself would melt, at least on the outer surface of the crucible, creating a skin on that outer surface (Astiti, 81; Mundarjito). As such, the clay used in the manufacturing of bronze objects itself became a specialized genre of heavily baked clay whose chemical makeup, porosity and absorptive properties changed (Astiti). Overlaps also existed between clay and copper alloys in terms of iconography (Guy, 1) and materials used within the same object (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai*

been leveraged towards this dataset. These are, if anything, lenses still deeply rooted in the very traditions of scholarship this project hopes to unsettle: emphasis on the written work, style, origin and creation. More scholarship is always needed. The objective is to move the conversation forward.

This "Introduction" begins this discussion by setting out the objective for the dissertation, considering where I have been and where I am going with this project. After reviewing the stūpika data at a very basic level, this section provides a glimpse into the fieldwork research upon which this project is based, outlines the theoretical premise of this project and delineates how we will move forward through the coming work.

Chapter Two "Of Space*"* considers stūpika as objects existing in a specific place and context. I provide a two-fold contextualizing narrative, discussing where stūpika are currently held, and reviewing the history of Maritime Asia and Java as it participated therein. Further, issues of historiography are addressed as I consider how to position this study in relation with the wider field of Area Studies, negotiating between the transregional and the hyperlocal perspectives. The result of this chapter is to set the stage for defining stūpikaic space—i.e. the space of inquiry relevant to our study as prescribed by our data—by viewing stūpika as functioning as landscape images.

Chapter Three "Of Text*"* prototypes the application of the theoretical approach discussed up until now: how can we ask different questions of our data to find new answers? Starting from the premise that the data presents exactly as one would expect, this section demonstrates how such a non-starter is in fact a productive starting point if we move beyond the prescribed paradigms. The first outline of the context of stūpika production is sketched.

Chapter Four "Of Iconography*"* takes a step further, considering the iconographic project of stūpika writ broadly, encompassing their defining upper form together with their base shapes and "imperfections." This is contextualized within the narrative of Javanese art history to gain purchase on the local Imaginaire. Gender dynamics as well as further details surrounding production norms are teased out.

Chapters Five and Six then add significant texture to those stūpikaic spaces so articulated. Chapter Five "Of Metal Molds*"* considers how we can view the space of stūpika in terms of their (now largely invisible) progenitors, the metal molds used in their creation. This chapter digs into the metallurgical context of Java: how were materials and spaces differentiated? Where did stūpika fit within this matrix? It also asks the fundamental question of how we can understand the fact that for a few centuries, stūpikas were made, and then they were not, from the perspective of metal allocation. Chapter Six "Of Clay*"* considers the composition of stūpika themselves, based on some testing and visual observation. In doing so, the locales of stūpika production is not only fleshed out but seen in network with fundamental changes occurring in parallel with stūpika production.

Finally, Chapter Seven "Conclusion*"* reviews our discussion thus far and considers what the findings of each chapter say in conversation with one another.

Summary of Argument

This dissertation is both an historical study striving to better understand the socioreligious space of classical era Java, and also a methodological case study suggesting new ways of

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Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 144). Similar moments of blurring can be found between the other tangents of inquiry set forth by this dissertation.

approaching the study of the premodern, or other narratives often perceived as "lost" to the flows of time and power. We are looking at an imperfect dataset. It is both over articulated (in the sense of being too often seen as completely explainable in terms of common transregional practices), and also under articulated (in terms of its perspective on the specific locals in which they were created and functioned). Our project is to consider what else that data can tell us about its context of creation and primary usage.

My argument is that by leveraging an eco-critically-inspired approach—an approach that accepts the possibility of other agents, of wider definitions of identity—to any dataset, new questions are encouraged. With new questions come the possibility of new answers. In parallel, both steps foster the adoption of new, self-conscious terminology which again tests our preconceptions of data and implication. This process is of particular utility within contexts where general wisdom tells us we have no or little data.

In leveraging this approach, our dataset blossoms with insight into premodern Java. We see sites of production specialized around specific materials, tools and skills. We see categories defined, and features prioritized and deprioritized. We see people—both men and women—acting and leveraging power. We see a space that is vibrantly engaged with the human process of tinkering, contributing to both local and transregional flows of knowledge and production.

Chapter 2: Of Space

Introduction

Stūpika did not and do not exist in a vacuum. Their place in time and space has a huge impact on the whos, whats, whys and hows of their story. It is impossible within the confines of this project to tease out every tangent and agent of influence playing upon and with stūpikas throughout time. This chapter hits the highlights, simplifying great complexity for the sake of clarity and expediency, to contextualize stūpika. To do this, this chapter addresses three perspectives: the contemporary places of stūpikas, the historical milieu of stūpikas, and how I approach defining stūpikaic space. Together, these discussions will provide a sense of place upon which we will build in the subsequent chapters.

Modern Spaces: where stūpika are found

Stūpika are prevalent across Java and its surrounds.[15] It is a common trope heard in Java that stūpika were found frequently in recent history (plowing a field, building a new house, excavating a site, etc.), but they were not seen as particularly important, and they are found less often now.[16] They were generally sent to the local archaeological office or leader. A huge percentage even of those found have fallen from sight. In addition, (and possibly in part because of this benevolent neglect shown to stūpika throughout the modern era), it is often difficult to gain access to collections. They are not well documented or advertised, and they are in some cases (understandably) protected from prying, foreign eyes.[17] Many that were unearthed are either destroyed or hidden, and still more may lie undiscovered underground. This project, therefore, is in no way claiming to be based on a complete set of data documenting all the stūpika of Java. I was, however, able to document a significant percentage of the stūpika extant within Java.

Modern Spaces

This dissertation will consider the stūpika held in seven collections. Primary emphasis will be put on those held at Museum Sonobudoyo, Museum Majapahit, Museum Banyuwangi,

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[15] This study is based upon only a small percentage of those discovered there let alone of those produced on that island. The vast majority of even those stūpikas found in colonial and post-colonial Indonesia have fallen from public sight. They are both found everywhere and are simultaneously associated with a small (sometimes changing) number of sites. For example, in 1977, Santiko lists stūpika as found at Pejeng, Banyuwangi and Palembang (Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur", 69). In 1979, Boechari lists the sites where stūpika are found as "the village of Djongke near Mlati, 7km. North of Yogyakarta (Stutterheim, 1938), Kalibening near Kalasan, near Pejeng in Bali (Stutterheim, 1925; 1929), at Mucar near Banyuwangi in East Java, and in Palembang (Bronson, 1974)" (Boechari "Report on clay votive stupas from the Borobudur site", 115), citing (Bronson "Laporan Perjalanan Di Sumatra"; Stutterheim "Voorlopige Inventaris Der Oudheden Van Bali"; Stutterheim *Oudheden Van Bali;* Stutterheim *Uittreksel Uit De Oudheidkundige Verslagen over 1931-1935*). Stūpika were also found in East Java as part of the Adam Malik collection (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 126*). This is far from a complete list, however. Still, it points to both the prevalence of stūpika and the difficulty of nailing down a definitive list.

[16] They continue to be found today (e.g. Situs Sendang, for preliminary report see (Borobudur)), but again, common wisdom among Indonesian's is that they are not found as frequently anymore. Many archaeological remains across Indonesia remain buried.

[17] Following up on the issue of importance, I should note that while stūpikas tend to be deprioritized within the archaeological record of Indonesia, my own engagement with them did spark a fair amount of concern regarding their status as "national treasures." This is a whole other project—the role of modern attention on premodern artifacts—worthy of ethnographic explorations.

and Museum Borobudur, while those held at Museum Nasional, Pura Mangkunegaran and Museum Sunan Giri will be touched on in passing. Those collections are (likely) made up of stūpika found primarily at the sites of Jongke, Borobudur, Candi Gentong and Gumuk Klinting, thereby spanning central and eastern Java.

Museum Sonobudoyo

Museum Sonobudoyo in Yogyakarta holds 38 stūpika. These range in size from 4 cm to 20 cm in height and 5.6 cm to 17.3 cm in diameter, made using top molds ranging in interior height from 2.5 cm to 12.13 cm and diameter from 2.7 cm to 15.8 cm.[18] They present in a variety of earth colors but tend towards tan to brown. On average, the stūpika held at the Museum Sonobudoyo are rounded, solid, neat examples, presenting smooth but generally matte surfaces. They are well-preserved, but some are broken and worn, and their surfaces slough easily with handling.

It is likely that majority (if not all) of the stūpika held at the Museum Sonobudoyo hail from the collection excavated in 1935 at Jongke (near Yogyakarta, in Mlati). According to Stutterheim, the trove at Jongke was significant and was sent to the Museum Sonobudoyo. What colonial-era photographs do exist of this trove also match with the general form and style of the stūpika found today at the Museum Sonobudoyo (Stutterheim *Uittreksel Uit De Oudheidkundige Verslagen over 1931-1935*, 17, 571). The numbers have drastically dwindled from original records, and it is possible that some were exchanged with those from other sites in the intervening years, especially given Indonesia's centralized management of archaeological artifacts.

Museum Borobudur

Museum Borobudur is located on the grounds of the Borobudur archaeological site. This most famous Buddhist site in Java is a large stūpa structure, dating to roughly the ninth century CE. A trove of stūpika (together with votive tablets) were found, buried in an earthenware container underneath a stone statue of a Buddha figure to the southwest of Borobudur, and many of those objects remain housed at the Museum Borobudur. The trove contains over 2300 stūpika.[19] The stūpikas are of a range of sizes from 4 cm to 13.5 cm in height.[20] They are brown

[18] Some of these objects are damaged, missing significant sections. As such, a direct comparison of sizes is impossible. That being said, a clear range of sizes was present.

[19] The exact number is somewhat unclear. Sri Hariati in 2006 lists 2397 stūpika and 252 votive tablets. Boechari et al list 2312 stūpika (Boechari "Report on clay votive stupas from the Borobudur site"; Sri Hardiati).

[20] Boechari et al conducted a thorough study of the stūpika of Java through the lens of those found at Borobudur. They proposed a classification system for the form of the stūpika as related to the stūpa forms seen in the region. Stūpikas are, by them, categorized in terms of three criteria: (a) shape of the aṇḍa, (b) overall size of stūpika, and (c) their material composition. Speaking to the last element, composition testing was done on the collection, allowing us to delve more deeply into this aspect in our chapter on clay (Boechari "Report on clay votive stupas from the Borobudur site", 115).

According to the observation of Boechari et al, stūpika found at Borobudur have three general top forms: (1) wider, more curving, bell shape, (2) narrower but still relatively plain, and (3) narrower bell shape with eight stūpika profiles. The bases, while hand-formed, come in various shapes: circle, four-sided, six-sided or oval (Boechari "Report on clay votive stupas from the Borobudur site", 115). The majority of the stūpika found at Borobudur are of the third type of medium size with a circular base and no inscription (745 instances out of the 1323 in good enough repair to categorize) (Boechari "Report on clay votive stupas from the Borobudur site", 116). Inscribed stūpika are similarly medium in size with a circular base footprint, but most are of the second category with a narrow upper without stūpa ornamentation (47, i.e. 71% of inscribed stūpika) while some inscriptions do present themselves in all shape categories.

to grey in color, although often covered in excavation particulate, making a clear view difficult. As we will discuss in subsequent chapters, the stūpika of Borobudur stand out for a few reasons, including the presence of what I am calling the eight stūpa motif and of a shortened version of the *pra tītyasamutpāda gāthā* written in *kawi* script (Boechari "Report on clay votive stupas from the Borobudur site", 115-118; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur", 76-86; Sri Hardiati, 50-51).

Museum Majapahit

Museum Majapahit is located at Trawulan in East Java. In its collection, we find 11 stūpika. These range in overall size from 4.4 cm to 11.6 cm in height and 4.1 cm to 9.4 cm in diameter, being made with top molds creating aṇḍa in sizes from .45 cm to 5.8 cm in height and 3 cm to 8.25 cm in diameter. This is a more (obviously) diverse collection, including stūpika from at least two find sites, and containing stūpika of distinctly red and also more tan to brown color, both smooth and rough. While the collection is now carefully cared for, the examples themselves are worn with age and slough easily with handling. The red instances in particular have a brittle quality to them.

Those housed at the Museum Majapahit, one might assume would come from Candi Gentong. A trove was found at that temple site, situated within the Trawulan complex. Museum records, however, note that some are from Gumuk Klinting in Banyuwangi farther to the east. Others, without distinct origin markers, one might assume were found locally at Candi Gentong, but this is very much an assumption. We will return to this question of origin and source material more specifically in chapter 6 "Of Clay".

Museum Banyuwangi

Museum Banyuwangi, located at the eastern tip of Java not far from the Gumuk Klinting stūpika find site, holds 32 stūpika.[21] These range in overall height from to 3.9 cm to 32.66 cm

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The vast majority of the stūpikas found at Borobudur are what Boechari would call "medium" in size (i.e. aṇḍa of height 3.2-4.4 cm and diameter 6-7.5 cm) as opposed to the 63 that are "large" (aṇḍas of height 3.8-6.32 cm and diameter of 7.1-9.26 cm) and the 54 that are "small" (aṇḍas of heights 1.93-3.7 cm and diameters of 3.64-6 cm) (Boechari "Report on clay votive stupas from the Borobudur site", 115-116). Only 107 of all the stūpikas bear visible inscriptions.

It is worth noting that many of these stūpikas are damaged, meaning that only about half (1422) were deemed classifiable by Boechari et al (Boechari "Report on clay votive stupas from the Borobudur site", 115). Still, this represents a very significant dataset.

We will not be using this classification system in our engagement with the stūpika of Java as it does not map well onto the wider dataset, but it is worth noting as a significant contribution to the field of stūpika studies in Java.

[21] Gumuk Klinting is found at the far eastern tip of the island of Java. This name refers to the mound-like shape of the site, *gumuk* meaning "hill" in Javanese and klinting "bell" (Issatriadi, 3). The area of far eastern Java, in the region of Banyuwangi, is dotted with many such mounts, some of which have been excavated while others still likely hide archaeological remains.

These stūpika were initially noticed in the modern era when in approximately 1944, under orders from the Japanese, the local leaders prepared the area for the deployment of defensive canons. Then, few paid much attention to the objects being dug up, but apparently children who came to play around the work site collected both stūpika and beads. Years later, in November of 1971, an antiques dealer came to the region in search of merchandise. Given the dire economic situation of the regions, people were happy to cut down coconut trees and dig up their land, delivering the wood and what they found in exchange for both food and cash payment (Issatriadi, 3).

At first, little attention was paid to the stūpika found as they dug, and many were simply broken and discarded in the excavating process. Eventually, people started to notice these small, egg-shaped objects, mixed in among beads and sand, bearing images of Buddhist figures, placing them to the side. It is interesting to note that

and in diameter from 3.8 cm to 22.68 cm, being made by top molds creating *aṇḍa* of size of between 1.9 cm and 15.9 cm in height and 3 cm and 17.4 cm in diameter. Those held at Banyuwangi are, on average, brown with red tones and present the smoothest, almost polished or glazed surfaces. They are almost rock-like in their hardness. Largely well-preserved, these also present some interesting instances of degradation and/or wear (e.g. divots, slashes, riverine wear, etc.) themselves are hardened into the surfaces. Most (if not all) of the stūpika held at Museum Banyuwangi likely originated from the trove found at Gumuk Klinting (and possibly smaller finds from the region).

Origin?

The loss of excavation data and the mixing of trove groups across held collections makes it a challenge to clearly identity which object comes from where or to definitively categorize objects into trove-groups. While I review which stūpikas are held where (as best I know), the actual study of the objects themselves will not put great emphasis on these questions of identity or origin about which we cannot know with certainty.

Similarly, dating of stūpika troves it tricky. The stūpikas themselves are not widely dated, but collections are generally dated based on examination of other objects found with them (e.g. textual tablets, silver or gold objects, etc.) (Boechari "Report on clay votive stupas from the Borobudur site", 115). This dissertation makes a rather blanket assumption that stūpika housed in the collections listed above are datable to around the turn of the second millennium CE, roughly in the ninth to 11th centuries. This is a vague statement at best, but it does situate us somewhat.

This study does not claim to be complete. It is working with significant but incomplete data. There are collections known to me to which I have been unable to get complete access or clear images. Even more are spread through smaller collections globally and domestically. And more still have been destroyed and lost to history.

What can be said is that these stūpikas were from and of Java. They were made and used and preserved to some extent. They are an aspect of life lived in Java, past and present. A significant percentage of the stūpika currently extent and upon which this study is based likely came from the archaeological sites of Gumuk Klinting, Candi Gentong, Borobudur and Jongke. This dissertation explores what can be done in this situation, with this specific dataset and in similar contexts of incomplete and complicated data.

Historical Space

Stūpika were created and functions both as part of the transregional networks of Monsoon Asia and simultaneously as part of the hyperlocal contexts within Java. I embrace both scales, but finding congruity between them is a well-attested challenge. One of the most famous iterations of this conundrum is the debate surrounding and between the work of Oliver Wolters

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people remember that as they dug deeper, these objects got larger. At the base of the pit, some rather huge stūpika were discovered, measuring approximately 40cm in height (Issatriadi, 4).
Below these stūpika at a depth of approximately two meters, was found a hard flat stone with four incisions, that area of which was covered with a sort of crown, forming what was likely a pripih, yantra gala or foundation stone. Although this stone was not in pristine condition, it was clear what was held within those holes. The interior walls were a greenish patina in color smeared with ash. Inside, were found gold foil bearing bijaksara in Old Javanese script, together with various bits of copper, stone and hair (Issatriadi, 4). Since excavation, it has been built over with a fish farm.

and Sheldon Pollock.[22] Both scholars have made ground-breaking contributions to their fields and driven generations of academic production as they grapple with how to view the space of

[22] Oliver Wolters published two editions of his seminal discussion of the field of premodern Southeast Asian Studies, *History, Culture, and Region in Southeast Asian Perspectives*, one in 1982 and a revised edition in 1999. In 1982, Wolters is adamantly opposed to positing a clear definition of Southeast Asia as a region. Instead, he wishes to encourage scholarship upon smaller, more local topics. In place of a definition, he describes the region as a set of largely independent nodes (*maṇḍalas*), whose loose interconnection gives rise to the *cultural matrix*, marked by the shared presence of both "cognatic systems of kinship, an indifference towards lineage descent, and therefore the significance attached to personal achievement in particular generations" and also (and more obviously) various apparently foreign but deeply localized cultural elements such as those associated with Hinduization (Wolters *History, Culture, and Region in Southeast Asian Perspectives,* 38, 42-45).

In contrast, in 1999, Wolters is willing to admit that one could see his previous *description* as a *definition* of Southeast Asia. As he starts his second postscript to that version, "Perhaps in 1982 I was too anxious to preserve both the geographical and historical distance between the sub-regions" (Wolters *History, Culture, and Region in Southeast Asian Perspectives,* 107). This transition is in no small part thanks to the advent of the idea of *heterarchy*, as presented by Joyce White.

With the 1999 edition, Wolters does not reject the concept of the cultural matrix, rather he suggests the implementation of a tweak. The concept of the cultural matrix never sat well with Wolters in so far as its identification was predicated upon the presence of foreign, and specifically Hindu, ideas. Given his leanings towards autonomous history, such interpretations could never provide a definition for Southeast Asia. White, through a study of graves from 2000 BCE until 200 BCE, argues that in Southeast Asia before the rise of Hinduization, there was a form of polity in Southeast Asia which she labels heterarchy that was very similar to the cultural matrix proposed by Wolters. Heterarchy is defined as a system of political points that each have an equal chance of gaining ascendancy, and do gain power through the specialization of skill to match a demand in the foreign market (Wolters *History, Culture, and Region in Southeast Asian Perspectives,* 122). With this intervention, White succeeds in providing Wolters with a supremely local, autonomous basis upon which to declare his cultural matrix as definition. In other words, as the cultural matrix becomes visible in sources untinged by Hinduization and therefore becomes more definitively defined itself in terms of the foundations of polity rather than its expression, it becomes a viable option for defining Southeast Asia in Wolters' view. This perspective can be seen an emphasizing divisions to the extreme.

On the other end of the spectrum, we can see the work of Sheldon Pollock. Over the recent decades, he has published a variety of books and papers putting forth his understanding of the pre-modern cultural situation across much of South and Southeast Asia, spanning approximately the first 1500 years of the Common Era. Pollock's theory revolves around what he has dubbed the "Sanskrit cosmopolis." This overarching unit encompassed much of South and Southeast Asia for most of the first millennium of the Common Era. It was characterized by the shared utilization of the Sanskrit language in particular ways for particular purposes. Specifically, he identifies the use of the Sanskrit language in poetic literature as a means to create and express power through the aesthetic qualities of that language (e.g. (S. Pollock *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India,* 13-15)).

What Pollock refers to as the cosmopolitan is trans-regional power creation, not centralized or driven by any particular group. Participation in this sphere has often been associated with a very elite sector of the pre-modern. Practically speaking, not everyone could muster the resources necessary to erect a stone pillar with a Sanskrit eulogy carved upon it. Theoretically, however, this was a relative open system. It was not centrally administered. Knowledge and resources were the only barriers. As such, although not truly open or accessible by modern standards, it was comparatively open.

Pollock's contribution, while being ground breaking and important, has garnered significant objections. Johannes Bronkhorst, for example, argues that Pollock removes the human component that went along with the spread of the use of Sanskrit for political purposes by putting undue emphasis on the capabilities of the Sanskrit language itself (Bronkhorst, 263-271). Writing on how to study pre-modern literary canons, Francesca Orsini points out that (a) Persian, largely ignored by Pollock, played a significant, dominant, elite, transregional role similar to that described by Pollock, and (b) the Cosmopolitan Vernaculars as identified by Pollock were largely driven by non-Brahmans, unlike as envisioned by Pollock (Orsini, 237-239). Another aspect of Pollock's argument which has attracted especial criticism is his apparent "division of labour" between Sanskrit and vernacular languages. He suggests that within the context of the Sanskrit cosmopolis, Sanskrit was used to express important political statements, while more mundane issues of documentation were stated in other, local languages. This observation is

South and Southeast Asia in terms of transregional networks (e.g. Sanskrit cosmopolis, cultural matrix, etc.) and/or individual entities (e.g. the hyper-local, maṇḍalas, etc.). This debate exemplifies much of our conundrum: how to read stūpika across the narratives of both the transregional and hyperlocal? The flip side of that questions is how can we define the narrative that is inherently stūpikaic and not the stūpikaic element of another narrative arc? This is a question we will return to later in this chapter and the dissertation as a whole.

Monsoon Asia

Stūpika functioned—were created and first used—within the wider context of the movement of people, goods and ideas through monsoon Asia or the Indian Ocean world. It encompassed the Red Sea, Persian Gulf, Gulf of Oman, Gulf of Aden, Arabian Sea, Indian Ocean, Laccadive Sea, Bay of Bengal, Andaman Sea, Gulf of Thailand, Java Sea and South China Sea.[23]

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integral to the argument as a whole as it is largely through this supposed division that Sanskrit gains its significance as a creator of power and trans-regional connector (Ali, 280). Unfortunately for this perspective, however, the existence of such a system has been severely undercut by the work of several scholars examining contemporary sources who point out that this division does not stand up in any meaningful way in the inscriptions of South Asia or Southeast Asia (e.g. (Ali, 283-291; Orr, 22).

All of these critiques touch upon a central theme: the feeling that Pollock's approach is somehow detached from the local realities over which he suggests this unifying, cosmopolitan culture lay, both implicitly and explicitly. As Ali writes, "For Pollock, Sanskrit could never signify local ideas, because ideas themselves must be constituted through language and in being expressed in Sanskrit, become ispo facto, Sanskrit ideas" (Ali, 279). As such, we see a vision of the cosmopolitan critiqued for its non-popular, non-local identity.

Wolters and Pollock actively engaged with one another, publishing responses and rebuttals and further codifying their two perspectives. The extent to which Wolters emphasizes the political substructures over the cultural expressions of polity can be seen in Sheldon Pollock's response. In his important text *The Language of the Gods in the World of Men*, Pollock argues against some aspects of Wolters' perspective. In this rebuttal, however, the 1982 edition of Wolters' text is invoked, despite the fact that in 2006, Pollock would have had access to the 1999 revised edition. Pollock rejected the 1982 edition because it was only that edition that posed a threat to his thesis. This can be interpreted in two ways. First, Pollock argues that Wolters over emphasizes the influence of localization. Whereas Wolters wishes to see the Indic as effectively losing its foreign nature through successive rendition of appropriation and translation by local agents, Pollock wishes to argue that commonalities remain and are real across a much larger swath of Asia: the Sanskrit cosmopolis (S. Pollock *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India, 531-532*).

A second way to look at this is to consider the corrective presented by Wolters in 1999. With the implementation of White's heterarchy, the issues of importance to Pollock (i.e. commonalities of expression of power) exit the field of discussion for Wolters. With the 1999 edition, Pollock's Sanskrit cosmopolis can co-exist with Wolters' heterarchical cultural matrix as each focus on a different level of political reality and do not contradict one another. Systems of expression (just as Pollock's Sanskrit cosmopolis) may come and go, but the basic blueprint of power remains the same. What remains as warranting the status of definition for Southeast Asia for Wolters in 1999 is a set of characteristics regarding power and polity construction totally divested of the outer accoutrement of cultural expression (Wolters *History, Culture, and Region in Southeast Asian Perspectives, 138*). Wolters even goes so far in 1999 as to suggest that the use of the Sanskrit language could be legitimately be seen as a tool at the hands of Southeast Asian rulers (Wolters *History, Culture, and Region in Southeast Asian Perspectives, 118*). In other words, in the 1982 edition, Wolters drains all foreign, inter-regional significance from the Sanskritic elements that Pollock uses to bind together an international, interregional space. In the 1999 edition, Wolters simply ignores the implications of these forms of cultural expression as they are no longer of central relevance to his discussion. As such, while his first edition presents a direct contradiction to Pollock's thesis, the revised edition exists happily in parallel with Pollock.

[23] What makes this a useful category is that fact that is represents the space occupied by a coherent network of exchange throughout this premodern and then specifically classical period. As Wolters describes this area,

People, goods and ideas have moved over the Indian Ocean for millennia, with archaeological evidence stretching by to the middle of the first millennium BCE (See (Beaujard, 419-420; Bouvet, 76; Gungwu, 3-12; Dzung, 11-12; Glover, 21-22)). During the earliest iterations, this network was segmented, east vs. west (Rivers, 59). Around the turn of the Common Era, however, the Indian Ocean World became a more unified entity (Beaujard, 421).

Part of this increased synthesis came from the rise of an ever-evolving set of larger empires (Beaujard, 423-424).[24] Another contributing factor was the discovery of the monsoon winds and their utility to long-distance maritime travel across the Indian Ocean World. By harnessing these wind and water currents, travelers sailed efficiently and predictably towards the south and west in the winter and to the north and east in the summer (Rivers, 59, 65).[25] With these (and other) changes, the flows of movement increasingly knit the space of Monsoon Asia together into a coherent whole.

West Javanese Period

Java's earliest engagement with the wider networks of Monsoon Asia is often referred to as the West Javanese period as it was in that region where much of the Sanskritized (i.e. of the Sanskrit cosmopolis[26]) archaeological remains have been found from the fifth century. It was also during this period that evidence of Buddhism first appears in western Java, specifically during the interim between the records left by Fa Hsien and Gunavarman in 413 and 424 CE respectively (Manguin, 115). More broadly, the ports established in West Java during this time period were examples of a wider proliferation of trading nodes that popped up during that era, functioning as intermediary stopover points between South and East Asia (Manguin, 113; Wolters *Early Indonesian Commerce: A Study of the Origins of Srivijaya, 35-36*). Java became an increasingly significant player within these trade networks, largely due to its role as intermediary in the spice trade, moving nutmeg, cloves, mace, etc. from the Moluccas, outward (Rivers, 75-76).[27]

> As "the single ocean," the vast expanse of water from the coast of eastern Africa and western Asia to the immensely long coastal line of the Indian subcontinent and on to China…. The single ocean possessed a genuine unity of its own. The trading connections that linked the opposite ends of maritime Asia resemble links in a chain which would join together even if one link is temporarily broken….In effect, the single ocean was a vast zone of neutral water, which rulers inside and outside Southeast Asia independently and for their own interests wanted to protect (Wolters *History, Culture, and Region in Southeast Asian Perspectives, 44-45*).

[24] This is not to say that trade was centralized or driven by governments. However, the presence of larger, more stable political entities did facilitate relationship building that allowed for easier long-distance passage of goods and people

[25] Prior to gaining this capability, travelers moved between the Red Sea and the South Asian peninsula by hugging the shoreline. Cutting across using the monsoon winds reduced travel times from fourteen to two months. The voyage progressed from Persian Gulf or eastern Africa to the Malabar coast to Sri Lanka to Southeast Asia (Isthmus of Kra, Sumatra or the Straits of Malacca) to southern China (Rivers, 68-70).

[26] The Sanskrit cosmopolis as put forward by Sheldon Pollock is a very broad and seminal explanation of the space of shared socio-religious norms and vocabulary that encompassed much of Asia during the premodern common era. See (S. Pollock "The Cosmopolitan Vernacular") and (S. Pollock *The Language of the Gods in the World of Men: Sanskrit, Culture, and Power in Premodern India*), as well as a brief review of responses in footnote eight of this chapter.

[27] Much archaeological evidence remains unexcavated in West Java. Comparatively little attention has been afforded that region as compared with its Central Javanese neighbor, both by colonial and national leaders. One of the most significant and/or famous sites to have been at least partially excavated is Batujaya, a set of Buddhist stūpa structures just northeast of modern Jakarta. Along the now defunct Cibuaya River in northwest Java, extensive archaeological remains are found dating to the sixth or seventh centuries CE. We see multiple square-foundationed

Central Javanese Period

These systems shifted around the ninth century, expanding the role of Southeast Asia in the maritime routes of Monsoon Asia. It was during this era that Śrīvijaya emerged as a power within maritime trade.[28] This reorientation was due to a variety of factors. First, another era of growth within maritime trade occurred around the eighth century.[29] Then in 878, after a series of

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structures built of stone and brick. Significant numbers of Buddhist votive tablets are also found at these sites. It is possible that these buildings should be associated with the Heling kingdom as mentioned by Chinese sources. The dating of this apparent Buddhist period in western Java is uncertain, largely based on perceived similarities between the votive plaques found there and those found in sixth century sites in Thailand (Miksic *Ancient Southeast Asia*, 219).

Other evidence of the adoption of Indic forms in Java are found at Taruma in western Java where a set of seven seventh century Sanskrit language inscriptions that include reference to Hindu world views, including reference to Viṣṇu and Indra (Manguin, 113). Earliest Old Javanese inscriptions (e.g. the 804 CE Sukabumi inscription, and the late ninth century Klaten inscription) also display a language and literary style deeply influence by Sanskritic norms (P. J. Zoetmulder, 6-7; Soekarto Kartoatmodjo).

[28] The earliest mention of Śrīvijaya comes from the 671 account of I Tsing, a Chinese pilgrim who traveled from Canton to the capital of that kingdom at Palembang. Other early evidence of Śrīvijaya is found in Old Malay inscriptions dating from between 682 and 686, found primarily in Palembang and on Bangka Island. Power of this kingdom grew rapidly. By 775, inscriptions at Ligor depict it as a powerful dynasty, ruling over both sides of the Straits of Malacca. In the 11th century, the Hsin T'ang shu describes that kingdom, and the Ts'ê fu yüan kuei mentions envoys sent to China from there in 702 and 742. Inscriptions from the surrounding region of Southeast Asia refer to Śrīvijaya from the seventh to 12th centuries, and Arabic language sources also discuss its presence (Wolters *Early Indonesian Commerce: A Study of the Origins of Srivijaya, 15-16;* Kee-Long, 295-296). Further evidence of long-distance trade between the Arabian Peninsula and China passing through Indonesia near Śrīvijaya is found in Flecker's investigation of a ninth century shipwreck discovered between Sumatra and Borneo off the northwestern coast of the island of Belitung. Based upon building techniques (which point to either India or the Middle East) and the possible (although uncertain) African-origin of the wood used to build this ship (which suggests a non-Indic origin given India's own extensive ship wood production capabilities), Flecker suggests that this ship was likely constructed in the Middle East but could have also been from India (Flecker "A Ninth-Century Ad Arab or Indian Shipwreck in Indonesia: First Evidence for Direct Trade with China", 344-347).

The Śrīvijayan Empire of the 7th through 10th centuries functioned as a relatively decentralized power structure. The ruler administered over two genres of sub-centers from the capital (Palembang until the 11th century): interior regions along the Musi River, and exterior ports facing the salt water of the Straits of Malacca area. Although participation in the Śrīvijayan maritime network included elements of religious and cultural sharing, the Śrīvijayan center went to great pains to build a navy capable of policing and controlling passage through the Straits of Malacca using resources from inland territories and orang laut (literally, "people of the sea" – i.e. "sea nomads") to ensure that only ports under their own control benefited from the flow of goods and people through that passage. By controlling trade, the Śrīvijayan rulers were able to maintain the allegiance (if sometimes relatively weak, only as expressed in the form of tribute) of various subkingdoms who could have otherwise sustained independent rule and profitable interactions with the maritime trade routes of the region (Kee-Long, 296-297).

[29] One factor that contributed to this shift was climate change. During the seventh and eighth centuries, climate shifts allowed for increased agricultural production in China and Central Asia. This, in turn, allowed for population growth and the attendant advancements in urbanism, innovation and production (Beaujard, 424).

Muslim merchants also played a key role in the evolution of the Indian Ocean mercantile networks. By the eighth century, for example, Omani merchants established a trading outpost in Sri Lanka. Trade flourished between the Oman region and South Asia in the third to sixth centuries, but these linkages waned during the early years of Islam. These connections were reinvigorated in the eighth century, and Omani merchants remained prevalent in the Indian Ocean trade of the following centuries. Bahrain also maintained importance during the second half of the first millennium CE, dominating the musk trade from India to the Arab Peninsula, based first out of Dārīn, later out of Qaṭīf and Baṣra (Iraq) (al-Naboodah, 83, 85). Similarly, the Abbassid Empire (the third Islamic Caliphate, based out of Baghdad) made a significant impact on the maritime networks of the Indian Ocean, largely building off of the systems set up by the Sasanids (Malekandathil, 262).

Exactly why or how this shift occurred is a complex issue, fraught with debate. Sanjay Subrahmanyam argues,

violent conflicts between the Tang and Arab merchants settled in Guangzhou caused the latter group to emigrate from China to the Isthmus of Kra. There, traders from both the eastern and western ends of Monsoon Asia met to exchange goods (Flecker "A Ninth-Century Ad Arab or Indian Shipwreck in Indonesia: First Evidence for Direct Trade with China", 350). This brought a distinct reorientation of trade systems, specifically the breaking in Southeast Asia of previously established long-distance (Arabian Peninsula to Indic Peninsula/Sri Lanka to Southeast Asia to China) networks largely administered by Arabs. During this era, we also see the increased movement of more than consumable goods across the Indian Ocean.[30]

Śrīvijaya was not the only trading center in of Southeast Asia during this era. In the ninth century, there were two ways to get from the Indian Ocean to the South China Sea: via the Strait of Malacca (between Sumatra and the Malay Peninsula, passing by Śrīvijaya proper) or the Sunda Strait (between Sumatra and Java). Both passages were used by traders from the Middle East (Flecker "A Ninth-Century Ad Arab or Indian Shipwreck in Indonesia: First Evidence for Direct Trade with China", 351-352). During this period, Śrīvijaya exerted some amount of control over the trading spaces of Java, but towards the end of this era, Javanese pushed back against whatever level of rule or influence they had experienced from Śrīvijaya (Wolters *Early Indonesian Commerce: A Study of the Origins of Srivijaya, 20*).[31] During the 9th to 10th centuries, we find evidence (e.g. Chinese pottery shards at Batujaya) of trade networks linking western Java with China, marking an increase in the exchange between these regions (Manguin, 120).

This is also the period in which political power shifted to Central Java. Central Java, with its many grand Hindu and Buddhist andesite temples and other structures—including Borobudur, Loro Jonggrang (aka Prambanan), the temples of the Dieng Plateau and Ratu Boko—is what many outside observers think of when they think of classical Indonesia.[32] Java of this era participated actively in the wave of esoteric Mahāyāṇa Buddhism as prevalent across the Indian

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> It seems clear enough that the history of Indian Ocean trade in the centuries after 750 AD is far too complex to fit the set of straitjackets that have been imposed on it in the literature survey above. Change (which must not always be glossed as growth, pure and simple) was polycentric in its motivations. There was no single epicenter that generated a pulse to which the entire system responded, even in the western Indian Ocean (Subrahmanyam).

[30] In the ninth and 10th centuries, the Middle East experienced an economic downturn, resulting in the significant reduction of the number of people living in urban centers there (e.g. in Baghdad). Trade, however, persisted, as mercantile activity remained strong within India and Southeast Asia and demand for goods continued throughout (Amar, 529-530, 534; Beaujard, 435; Horton, 66). Given this continued demand for goods, coupled with vacancy of providers left by the decline in the Arabian Peninsula, various Asian powers gained larger footholds in the Indian Ocean trade networks.

This shift, however, did not mean a total withdrawal of or end to innovation from the Middle East. For example, contact between India and the Middle East in the realm of mathematics accelerated during the eighth to 12th centuries. In the 10th century, Middle Eastern scholars modified Hindu numerical systems to include the decimal, possibly through the transmission of textile production techniques (Bier, 178-186).

[31] The relationship between Srivijaya and (Śailendra) Java has been much debated (See (Jordaan) for overview of discussion).

[32] Many impressive monuments were constructed during this time period. Our definition of “classical” Java in these terms and the lack of further large-scale excavation in other regions are, however, mutually constitutive and a product of historiographic bias. It is largely those few monuments that were prioritized by colonial and then early nationalist archaeologists, held up as desacralized beacons of a perfected past for empire and nation alike (see (Bloembergen)). It is also a common narrative I heard in Indonesia from archaeologists and historians: resources were just not available for all the work they wished to do. Centralized funding went to a few (often politicized) projects.

Ocean from the seventh century.[33] Central Java, however, lacks easily accessible natural ports. What trans-oceanic contact did exist came through the northern coast. The monumental centers surrounding modern Yogyakarta in the south of Central Java were agricultural areas. Movement between the sea and those southern monuments did occur but does not appear to have been central to the structuring of the polity or daily, local economic functioning.[34]

This central Javanese period is significant for our discussions as it was home to a significant percentage (possibly the majority) of the extant stūpika studied here. It was a time of grandeur, of agricultural wealth and of transregional engagement. It was neither the beginning nor the end of trade or exchange, but neither was it the era of the most intensive engagement in long-distance trade. Its architectural remains are spectacular in scale but also evince a relatively early stage of local technique.[35] It is a time that is prioritized internationally while somewhat deprioritized nationally. And it was the time period in which stūpika production emerged significantly within Java.

East Javanese Period

In the 10th and 11th centuries, political power shifted to the more sea-accessible regions of East Java and previous regional hubs (such as Śrīvijaya) declined.[36] Similar shifts occurred

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[33] In insular Southeast Asia, Java and Sumatra loomed large in this space of esoteric Buddhist thought and practice. After centuries of interpreting that region as interstitial at best, as informed and defined by South Asia and East Asia, it is becoming increasingly argued that ideas flowed in both or rather all directions (see, for example, (A. Acri *Esoteric Buddhism in Medieval Maritime Asia: Networks of Masters, Texts, Icons;* A. Acri "Once More on the 'Ratu Boko Mantra': Magic, Realpolitik, and Bauddha-Saiva Dynamics in Ancient Nusantara"; Chankra; Nihom *Studies in Indian and Indo-Indonesian Tantrism: The Kuñjarakarṇadharmakathana and the Yogatantra;* Nihom "The Mandala of Candi Gumpung (Sumatra) and the Indo-Tibetan Vajrasekharatantra"; Sundberg "A Buddhist Mantra Recovered from the Ratu Baka Plateau; a Preliminary Study of Its Implications
for Śailendra-Era Java"; Sundberg "The Wilderness Monks of the Abhayagirivihāra and the Origins of Sino-Javanese Esoteric Buddhism"; Woodward). Centers of religious thought and activity in Java are attested in archaeological record, local epigraphy and foreign sources.

The primary distinction of this genre of religious activity was the emphasis put on the need to be initiated prior to participating in some subset of the rituals. Dhāraṇī practices were also of central importance. Although two distinct streams, there was much overlap and interaction of discourse between esoteric Buddhists and esoteric Śaivites and as such, there is much commonality between these spaces in terms of both text, thought, ritual and artistic production. Esoteric Buddhism has long been associated with royal power (as argued by Ronald Davidson (Davidson)), as the two silos of power appear to have been especially linked in the case of esoteric Buddhist practices. That genre of practice is also closely tied with the cults of Mañjuśrī and Tārā, protector deities of travelers. Those deities are especially prevalent in the regions of Java, Sumatra, Sri Lanka, mainland Southeast Asia and China, leading many to see connections between those regions in the ninth century (see, for example, (A. Acri *Esoteric Buddhism in Medieval Maritime Asia: Networks of Masters, Texts, Icons, Introduction;* Bopearachchi)) For a full discussion of the wave of esoteric Buddhism in Southeast Asia, see Andrea Acri's edited volume *Esoteric Buddhism in Mediaeval Maritime Asia* (A. Acri *Esoteric Buddhism in Medieval Maritime Asia: Networks of Masters, Texts, Icons*).

[34] For full discussion of the orientation and movement between of religious sites in central Java, see Véronique Degroot's dissertation (Degroot).

[35] These themes will be reopened in subsequent chapters. See this dissertation's chapter six "Of Clay" for further discussion of agricultural wealth/production, and its chapter four "Of Iconography" for discussion of the production techniques associated with the larger architectural sites as they relate to the issue of stūpika.

[36] From the 11th century, Śrīvijayan power began to decline, likely commencing with the Cōla attack in 1025 in which Palembang and other important sites of centralized power were destroyed. The delicate balance of power between the center, inland and maritime periphery was disrupted. Vassal rulers increasingly circumvented Śrīvijaya's strictures, participating in maritime trade networks outside of Śrīvijayan infrastructure. For example, it was during this time that we see the growth of trade activity and interest in the Isthmus of Kra, Kedah, Barus and

across the Indian Ocean world as a vacuum was left by the receding Middle East and Europe.[37] The East Javanese period is of significant importance within Indonesia's national narrative. With its Golden Age in the Majapahit kingdom and subsequent shift to Islam, it is this facet of Indonesian and Javanese history that is often prioritized by observers within that region.[38]

The overarching narrative as presented by epigraphic and archeological records is one of a shift away from focus on domestic rice production with subordinate engagement with long

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Lamuri. Also, during the 11th century, the reorganization of power in Java pulled the balance of power, especially with regard to the spice trade, out of the Straits of Malacca and Śrīvijaya and into Java under the rule of Airlangga (Kee-Long, 297-299).

Another factor that may have contributed to the decline of Śrīvijaya was the increased demand for Southeast Asian sourced goods in both China and the greater Indian Ocean market. Śrīvijaya controlled trade, but the primary goods moved were of foreign origin (e.g. Arab resins, ivory, etc. going into China), and it was the movement of these products that the Śrīvijayan authorities strove to control. Southeast Asian products were not so strictly regulated, allowing local groups to participate more freely in their exchange. As the shift of demand occurred from foreign to local goods around the 11th century, so too did the shift in power (Kee-Long, 307).
Close by the decline of Śrīvijaya, the Chinese began to take a more active interest in maritime trade. In the 11th century, the Song Dynasty took control of China. They implemented policies that were very supportive of trade. During this era, we also see in China the flowering of technology useful for long-distance maritime travel, such as the compass and larger junks (Beaujard, 430-431). In the 12th century, China became increasingly involved in the exchange of Chinese ceramics for spices and other foodstuffs from Southeast Asia. Chinese traders favored trading directly with the agricultural states of Southeast Asia, further undercutting the role of Śrīvijaya as middleman (Kee-Long, 298).

Although Chinese sources suggest that Śrīvijaya was no longer a center of trade in the 12th century, there is evidence that Chinese did continue to interact with that empire and that Śrīvijayan settlers were even present in Quanzhou in the mid-12th century. Further, Arabic and Chinese sources, together with archaeological evidence, suggest that Śrīvijaya was still an important trade hub, commanding a strong navy and tributary ties with surrounding cities into the 13th century. Śrīvijaya maintained its position as a key player in the maritime trade between the Indian Ocean and China, while maritime trade in Southeast Asia became increasingly decentralized and diverse in terms of participants (Kee-Long, 300-307).

[37] New, larger political powers emerged elsewhere in the 10th century, facilitating the movement of trade. These empires included the Fatimids (Egypt, 969), the Cōlas (India, 985), the Khmers (Angor 944), Burmese (Pagan, 1044), and Lý (Vietnam, 1009) (Hall, 75). For other discussion of this reorientation, see (Berzock, 52, 59-60; Bier, 173; Horton, 67-76; Malekandathil, 260-264).

[38] 928 CE is a watershed moment this in the history of Java. It marks the oft-cited shift from the central Javanese era to the eastern Javanese era. Scholars are increasingly uncomfortable with such a clear divide, geographically, temporally and stylistically. While the terminology clearly points to a geographic shift in political power from the center to the east of the island, the definitional implication tends to refer to a stylistic distinction in temple architecture and the actual historical distinction is a temporal one (not a geographic one).

At the same time, there was a gradual shift of power or transregional engagement from central to eastern Java. Why this shift, in so far as we can call it such, did occur is still unclear. Various theories have been presented. Pigeaud suggested in his 1958 work "Javanese Gold" that the shift occurred due to the dwindling gold supplies in central Java (Barrett Jones, 7; T. H. Pigeaud, 195). The dynamics between Śrīvijaya and Śailendra is another oft cited (and rejected) factor (again, see (Jordaan) for overview). Barrett Jones argues that the shift of power from central to eastern Java was a gradual process, likely largely driven by the desire to participate more directly and actively in the trade networks that flowed and flourished along the north coast of Java (Barrett Jones, 6-7). It seems likely that a major volcanic eruption of Mount Merapi played some key role in the shift. Van Bemmelen determined that Merapi erupted in a significant way (van Bemmelen). Epigraphic evidence points to an eruption in 1016 but geological evidence points to an earlier date around 928 or 929 as being the one that likely made the most significant push for the rulers to move from central Java to eastern Java. This literal groundswell event both took what had been the agricultural foundation of the kingdom and made it cultivatable for a significant period of time, but also would likely have been seen as a significant sign to abandon the region. With the fertile earth and increasingly active ports calling from the east, as Fontein summarizes, it is little wonder that rulers and population alike chose to relocated (Fontein *The Sculpture of Indonesia*, 41).

distant trade and towards an increased focus on trade beyond the shores of the island of Java as supported by a still productive agricultural base. [39] Much of this activity focused around the Brantas River Delta in northeastern Java, near modern Surabaya. This region would later be known as Janggala, and was quickly characterized by dense population (Barrett Jones; Sidomulyo, 4). It is likely that the draw of this trading center was a significant factor in drawing the weight of political power from the agricultural plains of Central Java to the riverine systems of East Java.

Balitung is the oft-cited, almost mythic classical ruler of the east Javanese period who reigned roughly 900-910CE and provides the backstory to the subsequent efflorescence of East Java. His epigraphic record shows him exercising power over both central and eastern Java. While his origins have been much debated, the balance of data seems to show that he likely came from East Java. It was during his reign that the political unit of Matarām gained control over much of eastern Java (Ponorogo to Malang) (Sidomulyo, 4).

In eastern Java, power was then held by a succession of rulers, including Dakṣa, Tuloḍong, Wawa[40] and finally Siṇḍok.[41] With Siṇḍok, the center of power truly shifted to that region of the Brantas River delta in northeastern Java. Specifically, as noted in the Turyyan inscription from 929, his capital was initially at Tāmwlang (current Jombang) but was then moved to Watu Galuh (now Diwek, to the south). The last evidence of this being a political capital was found in the Wwahan inscription of 985-986. Siṇḍok ruled from 929-947, founding the dynasty of Iśānawangśa. His queen was the daughter of the rakya of Bawang, a region close by that of Wawa's rakyān in Sidoarjo (Sidomulyo, 5). As such, starting under Balitung and then continuing until Siṇḍok, the balance of power slowly shifted eastwards, coalescing in the maritime trade port of the Brantas River Delta in the tenth century.

With Siṇḍok, inscriptions shift from simply referring to the rulers of Mataram ("*sakweh ta dewata prasiddha mangrakṣa kadatwan śrī mahārāja ing bhūmi mataram*" i.e. "let the celebrated gods all protect the kingdom of the illustrious king of the realm of Mataram") to rather using the phrase "*kita prasiddha mangrakṣa kaḍatuan rahyang ta i mḍang i bhūmi mataram*" i.e. "Let you famed ones protect the kingdom of the deified ancestors that are in the Medang in the realm of Mataram"[42], possibly pointing to the movement of power center from shifted, that the previous power center of central Java became the home of dead kings and not living ones (Barrett Jones, 5).

Airlangga, who ruled from 1016 until 1059 is the next ruler about whom we know, largely based on the account of his life provided in the bilingual (Sanskrit and Old Javanese) inscription of Pucangan from 1041. As the story goes, Airlangga was the great-great-grandson of Siṇḍok via his mother who herself ruled Bali approximately 989-1001. Airlangga was betrothed to the daughter of the current ruler of East Java, Śrī Dharmawangśa, and traveled from Bali there to be wed. While there, the Javanese palace was invaded as part of a revolt led by Haji

[39] The shift of priority does note mean a decline of agricultural production. It was during this era that intensive wet agricultural practices were adopted in Java. I will return to this point in chapter six "Of Clay".

[40] With Wawa, inscriptions, while still suggesting that the center of power was in central Java, pay increasing attention to territories in eastern Java. Dyah Wawa (r. ~ 927-928) also known as the rakai of Pangkaja. Pangkaja has been identified as a part of what is now Sidoarjo in Surabaya, a key location at the mouth of the Brantas River. As such, with the rule of Balitung, the connections of the Javanese rulers with the region of trade intensified (Sidomulyo).

[41] Although the earliest inscription referring to Siṇḍok as the ruler is from 929, he is then mentioned as a functionary working under both previous kings, Tuloḍong and Wawa (Barrett Jones, 3).

[42] Translations by author.

Wurawari, although the date of this event is debatable based on various readings of Sanskrit vs. Old Javanese versions of that same inscription. Śrī Dharmawangśa and Airlangga both fled to the forest together with an attendant, Narottama. It has been argued that Airlangga hid out in the mountains to the south of modern Surabaya.[43] After his exile, Airlangga fought for (possibly) seven years to reclaim the throne starting in 1030, and was in the end successful leading him to establish sīmas at Pucangan, Barahem and Sapuri (Sidomulyo, 5-11). Airlangga was also the first ruler to be posthumously revered as an incarnation of Viṣṇu (Ricklefs, 65). When Airlangga stepped down, he divided his kingdom in two, giving rise to the two dynasties of the Kediri period (Janggala and Panjalu) (Ricklefs, 63). These events of the latter part of his rule are known to us only from later accounts from the Singhasāri and Majapahit eras. Little contemporary evidence exists to prove whether or not this peaceable division occurred as depicted in later literature, but what evidence does exist does seem to fall in line with that narrative (Boechari *Melacak Sejarah Kuno Indonesia Lewat Prasasti*, 135-154; Sidomulyo, 8).

The Kediri era, 1042-1222, was characterized by the two dueling houses of Panjalu and Janggala. Many stone inscriptions are found from this era, but less than half have been transcribed (Sidomulyo, 13). While many names of rulers are known, a clear vision of succession has yet to be compiled.

Alongside these political vicissitudes, there is evidence of new religious movements and shifts within religious practice, especially in the mountains around modern Malang. As mentioned earlier, Viṣṇu gained significance in court religion during this time period, although again only being invoked by kings posthumously (Ricklefs, 65). The Kasturi sect also emerged, with a first maṇḍala at Turyan, Tantu Panggelaran, remembered largely via a few powerful teachers, e.g. *wiku* Mpu Tapa-palet/Mpu Palot discussed in the Pararaton as an "adopted father" to Ken Angrok and *buyut* Genting who erected multiple maṇḍalas at Mt. Kawi (Brandes, 10; Sidomulyo, 18; T. G. Pigeaud, 121, 188). This was an era—in parallel with evidence of the rise and fall of stūpika usage—of religious change.

Later East Javanese Period

Around the 13th century, another restructuring of trade networks occurred. From the 12th through the 14th centuries, there was a progressive compartmentalizing of maritime trade routes. Rather than individuals moving across the entire breadth of the Indian Ocean network or breaking in Southeast Asia, a system of stages emerged in which people moved more frequently within their smaller spheres, passing goods from one trader to another (Ho, 102). Within these segments, trade proliferated, as regional and transregional trade amalgamated and proportionately greater emphasis was placed on the movement of less precious goods. This also meant that the directionality of trade shifted. As explained by Subrahmanyam,

[43] The iconography of Belahan and the epigraphy at Jolotundo (two water source sites near Mojokerto in northeast Java) have been cited as evidence of Airlangga's time spent in the mountains there. The Viṣṇu statue of Belahan ended up not having come from there originally, and the inscription at Jolotundo does reference *an* Udayana, but its date would place that figure significantly earlier than Airlangga's father, Balinese ruler of the same name. Sidomulyo has recently made the convincing argument for reading that text as referencing a previous (other) Udayana, likely related to the princess of East Java who took the throne of Bali when she married a Balinese man of less illustrious pedigree. That man then, it is argued, adopted as his coronation name, the name of Udayana to honor his wife's family and their more illustrious lineage. In any event, while the image of Airlangga living in the hills of Mount Penanggungan looms large in the imaginaire of many in Indonesia, little evidence exists to support such a narrative. The majority of Airlangga's epigraphic legacy lies further to the east in Java, making that a region more likely to have been his retreat (Sidomulyo, 13)

> Whereas during the years 800 to 1300, the main axis of long-distance commercial flows in Asia appears to have been in the east-west direction (both on the caravan routes through Central Asia, and on sea), the years after 1300 saw the rise of commerce largely in the north-south direction. Indian trade with Southeast Asia and East Africa grew, as did Chinese trade with insular Southeast Asia. This increase was largely based on the exchange of tropical products, such as spices and woods, and minerals, against manufactures like Chinese porcelains and silks and Indian cotton textiles. At the same time, the rise of a set of port-centred states, which we shall describe below, led to the growth of a substantial trade in food grains and other items of bulk consumption. This trade, in relatively low-value and high volume goods, may have existed earlier as well, but it would seem that the late fourteenth and fifteenth centuries witnessed a substantial expansion (Subrahmanyam, 754).

In the 15th century, Chinese influence declined in the larger Indian Ocean system. In 1433, the Ming Dynasty retreated from the outward facing system of maritime trade (Beaujard, 424). With the exiting of China from the scene, together with declines experiences in Europe, the Middle East and Egypt, trade continued largely based upon the continuities of South and Southeast Asia.[44] Specifically in the 14th and 15th centuries, such Southeast Asian centers as the Majapahit Empire in Java and Bali and then Malacca gained centrality (Beaujard, 435; Ho, 102; P. J. Zoetmulder, 21-23).

Looking back to Java, the 13th century saw a move into a somewhat interstitial period of later Kadiri bleeding into Singahari rulers.[45] According to Javanese memory, Ken Angrok ruled from 1222-1227, giving birth to the Singhasāri kingdom (Rajasa dynasty), although this origin narrative is not supported strongly by contemporary evidence.[46]

Throughout the Singhasāri period, that kingdom strove to expand its borders and re-unify East Java. Kṛtanagara was their most famous and powerful ruler, but even he did not achieve this goal (Ricklefs, 63). Kṛtanagara (as described in the Pararaton) was trained in a religious and scholarly fashion to take the throne. Kṛtanagara was killed in 1293 in a revolt and then the kingdom was sent into further disarray with the Mongol invasion of 1293.

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[44] In 1260, the Mamluks drove the Mongols out of Egypt, providing a new western end to trade conducted by Al-Karimi merchants. These traders, used to interacting with the Kerala ports prior to the fall of Baghdad, returned to that region from their new base in Egypt, while the Jewish and Christian traders who had remained in Kerala re-established their networks. Muslim traders primarily used the Kerala ports of Calicut and Cannanore, while the Jewish and Christian traders used Quilon and Cranganore. During the final decades of the 13th century, Kerala ports played host to vessels from China, and local traders reciprocated, visiting the Yuan who eventually brought Kerala into their tributary network, further easing the passage of goods, people and ideas across the Indian Ocean world (Malekandathil, 264-266).

[45] The time period of 1205 until 1255 has traditionally been assigned to the Singhasari era, but Pak Hadi has recently begun to argue that it should more correctly be seen as connected to the Kadiri era, based on the contemporary use of kingdom names, although all arguments are tentative given that evidence is thin (Sidomulyo, 22).

[46] The name of Singhasāri is not ever mentioned in any inscription dating from the period when it supposedly existed, making this labeling practice rather anachronistic. Further confusing the naming situation is the fact that the term Tumapĕl is synonymous with Singhasāri, but more commonly used in formal documentation. First evidence of that name being retroactively applied to the rulers of East Java comes from the Deśawarṇana of 1365. In that text, Prapañca reports that the name used to refer to the political center on the eastern slopes of Mt. Kawi changed in 1254 during the rule of Wiṣṇuwardhana from Kuṭa Rāja to Singhasāri. The 1255 Mūla Marurung inscription, the earliest inscription of the Singhasāri era, similarly suggests that the Tumapĕl is a recent capital. The progression becomes more concrete with the inauguration of Kṛtanagara (Sidomulyo, 21).

It is during the reign of Kṛtanagara, the much-lauded *amalgamation* of Hinduism and Buddhism so often associated with the idea of "Javanese religion" becomes more apparent. For example, after his death, Kṛtanagara was remembered as an incarnation of both Śiva and Buddha (Ricklefs, 65-66). This shift has been read back into early eras of the Singhasāri, but based uniquely on later evidence, and is not truly supported by contemporary epigraphy (Sidomulyo, 21).

The exact boundaries of the Majapahit era and empire are often debated as ties existed between previous and subsequent rulers, but it is generally dated from 1294 until approximately 1550. The son of Kṛtanagara grabbed power after the death of his father by, in effect, switching sides. He allied with the Mongols who had just invaded his father's Singhasari kingdom. Taking the coronation name of Kertarajasa, he ruled from the new capital of Majapahit until 1309 (Ricklefs, 63). That same political center would continue to maintain power even with the shift to Islamic rule and into the 16th century.

Majapahit was in many ways a more significant kingdom on the international scale than at the local one. This was due in no small part to the continued rise of the spice trade, and Majapahit-controlled Java's role as the primary intermediary or entrepôt, disseminating those produces from the eastern archipelago out into the wider Indian Ocean world. Much of what we know of the Majapahit era comes from its own manuscript records, especially the Deśawarnana and the Pararaton. As court productions, these sources provide a positive image of the kingdom as strong and wide-ranging. Key figures of the Majapahit were Hayam Wuruk, who ruled 1350-1389, and his minister, the famed Gajah Mada. The Majapahit empire also looms large in the modern, nationalist narratives of Indonesia. While Majapahit was powerful, it also faced challenges, especially from other local elite who controlled much of the land in the region (Ricklefs, 66). As Majapahit lost control over its ports and the international trade flowing past it, the kingdom lost some of its significance (Ricklefs, 66).

In 15th century, the Portuguese entered the Indian Ocean world, bringing a very different approach to trade relations than had previously been present in that world, as a centralized, armed, governmentally administered trading force.[47] Despite the reorientation brought by the Portuguese, continuities existed with previous maritime systems.[48] The Portuguese, for all their desire to control the maritime networks of the Indian Ocean World, failed. The advent of the Portuguese represents a point of change, but not of total redefinition.

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[47] The Portuguese wished to take sole control of the movement of spices and worked to re-direct trading patterns to achieve that goal. Specifically, the Portuguese worked to shift trade "from the Calicut-Aden-Cairo-Alexandria-Venice route to the Cochin-Lisbon route via the Cape of Good Hope with the help of coastal patrolling" (Malekandathil, 269). Other events in Europe at this time also impacted the Indian Ocean trade. For example, from the 10th to the 14th centuries, Europe saw a shift in climate that allowed for greater agricultural production, allowing Italy to produce its own rice in the 15th century and hence ending that region's longstanding heavy dependence on food importation (e.g. even from Roman times, grain was brought in from Egypt) (Beaujard, 424).

[48] For example, the Armenian merchants from New Julfa continued to play a significant role in the execution of trade throughout the Indian Ocean World, Europe to the Philippines (Aslanian ""The Salt in a Merchant's Letter": The Culture of Julfan Correspondence in the Indian Ocean"; Aslanian "The Circulation of Med and Credit: The Role of the Commenda and the Family Firm in Julfan Society"). As Wolters points out,

> The fundamental unity of communications [of the Indian Ocean World prior to the advent of the Portuguese] is amply verified in the quick recognition by the Portuguese at the beginning of the sixteenth century (1506-1512) that, in order to control the spice trade of eastern Indonesia, they had to erect a chain of fortresses from the Red Sea to the Moluccas before they could dominate the far-flung Asian emporia and monopolize the spice trade. Their ambitious geopolitical strategy never succeeded, and spices continue to reach the Mediterranean through Muslim traders (Wolters *History, Culture, and Region in Southeast Asian Perspectives, 45*).

Periodization

This overview of Javanese history read within the context of the networks of Monsoon Asia runs largely parallel to the system of periodization by John Miksic and Goek Yian Goh in their *Ancient Southeast Asia*. In that work, they map the classical era in terms of the *protoclassical* of 1-600CE, the *early classical* of 600-900, the *middle classical* of 900-1200 and the *late classical* of 1200-1400CE (Miksic *Ancient Southeast Asia*). There are pros and cons of this terminology as compared specifically with the divisions of West, Central and East Javanese periods more commonly employed within Indonesia. Regardless of semantics, however, we see through this overview a shift in the space of Java and in which stūpika functioned: early expressions of Sanskritic Buddhist polities around the fifth century largely focused in West Java, more grandiose iterations in the fertile plains of central Java in the latter half of the first millennium CE as Southeast Asia claimed a stronger position with maritime trade systems, and subsequently more localized versions proliferating in the West as Java itself took on a powerful role in maritime trade in the early centuries of the second millennium CE.

Stupikaic Space

That overview of history provides a context, but it does not shed much light on the specifics of our focus of study. How can we interpolate this data back into the intersection of the human and stūpika within Java? How can we read the stūpika of Java as speaking outward onto (rather than being subsumed by) this deluge of information regarding the large-scale networks of power in which they functioned? For this problem, I return to the field of Indonesian or Javanese studies and the work of Natasha Reichle as interpreted through the theoretical lens of landscaping.

Reichle made a study of Borobudur—the grand 8th-9th century Buddhist stūpa compound built in central Java—in which she examined the edifice as a way of unpacking the practicalities of its production practices.[49] She paints a picture of local farmer-artisans who likely held rights

[49] Borobudur is made of andesite. This dark grey volcanic stone is common in the region of central Java. While comparatively porous and weak for a stone, it was used in the construction of many monuments as these qualities make it well suited to carving. The reliefs carved into the rock face of Borobudur were carved once the stones were in place architecturally, i.e. in situ. Despite the larger canvas, as it were, being constructed prior to carving, carvers tended to use the blocks as individual canvases, containing elements (e.g. a face or group of people) within a single stone to ensure the highest integrity of image (Reichle, 338). This is unlike in later architecture, as associated with the period of East Java, in which the images run fluently across blocks.

The lowest level of reliefs of Borobudur are underground. They are generally referred to as its "hidden foot". In 1885, the Dutch engineer J.W. Ijzerman noted that the carving of the monument appeared to continue below the level of the stone path that skirted its base. This led to the excavation of the base (by removing the stone path) to uncover this 160-panel level. After being recorded by the Javanese photographer Kassian Cephas, the "hidden foot" was re-hidden in 1891. The Japanese again uncovered one quadrant during their occupation during World War II. As a result, today one can see four and a half panels of relief in the southeast corner of the monument (Reichle, 335).

The images of this level do appear to map in a general way to the narratives of the Mahākarmavibhanga, but it does not follow any extant version thereof precisely. This, combined with the variation of composition between various vignettes as depicted around Borobudur suggests that (a) the artisans had significant say in the details of how their assigned image was executed, and (b) said artists knew enough about both the narratives themselves and the local context around them to engage with both in a thoughtful and productive way, either individually or suggesting the existence of a since-lost Javanese version of the text (as argued Jan Fontein)(Reichle, 339-340).

Many scholars, notably Dumarçay and Bernet Kempers, explained the general process by which the panels of Borobudur were carved. Once the basic architecture was built, each panel was carved. The first step was sketch

to fertile local plots in exchange for devoting a certain percentage of their time to temple work. These workers were spread across the region in smaller settlements, and while their origin and/or wider international connections might be debatable, they were fixed locally while that locale was actively engaged in the wider networks of exchange discussed above. The images carved onto the face of Borobudur themselves depict a sense of reality that encompassed both local Javanese daily life and the Buddhist architectural styles as prevalent in India and other regions of Maritime Asia. They demonstrate a strong foundation of knowledge with regards to both Buddhism, artistic production (e.g. stone carving) and the local Javanese context (Reichle, 336-338).

As Reichle points out, Borobudur was the first of its kind in the region as an example of carved architecture of that scale and detail. It is apparent that the local artisans were greatly skilled in carving, knowledgeable in Buddhist stories, immersed in local life and possibly literate in Sanskrit and Pallava script. Still, the variation in execution appears to suggest a sort of "figure it out as we go" approach to this incredible project that spanned multiple generations of craftspeople (Reichle, 355).

To return to the terminology highlighted in the Introduction, Reichle sees direct evidence of an active culture of tinkering. Reichle's observations of the reliefs of Borobudur underscore the nuance with which we might sketch the space of stūpika. Frequently, discussions of stūpika come down to issues of the *Buddhist world*, *Monsoon Asia*, the *Sanskrit cosmopolis*, less *elite* ritual practice, etc. But that is not the space of actual lived existence surrounding stūpika. The truth is much more complicated. Reichle argues that the artists responsible for the carving of the bas reliefs of the hidden foot of Borobudur were local, seasonal labor with strong local and Buddhist knowledge, given relatively great autonomy over the details (at least) of their work, but also encompassing a range of skill and engagement. The elite and the non-elite, the local and the transregional, the religious and the economic, etc. are far from dichotomous; they function forever together. Reichle, in other words, presents a perspective from which one can erase the divisions held up by Wolters and Pollock. The trans-local is the local. The local is the trans-local.

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out the scene in charcoal or paint, then scratch it into the stone. Next the artist would carve out the background, thereby leaving the images in relief in the foreground. Finally, details would be added to the foregrounded elements and the outline of figures/objects would be more precisely articulated while not actually cutting anything from behind the profiles. As such, the elements depicted would sit forward from the recessed face of the panel but remained well anchored to the wall (Reichle, 340, 348). Despite this being the basic process, not all the panels are the same nor do they seem to have been tackled in order. Rather, variation exists between the techniques applied and unfinished panels are interspersed among completed ones. Not all the panels bear the same framing lines. Figures and objects are drawn in different ways in different vignettes. While most images were carved from the top and working down, this is not universally the case as instances exist where the bases are completed in detail but the upper elements are not. Some panels evince a high level of carving skill and just excitement about engaging with the material; others do not (Reichle, 348-51).

Inscriptions also exist along the hidden foot of Borobudur. These inscriptions appear to be a sort of shorthand for the images depicted, possibly notes for the artists, like a premodern sticky note labelling what should go where. It has also been suggested that they might have been meant like explanatory plaques to visitors. The inscriptions were carved by different people, however, as at least three distinct styles exist and spelling varies slightly between inscriptions. The style of writing appears to mimic the long, scratchy style of text written with a stylus. It would appear most likely, however, that these were notes made prior to the completion of the carving, written as if copying text that was written with a stylus/by someone used to seeing writing in that form, and then erased/removed upon the completion of the carving. This would fit well with the idea that multiple people would be working on different parts at different times and with significant breaks for agricultural labor (Reichle, 352-353).

Landscapes

This chapter is about getting the *lay of the land*. Our field of interest is not just (or even primarily) the space in which stūpika functioned, but more the space delineated by stūpika. What space is depicted or enacted by stūpika? I suggest that one way to address these questions is by leveraging the concept of the *landscape* and landscape imagery. How can we read stūpika as landscape art? What does this perspective afford our discussion?

In the field of Art History, landscape is often associated with depictions of our world that fundamentally splice the human from the non-human and the projection of hegemony over colonized spaces and bodies. Mitchell states from the outset of his edited volume *Landscape and Power* that "The aim of this book is to change "landscape" from a noun to a verb. It asks that we think of landscape, not as an object to be seen or a text to be read, but as a process by which social and subjective identifies are formed" (Mitchell "Introduction", 1). He continues,

> Landscape, we suggest, doesn't merely signify or symbolize power relations; it is an instrument of cultural power, perhaps even an agent of power that is (or frequently presents itself as) independent from human intentions. Landscape as a cultural medium thus has a double role with respect to something like ideology: it naturalizes a cultural and social construction, representing an artificial world as if it were simply given and inevitable, and it also makes that representation operational by interpellating its beholder in some more or less determinate relations to its givenness as sight and site. Thus, landscape (whether urban or rural, artificial or natural) always greets us as space, as environment, as that within which "we" (figured as "the figures" in the landscape) find—or lose—ourselves (Mitchell "Introduction", 1-2).

In this perspective, landscape is a genre of representation that both reflects and constructs networks of power and meaning.

Returning to the field of Buddhist Studies, Anne Blackburn describes how the manipulation of space—its landscape and architecture—plays a central role in Buddhist socio-religious practice. She underscores the importance of taking seriously what those instances of construction are saying about themselves and their context of production. This opens the opportunity to reverse engineer these choices to understand the (complicated, interconnected, political, social and economic) Buddhist past (Blackburn).

So what would it mean if we were to think of stūpika as landscapes? Stūpika are reproductions of the form of the stūpa. They are reproduction both of an idealized other space (i.e. the stūpa) and the local environment itself (i.e. the earth from which they are created). They take the local environment and literally reform it to fit within the contours of a (foreign) power structure's vocabulary. In doing so, however, they reshape the local context, enacting and creating that narrative to make it fundamentally of the local space. To use our vocabulary from the previous chapter, they function as the evidence of iterations of engagement, of exchange, of tinkering, entwining all the forces present in their space, snapshot miniturizations embodying the materials and materialities surrounding their creation. They depict that space as landscape images of all the complex intermingling embodied in that tinkering.

While the theory presented in the previous chapter offered a significant path towards viewing our dataset via a broader, or at least more inherent, lens, this turn to the concept of verbing landscape allows us the same opportunity with regards to our process of contextualization. Whereas the object is an instance of tinkering, containing the ingress and

egress of knowledge, it can then be read as an instance of landscape in which it itself defines its field of interest via its role as depicter of space.

From this perspective, we can move beyond the idea that the stūpika of Java are examples of India culture spreading across Southeast Asia or Indonesia becoming Buddhist in any simplistic or unidirectional way. By engaging with stūpika as landscapes in this verbal sense, we see the engagement of the local space, its physical materiality and the work of its people as centered while not rejecting the very real engagements with power networks that range much farther.

This approach achieves a few ends. First, it inverts the power dynamic. Rather than local artisans creating perennially imperfect renditions of foreign ideals, we see these artifacts as individual invocations of power over those transregional tropes: they are instances of mastery, not subservience. Second, we allow ourselves to be led by our data in bounding our discussion. If stūpika as landscape depict a *space*, it is that *space* (and only that space) which is of interest to our discussion. Third, in doing so, we are able both to lose ourselves (the modern academic) and find the premodern, contemporaneous human a little more. By allowing stūpika to dictate their own field, we take one more decision away from out anachronistic perspective and hand it back to that shadowy figure of the past, further adding to our sketchy understanding of that very person (writ plural).

Just as this theory of the landscape can allow us to engage with the role of the flower or rock depicted in some colonial painting, so too by this approach we can see the place of Javanese earth and hands in the space of stūpika and/or Buddhist religious practice within classical era Java. In parallel, this approach encourages us to both see stūpika as representations of the world around them (and potentially the stūpa known to local people) and also as informing local people as to the concept of the stūpa writ more broadly. This perspective is, in many ways, a corollary to the concepts of portability and miniaturization. The doing of landscape (conceived of broadly) is what is being done as ideas and objects are miniaturized and moved. The tinkering is the inclusive view of this labor that does not give all agency to the most powerful or remembered participants. What if we invoke the verbing interpretating of Mitchell (landscape as verb, not noun) to unpack these images and the forces at play in their creation, in the *landscaping* of these elements?

Conclusion

This chapter provides the historical context one might expect from a dissertation on Mahāyāṇa Buddhist artifacts. It explains Java's social, economic and political history as it fits within the wider trajectories of Indian Ocean history. This background is helpful to place our conversation and data, but it is a means to an end. That end is to consider how one might add to those conversations by considering the data according to new paradigms. Throughout the coming chapters, we will dig deeply into stūpika, asking them to pose their own questions and form their own conversations. Our aim is to take seriously this mode of stūpikaic landscaping as a means of negotiating the (limiting) labels and dichotomies so often leveraged upon them by historiography. Specifically, I argue that by viewing stūpika as landscape, we can refigure the space of discussion. By parsing stūpika as objects of text, of iconography, of metal molds, and of clay, we center stūpikaic space.

Chapter 3: Of Text

Introduction

A significant percentage of the extant stūpika found in Java contain some textual component. Only a handful of those inscriptions, however, are legible. Of those, we only find the text we expect (*pratītyasamutpāda gāthā*), written in Sanskrit, overwhelmingly in the script we expect (*siddhamātṛkā*) with some instances in the second most likely script (*kawi*).[50] These textual elements of stūpika (much like the genre as a whole) point to the fact that Java was part of the Mahāyāṇa Buddhist world as it traversed the Indian Ocean around the end of the first millennium CE.[51] But this is not the end of the conversation. The textual aspects of Javanese stūpika are far more than *just* unwavering iterations of a dominant, known, transregional tradition. Leveraging our eco-critically-inspired theoretical approach, this chapter asks us to think deeply about what else the data tells us.

I started this project with a very different aim in mind, one that centered the textual aspects of stūpika and viewed them from within the context of that maritime Buddhist space. I went to the field with a proposal to identify the texts used in the stūpika of Java. Having found some variation among the texts on the stūpika of Bali, the hypothesis was that there might be such diversity within the Javanese dataset.[52] This did not end up being the case. In that (negative) discovery, however, and through my deep engagement with the stūpika and the spaces in which

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[50] Historiographically, the Sanskrit language inscriptions of Indonesia have both received great attention (under colonial auspices) and subsequently very little attention (with the rise of Indonesian nationalism). As Griffiths notes,

> J.G. de Casparis, who died in 2002, was the last great specialist of Indonesian epigraphy who was competent in Sanskrit, but he stopped publishing inscriptions early on in his career. If I am not mistaken, not a single previously unpublished Sanskrit inscription from Java has been published by a trained Sanskrit scholar in nearly 79 years, since an article by De Casparis dating to 1961 (Griffiths "The Sanskrit Inscriptions of Śaṅkara and Its Interpretation in the National History of Indonesia", 1-2).

Griffiths highlights an important point and positioning for this project: that the Sanskrit epigraphic sources in Indonesia are at best ignored and more problematically, are often used to leverage historical arguments that they do not in fact support (Griffiths "The Sanskrit Inscriptions of Śaṅkara and Its Interpretation in the National History of Indonesia", 21). We can read this as a parallel effect to the desacralization of classical religious sites as described by Marieke Bloembergen and Martijn Eickhoff (Bloembergen). In the face of the Greater-India-influenced visions of a united, historically-Hindu South and Southeast Asia, Indonesia desired an independent identity and postmodern academics rallied in support of this vision. Part of the Indonesian nationalist initiative was to reinterpret the historical evidence of Indonesia in such a way as to demonstrate the existence of a great Indonesian past—not a great Indic past—in Indonesia. During the early years of independence, Indonesia called extensively upon its pre-Islamic archaeological wealth to establish national legitimacy. Many of these monuments had previously been used to prove Indic influence, emphasizing religion. With independence, they were actively reinterpreted, largely stripped of their religiosity (Bloembergen and Eijckhoff 2011, 406-408). Soekarno, for example, positioned these pre-Islamic temples and statues as part of national heritage while suggesting that their religious identity was not what was important, defining the proper *Indonesian* usage of such sites as non-religious. A similar arc is found in the categorization of Java's Sanskrit-language record within global scholarship. With Sanskrit, Hinduism, Buddhism, etc. too often categorized as Indic, such elements as found within the archaeological record of Indonesia were downplayed. This was done partially as a corrective to previous generations of overemphasis and partially out of a postmodern desire within the academy to respect Indonesian subjectivity. More recently, however, such categories are seen as existing more in network and belonging less to the subcontinent specifically (e.g. see (A. Acri *Esoteric Buddhism in Medieval Maritime Asia: Networks of Masters, Texts, Icons;* Acri "Translation as Commentary in the Sanskrit-Old Javanese Didactic and Religious Literature from Java and Bali"; Bopearachchi).

[51] For further discussion of the tradition interpretation of Javanese linguistic progression in conversation with the Indic subcontinent, see (P. J. Zoetmulder, 3, 6-9) and (Soekarto Kartoatmodjo).

[52] See (Warshall "The Sanskrit Inscriptions of Pedjeng: A Case Study of the Utility of Sanskrit Epigraphy in the Study of Bali's Socio-Religious History"; Warshall "The Pratītyasamutpādagāthā and the Vimaloṣṇīṣa Dhāraṇī: Stūpa Plaques from Pedgeng, Bali")

they functioned in Java, I began to see stūpika more completely, more holistically. This dissertation represents the result of that reorientation.

The presence of textual elements within and upon the stūpika of Java represents a choice. This chapter focuses on understanding that choice, not just as a foregone conclusion within the expansive networks of the Sanskritic Mahāyāṇa world but rather as conscious decisions enacted by individuals living in Java. This chapter centers questions of process and what that process reflects in terms of the cultural context in which they were made: how was text added to stūpika in Java? What aspects of text were prioritized? What do these choices suggest regarding the local, contemporary view of the project of stūpika making?

Together, this kicks off our envisioning of the workshops—those spaces constitutive of the social, cultural, religious, economic and political contexts in which they functioned—engaged in the production of stūpika. Throughout this dissertation, each chapter will add greater texture to these contexts of production, but with this chapter, we set the stage both for the content and method of this discussion.

This chapter offers a few central observations. Stūpika were created by craftspeople in workshops, wielding great skill in working with clay (mixing, molding, drying, stamping, incising, etc.), using utensils from metal-workers who were knowledgeable in creating circular stamps. In each context, some percentage of these craftspeople were somewhat conversant in (at a minimum, able to copy) Sanskrit, *siddhamātṛkā* and/or *kawi*. In the stūpika production process, maintenance of iconographic features was prioritized over the legibility (in the modern sense) of any added textual elements. What this chapter tells us, more than anything, is that we are asking all the wrong questions of our data. This dissertation might not offer any final answers in terms of the place or experience of stūpika within Monsoon Asia or Java, but this section points to the fact that the stūpika of Java are anything but a predictable or flat dataset.

Java's Stūpika Texts

Among the stūpika of Java, I have found examples of only the *pratītyasamutpāda gāthā* or abbreviations thereof. All the stamped instances are written in a version of *siddham* script.[53] All incised instances are in a version of *kawi* script. The vast majority of the inscriptions on stūpikas are stamped into the clay as set units depicting Sanskrit language in *siddhamāntṛkā* script. The exceptions to this rule are the stūpika found at Borobudur (and possibly also some from Candi Gentong) that bear handwritten Sanskrit language in Kawi script.

Boechari and others have examined the inscribed stūpika of Borobudur closely (Boechari "Report on clay votive stupas from the Borobudur site"; Indradjaya; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur"). Here, therefore, I focus my own reading on the stamped iterations found on the stūpika held elsewhere in Java.

[53] Two caveats: (1) Other texts can be identified among the text disks, some of which might have come from within or beside stūpikas. We will address this issue briefly later in this chapter, but for now, let us just acknowledge that this is a tenuous appendage (both in inclusion and exclusion) at best. For the sake of clarity within the space of this dissertation, we will restrict ourselves to the topic of stūpika proper. (2) Other texts are also found within the collections of stūpika found on other islands of Java (Griffiths "Written Traces of the Buddhist Past: Mantras and Dhāraṇīs in Indonesian Inscriptions"; Stutterheim "De Herkomst Der Kleizegels Van Pedjeng (Bali)"; Warshall "The Sanskrit Inscriptions of Pedjeng: A Case Study of the Utility of Sanskrit Epigraphy in the Study of Bali's Socio-Religious History"; Warshall "The Pratītyasamutpādagāthā and the Vimaloṣṇīṣa Dhāraṇī: Stūpa Plaques from Pedgeng, Bali"). Again, however, these are outside the scope of this dissertation project. Still, it is important to note that variety did exist.

Stūpika Texts within the Wider Buddhist World

Within the premodern Mahāyāṇa Buddhist world, (specific) texts functioned as relics, as a means to gaining proximity with the historical Buddha and his teachings.[2] Five texts in particular are seen as efficacious for placement in small stūpas. The most commonly found one is the *pratītyasamutpāda gāthā*. The other four are the *uṣṇīṣavijaya*, *vimaloṣṇīṣa*, *guhyadhātu* and *bodhi*[*garbha*]*alaṅkāralakṣa dhāraṇīs* (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images", 254).

Pratītyasamutpāda gāthā

The *pratītyasamutpāda gāthā* is the most common text to be identified within these small stūpa forms, found throughout the Buddhist world of the first millennium CE but in the greatest concentration along the Gangetic Plain of northern India in the second half of that era (Taddei, 78-79). The text itself is as follows:

Ye dharmā hetuprabhavā hetuṃ teṣāṃ tathāgatho hy avadat
teṣāṃ ca yo nirodha evaṃ vādī mahāśramaṇaḥ

Bentor translates this passage as “Those dharmas which arise from a cause, the Tathāgata has declared their cause. And that which is the cessation of them, thus the great renunciant has taught” (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images", 251). This gāthā is written in āryā meter. It has its origins within the Buddhist canon within the story of the conversion of Sāriputta and Monggallāna.

Starting from as early as the second century CE, it is found inscribed on the containers for corporeal relics. In the sixth century, a transition occurred whereby the text itself took the primary position, replacing the need for a relic other than itself and taking its place as enshrined within the miniature stūpas. Miniature stūpas (together with votive plaques) are a common part of the archaeological record of Mahāyāṇa Buddhist world from the sixth to the 12th centuries (Boucher, 4-8; Liebenthal).[54] Placing this text within a stūpa and collecting many within a larger stūpa was seen as highly productive of merit (Salomon, 117). Stūpika are simultaneously relics and reliquaries; they represent the presence of the Buddha in their form (stūpa) and their content (text, or the potential of text).

The stūpika and the texts found thereupon in Java can be situated within this genre. The presence of these texts (and specifically the *pratītyasamutpāda gāthā* in this form) places Java

[2] Buddhist relics were generally housed within mounds known as stūpas. These come in a wide variety of sizes, from small enough to hold in one’s hand to massive temple compounds. During the first few centuries after the death of the historical Buddha, the relics entombed within these structures were deemed physical aspects of Siddhārtha Gautama and other enlightened beings. Later, texts containing the teachings of the Buddha became ways in which that figure could be made physically present (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images", 250). A parallel process of representing the Buddha pictorially also emerged, for example in the wall carvings of Borobudur (J. Fontein, 212).

The enshrinement of texts associated with the Buddha’s dharma within stūpas became commonplace. It is discussed multiple times in north Indian literature (e.g. Pratyutpanna sutra -- 1st century BCE, Abhidharmavibhāṣāśāstra -- 2nd century CE, Abhidharmakośa -- 4th-5th century CE, and Sphuṭārthā -- 8th century) (Salomon, 117). The records left by the Chinese traveler I Tsing describe the practice of placing both physical and textual relics within stūpas in India in the seventh century (Bentor "On the Indian Origins of the Tibetan Practice of Depositing Relics and Dhāraṇīs in Stūpas and Images", 252). For a more complete discussion of the mechanics of this practice, see (Taddei, 79-80) and (Tucci *"Mc'od Rten" E "Ts'a Ts'a" Nel Tibet Indiano Ed Occidentale*, 57-70).

[54] While not within the scope of this dissertation, a cursory examination of the stūpika and votive plaques of Burma points to significant stylistic commonality and suggests that a comparative project between Java and Burma revolving around that dataset would be intriguing.

within a well-established network of shared culture that spanned a large part of Asia from the sixth to 12th centuries. The stūpikas of Java are of this wider tradition of reliquary usage, underscoring the known place of Java within the Indian Ocean world, Monsoon Asia and the Sanskrit cosmopolis. While true, this is not the end of the interpolation possible with regards to the text. The decision to incorporate the *pratītyasamutpāda gāthā* into and/or onto the stūpika of Java was just that: a choice.[55]

The Javanese Context: Powerful Texts

The *pratītyasamutpāda gāthā* was not the only text known to local copper-alloy craftsmen, ritual specialists or practitioners. Rather, amidst the whirl of textual and ritual knowledge, it was this text that was chosen to be placed in this function over and over again.

In his book, *More Than Words¸* Richard Fox leverages ethnographic work to unpack the complex place of writing within the Balinese context, pointing to the local perception of the power of text and the great diversity of practice present within the broader, national categories of religion and culture. The objects themselves—including the textual elements—hold power and agency. Written objects are not *just* to be read and choices of writing are not arbitrary (Fox).

This idea finds historical support across Java and into the premodern era. The written word functioned in classical Indonesia in a communicative fashion comparative to writing today, but also in an iconographic and/or emblematic fashion as syllables/letters independently held power, simultaneously.[56] Both these functions occurred using both Sanskrit and Old Javanese language and both *siddhamātṛkā* and *kawi* scripts. Old Javanese has a strong tradition of meaning embedded in a given letter/syllable (Ali; Kuipers, 17).[57]

Bronze statuary, for example, present a wide array of textual consecration objects, including *dhāraṇī* and text coins (Mechling et al., 99-100). Cruijsen, Griffiths and Klokke's 2013 article paints a rich picture of just how vibrant Javanese usage of short, powerful texts was during this premodern era. Through their close examination of the Mahāpratisarādhāraṇī and specifically one copper plate from Java, they show the people of Java engaging with a Sanskrit, Buddhist text, working actively between *siddhamātṛkā* and *kawi* scripts, considering both the sound and form of the text/language, intermingling textual and iconographic features together with material concerns (Cruijsen, 129-130).

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[55] Two contextualizing statements will help frame this data. First, our dataset is fundamentally imperfect and incomplete. Data is insufficient to say definitively that the stūpika of Java were only made using the *pratītyasamutpāda gāthā.* Nor can we hold Java in comparison with Bali to say the former was more homogenous while the latter more heterogeneous in its stūpika texts. Second, the *pratītyasamutpāda gāthā* was not used so widely for any lack of other options. Short, powerful texts were prevalent and multiple in premodern Java. What the data does say, therefore, is that within the whirl of text and meaning, time and time again, stūpika manufacturers chose to use the *pratītyasamutpāda gāthā* in Java.

[56] For example, see (Acri "Once More on the 'Ratu Boko Mantra': Magic, Realpolitik, and Bauddha-Saiva Dynamics in Ancient Nusantara"; Acri "Translation as Commentary in the Sanskrit-Old Javanese Didactic and Religious Literature from Java and Bali", 213, 236-237; Ali; Kuipers, 17).

[57] Nor were writing and textual traditions in Indonesia static. Within the context of Java and specifically the Javanese sphere in which stūpika functioned, writing and literary traditions were undergoing a period of transition. Andrea Acri and Thomas Hunter, through their long study of Sanskrit and Old Javanese literature and specifically their engagement with the concept of Sanskrit-Old Javanese translation within the *tutur* literature as preserved in Bali, note a trajectory from more directly Indic writing/textual production towards more *localized* creations throughout the premodern period. Specifically, they draw a line in the eleventh century—right in the midst of stūpika production and usage—as the point of inflection towards a more Indonesia-specific style (Acri "Translation as Commentary in the Sanskrit-Old Javanese Didactic and Religious Literature from Java and Bali", 213, 236-237).

Many powerful texts and textual elements are found within the archaeological record of premodern Java. The prevalence of the *pratītyasamutpāda gāthā* within the stūpika of Java points not to a local, blanket prioritization of that text, but rather to a specific affiliation between that text and the space of stūpika conception, production and/or usage in Java.

How?

Not only was that content chosen, but the means of appending the text to the stūpika was chosen. Any number of reasons might explain these choices: to use a stamped text vs. an incised text, a surface text vs. an enclosed text, a text vs. no text. Rather than focus on the whys—whys that are probably multiple and deeply obscured by the distance of time—I wish to dig into that for which we do distinctly have evidence: the *hows* of those choices and the implications thereof. How were stūpikas textualized? What does that add to our understanding of the identity and place of stūpika within their contemporary context?

Making of the stūpika texts: Incising

A significant minority of stūpika bear texts added by incising. Confirmed cases of this are found within the collection found and held at Borobudur (Boechari "Report on clay votive stupas from the Borobudur site"; Indradjaya; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur"). Unconfirmed cases also exist in other parts of Java, including Candi Gentong (Nastiti, 132-133). In these cases, a shortened version ("*ye dharma*") of the *pratītyasamutpāda gāthā* was scratched by hand in *kawi* script into the side of the base of the stūpika. The text is inscribed in line with the orientation of the stūpika form, i.e. legible when the stūpika is upright, and can be seen in its entirety from a single angle. It is likely that the incising occurred while the clay was not completely dry.

We will dig deeper into the clay practices of contemporary Java in chapter 6 "Of Clay", but for now, let me underscore two points: (a) incising was a very different skill than otherwise evinced within the space of stūpika production, and (b) these instances point to the fact that in some spaces of clay stūpika production, people knew how to write (even if just to copy) Sanskrit in *kawi* script. Given the broad similarities across other differentiating markers (form, use, etc.), I argue that this means of adding text achieved the same end as stamping (either enclosed or upon the surface) of stūpika within the mind of those creating stūpika. In a minority of cases, this was simply an option and/or a preferred means of achieving that end.

Making of stūpika texts: Stamping

The much more common means of adding text was to use a stamping device. In these instances, a tool bearing the text in relief was used to press the image into clay. The text itself was the whole *pratītyasamutpāda gāthā* written in *siddhamātṛkā* script. This stamp was used either pressed into a small round of clay to create a text disk which was then enclosed within the larger stūpika or pressed directly into the stūpika itself, generally centered upon its base.

With this means of textualizing stūpika, the craftsperson making the stūpika was not the person responsible (necessarily) for knowing the text or the script. Rather, the text and script were formed by a third-party actor, likely working in a very different medium (copper alloy, stone, other metal, etc.). The stūpika maker demonstrates yet another instance of their ability to obtain and use tools to mold clay from other manufacturers in order to make significant instances of the stūpika form.

Circular Seals, Contextualized

Seals were prevalent across insular Southeast Asia since the mid-first millennium CE, placing them directly in line with the rise of stūpika practices in Java (Gallop, 128). Some of the earliest seals found in Southeast Asia—dating from the early centuries of the Common Era—were made of precious stones or gold, often set as a ring, carved in relief for stamping, bearing short texts written in various South Asian languages/scripts. Such objects traveled extensively through the maritime trade routes of Asia and were used to mark ownership (Gallop, 129). Looking to Java and its surrounding sphere specifically and focused around the eighth to tenth centuries, we find gold and stone rings inscribed with various letters and images, often in *kawi* and associated with the goddess Śrī, pointing to a production tradition local to that region (Gallop, 131-132). From the 9th to 14th centuries, a second genre of gold rings are found, bearing short statements in Old Javanese and *kawi*. These are generally oval in shape and carved inward for use in stamping (Gallop, 132-133). Epigraphic evidence also points to the prevalence of rings in classical Javanese culture.[58]

Many of the resultant stamped objects survive from premodern Java. Clay votive plaques (bearing images and sometimes texts), Majapahit terracotta plaques (sometimes apparently worn on a cord as an amulet, if the holes are interpreted thus), and the clay seals used to close Old Javanese lontar letters might all fall into this category (Gallop, 135; Muller, 50-51; Voorhoeve, 388).

Seals and stamps of various genres were an important part of economic and political communication in Monsoon Asia, more broadly, and premodern Java, specifically. Those technologies and processes were associated with statements of power and ownership. Tools were produced to mark goods, documents and spaces as being *of* a given person or group. These were objects of prestige and power, able to confirm and enact truths.

Texting Stūpika: the Process

Motif/Text

There does seem to be some affinity between the choice to use the lines motif and that of adding visible text, especially as stamped upon the exterior base of a stūpika. If we look at the motifs on stūpikas with visible texts, the vast majority are of a genre of the lines motif (see chapter 4 "Of Iconography"). Of the 13 instances of text on or in stūpikas, 11 of them have a lines motif. The exact genre of lines motif varies with 4, 3-2 and 2 all presenting. A few instances are somewhat outlying. Museum Banyuwangi 66 which has large votive plaque stamp of both a figure and text added to its side but still have lines motif. Museum Banyuwangi 24 has a 4-lines with lower 4-8 motif (again, see chapter 4 "Of Iconography"). Three of these texted stūpika are instances of text coin still associated with its stūpika: Museum Banyuwangi 24, 25 and 71 (1047). The last presents with 4-lines motif, the second has not visible motif while the first has 4 lines with lower 4-8 motif. In all of the instances where text was stamped upon the base of a stūpika form, the motif of that stūpika is lines.

The converse, however, is not the case. Not all lined stūpika bear a text stamp. Of the 64 recorded instances of stūpika in lines motif (all genres), only 11 have a text stamped upon it. So,

[58] Sīma inscriptions frequently note the giving of *simsim* (rings), *cincin singhala bantuk* ("Singhalese style ring") or *taṇḍa haji* ("royal seal") to figures of importance with the establishment of a *sīma* (Gallop, 134-135; Groeneveldt, 282-283 n.1). By the 14th century at least, we see the use of the term *mudra* to denote royal seal, and it has been argued that earlier (9th century) texts employed *taṇḍa* or *lāñcana* in a similar way (de Casparis, 239; P. J. a. S. O. R. Zoetmulder, 1153-1164, 1928-1929; Gallop, 136).

it would appear that there is some affinity between the lines motif and the use of a text stamp, but lines motif was not reserved for use with the text stamp alone. Similarly, texts could be added to non-lines-motif stūpika, but it would appear potentially more likely that in such case, text coins would be used. Again, there is too little and too imperfect data to draw hard and fast rules, but these observations are interesting and illustrative of a space of decisions.

Bases

The form of stūpika is not restricted to the upper portion of the stūpika form. The base it itself an integral aspect of the iconographic statement made by any given instance. We will go into this in greater detail in our coming chapters, but there are two general categories of stūpika bases: molded and unmolded. It is sometimes challenging to categorize objects. The lines are surprisingly blurry at times. Some are clearly molded: the surface of the stūpika is evenly smooth on all portions, the profile of the base holds a precise line, the angles are exact. Others are clearly unmolded: the surface of the molded upper portion is distinctly smoother than that of the base, the profile of the base is lumpy, and angles are non-existent. Those in the middle often have deceptively smooth surfaces, appear regularized in profile, and yet lack any angular precision. This final category could be the product either of (a) a precise producer forming a smooth and even mound of clay protruding from the upper mold which was then flattened to form a base while drying, or (b) the use of a rounded bowl-like base mold. Given the difficulty of drawing too precise a line between these two categories, it is not a simple question of 1:1 association between mold usage and text implementation.

When text was added to the exterior and/or (in what cases we can see) to the interior of stūpika, it was done so within the base of the stūpika form. In other words, the textual elements present within the space of the stūpika formed outside the stūpika mold. These two steps—stūpika molding and text stamping—likely occurred in close proximity, whether by the same person, within the same workshop or in relatively close succession. As mentioned earlier, the stūpikas themselves were made by being dried in the sun. The level of detail of the stūpika motif suggests that they were not fully removed from their (top) molds until the clay was well dried. On the flip side, the clay must remain wet enough to take the text stamp. Again, given the detail provided by at least some of the stampings, it would appear that the clay was indeed wet. There is no evidence of a section of wet clay being added to the base of the stūpika for the purpose of stamping. The only instance of clay appending we see is that of affixing a text disk to the base in a handful of cases.

Thinking this through suggests a key fact of stūpika creation: the text stamp was likely added to the base while the top remained in its mold. This would put these two aspects into very close conversation with one another as they likely happened in the same place, by a single collection of tools. It might be worth noting, however, that it does appear a general trend that text stamps added to the base of stūpika survive less well than those added to text disks.[59] Specifically, if we think of this question in concert with our previous observation (that the text

[59] There are many reasons why this might happen, not the least of which are choices of preservation. A text disk is nothing but a pebble of clay if the text is not clearly visible. It is likely that innumerable less-well-preserved instances have been lost due to oversight or general disinterest. Stūpikas also suffer from a similar issue, being also just lumps of clay, but as larger more recognizable objects, it is comparatively less easy to overlook them. A poorly preserved stūpika is still somewhat recognizable as such while a poorly preserved text disk would be unlikely to draw the eye of anyone not specifically looking for one. If we acknowledge that very huge caveat, however, it is still somewhat interesting to consider the extent to which this observation (that text stamps are better preserved on disks than on stūpika s) can inform our understanding of the production of these objects.

was added to the stūpika while it remained in its mold) it might be hypothesized that the stūpika was allowed to dry partially prior to the affixing of the stamp and/or the clay was mixed to optimize for motif molding, not for text stamping.[60]

Legibility? Implications for production

How the texts were appended—specifically how choices were made in relation to legibility—speak to the relative importance of various facets of stūpikaic function, value and even identity.[61] Rather, these methods of adding textual elements (or rather, elements we modern observers would categorize as textual) point to the (perceived) utility of those elements. The text—or the knowledge that the text was there—added to the identity of the stūpika, regardless of if anyone saw it. In the case of incised text, while the text is clearly visible when the stūpika form is visible, the whole text is not there. In the case of stamped text, the text is not visible when the stūpika form is visible (either because it is hidden within or because it is obscured on the base of the object).

The practice of entombing these texts within the stūpika body itself points to the notion that the worth of such a text is in its presence, not its general legibility. While it is impossible with the resources available for this dissertation to determine how many extant stūpika hold texts hidden within (let alone the percentage of all stūpikas ever made in Java), the evidence of this practice visible to the naked eye suggests that it was not uncommon.

All examples from Java that show the interior tablet still affixed are from the Gumuk Klinting site at Banyuwangi in eastern Java. Several possible factors—beyond just happenstance—could contribute to this accounting. It could be a regional variation of the practice, placing the text coins within rather than just beside the stūpikas in deposits. [62] The environment or even social factors of eastern Java might also play a role. Stūpikas in which one can see a text coin entombed within as a very specific subset and specifically a subset that has already been broken but can maintain a high level of structural integrity even in its broken state. It does not fall apart farther nor does it get thrown away entirely. This might point to a lived experience of stūpika in eastern Java in which they are exposed to less constant assault by water, humans (farming, constructing, etc.) and once found, are preserved.

Further, as has been noted before, there is significant overlap between the space and/or identities of stūpika and that of votive tablets more generally. They are generally found together, seemingly both being part of the establishment of ritual space, likely for the construction of a

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[60] A further issue that I do not have the space to fully engage here is that of what I see as a stamp exit mark. In some of the stamped stūpikas, it appears that the stamping tool was removed at an angle or in a twisting/peeling motion, thereby leaving an indent of the handle in the surrounding clay. Why was this done in some but not all instances? Was it the personal technique of a single (or training-lineage) of makers? Was it something specific to the stamp itself that made this indent inevitable (like having a horizontal rather than a vertical handle)? I hope to engage this issue further at a later time. Whatever the cause, however, it would appear that some commonality existed between this set of objects, whether it be an issue of tool or user. And further, within that context of commonality, the addition of the stamp was more important than maintaining the form of the base.

[61] Griffiths's engagement with Sanskrit epigraphy and the historiography of epigraphy in Java underscores the likelihood of local knowledge of Sanskrit being very advanced and that it was used in contexts beyond the most politically elite (Griffiths "The Sanskrit Inscriptions of Śaṅkara and Its Interpretation in the National History of Indonesia", 21-22). I am not saying that a given person could not have read similar texts; I am suggesting that "reading" in the post-Reformation Protestant style is not the priority suggested by production techniques.

[62] Examples exist from Bali as well, but those are outside the scope of this project. The proximity of Banyuwangi to Bali does add further likelihood to the hypothesis that this style of stūpika may have been popular within that geographic space for a time.

larger Buddhist monument (stūpa). I observe that the texts on votive tablets (both the un-entombed text coins and the more ornate tablets with both iconography and text) retain legibility to a greater extent than their stūpikaic counterparts. This observation suggests a systematic distinction in manufacturing votive plaques vs. stūpika. Further, many stūpika have indents upon their exterior of a shape and size similar to the votive plaques found in the same troves. In the case of text disks held within stūpika, from what can be observed, the disks themselves are well-preserved but thoroughly encapsulated by the surrounding clay of the stūpika.

The multi-step process of molding the stūpika and then restamping the text on the exterior (in the context of exterior stamping itself) may provide an explanation: the clay that is dried enough to keep the stūpika form would be less ideal for taking the stamp imprint of fine text. And yet the step was taken. The various steps and aims had to be balanced, and we can see the choices and priorities of the actors at play in the end results. The creators of votive plaques knew how to make legible renditions of texts in clay, but this was not prioritized in the context of stūpikas. In the case of stūpika, it was the presence of the text, not its legibility, which was prioritized. Rather, the iconographic program of stūpika was paramount.

Conclusion

Looking at the textual elements of stūpika, what can be said about *how* they were made? There are three distinct (but interconnected) paths that we might address: (a) when text was added by enclosing a text disc within a stūpika, (b) when text was added by stamping it on the outside of a stūpika, and (c) when text was incised upon the outside of the stūpika. In all instances, the main textualizing engagement occurred on the base—aka the lower portion un-adorned with stūpikaic iconography—of the stūpika. And in all cases, with the addition of text, yet another feature was added, thus adding to the aims that must be balanced by the producer. By unpacking these contexts and the choices presented within the data, this section parses the prioritizations of those manufacturing spaces.

Amongst the stūpika of Java, written elements exist in line with traditions prevalent across premodern Mahayana Buddhist practice. Fundamentally, the textual aspects of Javanese stūpika present a situation that is entirely unsurprising. That does not mean that it was not a significant, meaningful choice made by the agents involved in stūpika production. By contextualizing this choice, this section parses the discussion to highlight how we might view this predictability as analytically significant.

Through this investigation, we see local Javanese production of stūpika as occurring in spaces with great skill in molding clay and some knowledge of Sanskrit and *kawi*. These spaces functioned in close conversation with transregional knowledge networks of Monsoon Asia, as well as in economic partnerships with spaces of production for copper alloy molds and textual seals, spaces knowledgeable in Sanskrit and *siddhamātṛkā*. Within those spaces, textual elements were valued for their significance or agency, not as legible pieces for reading. Also, even while valuing the role of text, craftspeople prioritized the iconographic program of the upper portion (i.e. that molded to form the stūpika shape) over and above the clarity of the text itself. A balance was sought between the "baking"/hardening of the stūpika form in the mold and removing it in time to make a clean stamp of the text on the base. And then again, the overall structural integrity was deprioritized once the object was declared "finished."

This chapter sets the mold for the subsequent sections. Our examination of the textual elements of stūpika underscores the utility of asking new questions of data, and kicks off our

texturing of the spaces of production associated with Javanese stūpika. The vision that becomes apparent is one of highly skilled, specialized and mutually collaborative workshops and/or artisans bridging the contexts of metal and clay. Subsequent chapters will dig further into those categories and their associated spaces.

Chapter 4: Of Iconography

Introduction

Stūpika, by definition, present a specific form and iconographic program. If an object does not look a certain way, it is not identified as a stūpika. Beyond that, however, there is great variation of form, even amongst just Javanese stūpika. That variety comprises both those elements that mark them as stūpika and also all the rest, all the blank spaces and the wider form of the objects. This chapter defines *iconography* broadly to encompass both the defining and the peripheral aspects, the intentional and the incidental, the decorated and undecorated aspects of stūpikaic form. The aim of this chapter is to note what stūpika look like, to acknowledge both their uniqueness and non-uniqueness, the tinkering and connectivity they embody, and to consider (both practically and theoretically) how we can then leverage this dataset towards a more complete understanding of classical era Java.

Stūpikas are part of that movement of ideas, practices and iconography that filled and knit together Monsoon Asia during the premodern era.[63] This is, if not a moot point, a muting point. It shuts down our discussion before it even begins. This, therefore, is not the focus of this chapter. Our emphasis here is on what else can be said, what new questions can be asked in order to open new discussions. Emphasis in this chapter will be put on aspects of the iconographic project of stūpikas that might be labelled as incidental, insignificant, or just 'other' in some way. We consider what can be seen if we read stūpika "against the grain" (Stoller).[64]

The outcome of this approach is a texturing of our view of stūpika but also of premodern Javanese life. While there are basic commonalities and genres of stūpikas as found in Java, there is an almost dizzying level of variation between them. This is noteworthy in and of itself given the flattening tendency of observers to reduce the category to a singular architype. It also points to the fact that these were not objects made by small numbers of people with small numbers of tools at their disposal. Many different sets of tools, likely in the hands of many different people, were employed to create the stūpika, leveraging a multitude of different molds, stamps and a diversity of manufacturing and decorating techniques. Further, this approach foregrounds how contemporary actors perceived of the categories of stūpa and stūpika in the local Imaginaire.[65] Multiple priorities needed to be balanced to create the stūpikas we see today: the image of the stūpa, the form of the stūpika itself as its own object, the addition of text, the legibility of that text, etc. Unpacking what we find allows us some small purchase on those valuations and upon the social complexities of power and access that defined the human participants.

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[63] It is well established that Java was active in the maritime networks of Monsoon Asia. The art and architecture of Java reflect this fact. Linkages between the stūpika of Java, the Indic peninsula as well as Sri Lanka and other regions of Southeast Asia are all well attested, and have been for a century. For further discussion, see for example, (A. Acri *Esoteric Buddhism in Medieval Maritime Asia: Networks of Masters, Texts, Icons;* Fontein *The Sculpture of Indonesia*; Kempers; Zwalf, 144).

[64] This dissertation as a whole strives to break our interpretation of stūpika free from the presumptions of viewing them solely as the expected markers of Buddhist praxis in the region, leveling diversity across the wider Mahāyāṇa Buddhist networks of Asia. While we will discuss the iconography of stūpika in terms of that wider world of Buddhism for legibility's sake, particular or corrective emphasis will be place on the second lens, that of the place of these objects within local iconographic vocabulary and understandings. We consciously, proactively appreciate the aspect of tinkering and unpack it. This approach does include, therefore, issues of transregional movement and localization, but it is not aimed at the labeling of such. Further, it takes in a much wider breadth of relevant data, appreciating the "faults", "mistakes," "blemishes", "artisan preferences", etc. just as significantly as markers of any given "style".

[65] For discussion of the term *Imaginaire,* see the work of Steve Collins e.g. (Collins *Nirvana and Other Buddhist Felicities: Utopias of the Pali Imaginaire*, 191-289; Collins *Nirvana: Concept, Imagery, Narrative*).

Defining Stūpika by Form

Stūpika

The term stūpika to denote these small stūpa[66] forms is not widely emphasized across the field of Buddhist studies, but it is the name of choice within Indonesia, both within and outside of academic circles. The genre of object, however, is not specific to Java. More commonly referred to as miniature and/or votive stūpas or *tsa-tsas*, these are fundamentally very small stūpas. They are roughly egg-shaped, able to sit somewhat upright (we will return to this point in later in this chapter). In most instances, they are ornamented so as to differentiate between the various canonical elements of a stūpa. They appear in a variety of forms, sizes and materials across Asia.[67]

Beyond these denoting features, stūpika—including those of Java—are very diverse. It is this variegation upon which I wish to focus, while not losing sight of the interconnectivity between instances. This examination of Javanese stūpika thus begins by overviewing the commonalities and trends within the collection to sketch the category, but then turns to the complexity apparent within that grouping—with all its tinkering, porting and replication—to tease out a greater understanding of the surrounding context.

Stūpika Of Java

Stūpika of premodern Java, while categorizable as a group and bearing similar trends in design, do in fact present significant variation of form and iconography. All instances currently extant and identified as such are all made of clay (see chapter 6 "Of Clay" for further detail). In terms of shape, all overlap in some definitional elements (largely in common with other stūpika globally): a plain base (either unmolded or molded, rounded or angular), a band of ornamentation, a smooth neck and a top adornment. In Buddhist terms, we can see these as the *medhi*, the *aṇḍa* and the *harmika*. The existence of a *chattra* or umbrella/spire form at the very top is hypothetically possible, but neither has any been discovered with such, nor do the extant molds seem to suggest that such an element would have been part of the clay mold itself.[68]

Javanese stūpika range in size. As they exist today, with all the wear and breakage that entails, they measure from 3.9 cm to 32.66 cm centimeters in height and 3.8 cm to 22.68 cm in width/diameter. The median size of a Javanese stūpika as currently preserved is 5.18 cm tall by 7 cm wide. These numbers, however, are impacted by the fact that stūpikas often break horizontally, leaving the remaining object shorter than originally but just as wide. To mitigate these discrepancies and focus on the original form, more productive measurements can be taken on just the *aṇḍa* portion. Looking just at that upper section, stūpika *aṇḍa* range in height from 1.9 cm to 15.9 cm in height and 2.7 cm to 17.4 cm in diameter, with a median size being 4.6 cm by 6.5cm.[69] On average, stūpika are approximately as tall as they are wide, but there are some that are more vertically oblong and others that are squatter.

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[66] For overview of the form and iconography of the stūpa, see for example (Tucci *Stūpa: Art, Architectonics and Symbolism*).

[67] The term "votive stupa" is often also used to denote somewhat larger (but still relatively "miniature" standing stūpas (e.g. (Durt et al.)). For further information on truly mini stūpas, aka stūpika, across Asia, see (Bronson "A Lost Kingdom Mislaid: A Short Report on the Search for Srivijaya"; O'Connor).

[68] There does seem to be some evidence of a stylized version of a chattra-representing dome atop the stūpika (in parallel with how stūpas were represented in the bas reliefs of Borobudur), though this may point more to the local understanding of a stūpikas relation to a stūpa and how the category "stūpa" was defined.

[69] See chapter 5 "Of Metal Molds" for further discussion of the molded portions, their size and associated tools.

Javanese Stūpika Motifs

Beyond this basic form, various iconographic elements are found imprinted upon the stūpika form. I place these in two broad categories: (a) lines motif and (b) stūpa motif. Variation exists within each of these categories, as well as overlap and outliers, but these fundamental groupings are helpful for mapping the iconographic program of Javanese stūpikas.

Lines Motif

The most common ornamentation of a stūpika in Java is horizontal lines or what I am calling *lines motif*. An overwhelming percentage are adorned with simple a series of lines running the circumference of the object at various intervals at the base of the molded section (i.e. the *medhi* of the stūpika itself, what would be the mouth of the mold itself). This percentage is all the more significant as even the more ornate stūpikas bearing other motifs do also include this horizontal banding. Even while lines remain very common if not definitional to the category of Javanese stūpika, the exact number and placement of these lines varies. I argue that this lines design, so pervasive as to be definitional to Javanese stūpika, represents the vertical segmentation of the stūpa structure, emphasizing that striated nature of the stūpa form. We will return to this discussion later in this chapter.



Figure 1: Museum Sonobudoyo, Stūpika 6, 10727_04.1540 [70]

Stūpa Motif

[70] All images by author unless otherwise noted.

The other common category of stūpika motifs I delineate, also one of the most striking genres of stūpika iconography, is what I am calling the stūpa motif. Just as with the lines motif, variation exists within this category and, in this case, I classify a few subgenres.

The basic concept of this stūpa motif is that rather than (just) lines banding the stūpika, we see stūpa/stūpika images imprinted upon—or appearing to rise out from—the sides of the stūpika. The sides of the stūpika are molded with the original mold to depict images of stūpa wrapping around the *aṇḍa/medhi* of the stūpika. As noted, most of the stūpa motif stūpika still emphasize the horizontal lines of the stūpa(s) depicted, further blurring the lines between the categories and underscoring the local significance of that aspect of the stūpa form.

1. Full 4:8 Stūpa

The most ornate subgenre of this motif, I call the full 4:8 stūpa motif. It depicts four stūpas in full profile and another 4 as corners in 3/4 view. In this rendition, the stūpika is imprinted with four stūpas in profile at regular intervals around the stūpika with corners protruding interstitially. You might imagine this as if one had a 3-D model of a stūpa with squared base, cut it open along one side and then scored on either side of each corner from the interior, unfurled it to flatten it out (like if one were to open an orange, keeping the segments loosely connected), and then wrapped that unfolded stūpa around the outside of the stūpika. You would get the shape of the exterior stūpa but distended and superimposed upon the interior stūpika. In examples of this genre, we see all elements of the stūpa depicted in their reliefs: the deep base and the *aṇḍa*, differentiated with a well-articulated band, topped with both a *harmika* and *yaṣṭi* depicted as concentric domes, the harmika being somewhat squatter and the *yaṣṭi* being somewhat taller/more elongated. I interpret these as stūpa and not stūpika given how they end in flat pedestal and the focus on angularity, mirroring the architectural styles of stūpa in Java (to be discussed further shortly). This genre is characterized by the continuity of stūpa motif surrounding the stūpika.[71]



Figure 2: Museum Sonobudoyo Stūpika 9: 10733_04.1546

[71] Given the local emphasis on the directionality of religious monuments, I place this motif within that category, as pointing to the cardinal directions. See, for example, (Chemburkar; Degroot, 105-125; Mishra, 81).

2. 8 stūpa motif

Another subgenre of the stūpa motif is found among the stūpika of Borobudur specifically. In this group, eight stūpa/stūpika are depicted encircling the stūpika but in this case they are depicted in discreet profile only, with each egg-shaped imprint evenly spaced around the stūpika (Kandahjaya; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur", 69).

These instances of stūpa in profile as stūpika motif do display a *harmika* and *yaṣṭi* of sorts. This suggests that while a *yaṣṭi* might not have been a viable option for the stūpika itself (or at least one out of clay/molded as one with the rest), the concept remained. Similar to how the image of a stūpa on Borobudur could be simplified to an *aṇḍa* with both harmika and *yaṣṭi* suggested by concentric mounds, so too on the stūpika, the images of stūpa and the form of the stūpa itself is simplified.



Figure 3: Borobudur Stūpika examples of 8 stūpa motif

(Indradjaya, 36)

3. Lower 4:8 Motif

A final subcategory of the 4:8 motif is very similar to the first such subgenre, except that only the protuberances of the *medhi* are included. The *aṇḍa*, *harmika* and *yaṣṭi* are not represented upon the stūpika, just with their suggestion via a lines motif upon the stūpika itself.



Figure 4: Museum Majapahit Stūpika 9: 2091.TR.-.-.PIM

Figure Imprints

Beyond these architectural motifs, a couple instances in Java of stūpika with additional images, specifically imprints used in the production of votive tablets. These images—figures, text and other iconography—are imprinted into the sides of stūpika. These instances present a

subcategory in between the space of the stūpika proper and votive tablets more broadly as they bear the iconography of both.[72]

The only site in Java where we see instances of anthropomorphic figures imprinted into stūpika is at Banyuwangi. None of the stūpika I have seen as held at Museum Sunan Giri (hailing from Bawean), at Museum Trawulan (hailing from Candi Gentong and Banyuwangi), at Museum Sonobudoyo (from Jongke and/or other sites), at the Pura Mangkunegaran in Solo, nor those of Borobudur bear any of these iconographic figures. While outside the frame of this dissertation, instances do also exist among the stūpika of Bali. This makes for an interesting orientation of the data, linking those of far eastern Java with those of neighboring Bali. This would appear to be an unsurprising alliance geographically.

At Banyuwangi, as in other places, stūpika were found together with various votive tablets bearing imprints of text, figures and stūpas, variously. Text stamps are common across the breadth of stūpika but this cross-over of figure imprints is rare. Banyuwangi 66 is the clearest example of a full stūpika with large, votive plaque stamp. Instances Banyuwangi 65 is a rougher stūpika shape, closer to the two-dimensional renditions of stūpa/stūpika as foundation for votive plaques found elsewhere in Asia. In both cases, examples exist of the same stamp used both to imprint the stūpika form and non-stūpika-shaped votive tablets.



Figure 5: Museum Banyuwangi Stūpika 66

Photo curtesy of Pak Bambang Budi Utomo and Pusat Penelitian Arkeologi Nasional

[72] As noted previously, it is not within the scope of this dissertation to investigate the entire (very related) category of votive plaques. This work, also, has already been done by other scholars, such as (Indradjaya; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur"; Lamb).

I wish to focus upon these instances of hybridity from a practical perspective. Banyuwangi stūpika 66 is the most ornate, precise instance. In that case, the votive stamp was applied to a base elongated presumably to receive the stamp: the full stūpika motif is visible off the top (4 lines motif) and then the full votive stamping is visible on one side of the base. Its base is also somewhat flattened on its bottom, as if it could have (at least prior to the addition of the stamp) stood up. There does not appear to be significant flattening on the vertical side of the base opposite from where the pictural stamping was added, however, there is a large indent running the length of the base as it was pressed up against a rod or rounded corner.



Figure 6: Museum Banyuwangi Stūpika 65

Photo curtesy of Pak Bambang Budi Utomo and Pusat Penelitian Arkeologi Nasional

Banyuwangi stūpika/votive plaque 65 takes a different approach to the intermingling of these two genres of object. It is not a stamped stūpika at all, but a lump of clay hand-molded into the general shape of a stūpika but flattened and imprinted on one side with the image of a sitting buddha figure. Other instances of this stamping are found from the same trove as round votive tablets.

This crossover highlights some aspects of the production process that are further fleshed out by other observations. First of all, the same stamps (or near identical ones) are used both on the stūpika and on the non-stūpika-shaped votive tables. For example, the stamp on Banyuwangi stūpika 66 and Banyuwangi votive tablet 64 are—based on a comparison of dimensions, iconography and text—made from the same stamp. Second, the stūpika was still soft enough when it got to the votive figure stamp that it could be molded. Third, several of this collection boast divots or imprints that appear to come from other elements of the same collection, suggesting that stūpika and votive tablets were piled together while some (at least) objects remains malleable. A visual perusal of the Banyuwangi collection suggests that both object genres were made from the same type of clay.

All this points to the probability that votive tables and stūpika were made in the same work space, with different but associated and sometimes overlapping tools (i.e. with tools from a single kit) and therefore likely by the same people or group of people.

Bases

Just like their uppers, the bases of stūpika are diverse, presenting a variety of shapes, sizes, levels of finish and production technique. Some appear formed with a mold, boasting straight edges and clean angles. Others are formed by hand. Some are finished as finely as their associated uppers; others are left rough and unfinished. Some are proportional and purposeful; others appear more haphazard and incidental.

One aspect of the bases I wish to highlight is their overall symmetry, or rather, the lack thereof. A shockingly high percentage (effectively all) of the extant stūpika of Java do not sit straight upon their bases but rather list to the side like tiny Pisa towers. They would appear to be off-kilter, but the frequency of the lean suggests that maybe this is exactly how they were designed to be. The only collection that is more upright (though far from universally so) are the stūpika of Banyuwangi. Within that collection, of the 32 stūpikas, 11 appear somewhat out of plumb. The other collections are overwhelmingly pitched.

I see this tendency for stūpikas to list to the side as evidence regarding both what the production techniques were and also what was seen as significant/insignificant for the goal objects themselves within their context of production. I am thinking in terms of what people wanted and how that might have been achieved. This thought experiment is very much tied into our theoretical discussions of earlier, considering the local project of tinkering, of the leveraging qualities of the materials and environment, of the ossified moment of seeing and miniturizing that which is represented, etc.

First, it is unlikely that stūpika were dried upright. As discussed in chapter 6 “Of Metal Molds,” molding was often done with the object setting upside down or rather with the region bearing the most details of ornamentation facing downwards to allow gravity to support rather than detract from those features (Mechling et al.). If a similar approach was adopted within the clay production sights of Java, then the “bases” would not have functioned as such during the drying state. This interpretation is further supported by the tendency (as noted in our chapter on text) for the textual aspects of stūpika to be added to their base, and particularly for stamped instances to be found centered upon the very bottom of the stūpika. Such stamps were added while the clay was still malleable, so the undersides must have been accessible during the drying process. From this perspective, the stūpika bases would have to have been flattened and dried sufficiently to hold said shape, but then — while still wet — be stamped with the text and left to fully dry with the base in a non-weight-bearing orientation (given that the stamped images remain clear and unobstructed). All the while, the upper would remain within the stūpika mold in order to preserve fine detail upon that portion. As such, the slightly off-kilter nature of the stūpikas when “upright” is likely due to the fact that they were not created in the workshop in this orientation.

On the flip side, however, it also seems unlikely that the molds stood (independently) upside down. What extant bronze molds used to form the stūpikas we have included handles protruding off their tops (Harkantiningsih). One, it is possible that not all molds had handles placed thus. We do not have many molds compared to the diversity of stūpikas found so it is hard to argue that we know anything definitely about how stūpika molds were in general. Still, supposing that we just happen to have found only molds with handles while most of the molds had no such handle (or even a “base”) on their top seems equally tenuous. Two, we could

surmise that there was a separate rack into which the mold was placed, holding it upside down. This is similarly possible, but far from provable. Three, stūpikas could have been placed right-side-up for drying—or at least for part of the drying, but without significant emphasis placed on their verticality. This could be true when no exterior stamp exists, or if the stamp was added after partial drying. It is also possible, if not probable, that different manufacturers used different drying techniques and orientations, as we also see in relation to our discussions of text and clay.

Stūpika of Java: Summation

This overview of the stūpika of Java tells us a few things. First, we are dealing with a coherent but diverse dataset. All the objects are clearly of a type, but within that category, many details vary. Specifically, I see the iconography of stūpa as being prioritized above all else in the design and production choices. Specifically, significant emphasis put on the vertical stratification of the stūpa/stūpika form, and often the angularity of stūpas is highlighted. The stūpika of Banyuwangi present an iconographic program that both overlaps with the norms of the island but also include significant divergence.

The stūpika of Java are distinctly an example of art object reflecting South Asian influence but also very much localized. In the stūpika of Java, we see those local traditions of art production that simmered across the region during the premodern period.[73] Viewing Javanese

[73] When considering the premodern iconography of central Java (temporally speaking), a long-standing trope among observers (domestic and international) differentiates between two separate regions: the Dieng Plateau to the north vs. the plains to the south. The latter is associated with the large number and major architectural structures (e.g. Borobudur, Prambanan/Loro Jonggrang, etc.) displaying both Hindu and Buddhist investment. The former boasts fewer extant temple structures, generally focused around Hindu/Saivite deities. Beyond the architectural remains, however, the wider body of iconographic evidence points to the existence of much Hindu and Buddhist ritual activity across the region (Fontein *The Sculpture of Indonesia*). Bronze, gold and silver statuary, in particular, is found across the region. Among the bronze objects, for example, Buddhist motifs are more common than Hindu images in the north-central region. A more contextualized review of the temple remains of Java shows less of a divide (Hinduism to the north, Buddhism to the south) and more of a "carefully maintained balance" similar to that often noted in India: Candi Banon with Borobudur, Loro Jonggrang with Candi Sewu, and the Hindu temple complex of the Dieng Plateau with Candi Bogang (Fontein *The Sculpture of Indonesia*, 38).

Building religious monuments or rather expressing prestige and affiliation through the built environment is a key feature of Buddhist activity across South and Southeast Asia (Blackburn, 193; Elsner "Iconoclasm and the Preservation of Memory", 219). Maintenance of extant structures also played a key role within the donative practice of premodern Java, especially within Buddhist contexts. People in Indonesia who adhered to Buddhism put great emphasis on the utility of supporting existing religious sites rather than building whole new ones. Elaborating upon or providing upkeep for Buddhist sites was an important way to gain highly-prized merit, as suggested both by the archaeological record and the account of Yi Jing of his time in Śrīvijaya (Fontein *The Sculpture of Indonesia*, 39). The Buddhist sites were not a one-and-done event but rather an ongoing process of creation, of engagement, of recreation, of action, of tinkering.

There is also a commonly cited divide between the art of Central Java vs. Eastern Java. Noticeable differences do exist, but despite the names, this is a temporal divide, not a geographic one. Significant continuity also exists between the motifs, architectural depictions, narratives portrayed, etc. of the two periods (Fontein *The Sculpture of Indonesia*, 48). It is helpful to see the differences, therefore, as a progression occurring across the region, as viewed across data that pools first in the central region and then in the eastern region for parallel but distinct reasons.

Fontein reviewed the differences thus: (1) Central Javanese temples are simply bigger than their eastern Javanese counterparts (Fontein *The Sculpture of Indonesia*, 48-49). (2) The carving on stone buildings of the central Javanese period is hemmed in by the structure itself, the structure being built first and carved second. As this process is refined, the architecture and building process itself better prepares a canvas so as to allow more intentional and complete looking carvings. By the eastern Javanese era, the building process (e.g. selection of stone block size/orientation) is so informed by and attuned to the subsequent carving steps that it allowed for much more ornate and continuous carving to be added, unfettered by the building choices themselves (Fontein *The Sculpture of*

stūpika via this perspective, I wish to consider what the iconography of stūpika tells us about the perception of categories and/or the lived experience of those involved in their making.

Interpretation: Stūpika vs. Stūpa

Following Lévi-Strauss and Evans in their concept of the miniature discussed in the Introduction, I suggest that by looking at stūpika, we can gain insight into how associated groups viewed the category *stūpa* (Evans). This theoretical view is supported by contemporary archeological data. Scholars have noted that Javanese "early early Classical" (i.e. around the 8th century) architecture—generally associated with the central Javanese period—is flat and broad, with more pronounced horizontality. Stūpas of that era in Indonesia are of the terraced style (Santiko "The Structure of Stūpa at Muara Jambi", 116).[74] Looking to Borobudur as the quintessential example of this genre, both its own structural form and images of stūpas carved into its reliefs underscore these qualities: articulated levels and angular corners (Fontein *The Sculpture of Indonesia*, 75).[75]

The egg-shaped stūpikas themselves do not inherently have this vertical differentiation. Their decoration, however, puts calculated emphasis on these elements. The definitional form of stūpika already conveys the form of stūpa—or at least miniature stūpa—but it was not that form that was repeated and underscored by the manufacturers and markets that drove stūpika production. According to its own memory, the aspects of stūpa-ness that warranted emphasis within that context were its vertically-stacked form and pointy corner-stoned base.

In the view of contemporary, premodern, local actors—consciously or unconsciously—they were not mimicking some foreign architectural style; they were producing and invoking *stūpa-ness*, and in their minds, this is what stūpa were. Not only do stūpika depict the built

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Indonesia, 48-49). (3) During the central Javanese period, both Hindu and Buddhist temples were built as distinct structures but often in partnership with a separate structure of the other tradition. With the passage of time, while Hinduism and Buddhism remain somewhat in competition, by the Singhasāri and Majapahit eras, there develops an increasing sense that the two traditions are really fundamentally the "same" with Hinduism somewhat overarching. We see then the figure of Śiva-Buddha (Fontein *The Sculpture of Indonesia*, 49-50) Part of this conflaction of the two traditions is ascribed to the rise of tantric elements in both: e.g. Kalacakra adherents in Buddhism (likely coming from Vikramasila in India) or Ganacakra adherents and Bhairava adherents in Hinduism (Fontein *The Sculpture of Indonesia*, 50). (4) Another distinction between the art of central vs. eastern Java is in the advent of the "portrait statue" in the tenth century. Powerful figures, often royalty, inserted themselves into the greater pantheon. After their death, a given individual would be commemorated with a shrine or statue of their favorite deity, with their own likeness somewhat incorporated into the image. Moen differentiates between statues of religious figures vs. portrait statues by the crown, suggesting that deified humans/royalty are depicted wearing crowns (kirītamukuta) while deities have a jatāmukuta (hair piled atop their head in a knot) (Fontein *The Sculpture of Indonesia*, 50-52). And (5) The later central Javanese period saw a rise in Vajrayāna Buddhist motifs including female figures, deities sporting multiple arms, mandalas and simply more deities (Fontein *The Sculpture of Indonesia*, 340).

[74] This genre of stūpa was first seen in Gandhāra in the early century CE. Examples can be found in Indonesia at Muara Jambi, Muara Takus (Candi Tua) and Borobudur. This category is framed in comparison with the older, circular style exemplified by Sanchi.

[75] Borobudur and other temples—often explained as depicting cosmological organization—have this tiering (Fontein *The Sculpture of Indonesia*, 67-75). The temples of the eastern Javanese period/late classical period are more vertical with the horizontal striations less underscored as the carved motifs and detailing overwhelms the leveling even as it still exists, together with a more vertically layered roof style, results in a much more vertical-feeling candi style (Soekmono in (Fontein *The Sculpture of Indonesia*, 81)). In the later years of the east Javanese era into the 15th century, there appears to be a return of "pre-Hindu" architectural style that emphasized a stepped structure (Fontein *The Sculpture of Indonesia*, 82).

reality of Javanese Buddhism, but they function as a distillation of stūpa-ness within the Imaginaire[76] of contemporary actors.

Usage: Borobudur Relief

There is a relief found at Borobudur that appears to present an image of stūpika in action (Krom, 89). Relief 116 of the hidden foot of Borobudur shows a series of scenes that appear to depict various figures giving and receiving objects (see (Cephas and Cephas) for image). This section is part of a tripartite vignette. In the left-most frame, a royal or rich couple gives out alms to common people. In the center of the frame, a male supplicant gives alms to a mendicant, likely Śaivite given his long beard, bun of dreadlocks, pot and sandals. The final segment of this panel depicts a group of supplicants giving a variety of objects to a Buddhist figure. He has elongated earlobes and a thread, but no other ornamentation. Stalks of grain, a large flat dish of something as well as an object that looks like a miniature stūpa are all presented. I read this image as depicting various donative practices, including the giving of stūpika.[77] A few implications can be drawn from this image.

First, this stūpika does boast a rather prominent *chattra*. If we take this object to be representative of a stūpa or stūpika, therefore, it would appear that at least in the contemporary artistic Imaginaire, the stūpa/stūpika included the *chattra* element. While it is unlikely, in my opinion, that a true spire was attached to stūpika, still, it is common to see a circular print upon the top of the squared harmika, potentially meant to suggest the presence of a top round element. The idea of stūpa-ness as distilled into the stūpika included (a gesturing towards) a *chattra*.

Second, as discussed earlier, in this illustration as well, the horizontal delineation of the stūpa form is emphasized (along with an unadorned based). The whole appears rounded, but the horizontal lining of the stūpa is very apparent. Given how little space was available to the artist carving this vignette, "stūpa" needed to be conveyed as efficiently as possible. This was done with a basic outline and a few simple lines of differentiation (i.e. similar to how it was done on the stūpika themselves). In a context when the artist would have had to be very sparing and intentional with his/her ornamentation, what was singled out to be prioritized were the striations.

And third, in this image, the small stūpika is being given to a Buddhist figure at a Buddhist site by a female figure. For this artist, the way that people (including women) engaged with Buddhist figures in Java was to bring gifts of grain, cloth and stūpikas to larger stūpas, possibly Borobudur itself specifically.[78]

The importance and power of women is not surprising in Java. Looking just at the images of life and belief depicted on stone temples, women figure prominently. Both male and female people/devotees are regularly depicted. Queens are depicted with significant divine attributes and whole temples are frequently dedicated to female divinities (Bremer, 110). Other sections of the hidden foot of Borobudur show women (more so than men) buying and selling goods (Bernet

[76] Again, see Steven Collins (e.g.(Collins *Nirvana: Concept, Imagery, Narrative*))

[77] It is, of course, possible that this depicts the dedication of an architectural stūpa (or even the donation of some other object—like a carafe—entirely). My choice to interpret this image as of a stūpika stems largely from the difference between it and other containers and/or stūpas depicted in the reliefs of Borobudur, its association with a Buddhist recipient, and the emphasis on the *chattra* elements.

[78] This interpretation is supported by contemporary sīma inscriptions in which grain and cloth were very common donative offerings. Still, it would be a stretch to take this as sufficient evidence to say that stūpika were a female mode of religiosity. However, it certainly seems like sufficient evidence to say that for that local farmer-craftsman who carved that panel, it was not *not* women who engaged with stūpikas. This would place stūpikas within a non-gender-specific ritual space which is interesting in itself.

Kempers). Wisseman Christie argues that during both the central and eastern Javanese periods, women likely played dominant roles in local economic activity while men were more dominant in the transregional movement of goods (Christie "Javanese Markets and the Asian Sea Trade Boom of the Tenth to Thirteenth Centuries A.D.", 365-366).

I see this hint of correlation between women and stūpika practice in conversation with what we know of the larger shifts in economic and cultural engagement in this period—i.e. the shift of emphasis from agricultural to trade economics, the change in monetary systems, the rise of Vajrayana practices and their attendant iconographies—together with the flourishing and subsequent disappearance of stūpika production. This discussion gestures towards women playing a significant role in (economically-tied) religious practices throughout the premodern period in Java, but that those roles changed over time. As new modes of expression and engagement became more prevalent, other modes lost significance. The moment of stūpika marks a specific juncture in the (gendered) religious practices of Java.

Conclusion

The iconographic program of Javanese stūpika, unsurprisingly, confirms participation in the wider maritime Buddhist conversation of the turn of the millennium. This is not, however, the end of the story. That "cosmopolitan" space of international Buddhism was not elite and exclusive. The very objects that scholars hold up as proof of long-distance engagement and power relations are themselves very much the products of the commoners. The iconography itself, when seen more broadly, contains both those markers of transregional vocabulary but also the markers of regional and individual communication.

Javanese stūpika, as a category, is highly diverse and tells us much about the priorities, production practices and donative traditions of the region. For a category defined by their form and often discounted as homogeneous or simple, by shifting the angles of inquiry, this chapter underscores just how much more information can be accessed.

This chapter has elaborated upon our discussion of premodern Java. Stūpikas were made within a working context where tools of metal and possibly other materials were sourced from other craftsmen and where other ritual implements were also made, including votive tablets. They were dried not in their upright orientation. Stūpikas were made in a space where the written word was prized (given its placement as relic) but not always for its readability. Knowledge of *kawi* and Sanskrit was present in at least some of these spaces, while others relied on access to other workshops with knowledge of Sanskrit and *siddhamātṛka*. In that manufacturing space, more emphasis was placed iconography over text legibility, and the process of adding various iconographic elements was prioritized over the perfection or preservation of the end product. Stūpikas functioned in a transactional way. They were given in exchange for something (likely merit/fecundity/boon/etc.). The form of stūpika was informed by local ideas of the significance or definition of "stūpa". This perspective focused largely on their general outline, square base and horizontal delineations. Further, that context in which stūpika were made and implemented was a context from which women were not excluded.

This vision of premodern Java amplifies our understanding of the lived realities surrounding the largescale political and economic shifts that occurred on that island around the turn of the second millennium CE. Modern interpretation often categorizes stūpika as simple, cheap, common objects. And yet, looking at them closely, I am flummoxed at how so many were produced so precisely with so many distinct variations while being so delicate and requiring so many different steps. A truly huge corpus of knowledge, skill and expertise at the hands of the

people went into the production of Javanese stūpika, and the active genius of constant experimentation and development can be seen etched in their every iteration. This was not part of some elite, sequestered minority, but rather the action of the many, in conversation. And it was that conversation that undergirded the large-scale shifts recorded by history.

Chapter 5: Of Metal Molds

Introduction

Stūpika are formed by pressing wet clay earth into copper alloy molds. In some instances, as discussed in previous chapters, another stamp is used to add text or further iconography. Very few of those molds or stamps—especially in comparison with how many must have existed—remain extant. Yet, the space of copper alloy is the space of origin of stūpika. It birthed stūpika. The two are forever linked. The production and subsequent apparent depreciation (or eschewal) of stūpika marks a shift in copper alloy usage locally and Indonesian engagement with metal, trade, religion and Buddhist ritual space as seen in network.

The Intan shipwreck—where a significant percentage of the extant stūpika molds were found— likely sailing from a Śrīvijayan trading entrepôt in Sumatra to the Javanese kingdom of Mataram (Flecker "Maritime Archaeology in Southeast Asia", 38; Harkantiningsih). This ship is dated to the early to mid-10th century based on carbon-14 dating and the style of ceramics and Chinese coins found therein. The genre of wood used and its mode of lashed-lug construction point to it originating from Indonesia. It bore significant quantities of goods from Sumatra combined with a variety of goods from other regions. It was discovered to the south of the Bangka Straits in a known trading route. In its construction, location and cargo one can see a wide cross-section of the networks of exchange that bound the Indian Ocean together and in which Java functioned.[79]

This find itself encapsulates so much of the complexity of movement that is also tied up in the space of stūpika and specifically stūpika as objects of metal molds: metal cast and for recasting, engagement with China and India, movement of metallurgical resources between regions of Southeast Asia, transitions in coinage, religious implements, etc. Looking at this shipwreck underscores the context in which stūpika molds functioned. It was very much a network of ideas, techniques and materials that moved freely through the maritime routes of the Indian Ocean world. Raw materials were used and reused in various ways, combinations and modalities as demands dictated. It was fluid and dynamic. This frenetic activity is reflected in the apparent pervasiveness and subsequent disappearance of stūpika molds in premodern Java.

Stūpika molds

Three genres of mold (defined broadly) are relevant to the production of stūpika. First, and most obviously, are the upper molds, i.e. that which gives stūpika a stūpa shape and their motifs as described in the previous chapter. The bulk of this chapter revolves around this category. Second, in some cases, a mold was used to form the base of the stūpika (although many stūpikas were formed with only a single, upper mold, the bases being formed by hand). Third, as discussed in our chapter on epigraphy, stamps or seals were used to add text to the stūpika.

Upper Molds

Thousands of stūpika have been found in insular Southeast Asia, evincing the presence of a great diversity of molds in the classical era. Only six currently identified molds survive to the modern era.[80] This extreme dearth is further compounded by the fact that three of those six were

[79] See (Flecker *The Archaeological Excavation of the 10th Century Intan Shipwreck*) for full discussion of the Intan shipwreck, its discovery and excavation.

[80] Determining the origin of stūpika molds is problematic. Little direct research has been conducted on the extant stūpika molds, and such a study is not within the scope of this project. No systematic composition testing has been done. Molds moved over land and sea, and some were likely imported. Archaeological context, iconography and script suggest that at least some molds (either stūpika molds or text stamp) were manufactured in insular Southeast

found as part of the Intan shipwreck (Harkantiningsih).[4] Only three survived on land: one from Palembang, one from Semarang[5] (Flecker 2002, 42-43) and one from Klaten (O'Connor).[6] We will touch other implications of their presence in shipwreck remains, but for now, I simply wish to underline the fact that many molds existed, but the great majority of those objects disappeared, and significant percentage of those we do have were "hidden" (underwater) from contemporary actors. It would appear that they were actively gotten rid of, the metal moved into other functions.

If we assume that those found are typical, then a few general statements can be made about stūpika molds. First, they are made out of some form of a copper alloy. Second, they are generally bell-shaped, with a domed base and a somewhat elongated, straight handle protruding off the top (as referenced in our chapter on epigraphy). Third, the vast majority (but not all) of the iconographic elements on these molds exist on the interior in relief. These were not decorative objects themselves; they were tools to make other objects more decorative. A few exterior decorative molded and incised lines, however, are found on the best-preserved instance as at Semarang (O'Connor, 62). Fourth, by definition, the molds are larger than the stūpikas they would produce. Just as the stūpikas themselves come in a variety of sizes, so too do the molds, but always a size larger. Fifth, these molds are relatively hefty things. This is not a delicate cone of pounded metal. From what instances we do have, plus the examination of imprints found on surviving clay stūpika, the molds boasted relatively significant walls of approximately .5 cm thickness. Sixth, these heavy objects were cast. Seventh, the extant molds found present a subset of the same iconographic styles as noted in the stūpikas themselves (lotus base topped with lines and/or images of stūpas below a smooth dome and a squared apex) but they are not readily identifiable as the progenitors to any of the extant stūpikas.

Text Stamps

The implements used for the addition of textual elements are more ambiguous. As discussed in the chapter on epigraphy, our closest corollary are the stamping rings that were prevalent across premodern Java. For example, gold sealing rings were common to classical era Java. These were incised with short texts, written in *nāgarī*-type (Indic) and *kawi* (Javanese) scripts, on small oval surfaces (Gallop, 131-135). The text stamps used in stūpika production

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Asia. Further, it is not possible at this time to directly link any of the extant molds with any of the extant stūpikas themselves.

Given this situation, this chapter will look at what small dataset is available as indicative of the genre. I will not focus upon determining the origin of the molds; rather I will consider what can be said about the dynamic between stūpika molds and the local Javanese worlds of metal in which they lived (at least for a time).

[4] The Intan shipwreck was excavated in 1997 (see Flecker 2002 for more information). In addition to the great quantity of other ceramic and metal artifacts, three stūpika molds were discovered. They are currently held in a private collection. In all three cases, these molds are bell-shaped, bearing all ornamentation in negative on their interior (for imprinting), and all three are examples of decorative molds depicting eighth stupas, each presented in profile, on a square, tiered base. Below the stupas is found a ring of lotus leaves just inside the lip of the mold. The further interior of the mold appears to be smooth, coming to a square apex. Two were found still bearing handles, the third was too corroded. Each mold is of a slightly different size, ranging in size from 7.5 cm tall by 7.5cm wide, to 11 cm tall by 8.4 cm wide (Flecker *The Archaeological Excavation of the 10th Century Intan Shipwreck, 42;* Harkantiningsih, 91).

[5] The mold found at Semarang is currently held at the Rijksmuseum Voor Vokenkunde in Leiden (O'Connor, 60). It is 11.5 cm tall and 9cm in diameter, with a handle. Again, the majority of the ornamentation is on the interior, also there is a decorative ridge and some incising upon the exterior (O'Connor, 61). See (O'Connor, 60-62) for full description.

[6] (Boechari p 582) (See Manguin 1990 p 67 for more on this excavation – requested from AAM)

were likely made in a similar fashion, incising the letters in negative upon their surface. As incised objects, the metal composition of those stamps was likely different from that which we have so far hypothesized for the stūpika molds. While the former would need to be softer to take precise incising, the later were harder as products of casting.[81]

I am not arguing that the texts must have been added using a gold seal ring. I would venture, however, that the space of production for the tool used to add the text to stūpika was different from the space of production for the creation of the basic mold itself. The former would have been more a space of hand-modifying softer metals (gold, silver, lower-tin copper alloys, etc.) and the latter would have been a space of casting.

Base Molds

Some stūpika have molded bases; some have rough, hand-formed bases. The former instances are distinguishable by their straight sides and clear angles. Some stūpika are not easily categorized between these two options. Such molds would have little to distinguish them as base molds, and they could have looked largely like small bowls. Given the comparatively nondescript nature of these bases, I am not aware of any currently so-identified instances of stūpika base molds from Java.

From the perspective of our discussion on metal, we have little evidence. When such molds were used, given their specific sizing to match the top molds, it is likely that both molds were produced in tandem, or that bases were more generalized but used when an appropriately sized base mold was available. It is possible they were also made of copper alloy, but they could have also been made of other (even less hard or heat resistant) materials given that the stress of molding local clay without high heat firing is minimal.

Metallurgy & Copper alloys of insular Southeast

Copper alloy, generally referred to rather imprecisely as bronze, was used widely in premodern Java, including significantly within the space of Buddhist religious practice.[82] Despite the widespread presence of copper alloys and other metals, bronze was not readily available or locally smelted in insular Southeast Asia. It was imported primarily from mainland Southeast Asia and China and then fashioned locally (Christie "Javanese Markets and the Asian Sea Trade Boom of the Tenth to Thirteenth Centuries A.D.", 358). This combination of scarcity and local production opportunities (as either cause or effect) situated copper alloy as a key player in high-demand luxury domestic goods (e.g. betel boxes, jewelry, pots, etc.) and the social

[81] In other words, it is unlikely that a high-tin copper alloy was used for an implement that was to be incised, stamped or manipulated in any way once cooled as it would have been too brittle.

[82] Bronze is a metal alloy predominantly composed on copper mixed usually with tin and/or lead. Bronze and iron technologies arrived in insular Southeast Asia at the same time, shortly after 300 BCE (Bellwood, 36). Transmitted from mainland to insular Southeast Asia around turn of first millennium, some of the earliest extant examples of bronze from the region are the Don Song or Pejeng style drums as found in central and eastern Java, and Bali. These, as with other bronze objects, were made using lost-wax technique. By the late first millennium CE, metallurgy was well established. Looking specifically to the ritual space within Indonesia, bronze was used in the production of Hindu and Buddhist deity statues during roughly the 7th to 11th centuries (Mechling et al., 65). While Sanskrit texts exist within the South Asian corpus delineating the process of bronze production, there is not local evidence of those texts existing within Java so we cannot just assume such manuals would have been followed (Mechling et al., 88).

transfer of wealth (e.g. inheritances, bride prices, etc.) (Andaya; Heekeren, 5; Christie "Javanese Markets and the Asian Sea Trade Boom of the Tenth to Thirteenth Centuries A.D.", 358-359).[83]

Most copper alloy objects found in Indonesia were cast using lost-wax technique (or multi-piece stone molds if we look back to early drums). Some copper alloy objects—for example, copperplate inscriptions, mundane utensils, etc.—were made or ornamented by hammering, stamping, filing and chiseling. These latter techniques were also used for the manufacture of objects in precious metals, gold and silver (Scheurleer, 12).

Epigraphic Contextualization: The Space of Stūpika Metal

Within the thought of classical Javanese people, distinctions existed between types of metal. In addition to divides between gold, silver, and iron, the category of copper alloy was also not seen as monolithic.[84] In many instances, *sīma* records show reference to a variety of metal workshops covering gold, copper alloy and iron, but there was often more than one genre of copper-alloy-focused production site. These epigraphic delineations of workspaces point to divisions along the lines of both (a) composition and (b) technique. Within the space of copper alloy, divisions existed between softer copper alloys that would have been pounded, stamped and incised and less malleable copper alloys—including bell metal and higher tin copper alloys—that were cast with minimal subsequent modifications.

Hindu Buddhist Statues, a Corollary

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[83] Fontein also provides some historiographic context by noting that the reason so many metal archaeological objects—especially in gold—have been found in north central Java is likely linked with the fact that residences of the region in more modern times traditionally paid their national taxes using gold they found buried in ritual deposits (Fontein *The Sculpture of Indonesia*, 38). This situation likely impacted the modern perceptions of metallurgy.

[84] It is not within the scope of this dissertation to offer an exhaustive review of the epigraphic references to metal from the central and eastern Javanese periods. I will provide a few illustrative examples here. From Barrett Jones's review of inscription from the early tenth century, we find a variety of substances noted as article carried by traders, including some metals: *gangsa* (bell metal), *masayang*, *tambra* (material used in copper plates), *tamwaga* (copper/brass), *timah* (tin), and *wsi* (iron) (Barrett Jones, 51).

My own reading of a range of Javanese inscriptions points to a very particular parsing of identity and space related to metal usage. I provide a few examples of inscriptions (with my own translations) to support this. For example, the copper plate of Taji (Ponorogo, 823 Śaka) lists the presence of "*paṇḍai mas vsi tāmra kāngsa*" i.e. "masters of gold, iron, "tamra" copper alloy and bell metal" (See (Sarkar, 7) for full transcriptions; translations are my own throughout this section).

The 829 Śaka (907 CE) copper plate inscription of Sangsang from central Java delineates that "*hana ng kāna hīnghīngana kvaiḥanya paṇḍai mas paṇḍai vsi tambaga gangśa tlung ububan ing sasīma*", "there is there a limit to the number gold smiths, smiths of iron, "tambaga" copper-alloy and "bell metal" copper alloy that is three bellows in each sīma plot" (Sarkar 1971, 87). Later, within the same inscription, metal objects to be given as payment are discussed thus categorized as "*tamvata prakāra …., gaśa prakāra…, vsi prakāra…*" Van Naerseen reads *gaśa* as *gangśa* (bell metal), and further postulates tamvata as a category of "dish". I follow his reading of the former, but I would argue the latter might rather be read as *tambaga* (the characters for v/b and t/g being close in form), thereby bringing us to reading of whole passage as ""*tambaga*" copper alloy [objects] such as…, "bell metal" copper alloy [objects] such as… and iron [objects] such as…". The lists of objects in these lists corroborates this reading (Sarkar 1971, 85, 88-89, 94-95).

The Ālasantan (861 Śaka, 939 CE) inscription (plate 2, lines 3-4) cites the existence of three *paḍahi*-drum making workshops (likely referring to a genre of what we would call bronze drums, two gold smithies, two "*tambaga*" copper alloy smithies and two iron smithies. ("paḍahi tluṁ taṅkilan·, °uṇḍahagi ru°aṁ tuhān·, paṇḍay· mās· ru°aṁ guśali, paṇḍay· tamba(4) ga ru°aṁ guśali, paṇḍay· vsi ru°aṁ guśali" (Wibowo, 38).

These are but a few examples, but the reader can get a sense of the demarcations and specificity conceived of within the local, contemporary perception of metal and specifically within the category of copper alloy.

One of the most preserved and researched genres of contemporary copper-alloy objects are religious (Hindu and Buddhist) statues, dating largely from the 7th to 11th centuries. These copper alloy Hindu and Buddhist statues were cast as solid pieces using lost-wax technique. They were formed with a hollow cavity to hold a consecration deposit. Casting often occurred with the molds held upside-down in relation to the final piece, although some instances occur of the mold being oriented face-down. As Mechling points out, this evinces casting knowledge associated with both South and Southeast Asia (e.g. Peninsular Thailand, Tamil Nadu, Nalanda, Tibet and Sri Lanka), a high skill of casting ability and a prioritization of detail on the top and/or front of the objects (Mechling et al., 88-94).

In terms of composition, Javanese craftspeople used a tin-copper alloy containing very few and decreasing amounts of other impurities to produce these religious statues. Overtime, the percentage of tin increased, with Mechling et al seeing instances in the Guimet collection of 20% tin, aka bell metal (Mechling et al., 83). High-tin alloy has a higher melting point. In general, low-tin bronze melts at 913°C, copper at 1083°C and very high-tin copper alloy—aka bell metal—at 1200°C), and is more brittle and more difficult to incise and/or repair than lower-tin or leaded bronze. It is prized for its shiny silver-like appearance, making it possibly a useful way to make "silver" statues more cheaply (Mechling et al., 94, 97).[85] While not all copper alloy Javanese statues meet the threshold of bell metal (20-25% tin), the space of Hindu and Buddhist copper alloy statues was engaged in and shifting towards that percentage.

Discussion

Looking at the epigraph and statuary evidence, we see a context in which Javanese manufacturing was highly specialized, with workshops dedicated to various metals and molding techniques. There were spaces where softer metal was poured, struck and incised. And there were spaces where harder metals were cast with minimal other modifications. Copper alloys were used in both spaces. While high-tin copper alloys (like bell metal) were cast and only minimally modified once cooled, other metals—including more malleable, lower-tin copper alloys used for copper-plate inscriptions or utensils, along with objects of gold or silver—were modified by hand by hammering, stamping filing or chiseling (Scheurleer, 12). In the case of the religious statuary of Java, the vast majority of statuary decorations are imparted via casting, with only minimal details added by incising the fully set, cold metal (Mechling et al., 77). In such spaces of production, the materials used were increasingly pure and increasingly higher-tin copper alloy, edging on bell metal. It is within that space that I place the manufacturing of upper stūpika molds.

This categorization of stūpika molds is further supported by the preservation of molds in shipwreck. High-tin copper alloy preserves well in salt water (Nicolas, 86-87). Metal molds generally do not survive long given the demand for raw materials in the premodern (Brancaccio, 64). The relative density of stūpika molds found in shipwrecks is likely a result of these two dynamics: those left on land were quickly remelted while those underwater remained relatively safe in their salty hiding spot.

The space of religious statuary production was a space of lost wax casting, where craftsmen held great skill in that technique and some facility in incising, where the materials

[85] In their study of impurities, Mechling et al found a couple of interesting points: (a) that composition became relative more pure as time passed, and (b) that irregularities of composition ran parallel to irregularities of style. Further, the variations of composition between various elements of a given statue suggest that all pieces were made in the same workspace but not from the same metal alloy batch (Mechling et al., 84-86).

available were copper alloys and tin which were repeatedly remelted and recast to the point that other component elements dwindled within the ecosystem, the percentage of tin increased, and the look of silver was desired more than the drive to pay for it.

Looking at this wider view of the space of copper alloy in Java, we see active production. Materials are used and reused. For a while, Hindu and Buddhist statues were popular. Throughout, bells were popular. As the materials were used and reused, the overall composition of the metal used in the statuary was an increasingly pure high-tinned copper alloy. Given their overlap of materials and technique, religious statues and bells were likely produced within the same or connected workshops. I posit that stūpika molds—made of the same alloys using the same processes—were made in the same or connected workshops, formed from (increasingly) high-tin copper alloy, cast with lost wax technique, in network with tin and small amounts of gold and silver, and decorated minimally with incising once cooled.

Bells, a Second Corollary

Not all bells are made of bell metal, but there is overlap. I will not delve deeply into the bells of Java.[86] What I do wish to emphasize, however, is that bells were widespread in premodern Java. Specifically, copper-alloy bells were common during the Central Javanese period and became increasingly prevalent into the East Javanese period. Many bells remain extant from both periods. As Fontein and Soekmono write,

> By far the most common bronze relics of both the Central and East Javanese periods are ceremonial bells, perhaps five hundred of which have been preserved….
>
> This preponderance of bells is a phenomenon observed not only in Java, but in other parts of Southeast Asia (Fontein *The Sculpture of Indonesia*, 56).

Exhaustive composition testing has not occurred yet, but what such studies have been performed combined with visual inspections point to bells (including gongs) being made with high-tin content (Nicolas, 83-84).

Taking this as context, this adds to my view of premodern Java as an era in which increasing emphasis was placed on the manipulation of high-tin copper alloy. The material was in high demand, and craftspeople used it to create multiple genres of object.

Coinage, a Third Corollary

Money—i.e. coinage—was a key and evolving player in the world of metal in classical Java. Coinage came to insular Southeast Asia relatively late. Despite their longstanding engagement with long distance trade, local economies did not adopt coins until the end of the 8th century (Christie "Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D", 246, 249). First millennium Chinese coins are found, but only with later coins, and Indian coins of that era are not found in insular Southeast Asia. Gold, bronze, iron (in rings or bars as well as in finished objects), cloth and rice were exchanged by way of payment, with varying levels of standardization in the ninth and tenth centuries in Java and Bali (Christie 1996, 245).[87]

During the Mataram empire of Central Java, gold *piloncito* (small dice) of gold, electrum and silver, and silver/copper alloy (billion) “sandalwood flower” coins (circular, flat or concave, stamped on reverse side) were the common currencies (Christie 1996, 246, 249). These 9th and

[86] For more on the bells of Java, see (Fontein *The Sculpture of Indonesia*, 56-57; Nicolas).

[87] I also see this throughout the *sīma* inscriptions mentioned in our discussion of the epigraphic evidence on metal usage.

10th century gold and silver-copper alloy coins in Java bear Sanskrit letters written in north Indian *nāgarī* or *siddhamātṛkā* script. The use of these coins spread from central Java eastwards through East Java and Bali, reaching all the way to Manila, and west into Sumatra by the tenth century (Christie "Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D", 246-247).[88]

By the 10th century, with the intensification of the trade networks focused around Java and Bali functioning as entrepôts for the larger region of insular Southeast Asia, an economic zone was established ranging from southern Sumatra through the Philippines largely predicated on the presence of a common currency available in small denominations. At first, silver and silver-copper alloy coins were used. Subsequently, Song Chinese copper coins (actually bronze) became the common currency. By the mid-13th century, however, local Javanese production of this currency (aka *picis*) largely replaced imported coins due to increasingly irregular international supply. This new wave of production required a huge influx and/or reallocation of bronze (Christie "Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D", 264; Christie "Javanese Markets and the Asian Sea Trade Boom of the Tenth to Thirteenth Centuries A.D.", 360; Miksic “Review: Archaeology Ceramics, and Coins”, 291-292).[89]

This shift in the money used in Java was not just one of metal composition but again, it was a shift in production technique. No longer were currency metals (gold and silver) being dripped and struck. Instead, currency metal (largely copper alloy) was cast (Christie "Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D", 254). The space of coinage, therefore, shifted, either literally in that it moved from one type of workshop to another, or more figuratively in that coinage manufacturing sites would have dedicated greater time and/or space to the use of casting technologies rather than striking technologies.

With the shift in coinage, the efflorescence of bronze statuary, and the popularity of bells, an increasingly greater emphasis on hard, cast metal is apparent. Incising and stamping were not totally unknown within these spaces, but they were not as central to the production process as in previous eras or within workshops dedicated to softer metals. It is within that space that I situate stūpika molds.

The Great Exodus: copper alloy’s abandonment of the stūpika

Stūpika molds were seen as useful—as a worthwhile use of (high-tin) copper alloy—in insular Southeast Asia by the ninth century. Within a few hundred years, they were no longer seen as useful. Given the diversity of stūpika extant, many stūpika molds were present in Java.[90] Other bronzes from this time period, including other Buddhist ritual objects, survive in significant numbers. So why did such a high percentage of the stūpika molds seemingly disappear? Or more productively, what pulled copper alloy out of the shape of stūpika molds and into other uses?

I suggest that stūpika molds were part of the great reallocation of copper alloy that occurred in the early centuries of the second millennium. While not exhaustive, two significant destinations of the copper alloy used in stūpika molds were likely coinage and bells. As discussed previously, the radical uptick in demand for small-denomination currency leading up

[88] Also see (Amelia) for further discussion of role of Chinese coins in classical era western Indonesia.
[89] The Intan shipwreck points to the import of such materials (See (Flecker "Treasure from the Java Sea (the 10th Century Intan Shipwreck)", 3)), in addition to the recasting of local copper alloy objects.
[90] There would still have been an order of magnitude difference between the molds and the stūpika produced. The original number of objects, therefore, does impact our viewable record, but it does not totally explain it.

to the 13th century drove much copper alloy into the form of coins. Those coins were produced using the same predominantly higher heat, casting techniques (as opposed to predominantly lower heat, striking techniques) as were present within the space of stūpika mold production. Further, the demand for bells was high across the era, and the repurposing of the already bell-shaped stūpika mold to an actual bell would have been an easy feat.

Conclusion

We know very little directly about the molds that were used to make stūpika. We have a tiny number extant and very little work has been done studying them specifically. That being said, by following the tangents of the tangents, we can see this facet of stūpikaic life in (somewhat hypothetical) detail.

Stūpika molds were cast of copper alloy. It is likely that many used a higher-tin alloy. Little (but not no) incising was added to the molds themselves. These molds were then used in tandem with other tools to produce the stūpikas themselves. Among the other tools used, a stamping tool at add the text figured. This stamping tool was likely produced using a different set of metallurgical techniques, placing greater emphasis on incising and less on casting. It is also, therefore, likely that the composition of the mold vs. the stamp would have been different. It follows that the mold and the stamp came from different spaces (either literally—different workshops—or figuratively—different people, expertise, tools, mindsets, etc.).

At the same time, epigraphic evidence points to the fact that Java viewed in metallurgical landscape as diverse: types of metal—and even types of copper-alloy— were widely recognized. Different people and spaces were dedicated to each. Further, in parallel, there was a shift in a few fields on metal usage. Copper alloy, with an increasingly great tin content and a decreasing amount of other impurities, was used in the production of religious statuary (Buddhist and Hindu). Bells were cast of copper alloy likely approaching technical "bell metal" composition as well. Rings for sealing were made by incising various materials on the more malleable end of the spectrum, including gold. *Siddhamātṛkā* and *kawi* scripts were used across this space. Money moved along a trajectory from predominantly struck coins of gold, silver and billion towards cast copper-alloy and tin coins.

Molds made to create stūpikas—being cast and minimally incised and generally bell-shaped—were likely made by craftspeople specializing in casting and likely working primarily with increasingly high-tinned copper alloy. I am not arguing that all stūpika molds were made of bell metal (just as I am not arguing that the stūpika text stamps must have been made of gold—there is really no evidence to support either such claim specifically), but I am arguing for overlap or rapprochement between these categories. These would have been the same spaces in which were made other such ritual objects as bells and religious statues. The space of stūpika mold production—where the much of the conceptualizing of stūpika occurred—was therefore the spaces as mentioned in the epigraphic examples of casting copper alloys, where materials were increasingly tinned copper alloys.

Chapter 6: Of Clay

Introduction

In addition to the shifts within metal discussed in the previous chapter, a few other things happened around the turn of the second millennium in Java, and specifically a few things happened that were deeply connected with the qualities and use of Javanese land local to the major population and power centers. First, the much-discussed shift of political power from central Java to eastern Java took place. Second, irrigated, wet agriculture was implemented, first in central Java in the final centuries of the first millennium and then in eastern Java in the early second millennium (Christie "Water and Rice in Early Java and Bali"). Third, with increased engagement with Chinese ceramics, Javanese clay—specifically earthenware—manufacturing entered a new phase (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 139*). Alongside and within these events, stūpika were made of clay earth local to sites of political and religious investment, using soil ripe for wet rice agriculture, and using techniques overlapping with earthenware production. The stūpika of Java, as objects of clay, are thus deeply entwined with and representative of all those human shifts of settlement, power, production and exchange.

In this chapter, I leverage composition testing and close visual observation of the stūpika of Java, contextualized by scholarship on the wider usage of clay and local production practice. I frame stūpika as both representative of fundamental shifts in the socio-economic structuring of the region, and as bearing witness to the high skill and intentionality inherent to stūpikaic clay manipulation. This chapter, therefore, both adds further to our view of premodern Java with particular insight into yet another area of production and economic exchange, and also undergirds our discussion of iconography by emphasizing the extent to which these objects were the product of various forces (environmental and human), managed by craftsmen deeply skilled and engaged in that local context.

Made of Clay?

The term clay can mean many things to many people. It is a general term, denoting a fine-grain, colloidal earth. Soil that holds together and can be effectively molded when wet falls into this category. Similarly, in modern Indonesian, the term *tanah liat* is used to describe the material used in the production of stūpika. This phrase is translated as *clay* in English, but if we parse it further, *tanah* means earth, soil or land, and *liat* modifies with the sense of being tough or holding together well. The stūpika in Java are made of clay earth in this sense. Earth—of various compositions—was taken from local sources, mixed until it was sufficiently malleable, molded by pressing it into a copper alloy mold and dried until it was hard. The end result is a solid if fragile object bearing fine detail.

Clay, especially low-fire clay manufacturing, offers low barriers to entry for new production techniques.[91] Unlike metal casting or high-fire clay manufacturing (e.g. porcelain), minute variations of production and style can develop, travel, be adopted and be reinterpreted quickly without significant investment for infrastructure or training within the context of low-fire clay (Brancaccio, 56). In other words, it is a space ripe for tinkering, and the analysis of stūpika presented in this chapter and dissertation reveals just that: massive amounts of tinkering.

[91] This is not to say that such materials require less skill or are lesser in any way. The process, however, is open to more interpretation at more junctures.

Ceramics

Ceramics constitute a similarly broad category.[92] While encompassing an even wider range of materials, this term is generally used to refer to objects made of clay, often mixed with various additives like sand, and then fired until hard. Earthenware, stoneware and porcelain are all genres of ceramics. Earthenware again represents a large category of objects made from clay that is baked at a relatively low temperature (under 1200degrees Celsius). This makes it relatively porous until a glaze is applied. Famous examples of the category include Redware, (Majapahit) Terracotta, etc.

Many parallels exist between stūpika, on the one hand, and ceramic objects more broadly and earthenware specifically, on the other. Both ceramics and stūpika are made of specific admixtures of local earth, valorized, associated with death rituals, collected into troves and buried.[93] The point of significant divergence is the heat at which each genre is dried. Given their low (in some cases basically nonexistent) baking, stūpika do not entirely fit within the ceramic category. Even earthenware—as a low-fire genre of ceramics—is baked at a higher temperature than most extant stūpikas appear to have been. Stūpika, however, are made of the same raw materials and using the same molding techniques as contemporary, locally produced earthenware. I argue, therefore, that stūpika are distinctly part of the universe of ceramics, and of earthenware, if at its edge.

Earthenware has a long history in Java dating from long before the classical period. Earthenware objects dating from the beginning of sedentary communities is found across Java. Extant examples date back to two thousand BCE, with earthenware used both for daily life and as part of ritual (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 126*; Miksic "Kilns of Southeast Asia", 68-69).[94]

For a long period spanning much of this history, earthenware manufacturing focused around a few techniques. Objects were made with the paddle and anvil technique (i.e. artisans stretched and shaped the clay by holding a stone on one side and hitting the other side of the desired wall with a stick) and by hand-shaping. Alternatively, clay was rolled out into a snake and coiled into the desired shape, after which the walls were smoothed out. These objects were then fired by placing them in a clay-lined pit topped with a wood fire and then buried under straw to keep the keep the heat in and evenly distributed. Decorations were added to these earthenware goods with incisions hand-carved into the clay. This process of earthenware

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[92] For further reading on Southeast Asian ceramics, see (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins*); (Adhyatman "A Note on Yue-Type Ware Found in Indonesia"); (Dupoizat; Flecker "Maritime Archaeology in Southeast Asia"); (Guy); (Miksic "Research on Ceramic Trade, within Southeast Asia and between Southeast Asia and China"); (Miksic "Kilns of Southeast Asia").

[93] Ceramics are often found intentionally buried, as the people of Java held ceramics as sacred and/or of familial significance. Troves of ceramics were made as part of human burials or preserved in collections during times of political unrest (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 126-143*).

[94] The historiography of ceramics deeply impacts our understanding of both the category and history more broadly. This can be seen very clearly in the context of underwater archaeology. Environmental factors likely contribute to an uneven percentage of ships sinking while following specific geographic and temporal routes also associated with the export of ceramic goods. However, within those numbers, it is more likely that ships with ceramic cargoes are to be found and excavated due to the ongoing valorization of ceramic goods (especially porcelain). This creates an imbalance in the modern view of premodern activity (Flecker "Maritime Archaeology in Southeast Asia", 36).

production found in Indonesia was not specific to that region. Similar products and techniques are found across much of Southeast Asia (Vietnam, Malaysia, the Philippines and Indonesia) from 1500 BCE through the first millennium CE, known as Sahuyn-Kalanay pottery (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins, 139*).

These techniques, however, changed around the turn of the second millennium CE. With the advent of more metal capabilities, earthenware production shifted. Stamps and molds were used increasingly to shape and decorate more elaborate, polished and consistent objects. Around the 11th century, a significant uptick in the prevalence of ceramics from China (lasting until the Ming Gap) coincided with shifts in products made within Java. New shapes of earthenware goods emerged in Java (jars, large vases, teapots, objects with a foot suggesting the use of a wheel, new surface decorations, Lio aka fired bricks used widely in the architecture of eastern Java, etc.) (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins*, 139).[95] These shifts were not unique to Java. Similar changes occurred in the ceramic record of much of South and Southeast Asia (for example, in Khmer kilns).

In the centuries thereafter, Javanese ceramics (and specifically earthenware) production grew further. The most famous example of this within Java are the Majapahit terracotta statues. The kingdom of Majapahit is in many ways almost synonymous with terracotta figurines. Many objects made of this material were found in the region of Trawulan, dating to the 13th to 15th centuries (Adhyatman *Keramik Kuna Yang Ditemukan Di Indonesia, Berbagai Penggunaan Dan Tempat Asal/Antique Ceramics Found in Indonesia, Various Uses and Origins*, 139). That genre of clay object is distinctive in a few ways, not the least of which is its red color, a result of the local earth. The Majapahit kingdom and its craftsmen are lauded to this day for their significant skill and artistry in the manipulation of clay as earthenware.

It is within this narrative of earthenware that I place stūpika as objects of clay. Stūpika were made in Java during a moment of transition within the clay economy. Longstanding craft traditions of clay production, deeply engaged with the flows of ideas across Maritime Asia, formed a firm foundation upon which local producers tried out new techniques, produced new goods and honed their own specific styles. It was a space of variable but relatively low heat firing, using locally sourced and mixed clay materials, and a new and evolving set of tools that included both hands, stamps and molds, in addition to wheels and cutting implements. These same skills, materials, structures and tools were used to make household goods, ritual objects and the stūpika of Java.

Stūpika Composition

All evidence points to Javanese stūpika being made from a malleable clay mixture, formed by carefully mixing locally sourced earths.[96] Comprehensive composition testing has not been conducted on the stūpika of Indonesia. Two such studies, however, have been made,

[95] Even the stūpika themselves as found at Borobudur were discovered within an earthenware jug (Boechari "Report on clay votive stupas from the Borobudur site", 115; Santiko "Some Remarks on Votive Stupas and Votive Tablets from Borobudur", 76); (Sri Hardiati, 50).

[96] Those same raw materials were used for a variety of purposes. For example, looking at the excavation records of Candi Gentong, the variations of composition between clay stuffs is apparent even within the construction of a single structure as walls, walkways, pipes, etc. each required their own composition (Rochmani, 8-9). Mixing precise, purpose-specific clay was central to the building and manufacturing practices of premodern Java.

covering the collections as found at Pejeng in Bali and at Borobudur in Java. Between half this data lying outside the perimeter of our current study and the two studies combined representing only a small percentage of the total extant (let alone originally produced) stūpikas of the region, these studies do not provide a full image of the composition of Javanese stūpika. They are, however, suggestive of trends that I corroborate with visual observation across the extant data.

Borobudur



Figure 7: Stūpika of Borobudur, Museum Borobudur

(Note glimpse of text inscribed at center.)

The Borobudur stūpikas are all made of yellow-brown mont-morillonite polarized clay soil that is prevalent around Borobudur and in the Menoreh hills, combined with sand and quicklime to stabilize the solution (Boechari "Report on clay votive stupas from the Borobudur site", 116-117).[97] The local soil around Borobudur comes in two relevant genres: red-brown and yellow-brown. The former clay contains 26.44% sand and .16% calcium, the latter 19.4% sand and .03% calcium. Conversely, we see these percentages increase significantly as we look at the materials using in stūpikas themselves. If we average the compositions of all tested instances, the percentage of sand jumps to 33.22% while calcium to .064% (Boechari "Report on clay votive stupas from the Borobudur site", 117). As such, we see a distinct jump in the amount of sand (by approximately 71%) and calcium (by approximately 114%) as compared with the local yellow-brown soil. This points to the fact that soil was not simply taken from the ground and molded; different soils were sourced and mixed to create a specific solution.

Further, the composition of the stūpika found at Borobudur is remarkably uniform. The range provided by Boechari is remarkably tight. The standard deviation on the sand content is

[97] Borobudur is situated in a region of distinctly mountainous soil (latosol/andosol, near regosol from the regions between hills and mountains, red/yellow Mediterranean and lithosol), but similarly to Jongke it is near regions of alluvial soil. The construction of Borobudur in general has been framed within the context of it functioning as part of the intensive agricultural milieu that was the Śailendra dynasty, a system that relied on said alluvial soil in network with more volcanic mountainous additives. The composition testing again corroborates this interpretation (Boechari "Report on clay votive stupas from the Borobudur site", 116-117).

3.16 and while that of calcium in .003. Such precision would seem rather untenable if the admixture was being created individually for each object. I suggest that this data points to the mixing of a batch of moldable material—local clay plus local particulate—that would then be used over some space of time to create a set of stūpikas.[98]

From a visual examination, the stūpika of Borobudur are brown, with some containing a slight red or slight grey cast. Their clay is smooth with some small particulate, and their surface is overall dusty (partially due to their own minimal firmness and partially due to incomplete removal of excavation dirt) and shows rivulets and gouging.

Sonobudoyo



Figure 8: Stūpika 10 Museum Sonobudoyo, 10736_04.1549

The stūpika held at the Museum Sonobudoyo have not undergone composition testing. Further, we do not have clear information as to where each individual stūpika from that collection originated. Based on archival records (Stutterheim *Uittreksel Uit De Oudheidkundige Verslagen over 1931-1935, 17, 571*), I suggest that most, if not all, came from the Jongke trove, but this is an educated guess. The area of Jongke is in a region of regosol from Mount Merapi, surrounded by alluvial soil. My own close reading of these objects, corroborated with the observations of the team at the Museum Sonobudoyo (Koleksi), provide some understanding of the materials used to make the stūpikas housed there.

There is diversity within the collection of stūpika held at the Sonobudoyo. They are of different sizes, bear different motifs and contain different genres of textual element. That being said, they do present a uniform look in terms of color and texture, with only minimal variation. The stūpikas at the Museum Sonobudoyo are tan/brown in color, with some ranging closer to

[98] The results of the composition testing of Balinese stūpika from Pejeng is very similar: the stūpika were made using local soil, mixed with particulate to ensure strength and malleability. According to Stutterheim's conversation with Dr. Ir. Tan Sin Hok of the Palaeontologisch Labratorium in Bandung, the stūpika as found in Pejeng, Bali were tested and found to be composed on a combination of elements common to the local region. Specifically, he notes that in order to ensure structural integrity upon baking, coarse particulate is introduced into the mixture, in this case "basic plagioclasses, light colored pyroxenes, debris of pumic and andesite" i.e. young volcanic materials (Stutterheim "De Herkomst Der Kleizegels Van Pedjeng (Bali)", 134).

gray and others exhibiting slight reddish undertones. The exteriors of these stūpikas are finished with a matte smoothness, while their interiors (visible at points of breakage) are granular with significant particulate within the material. That particulate is generally pale to white in color.

While damage is certainly present, this collection has held up remarkably well. Granted, if this is part of the Jongke trove, it is only a small percentage thereof so it is possible that only the best preserved made it into the permanent collection. We see less evidence in this dataset compared with others of the objects washing away. In handling them, I observed off-dusting. Particulate sloughed onto the tablecloth and gloves, but the stūpika felt overall hard, solid and relatively strong.

The look of the stūpika from the Sonobudoyo is similar to those from Borobudur. Those held at the Sonobudoyo, however, are more thoroughly cleaned of surface dirt, making them appear lighter in color and less dusty, but the objects themselves are similar in texture and color.

Museum Majapahit

Museum Majapahit is located at the archaeological site of Trawulan in Mojokerto, East Java. Stūpika were excavated from one of its temples, Candi Gentong. This site is in a region of alluvial soil but surrounded by regosol soil of the Mount Arjuna range, and close by deposits at Mt. Penanggungan of the same Red/Yellow soil as was used in the stūpika of Borobudur.

The collection held at the Museum Majapahit, however, presents an eclectic face, with some stūpika being red, others tan/brown, some in relatively good condition and others barely recognizable as stūpika, some with smooth surfaces and others with deep pockmarks and rivulets across their surfaces. This context is further complicated (or explained) by the records that accompany the collection. Three of the eleven stūpika from this collection are recorded as coming from Gumuk Klinting in Banyuwangi. Two instances are recorded as coming from ONB, (i.e. (*uitlever*) *onbekend* or being of unknown provenance) while the remaining six have nothing written in the origin field of their inventory sequence.



Figure 9: Museum Majapahit Stūpika 4 (127.TR.GMK.72.BPG)

Those stūpika from Gumuk Klinting are tan/brown in color and relatively robust in terms of preservation. Their exteriors are smoothly finished while their interiors display particulate.

Unlike those from the Sonobudoyo, the stūpika from Gumuk Klinting did not release particulate in handling. These are some of the most well-preserved instances in this collection.



Figure 10: Museum Majapahit Stūpika 11 (2092.TR.-.-.PIM)

Those without recorded origin are reddish with some having a darker brown/red tone with some having even black elements. They are more worn and degraded overall. The clay appears to have had less particulate in it, although the overall texture of the degraded objects often appears rather rough or pockmarked, and gave off some particulate.



Figure 11: Museum Majapahit Stūpika 6 (2089.TR.ONB.24.PIM)

Those listed as origin ONB (rather than just blank) resemble the first Gumuk Klinting category more closely. They are well preserved, tan/brown in color and boast smoothly finished exteriors.

Looking only at the documentation, it might be tempting to read the records as saying that the ONB stūpika and the unlabeled-origin stūpika were the "same". Similarly, looking only at the stūpikas themselves, one might wish to lump all the brown/tan well preserved smooth

instances together and all the degraded red/brown instances together. Neither approach paints a terribly precise picture.

As I read these stūpikas and their archival labels, I am largely reminded of the process of intake, of the potential smaller finds discovered in local fields and construction sites, of national collections pushed outwards, of the power dynamics between local traditions, national structures and the international market, of artifacts passed from hand to hand until they ended up in this museum collection.

Museum Banyuwangi



Figure 12: Museum Banyuwangi Stūpika 72

Photo curtesy of Pak Bambang Budi Utomo and Pusat Penelitian Arkeologi Nasional



Figure 13: Museum Banyuwangi Stūpika 4

Photo curtesy of Pak Bambang Budi Utomo and Pusat Penelitian Arkeologi Nasional



Figure 14: Museum Banyuwangi Stūpikas 73.1, 73.2, 73.3

Photo curtesy of Pak Bambang Budi Utomo and Pusat Penelitian Arkeologi Nasional

Like those held at Museum Majapahit and listed as coming from Gumuk Klinting, those housed at Museum Banyuwangi are generally brown in color, with some tending towards tan and others with a red undertone. They are often smoothly finished and appear to be made with a relatively smooth clay. Some are so smooth they seem almost to be glazed or polished, while others have a smooth but matte surface more akin to those found at the Museum Sonobudoyo. A small grouping tends even more to red and these are also rougher and more degraded in texture. On average, this collection appears the hardest, most baked of those found in Java.

At Banyuwangi, stūpika were found in a region of alluvial soil, located near mountainous soils (such as grumusol from "rolling land," regosol/latosol from the hills, and red/yellow Mediterranean soils and others) associated with Mount Raung. This region is also right by the sea, much closer to that environment than the other troves.

Without precise and extensive composition testing, it is impossible to say definitively how each stūpika's source material was sourced. Visual examination of the stūpika, however, suggests that there was regional variation in the materials used, but that in all cases (of those stūpika that survived) a few qualities remained constant: the raw material was clay with a generally fine texture with some grainier particulate mixed in. In central Java, that material was generally brown with a slight red or grey cast, and the particulate remained visible. In northeastern Java, around Gentong, that material tended to be red with dark, almost black inclusions and a finer overall texture. In the fast east of Java, around Banyuwangi, we again see more brown material, with some slight red or grey tones, minimal particulate and in some cases, a very smooth polished exterior. These general classifications map clearly onto the soils available in each region. In all cases, stūpika are found in troves in areas boasting both strong flooding plains of alluvial soil and areas of more granular mountainous soil. Further, the similarities between both the central Javanese and the eastern Javanese troves dovetail with the similarities of the soils found in those regions, while the differences point to some variations of production (to be discussed shortly). Those from the Gentong region stand out for their color and texture, but that particularity mimics the other clay goods from that region.

Agricultural Connections

Another way to view this data is to say that the stūpika of Java are found in greatest concentration in regions and are made of soil combinations ripe for intensive wet rice agriculture. All sites of significant stūpika discovery in Java—i.e. Borobudur, Jongke, Candi Gentong and Banyuwangi—are in regions of fertile alluvial soil closely associated with mountainous (volcanic) soil where intensive agriculture (and specifically wet-rice agriculture) flourished (Soil Research Institute).

This idea of the combination of mountains and lowlands and water being of significance within western Indonesia in terms of religion, agriculture and political organization is well attested.[99] Nor am I positing a direct causal relationship between soil type and cultural production. Stūpika have not been found (at least not as large, officially excavated troves) at every instance of interface between alluvial/fertile lowland soil with rocky mountain soil. Rather, stūpikas are part of that dynamic interplay of human activity and topographic realities that so characterized Java, both contributing to the complexity of interaction and themselves capturing

[99] See, for example, (Christie "Water and Rice in Early Java and Bali") and (Lansing)

the interconnected nature of Javanese life. There is overlap between regions where stūpika (and other earthenware goods) are found in great number and regions where intensive agriculture flourished. Both leveraged a mixture of alluvial and mountainous soils. I wish to point to the interconnected nature of these trajectories, to the contributing, agent-ful role played by clay.

My close examination of stūpika, combined with what composition testing is available and our understanding of soil local to major trove sites, suggests that stūpika were made of local materials. Those materials were sourced and mixed with precision to create a raw stuff primed for the creation of stūpika according to a specific process. This is the first step in the clay phase of stūpika production, and one that I argue points to two salient points. One, and this will be repeated again and again, stūpika were made with great consciousness and skill. Tinkering was prevalent, but no lack of capability is evinced. Two, that those same raw materials and major trove sites are regions that were at the same time implementing intensive wet rice agriculture. And three, that space of clay production that gave rise to stūpika bears qualities (what was being used, how it was manipulated) that significantly overlap with the space of earthenware production local to the same regions.

Production Logistics

Within this contextualization, the final section of this chapter will unpack a few other observations made of the stūpika of Java with regards to their nature and production as objects of clay. Specifically, as noted previously, the production of stūpika overlaps with that of other earthenware products in terms of their raw material, their molding techniques and their drying processes. The first of these we have dealt with in the previous section, but this section will contextualize stūpikas in terms of the second two steps in their production.

Molds

The previous chapter discussed the metal molds used in the production of stūpika in their own right, focusing on the metallurgical manufacturing and usage. In this section, however, I will consider how the molds functioned within the space of clay manufacturing. This, therefore, is a view of molds from the perspective of clay.

Single and double mold technologies for clay were common in the Indian Ocean world. Creating clay objects using double molds likely moved from the Mediterranean world to Southeast Asia via South Asia (Brancaccio, 56; Bellina, 80-83). As mentioned in the previous chapter “Of Metal Molds,” some stūpikas were made using a single mold and others with a double mold.

The base shapes of stūpikas found in Java are best described as a spectrum. On the one end, the base is just a rough lump, the stūpa upper form rising from the rough earth in a rather shocking disjuncture. At the other end of the spectrum, the base is as even and angular as the top, boasting straight sides that taper down to hit a flat, circular base at a clean angle. Many fall somewhat in the middle.

The majority of stūpika found extant in Indonesia were made using a single mold. This fact has been observed by both Goris (in his examination and drawing of the stūpika of Pejeng in Bali) (Goris, 83) and subsequently by O’Connor in his discussion of a stūpika mold found at Semarang (O'Connor, 61). Boechari et al go so far as to say that “the base was apparently shaped by hand arbritarily (sic), depending on the amount of clay which the stamper still held in his hands” (Boechari “Report on clay votive stupas from the Borobudur site”, 115). While no base

molds have been identified as such, the extant stūpika record itself suggests that in some cases a base mold was also used.

Most stūpikas fall somewhere in the middle between clearly single molded and clearly double molded, having bases smoothed into a more rounded or more angular, but somewhat regularized foundation upon which the stūpika upper would sit. Given this variation, it is difficult to say with perfect certainty that *x* stūpikas are made with a base mold while *y* are made with only a single mold. However, given their impressive regularity and angularity of base, it would appear likely that some of the stūpika from Gumuk Klinting, and some of those housed at the Museum Sonobudoyo (i.e. those likely from Jongke) were produced using a second, base mold that formed a cleaner, more angular base structure to the objects.

At this juncture, I wish to simply emphasize the diversity found within the molding practice, even as they are all superficially made in the same way. Yes, they are generally made with a single mold, but there are likely exceptions to that rule, and even of those made with a single mold, the form given to the based varies drastically.

Firing

Another common refrain used to describe the stūpika of Java is that they are unfired, being sun dried instead. As we found with our discussion of molds, the evidence points to this being not universally true. And again, within the category, I would describe the level of baking present in stūpikas as lying on a spectrum. Some are very delicate lumps of earth, barely holding together, still displaying un-melted silica particulate, continually off-dusting and frankly just defying logic that they continue today. Others are hard, solid, rock-like things with shiny surfaces. And the vast majority lie somewhere in between: they are hard but fragile, have held together but could crack at the slightest provocation. This again points to a mindset of tinkering occurring within the production of these objects, as different workshops, craftsmen, religious specialists, consumers and local environmental or socioeconomic realities all came together to encourage the production of slightly different stūpikas.

Given the variation within the dataset, I suggest that stūpikas were "baked" in different ways. Some (likely most) were more dried than baked, i.e. set at a relatively low heat as under the sun. Others, based on their solidity, finish and color, were baked or dried at a somewhat higher temperature (though still relatively low temperature as compared with high fire ceramics). This concept of votive clay objects being made with a variety of baking practices has precedence. Lamb, in his investigation of the votive plaques on Perlis, discusses how some were lightly baked while others were sun-dried (Lamb, 53). I suggest that the stūpika found in Java follow a similar pattern: some are sun-dried while others are baked to a variety of levels.

Baked clay changes color depending on its chemical content. High iron content turns red. Calcium turns clay white or ashy colored. Silica (which looks like small glass grains in unfired clay) melts when heated sufficiently and then creates tightly bound structure (Astiti, 76). As has been noted, in most instances, the silica particles are still visible, but in other cases, this is less obvious. Further, some instances (especially those found at Banyuwangi), a "skin" is found that looks almost glaze-like in its polish and may be a byproduct of heating that drew out the metals and silicates of the clay. The veining present in some other instances of stūpika bearing black veining within the broken edges also points to some greater level of firing that would melt and change the color of chemical components.

Apart from parsing the individual pieces, the genre itself poses some suggestions. Going back to the issue of votive plaques for a minute, that category is both often lumped with stūpikas in terms of production genre and is generally labelled as "sunbaked." Still, as noted above, those

plaques were not universally *just* sunbaked. This observation becomes more suggestive if we take the physical form of the two types of votive object into consideration. Votive plaques are generally flat, relatively thin objects with iconographic imprints on one broad side of disk. In other words, a votive plaque can be stamped and left to dry without anything too drastic happening. Stūpikas, on the other hand, are thick pieces of clay with significant need of overall structural integrity to maintain their stamped identity. For a stūpika to remain a stūpika, and especially an ornately decorated and upright stūpika of large volume, it must be almost completely dry and hard prior to removal from the mold. Otherwise, the weight of the wet portion would drag the whole down. This points, therefore, to the production of stūpikas in rather specific circumstances. In the dry season, some amount of sun drying likely would have worked, especially with smaller or narrower stūpikas. In the case of larger, wider stūpikas, however, and especially if they were also made during periods of increased rain and/or humidity, they would have required some amount of baking/fire-proximity-drying to be successfully created. Again, this perspective does not provide a full picture or even much concrete evidence, but looking at the dataset from the perspective of clay firing, we again see a context of tinkering, of local and trans-local knowledge, of skill, of engagement with firing even if not active firing in all cases, of time dedicated to quality production, etc.

Thinking of these observations regarding the composition, molding and drying of stūpika, a few logistical questions or suggestions arise. It is helpful here to walk through the production process. Raw materials—fine earth and more granular particulate—was collected from surrounding regions. Those materials were then mixed in relatively large batches (i.e. enough to make a significant number of stūpika) and wetted to form a malleable paste, capable of taking fine details and surviving long periods of time. That clay was then pressed into copper alloy molds. In most cases, only upper molds were used, but some were made using double molds. In all cases, the base of the object was formed in some way, whether by molding with a purpose built second mold, placement in or on some other surface or hand formed. Those objects—likely many at a time—were then dried. The clay was left in the copper alloy molds for some relatively significant amount of time to ensure the structural integrity of the object, with the whole often positioned upside-down during the drying process. They were dried to various degrees, some likely just in the sun and others exposed to greater heat. Somewhere within the drying process, text stamps were added to their bases. In many instances, gouges or indentations appear on the bases of stūpika where the upper is well preserved. I suggest that this points to the objects being somewhat tumbled together while still drying in their molds.

Synthesis & Conclusion

Clay soil was used in manufacturing across the region of Java and maritime Southeast Asia, not to mention the rest of the Indian Ocean world, during the period in question. Stūpika, as objects of clay, are both instances of the hyper-local use of hyper-local materials but also the transregional traditions of production. It is a swirl of ideas, materials and objects.

This chapter presents three key observations regarding stūpika as objects of clay. (a) That stūpika were formed using local—but carefully sourced and mixed—clay, (b) the major documented troves were made in regions where soil was ripe for—and in the process of transitioning to—intensive wet agriculture, and (c) stūpika were made using the same raw materials, tools and techniques as were becoming prevalent during a moment of significant change in the earthenware production of Java. Within that context, clay was carefully mixed,

molded and dried in a variety of ways, evincing both great skill, regional variations deeply tied to geography and significant tinkering.

The close examination of the clay composition used in stūpikas points to a context of informed intentionality. Earths were chosen and mixed to achieve a desired end. I see this point in synergy with our chapter on iconography: if we can argue that makers made what they wanted, we can read what they made and believe what it is saying about what those makers thought, wanted and prioritized.

Further, that space of intentionality was informed by or interlaced with a wide range of contributing factors, including the geological and the economic. Extant stūpika troves correlate generally with agricultural (wet rice) regions near mountains that functioned as centers of food production, not trade. Again, I am not interested in unidirectional causality, but this perspective on stūpika underscores how they functioned within the dynamics of available material and regional economics. Within the whirl of activity—individual, environmental, societal, transregional, etc.—stūpikas were created within a particular niche. That niche is the stūpikaic space this dissertation targets, and this chapter triangulates that space via its analysis of the clay nature of stūpika.

Looking at the stūpika of Java from the perspective of clay, this chapter thus definitively places the production of stūpika within such a context of deeply skilled tinkering, functioning within the dynamics of regional political and economic shifts, setting the stage for the unpacking of those moments of striving, of trying, of testing, and asks how those instances of tinkering functioned and contributed to which conversations as will occur in our chapters on iconography and text.

The era around the 10th century CE is often held up as a watershed moment. Within a few short centuries, among other things, political power moved from central to eastern Java, intensive wet agriculture spread, and long-standing ceramic traditions changed. Within this era of dynamic reorganization, stūpikas were made, and through their very nature as clay, reflect that context of transformation.

Chapter 7: Conclusion

In her introduction to *Engendering the Buddhist State: Territory, Sovereignty and Sexual Difference in the Inventions of Angkor*, Ashley Thompson writes in summation of her critic of Pollock,

> My apparently disproportionate attention in this book to certain apparently minor details may seem ungracious at least, if not misguided, missing the forest for the trees. Yet it is precisely my point that the forest is in the trees—which is not a way of suggesting that there are no differences between the forests and the trees (Thompson, 15).

That is the project of this dissertation: to see the trees (stūpika) as trees and not just the forest (Monsoon Asia, Sanskritic cosmopolis, etc.) but also as constructive of their own forest (stūpikaic space). This project strives to see the stūpika of Java as communicative entities, not as mirrors reflecting back the meaning ascribed by dominant, well-recorded, anachronistically prioritized, transregional narratives. By allowing seriously for the possibility of stūpika to define the parameters of—and actually carry on—a conversation, this work opens our paradigm and multiplies our loci of observation, allowing new questions to be levied and new information to surface.

Review of Argument

Common narratives of Java around the turn of the second millennium CE focus on the shift of political power from central to eastern Java, the changes in architectural and artistic styles, the reorientation of the economy from agriculture to trade (with the attendant introduction of higher yield wet agriculture), the interactions and redefinitions of Hindu and Buddhist religious traditions, the localization of literary traditions, etc. This dissertation adds to this vision of the Javanese past by filling in some of the realities lived by the people experiencing and enacting these broader shifts. Specifically, the pasts that this project largely engaged were the production practices surrounding the spaces of clay and copper alloys. In so doing, this dissertation provides a view of premodern Java that is complex, dynamic and characterized by continual tinkering.

The "Introduction" lay out the theoretical foundation of this discussion, highlighting the analytical productivity of acknowledging and changing the parameters of our discussion.[100] My approach in this dissertation was inspired by the work of eco-critical, Southeast Asian Studies and interdisciplary scholars. I argued for defining our investigation in terms of stūpikaic space as a means to reorient and/or disrupt discipline-specific thought patterns.[101] To do so, I structured this dissertation around the various aspects—or lines—of stūpikaic identity, examining them as objects of space, iconography, text, metal molds and clay.[102] I turned to scholarship on replication and portability as a means to clarify what and how I might understand the wider past through my engagement with this one set of objects through these tangents.[103] I centered the idea of tinkering, viewing stūpika as the ossifications of an ongoing, endless process of building and transferring knowledge in which individual actors make choices informed by their realities and perceptions of those realities (material and materiality). The study of stūpika in this dissertation, therefore, was the study of a set of material remains, redefined and re-leveraged against its own

[100] See (Kuhn).
[101] See (Bennett).
[102] See (Ingold *Lines: A Brief History*).
[103] See (Evans; Fox; Hoffman; Gombrich; Lévi-Strauss; Sontag; Wolters *History, Culture, and Region in Southeast Asian Perspectives*).

self-defined systems of meaning—i.e. in terms of stūpikaic space—to gain purchase on the materialities as experienced by the people surrounding their creation and usage. It told of the surrounding pasts surrounding stūpika, pasts often seen as lost to (or, more accurately, obscured by) dominant narratives of history. By listening to our (inanimate) informants—the stūpika themselves, by allowing them to sketch an ecology of meaning, by engaging with the material remains of that space, the "Introduction" argued that it is possible to see glimpses of the materiality as experienced at the historical moments of stūpikaic production and usage.[104]

Chapter 2 "Of Space" started off by reviewing the modern setting of stūpika in Java and the historical place of stūpika within the wider history of classical era Monsoon Asia. This contextualized the conundrum of how to balance the narratives of stūpika functioning at very different scales: the sweeping transregional vs. the hyperlocal. In answer to this problem and building upon the theoretical discussion of the "Introduction," this chapter then worked through how to define stūpikaic space as constructed via the work of landscaping done by Javanese stūpika. By viewing stūpika as a genre of "landscaping" object,[105] the observer was encouraged to see them as embodying narratives of the past, depicted via and within stūpikaic space. This approach gave rise to the veins of inquiry discussed in subsequent chapters that engaged with stūpika as objects of text, of iconography, of metal and of clay.

Chapter 3 "Of Text" engaged the stūpika texts from the perspective of production process and what those choices tell us about the surrounding context. The textual elements of stūpika are exactly what one would expect: the *pratītyasamutpāda gāthā*, incised in *kawi* or (more commonly) stamped in *siddhamātṛkā* script. I prioritized viewing these texts, however, not in terms of transregional religious or textual traditions but rather in terms of local stamping practices and production techniques. I described a context in which short texts were prevalent, powerful and diverse across the region. They were appended using stamps to mark hegemony. Those stamping devices were created and used by people holding great, highly specialized skill—spanning to spaces of metal and clay materials—working in parallel. Within those spaces of production, craftspeople chose to add this specific text—one of many available to them—and further, chose to add it to the stūpikaic context according to a specific triaging of goals. As such, in looking at the data this way, I argued against beginning and ending the discussion of stūpika texts as *just* the anticipated texts in their anticipated form, but rather seeing through them the prioritization of iconography and the deprioritization of text legibility within the contemporary perception of stūpika, as well as the complexity, intentionality and interconnected nature of the production spaces engaged in clay and metal manufacturing. This chapter, thus, set the stage for the subsequent three chapters to dig deeper into those spaces, viewing stūpika as defined as objects of iconography, metal molds and clay.

Chapter 4 "Of Iconography" described the defining and common forms of Javanese stūpika and then opened that conversation up to engage with their physical characteristics more broadly. This chapter highlighted how complicated the process of production was; so many different elements were balanced against one another with great dexterity and intentionality but also variation. Workshops—producing both stūpika and votive plaques, as well as various tools and materials—interacted with one another, engaging multiple individuals, groups and skillsets. Across these contexts, the iconography of stūpika, as a miniature replica of stūpa, puts a spotlight on the contemporary perception of that category. The prioritized aspects of stūpika form evinced a contemporary Imaginaire that viewed *stūpas* as defined by their vertical differentiation and

[104] See (Ingold "Materials against Materiality"; Ingold *Lines: A Brief History;* Ray).
[105] See (Mitchell "Imperial Landscape").

angularity, as empowered by the existence of text as relic (but not necessarily its legibility). Once produced, stūpika were used in a transactional manner and in contexts where women engaged. Together, this chapter argued that the iconographic program of stūpika as complex, leveraging great skill and creativity, and participating in local and translocal connected socio-economic systems.

Chapter 5 "Of Metal" dug into the metallurgical segment of the stūpika's lifecycle. It asked what can be said about the molds used to make stūpika, how those statements fit within the wider local context of metallurgy, and what those statements together tell us of the place of stūpika production within premodern Java. Fundamental to this discussion was the desire to unpack what it meant for metal to be seen as useful as stūpika molds for a few hundred years and then for that to change, for stūpika molds to no longer be a worthwhile use for the prized material. This section situated the production of stūpika molds within a context of metallurgy focused around casting higher-tin copper alloys, a space deeply entwined with the production both of other religious figurines (e.g. Hindu & Buddhist statues, bells) but also, increasingly, coins. As economic and political systems shifted drastically around the turn of the second millennium CE, stūpika embodied the fluctuations of power and worth across social, economic and religious spheres. By reading stūpika as ossifications thereof, this chapter added texture to our understanding of the lived realities of that time of famed, elite change.

Chapter 6 "Of Clay" discussed the raw materials used to make stūpika themselves. Based on composition texting and my own close examination of the stūpika, this section confirmed the common assumption that stūpika were made with local materials. I argued, however, that far from being haphazard, uncurated mud, the clay materials used were very carefully, expertly mixed combinations of specific local materials. Further, soils used in the extant stūpikas were associated with the newly implemented intensive wet agricultures of the region, and the production techniques used in the manufacturing of stūpika overlapped significantly with the fast-evolving space of earthenware production in Java. Here again, I saw stūpika as the material remains of a context of complex materialities, bearing witness to complex periods of social, economic, political and religious change.

Other Sources

Other sources exist that would add further to this conversation. Although it was not within the scope of this project to address all relevant sources in full, my preliminary engagement with these other instances suggests the utility of further exploration.

First, this dissertation focused on a significant but not exhaustive set of Javanese stūpika held in Indonesia. There are other extant stūpika both from within Java and the near surrounds. Within Java, Museum Nasional (Jakarta), Pura Mangkunegaran (Surakarta) and Museum Sunan Giri (Gresik, holding stūpika from the island of Bawean) all hold additional collections I was unable to engage closely. In addition, stūpika are found and held in Bali and Sumatra as well. For example, significant collections are held at the Museum Bali[106] and the Balai Arkeologi Bali (both in Denpasar). Collections of Indonesian stūpika are held abroad, and it is also likely that still other instances of stūpika exist in Indonesia. In all cases, further composition testing of both stūpika and extant molds would add significant granularity to our discussion. In the case of those collections noted above in Indonesia, I was able to view all said collections in person to some extent. The stūpika held there follow the same general patterns as identified in this dissertation,

[106] See (Budiastra).

but more, close reading of these other collections would add significantly to our understanding and project.

Second, further textual study would also add to our conversation. Chapter 3 "Of Text" and chapter 5 "Of Metal Molds" do both engage with the contemporary epigraphic record of Java to contextualize stūpikas. I have also spent time scouring the textual record for references to the usage or manufacturing of stūpika, but time was not sufficient to make an exhaustive study nor could space reasonably be allocated within this dissertation to discuss even the textual evidence already found in great detail. Specifically, I am interested in the epigraphic records, especially *sīma* inscriptions, for their insight into the socio-economic activity surrounding (and embodying) religious activity. As it stands, I know of no direct, textual references to stūpika from contemporary Indonesia. Further reading would clarify if in fact no statements were made (an interesting point in and of itself) or if any descriptions (or prescriptions) were made that could add to our view of the perceived or practical place of stūpika within premodern Indonesia.

Third, I am interested in expanding this vision of the past by both moving beyond stūpika within Java and beyond Java with stūpika. Engaging with both stūpika and votive plaques more broadly within Java (or Indonesia) would provide a more detailed view of the context in which they both were created and functioned. Stūpika were (and are) used in other parts of Asia. While a pan-Asian project looking at stūpika would be ideal, I am interested to engage foremost with those found in Burma. Initial observations point to some productive and suggestive overlap in terms of form and content between the stūpika of Indonesia and those of Burma. Both of these paths of future inquiry would augment again the discussions engaged by this dissertation.

Shifting the Narrative

Stūpika were a common part of premodern Javanese practice for a few of centuries, spanning the turn of the second millennium CE. This was also a time of significant change within the region and the island of Java specifically. Trade networks continued to reorganize with Java playing an increasingly active role in the movement of goods and people. Agricultural practices changed too with the implementation of wet cultivation, freeing up significant domestic labor. In parallel (and in part due to these socio-economic changes), local political power shifted from central to eastern Java, and religious, artistic and manufacturing practices all entered an era of quickened change. This dissertation leverages these stūpika—an underutilized genre of source—to add texture to that vision of Javanese pasts.

This project is both an historical and a methodological study. I assert that disciplinary norms (of History, Buddhist Studies, Southeast Asian Studies, etc.) preemptively circumscribe the answers our data might offer by always asking the same questions. I suggest that the framework of ecocritical engagement provides an alternative that encourages the development of new questions that can in turn generate the possibility of new answers.

This dissertation highlights how much stūpikas tell us about the lived experience of premodern Java, both as its own locale and as a player in those larger networks of meaning. It emphasizes how a source (or set of sources) often discounted as expected, uniform or explained can provide significantly more information when viewed from new angles. By engaging stūpika as witnesses to the active participation of a variety of forces (human and nonhuman) in constant conversation, this dissertation both sheds new light on premodern Java and presents a method for moving beyond the strictures of discipline in general and the challenges faced by Southeast Asian Studies specifically.

I argue that by studying stūpika through an ecocritical lens, as the material remains of the iterative process of knowledge movement, of portability, of replication, of tinkering, impacted by human and nonhuman agents alike, we can gain new purchase on obscured pasts. This dissertation engages with stūpika as replicas that bear witness to the "long tail" of tinkering occurring within premodern Java, that made manifest the materials and materialities of that past in replication, unpacking the agentful elements of that dynamic. In looking at the stūpika of Java thus, what becomes glaringly obvious is that those small voices are very much present. They are not lost; they are simply ignored.

This approach contributes to the historiographic discussions of Southeast Asian Studies, and offers a suggestion for how to seek stories of the past autonomous from the over-loud paradigms of history. The discipline of Southeast Asian Studies was very self-consciously founded upon the struggle to demarcate and define that geographic area in relation to (within or against) struggles for political power. This played out through colonial, post-colonial, post-WWII and nationalist eras and conversations. The approach presented by this dissertation moves this discussion forward still further, pointing to a method for prioritizing the local and appreciating the translocal, all while deprioritizing the dominant human histories.

Final Thoughts

Stūpikas were made, functioned and used during a period of significant change in Java. Around the turn of the millennium, Java's centers of power shifted from central to eastern Java. Engagement with long-distance maritime exchange increased. Intensive wet agriculture was introduced, significantly increasing production while social, economic and political attention reoriented towards trade. Economic practices also changed as money systems evolved to rely increasingly upon locally caste copper alloy coins. These shifts engaged with and were productive of a large reorganization of production spaces and practices surrounding the manipulation of metals (for coins, but also for statues, bells, etc.), stone (for architecture) and clay (for earthenware).

All these changes were changes experienced and enacted by common people. These were not top-down edicts or abrupt switches. These transformations were the products of individuals—in conversation—tinkering. The stūpikaic vision of the past presented by this dissertation highlights the extent to which these "watershed" moments were in fact the accumulation of countless small choices made by countless *small* actants.

Stūpika reflect for our view all the complexities of this process of change at the hands of the many. By viewing stūpika as sketching their ecology, this dissertation reads that stūpikaic space as a landscaped representation of the materialities impacting their creation. In doing so, we see stūpika highlighting the defining local aspects of Buddhist architecture, providing glimpses into the division of labor and priorities of various workshops, gesturing towards the roles of women, etc.

When looking at the stūpika, I see the swell of human involvement in the building of socio-religious space in Java. I see people, families, villages and communities all working to reorganize or to define their space in terms of a multitude of monuments, the built reality of Java. Part of that was building huge edifices. And part of that was to create and deposit stūpika. Within even that small, short-lived corner of activity, I see immense diversity, initiative and skill. I see tinkering. I see the thoughts, resources and skills of many, not as a faceless monolith but as a legible mosaic.

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