

# Historical Study of the Use of Low Seat *Dingklik* in Java in the Socioeconomic Activities of the Colonial Era (1800-1900)

Since the 8<sup>th</sup> century, Indian traders have brought Hindu/Buddhist practices to Java, influencing the culture of sitting low. When furniture came to Indonesia during the colonial era, the Javanese started using low-wooden benches called *dingklik* for work and informal interactions. Despite having a simple form and being often hidden, *dingklik* underwent a transformation through socioeconomic activities in Java during the colonial period. Contemporary paintings, photographs, and films were used to analyse *dingklik* in terms of content, visual elements, and height in socio-economic activity. From an economic perspective, the shape of *dingklik* was oriented toward mobility so that for carry-on traders, the *dingklik* had smaller and lighter legs, making it easy to carry. Meanwhile, socially, the form of *dingklik* was influenced by philosophical symbolism, and for Javanese nobles, it had decorative features similar to royal chairs as symbols of power. This study highlights the shift in the value of traditional Javanese sitting facilities.

Keywords: *dingklik*, Javanese sitting style, social economy, colonial era, traditional low bench

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## Low Sitting Style in Java

The culture of sitting low was typically practiced by ancient Javanese people<sup>1</sup>. Low sitting positions include squatting, crossing legs, kneeling, and various other positions below the knee height of an adult. In the 8<sup>th</sup> century, the practice of sitting low was influenced by Hindu/Buddhist and Islamic teachings, when Indian and Chinese traders came to Indonesia to establish trade relations<sup>2</sup>. Historical evidence in line with this is the depiction of a low-sitting position on the relief of the largest Buddhist temple in

Indonesia, the Borobudur Temple, built in 824. The Borobudur Temple depicts the reflections, meanings, and sociocultural stories of ancient Javanese people in various social strata. 126 of the 160 reliefs of *Karmawibhangga* (reliefs in Borobudur depicting human life in the endless cycle of birth, life, and death) show priests and nobles of high-ranking Buddhist society sitting on a low elevation stone below knee level<sup>3</sup>. Then, around 1500, Islamic teachings entered Java, and worshipping was mostly conducted with a culture of sitting low. This was adapted to the social interactions of the community, such as for discussions and gathering (in Javanese terms, *srawung*), which was more comfortable in a sitting, cross-legged position on the floor, and for work in trading, farming, and crafting in a squatting position. The strong culture of sitting low has been passed down through generations during religious rituals, causing the development of Eastern furniture to be considered slower than that of European nations.<sup>4</sup> Other external factors, such as warm air and a favourable climate in Eastern countries, made it comfortable for people to carry out outdoor activities, such as farming and raising livestock, sitting closer to the ground and grass. The habit of sitting low was practiced by villagers in the early 20<sup>th</sup> century with crossed legs or sitting low using low-seating equipment<sup>5</sup>. Therefore, minimalist and practical forms of furniture design were more commonly used in residents' living spaces. Generally, craftsmen's workshops were located near the house with a low roof and little furniture, so a low sitting position was considered more practical<sup>6</sup>. The minimal furniture referred to is characterized by the small number and use of furniture as well as its design, which adapts to the floor-type sitting style.

In the beginning of the colonialization, Europeans including the Dutch entered Indonesia with the culture of sitting on chairs and using various kinds of furniture. Despite contact with Europeans, the indigenous people at the time did not use furniture

often. Batavia, as the centre of the Dutch East Indies government, became the centre for making furniture for the Dutch East Indies government and wealthy merchants.

Furniture purchases in the colonial era were generally for domestic needs, government procurement, and as gifts to Javanese nobles<sup>7</sup>. However, the furniture commodity brought by the Europeans further contributed to economic development. The construction of ebony chairs, which became an export commodity and was intended for the staff of the VOC (an association of the East-Indies Trading Company that had a monopoly on trading activities in Asia)<sup>8</sup>, created jobs where native Javanese generally became carpenters. Therefore, in the 1800s, aligning with the development of world industry, many Javanese natives worked in craft. The majority of other jobs done by native Javanese to improve their standard of living were, for example, becoming female servants in the homes of the Dutch, or becoming peddlers.<sup>9</sup> The low sitting position was often used by the community in doing their work. At that time, the low bench called a *dingklik* (in Javanese) was used by the natives to accommodate squatting while working. Additionally, *dingklik* was also a means of sitting in informal interactions. *Dingklik* is a four-legged low bench with a height of no more than 30 cm, used in a lot of menial work, such as craft, cooking in the kitchen, or peddling<sup>10</sup>. *Dingklik* is also known as *jengklok* in colloquial Betawinese or *jojodog* in colloquial Sundanese.

[Figure 1 near here]

Figure 1. Picture of a *dingklik* in trade activities

The origin of the term '*dingklik*' itself has not yet been found in the literature. However, several references related to traditional sitting facilities have discussed chairs. In Javanese, *dingklik* is written and spelled as *dhingklik*, similar in form to a king's chair, called *dhampar*<sup>11</sup>. Descriptively in Javanese, *dingklik* are called *blablag pêsagi nganggo sikilan (piranti linggih)*<sup>12</sup>, meaning square wooden planks as seating

equipment which are supported by chair legs. Other reference sources state that what distinguishes a *dingklik* from a *dhampar* is size, with the *dhampar* being larger. *Dhampar* contains the word *ampar*, which in Javanese means sitting on the floor, whereas *dingklik* is defined as a means of sitting for lower-class people (Javanese: *wong cilik*). Therefore, the throne of the Sultan of Yogyakarta uses *dhampar* instead of a chair to represent the ‘throne for the people’. *Dingklik* is a seating furniture for informal interaction with a variety of natural sitting postures, allowing users to avoid direct contact with the floor. The presence of *dingklik* accompanies the development of furniture in Java and accommodates the socioeconomic activities of the people from the past. Unfortunately, little research has been conducted on Javanese *dingklik*. *Dingklik* with simple visual characteristics, often only functional, and stored when not in use, is also a factor in the lack of research or archiving evidence of what a *dingklik* is. Therefore, the uniqueness, aesthetics, and context of the use of *dingklik* need further investigation by conducting historical studies on the existence of *dingklik* and its correlation with the socioeconomic activities of the community, especially when the presence of furniture began to be noticed and expanded, in the colonial era. This study aims to preserve the traditional knowledge related to *dingklik* and identify more accurate searches about the transformation of their use.

Furthermore, to identify the characteristics of the shape of Javanese *dingklik*, the design aspects need to be considered. Unfortunately, during the colonial period, the field of design had not gained national attention<sup>13</sup>; thus, the lack of archival documentation of the existence of *dingklik* and identification of traditional Javanese furniture designs was minimal. The design field in developed countries can be traced back to the late 14<sup>th</sup> century, originating from the Latin term *designare*, which means to mark out, devise, or appoint. By the mid-19<sup>th</sup> century, design had gained significant

importance in European industry and discussions on material culture. This development led to the establishment of arts education programs, for example, the Government Schools of Design in the UK around 1840. These programs aimed to support local industries such as textiles, metalwork, and lace, and educate the population in the arts and principles of design<sup>14</sup>. However, no known historical research has specifically explored the use of *dingklik* in Java.

This historical research has used content [visual] analysis techniques to evaluate various visual recordings from the colonial period representing *dingklik* existence. These records, including paintings, photographs, and videos, were obtained from the catalogues of national libraries, such as the Koninklijke Bibliotheek, Eye Film Museum, and KITLV. The data analysis focused on the visual aspect, by mapping changes in the use of *dingklik* over time and examining variations in chair height through typology charts. This analysis was conducted by considering social and economic factors relating to the use of *dingklik* in traditional Javanese furniture. This study provides a valuable reference regarding changes in values related to informal sitting practices and presents findings regarding the visual attributes of *dingklik*, providing insight into their historical and periodic characteristics.

### **Artifact Archive**

Data collection was carried out by tracing historical sources that prove the existence and use of *dingklik* and then archiving them. Based on various alternative historical sources (oral, written, and visual), the most representative data were visual history sources in the form of photos, illustrations, paintings, and film scenes from several online national libraries (Koninklijke Bibliotheek, Leiden University digital, Tropen Museum catalogue, and eyefilm.nl). The results obtained were 45 photographs, 40 paintings/illustrations, and nine film scenes that were selected based on the definition of

*dingklik*<sup>15</sup>, mapped from the socioeconomic history of the ancient Javanese people, and found that the most relevant period of *dingklik* use was in the range of 1800 – 1900. The following figure shows the mapping from the artifact archiving.

[Figure 2 near here ]

Figure 2. Tabulated evidence of the presence of *dingklik* from visual history sources.

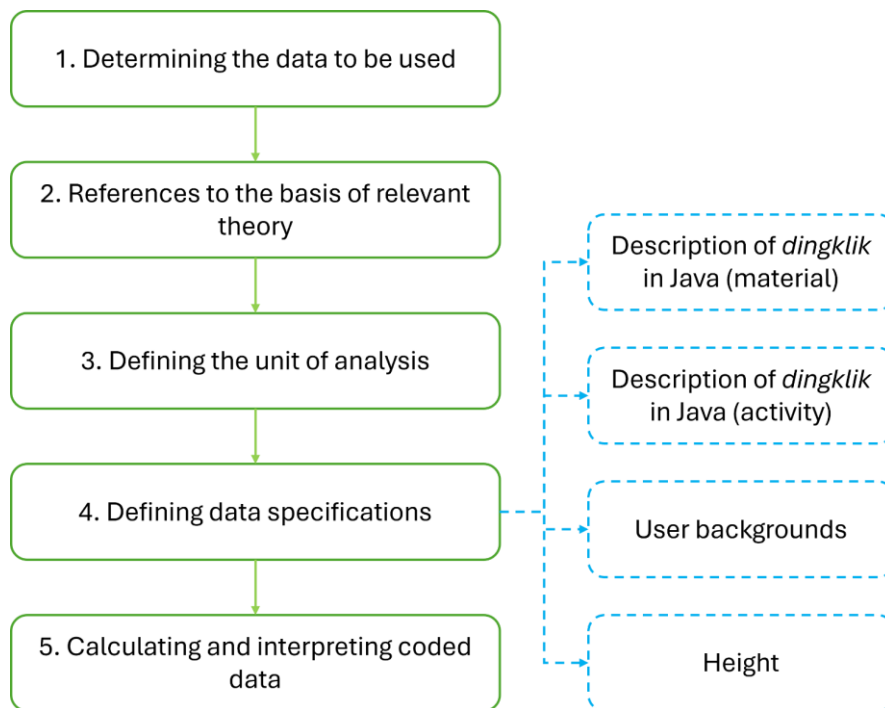
In more detail, Table 1 shows the archived visual history sources<sup>16</sup>.

Table 1. Visual history sources of *dingklik*

| Period      | Object                        | Location                                                                                                                                                                                                                                                                                                                                                            |
|-------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1800 – 1900 | Painting, illustration, photo | <ul style="list-style-type: none"> <li>- Online catalogue of the National Library of the Netherlands (<i>Koninklijke Bibliotheek</i> )</li> <li>- Online catalogue of Leiden University Digital</li> <li>- Online catalogue of Tropen Museum</li> <li>- Online catalogue of KITLV, Royal Netherlands Institute of Southeast Asian and Caribbean Studies</li> </ul>  |
|             | Film                          | Online catalog of Eye Film Museum<br>Amsterdazm-Corporate Film: <ul style="list-style-type: none"> <li>- <i>Syndicaat voor Filmopname in Nederlandsch Oost-Indië</i></li> <li>- <i>Haghe Film</i></li> <li>- <i>Nederlandsch-Indische Film Maatschappj</i></li> <li>- <i>Nationale Filmfabriek Bloemendaal</i></li> <li>- P. R.W. van Gesseler Verschuur</li> </ul> |

### ***Dingklik* in Visual Content Analysis**

The data that had been mapped and filtered in the archives were processed using content analysis to identify the usage frequency of *dingklik* in the colonial era through socioeconomic activities, form and material characteristics, chair height, and user background. The detailed content analysis<sup>17</sup> stage consisted of the following steps:



- (1) The data to be processed were taken from the archive in which the data were classified by type of visual history source, namely paintings, photographs, and videos, and sorted periodically.
- (2) Literature on what a *dingklik* is, its characteristics and design specifications that could be used to describe its character. A theoretical basis was used to determine the unit of analysis and interpret the findings.
- (3) The unit of analysis is the part or perspective to be analysed. Referring to the type of archiving data, the units of analysis in this research were visual content (pictures, photos, and films) and verbal content (words, numbers, sentences, and

paragraphs) in titles, descriptions, and information (work tags), from the selected visual history sources.

(4) Content analysis tables were mapped based on data specifications.

Specifications obtained from the elaboration of *dingklik* literature study and technical aspects in designing seating facilities include:

- Description of *dingklik* in Java (material): Wooden planks were components of *dingklik*<sup>18</sup>. Wood was widely used to make *dingklik*<sup>19</sup>. Therefore, data specifications were mapped based on materials, namely wood and non-wood materials (modifications to data specifications were made if there were variations in other materials during the analysis).
- Description of *dingklik* in Java (activity): *Dingklik* was a seating equipment for Javanese people for activities in the kitchen, trading, and making handicrafts<sup>20</sup>.
- User backgrounds
- Height (cm): A relative comparison to humans was used as a reference to determine the height of *dingklik*. Nominally, the average height of *dingklik* was numbered<sup>21</sup>. The relative height compared to that of humans could be considered to be less than 40 cm below the knee.

The data specifications were then mapped to the content analysis table and compared with the types of Javanese socioeconomic activities found in the archives.

(5) The presence and frequency of *dingklik* usage from visual history sources were identified through calculations and descriptively interpreted.

## **Visual characteristics and height of *dingklik*: an analysis**

### ***Search of dingklik* characteristics**

Processed results of the content analysis from Steps 1 to 5 were mapped in two content analysis tables. The first table highlights the data specifications (user, setting, height, and material) and activity types in the form of trading, crafting, and social interaction (two social classes: nobilities and camp prisoners).

Table 2. *Dingklik* data specifications and activity types

| Period<br>(Year) | Object                                    | Specifications |                |         |         |             |           |     |          |        |        |            | Indicator        |                  |        |
|------------------|-------------------------------------------|----------------|----------------|---------|---------|-------------|-----------|-----|----------|--------|--------|------------|------------------|------------------|--------|
|                  |                                           | User           |                | Setting |         | Height (cm) |           |     | Material |        |        |            | Type of activity |                  |        |
|                  |                                           | Upper<br>class | Lower<br>class | Indoor  | Outdoor | <10         | 10-<br>20 | >20 | Wood     | Bamboo | Rattan | Upholstery | Trade<br>economy | Craft<br>economy | Social |
| 1800 -<br>1900   | Paintings<br>and<br>illustrations<br>(PI) | O              | O              | O       | O       | O           | O         | O   | O        | O      | -      | O          | O                | O                | O      |
|                  | Photos (Ph)                               | O              | O              | O       | O       | O           | O         | O   | O        | O      | O      | O          | O                | O                | O      |
|                  | Film<br>scenes (F)                        | -              | O              | O       | O       | O           | O         | O   | O        | -      | -      | -          | O                | O                | -      |
| Sum              |                                           | 2              | 3              | 3       | 3       | 3           | 3         | 3   | 3        | 2      | 1      | 2          | 3                | 3                | 2      |

The content analysis table based on the data specifications was then mapped in more detail through the second table: the frequency of *dingklik* appearances in terms of data specifications, and types of visual history sources selected.

Table 3. Frequency of *dingklik* depictions appearing in selected visual history sources based on data specifications

| Object                                       | Specifications                |                                                    |                                                                 |                                                               |                                                         |                                               |                                                 |                                                              |                                        |                              |                              |
|----------------------------------------------|-------------------------------|----------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------|-------------------------------------------------|--------------------------------------------------------------|----------------------------------------|------------------------------|------------------------------|
|                                              | User                          |                                                    | Setting                                                         |                                                               | Height (cm)                                             |                                               |                                                 | Material                                                     |                                        |                              |                              |
|                                              | Upper class                   | Lower class                                        | Indoor                                                          | Outdoor                                                       | <10                                                     | 10-20                                         | >20                                             | Wood                                                         | Bamboo                                 | Rattan                       | Upholstery                   |
| Paintings and illustrations (PI)<br>40 items | Based on portraits of nobles  | Based on trading, craft, servants & camp prisoners | Based on craft, portraits of nobles & camp prisoners            | Based on trading, craft, portraits of nobles & camp prisoners | Based on trading, craft & portraits of nobles           | Based on trading, craft, & camp prisoners     | Based on trading, craft & camp prisoner         | Based on trading, craft, portraits of nobles & cam prisoners | Based on trading                       | -                            | Based on portraits of nobles |
| 40 (100%)                                    | 3 (7.5 %)                     | 37 (92.5 %)                                        | 15 (37.5 %)                                                     | 25 (62.5 %)                                                   | 5 (12.8 %)                                              | 15 (37.5 %)                                   | 20 (50 %)                                       | 38 (95 %)                                                    | 1 (2.5 %)                              | -                            | 1 (2.5 %)                    |
| Photos (Ph)<br>45 items                      | Based on a portrait of nobles | Based on trading, craft, servants & camp prisoners | Based on a portrait of nobles, houses of the natives, workshops | Based on trading, craft, & camp barracks                      | Based on trading, craft, portraits of nobles & servants | Based on trading, craft, & portrait of nobles | Based on trading, craft & houses of the natives | Based on trading, craft, portrait of nobles & camp prisoners | Based on trading & portraits of nobles | Based on portraits of nobles | Based on portraits of nobles |
| 45 (100%)                                    | 16 (35.5 %)                   | 29 (64 %)                                          | 22 (48 %)                                                       | 23 (51 %)                                                     | 10 (22.2 %)                                             | 22 (48.8 %)                                   | 13 (28.8 %)                                     | 32 (71.1 %)                                                  | 4 (8.8 %)                              | 1 (2.2 %)                    | 8 (17.7 %)                   |
| Film scenes (F)<br>9 items                   | -                             | Based on trading, craft, servants & camp prisoners | Based on craft                                                  | Based on trading                                              | Based on trading & craft                                | Based on trading & craft                      | Based on trading & craft                        | Based on trading & craft                                     | -                                      | -                            | -                            |
| 9 (100%)                                     | -                             | 9 (100 %)                                          | 4 (44 %)                                                        | 5 (55%)                                                       | 2 (22 %)                                                | 3 (33 %)                                      | 4 (44 %)                                        | 9 (100 %)                                                    | -                                      | -                            | -                            |
| Total source                                 | 19                            | 75                                                 | 41                                                              | 53                                                            | 17                                                      | 40                                            | 37                                              | 79                                                           | 5                                      | 1                            | 9                            |

Characteristics of the *dingklik* were found in more detail referring to user background, type of background, height, and materials, and depended on social (portraits of nobles and camp prisoners) or economic (trading and craft) activities. User background was divided into two social classes: upper-- and lower-class users. As shown in the table (3), *dingklik* were used more (according to their role as seating equipment) by the lower class with the appearance of 75 objects from the total visual history sources, compared to the upper class with only 19 objects; the dominant sources were paintings and illustrations with as many as 37 objects. Based on the background of the placement of *dingklik*, outdoors or indoors, the difference was not significant: 53 objects for outdoor use and 41 for indoor use. Meanwhile, the average height of *dingklik* validates previous findings of an average height of 10 to 20 cm, as found in 40 objects of visual history sources. The most widely used *dingklik* material was wood as found in 79 out of 94 objects. Non-wood materials used were rattan and bamboo, and a combination of fabric (upholstery). This is marked by the presence of wooden/rattan carvings and upholstery fabric on the footrest, simple wooden pieces that still show the grain of trading and crafting *dingklik*, and raw-looking bamboo pieces arranged in threes or fours, supported by simple bamboo planks. The characteristics of *dingklik* can generally be identified by their material: *dingklik* s generally made of simple pieces of wood with three to four legs and mostly used in informal situations (such as when working, by lower-class people). With a sitting height of 10 – 20 cm, *dingklik* was found in both outdoor and indoor situations. It should be noted that other minor findings do not invalidate these. They will be discussed further in the subchapter on the representation of *dingklik* types based on visual elements and height, in a social context.

### ***The characteristics of dingklik in socioeconomic activities***

A characteristic of *dingklik* is that it was used by lower-class people as seating

equipment, both indoors and outdoors. These findings indicate that the type of socioeconomic activity affects the use of *dingklik*. A comparison of the characteristics of the *dingklik* was conducted on the types of socioeconomic activities carried out by the ancient Javanese people (Table 4). Trade economic activities were more specifically divided, into carrying pole (*pikul*) and mat (*gelaran*) traders, and craft economic activities that included batik artisans, and wood and iron craftsmen. Social activities consisted of portraits of royalty and interactions between natives and camp prisoners.

Table 4. Comparison of the characteristics of the *dingklik* with the type of socioeconomic activity

| Category<br>Type of Activities |                                       | Specifications |                  |                  |                  |             |                  |                  |                  |           |        |            |
|--------------------------------|---------------------------------------|----------------|------------------|------------------|------------------|-------------|------------------|------------------|------------------|-----------|--------|------------|
|                                |                                       | User           |                  | Setting          |                  | Height (cm) |                  |                  | Material         |           |        |            |
|                                |                                       | Upper class    | Lower class      | Indoor           | Outdoor          | <10         | 10 - 20          | >20              | Wood             | Bamboo    | Rattan | Upholstery |
| Trade economy                  | Pikul traders                         |                | (PI) (Ph)<br>(F) |                  | (PI) (Ph)<br>(F) | (PI) (Ph)   | (PI) (Ph)<br>(F) | (PI) (Ph)<br>(F) | (PI) (Ph)<br>(F) | (PI) (Ph) |        |            |
|                                | Gelaran traders                       |                | (PI) (Ph)<br>(F) |                  | (PI) (Ph)<br>(F) | (F)         | (PI) (F)         | (PI) (Ph)        | (PI) (Ph)<br>(F) |           |        |            |
| Craft economy                  | Batik artisans                        |                | (Ph)             | (Ph)             | (Ph)             | (Ph)        | (Ph)             |                  | (Ph)             |           |        |            |
|                                | Wood crafters, metal crafters, others |                | (PI) (Ph)<br>(F) | (PI) (Ph)<br>(F) | (PI) (F)         | (PI) (F)    | (PI) (Ph)<br>(F) | (PI) (F)         | (PI) (Ph)<br>(F) |           |        |            |
| Social                         | Portraits of nobles                   | (PI)<br>(Ph)   |                  | (PI) (Ph)        |                  | (PI) (Ph)   | (Ph)             |                  | (PI) (Ph)        | (Ph)      | (Ph)   | (PI) (Ph)  |
|                                | Natives & camp prisoners              |                | (PI) (Ph)        | (PI) (Ph)        | (PI) (Ph)        | (Ph)        | (PI) (Ph)        | (PI) (Ph)        | (PI) (Ph)        |           |        |            |

Notes: (PI) Paintings and Illustrations, (Ph) Photo, (F) Film

A comparison of the characteristics of *dingklik* with the type of activity revealed a correlation. Table 4 shows the economic activities of trade in outdoor environments. The majority of the *dingklik* materials used by these two types of traders were pieces of wood with various seat heights. Heights of 10 – 20 cm and > 20 cm were found in *dingklik* used by carrying traders. In addition to wood, pieces of bamboo were also found. These findings were obtained from paintings and photographs. The *dingklik* used by the mat traders had similar characteristics, but the material found was only wood, with no other material variation.

In the craft economy, which consists of lower-class people, the chairs of batik artisans were found to be relatively low below 20 cm and found entirely on photo sources. The *dingklik* of batik artisans can be said to be dominated by indoor use, while outdoor use remained in the terraces and yards of the house. Other craft economic groups include carpenters, cooks, copper factory workers, *keris* craftsmen, and camp prisoners who perform craft tasks. This group used *dingklik* as seating equipment with various sitting heights, both indoors and outdoors, and were commonly found in paintings and film scenes. Interestingly, all *dingklik* in this category were made solely of wood.

In the social activities of upper class, a shift was observed in the values and functions of *dingklik*. Portraits of nobles were often found in photographs and paintings containing *dingklik* as footstools in indoor settings. The height of the *dingklik* as a footstool was relatively low (< 20 cm) because it functions as a footrest. The *dingklik* used by nobles visually differed from that of the lower-class people who used materials apart from wood, such as rattan, bamboo, and upholstery. This finding is interesting because *dingklik* as footrests had decorative features such as wooden or rattan carvings, and using various upholstery was considered luxurious compared to *dingklik* used as

common seating equipment. This will be further discussed in the subchapter on the design of *dingklik*.

In the lower classes, for interactions between natives or camp prisoners, *dingklik* as seating equipment was made of wood with varying heights of <10, 10-20, and > 20 cm, as was found in historical sources of photographs and paintings.

### ***A visual timeline of the use of stools in the colonial era***

Regarding the characteristics of *dingklik*, there were different characteristics between the socioeconomic sub-activities of the Javanese community. Therefore, the form of *dingklik* was visually recapitulated in a sequenced timeline by redrawing the archive of visual history sources, mapped based on the timeline and socioeconomic sub-activities. The results of the redrawing of the *dingklik* and descriptions of the images were then interpreted and further analysed to obtain new findings. The visual timeline was divided into three: two timelines mapping two economic sub-activities (trade and craft economics) and one social sub-activity (portraits of nobility, and interactions between natives and camp prisoners).

[Figure 3 near here].

Figure 3. Visual timeline of *dingklik* usage in trade economic activities<sup>22</sup>.

[Figure 4 near here].

Figure 4. Visual timeline of *dingklik* usage in craft economic activities<sup>23</sup>.

[Figure 5 near here].

Figure 5. Visual timeline of *dingklik* usage in social activities

In Figures 2, 3, and 4, the basic design trends of *dingklik* can be observed for each socioeconomic activity. These findings are summarized in the following three basic, but iconic *dingklik* designs.

[Figure 6 near here].

Figure 6. The basic designs of Javanese *dingklik*.

The basic representation of Javanese *dingklik* designs shown in Figure 6 consisted of *dingklik* as seating equipment when trading and crafting, and *dingklik* as footstools in portraits of nobles. *Dingklik* as a means of sitting looked simpler and non-decorative. For example, *dingklik* for trading in the form of a low wooden bench with four legs used by carrying and mat traders. Carrying traders were mobile traders who sold their wares by carrying two baskets/weights on a pole resting on their shoulder, while mat traders stayed in one place by arranging their wares on mats, baskets, or low tables. Carrying and mat traders represented traditional buying and selling activities<sup>24</sup>.

The basic design that appeared on *dingklik* for crafting was a low-wooden bench with legs made of wooden plank profiles supporting the left and right sides of the seat. Crafting *dingklik* for both indoor and outdoor installation have in common that they are made of a simple design with a board material profile. Most outdoor craftsmen's *dingklik* were used by batik artisans in terraces and backyards. Batik is typically conducted outdoors<sup>25</sup>. Other outdoor activities that used *dingklik* as seating equipment include farming, copper mining, and prisoner camp activities outside the barracks. Indoor *dingklik* was more widely used in kitchens, craftsmen's workshops, and barrack camps.

In the social activities of nobles, the basic design of *dingklik* was completely different from that of trade and craftsmen. The *dingklik* for nobles was unique in that it

was only used by women as footstools. The visible feature of this footstool is that it is composed of decorative carved stool legs. The other was a low-drum stool covered with a combination of materials in the form of upholstery.

### ***Typology of dingklik height in socioeconomic activities in the colonial era***

Height specifications of the *dingklik* data became a benchmark for identifying the use of *dingklik* in socioeconomic activities of the Javanese community during the colonial era. In Table 4, various activities showed variations in the height of the *dingklik*. Therefore, seat height was further identified in the seat height typology using several comparison charts.

[Figure 7 near here]

Figure 7. Graph of seat height typology for each job accompanied by an object<sup>26</sup>

The results of the mapping of *dingklik* height for each job in Figure 7 were then compared based on the following sub-activities: trade and craft economy, and social (nobles and camp prisoners).

[Figure 8 near here]

Figure 8. Comparison of *dingklik* height in each sub-activity<sup>27</sup>.

When comparing the characteristics of *dingklik* to the socioeconomic activity types of the Javanese community in Table 4, there were variations in the height of *dingklik* in indoor and outdoor craft economic activities. In this sub-activity, *dingklik* was divided into outdoor crafts (batik artisans – because they have similar heights), chairs for outdoor crafts (others), and chairs for indoor crafts. Figure 7 maps the three in respective graphs and Figure 8 compares them by craft economic sub-activity. *Dingklik* with the highest height appeared to be used in indoor situations, followed by outdoor

craft (others), and the lowest outdoor craft (batik artisans), which was at a height of 10 cm or less than the number calculated from relative comparisons with human anthropometry. The graph in Figure 8 shows that *dingklik* in outdoor situations were shorter than those used indoors for craft economic activities.

The heights varied in the economic activities of carry and mat traders. Both used *dingklik* in the same relative height range, namely 20 to 25 cm. Mobilization did not appear to be related to *dingklik* height. Some data indicate that the *dingklik* of carry traders was slightly higher, but this difference is not significant.

In all economic activities, *dingklik* used in crafts and trade had a relative height in the range of 20 cm, except for the very different *dingklik* used by batik artisans with a height of 10 cm or less. Even though the calculations and comparisons of the indoor craft *dingklik* were higher than those of the others, there was no fluctuating height difference when compared to the data on the use of other *dingklik*.

Furthermore, in terms of social activities, the height of *dingklik* differed significantly. The sub-activities consisted of portraits of nobles and social interactions of natives and camp prisoners who used *dingklik* for different functions depending on their social class. *Dingklik* for social interaction of natives and camp prisoners were relatively taller because of their use as seating equipment, which was above 20 cm, and much different from the *dingklik* of nobles as footstools, which considered the comfort of the heel when lifted and the image of decency/properness. The nobles' *dingklik* did not pay attention to sitting height, and their height range was less than 10 cm.

The last height typology was to compare all socioeconomic sub-activities in one graph (Figure 8). Sequentially, the tallest *dingklik* was for the social interaction of natives and camp prisoners and indoor craft seats; the second was the group of carry traders, mat traders, and outdoor crafts (others), and the lowest was the group of batik

artisans and nobles (footstools). Generally, *dingklik* height increased with each passing year. However, a relationship was drawn between the type of activity and height of *dingklik*: in the economic sector (trade and carpentry), the use of a chair did not significantly affect height. Meanwhile, in the social sector, there was a significant influence between the height of *dingklik* used by natives and camp prisoners for social interaction and those used by nobles. A similar pattern was observed for all charted *dingklik* height typologies.

[Figure 9 near here]

Figure 9. Correlation graph of similar *dingklik* height typology patterns<sup>28</sup>

The first correlation graph consists of the typology of the height of the *dingklik* used by artisans (craft-outdoor) and of the portrait of nobles. This graph shows that both had the same average *dingklik* height, which was below 15 cm, the lowest compared to others. Another feature is that some batik *dingklik* had a carved wooden leg design similar to the noble footstool design, which was equivalent to chairs in Javanese palaces. Looking at historical events, indications of a relationship between batik and the lives of nobles exists. First, batik cloth was used only by the Javanese royal family and the work was conducted at the palace<sup>29</sup>. Therefore, it is possible that the design of the batik *dingklik* legs was influenced by the palace chair legs.

The second correlation graph connects the pattern of the height of outdoor craft *dingklik* (others) to the *dingklik* of mat traders. Outdoor crafts (others) consisted of *keris* craftsmen, farmers, miners, tailors, and net weavers. After correlation, this second graph produced an average *dingklik* height between 20-30 cm, higher than the correlation graph for *dingklik* used by batik artisans and nobles. However, after conducting cross-reference studies related to historical events, it could not be concluded whether a relationship between outdoor situations and seat height exists. Another supporting fact

is that batik *dingklik* were also classified as outdoor, having a much different height from other craft *dingklik*.

The third graph correlates the pattern of indoor craft *dingklik* heights to the *dingklik* used for social interaction by natives and camp prisoners in Dutch East Indies camps during the Japanese occupation (1942-45). Although these two types of *dingklik* had similar height patterns, the graph shows *dingklik* for social interaction natives and camp prisoners tended to be slightly taller. This may be due to anthropometric factors arising from different user backgrounds (natives and camp prisoners). The camp prisoners were Dutch East Indian people captured by Japanese troops when they invaded Indonesia and were classified as Europeans who were taller than Asians. The internment camp contained Europeans who were ordered to work on various war projects during the Japanese occupation<sup>30</sup>. The average height of *dingklik* used by these two groups was in the range of 20-30 cm where the majority was at a height of approximately 30 cm. Although 11 out of 14 data on natives and camp prisoners, and craft indoor *dingklik* had similar heights, no other evidence supported that the indoor situation affected seat height.

## **Discussion of the findings on the use of *dingklik* in Java**

### ***Recognizing the characteristics of dingklik: What was a dingklik actually?***

The search results for *dingklik* characteristics showed user profiles, placement backgrounds, materials, and *dingklik* heights, indicating patterns of use during the colonial era. From 1800 to 1900, *dingklik* were used more as seating equipment for trade and craft by ancient Javanese people who were classified as lower class. This is supported by the literature on socioeconomic conditions during the colonial period, namely the population earning income by farming, crafting, trading, and becoming

servants. In 1830, the Dutch colonial government imposed a system of forced cultivation (*cultuur stelsel*) so that people's livelihoods were dominated by *farmingheue*<sup>31</sup>. Other jobs, such as being servants in European houses in Batavia, were also carried out by the Javanese<sup>32</sup>. In a photograph of the interaction between a waiter in 1870 and a painting of a waiter cooking in 1900, the *dingklik* being used as a means of sitting was evident. Employment trends shifted at the end of the 19<sup>th</sup> century. The economy, which initially focused heavily on agriculture, transformed into a non-agricultural one, echoing the Industrial Revolution. In Indonesia, the craft industry strengthened the economy<sup>33</sup>. One of these fields was the hand-painted batik industry, which developed rapidly in the 1800s. Batik, which was originally intended for the royal family and was produced in the palace, then shifted to being made by women in their households<sup>34</sup>.

[Figure 10 near here]

Figure 10. Photograph of women drawing batik in Java (a) in 1885 (Courtesy of National Museum of Ethnology in *Koninklijke Bibliotheek* collection); (b) redrawing *dingklik* of batik artisan (by researcher); (c) in 1912 (Courtesy of Phot. Dr. E. Erathus collection); (d) redrawing *dingklik* of batik artisan (by researcher).

Figure 10 shows a portrait from around 1875 to 1930 of several women sitting on wooden *dingklik* making batik motifs using *canting* (drawing decorations using wax as a colour barrier).

In trade economy, street vendors often used *dingklik*, such as in the period 1856 – 1990, when the number of peddlers in the city increased along with a decline in the world economy in 1930 (the global depression). Native people flocked to urban areas during the 1930 depression, and the majority worked as traders<sup>35</sup>.

Furthermore, the ratio of the use of outdoor *dingklik* to that of indoor *dingklik* was 53:41. Outdoor use was relatively higher, but not significantly different. However, the finding of *dingklik* objects in these numbers indicates that *dingklik* became furniture familiar to Javanese people between 1800 and 1900 in various indoor and outdoor activities. In the beginning, the culture of sitting on the ground was attached to the ancient Javanese people, then people slowly transitioned to sitting on *dingklik*<sup>36</sup>.

Regarding materials, *dingklik* characteristics validate the literature. The most common feature of *dingklik* is its composition of simple solid wood. Since the 8<sup>th</sup> century, wood had been used by Javanese people<sup>37</sup>, and possibly before that as well. However, because wood materials are brittle and easily weathered, it is difficult to find surviving samples. The definition of *dingklik* as a seat made of a square wooden board<sup>38</sup> aligns with the content analysis evaluation results that 79 of 94 images of *dingklik* from visual history sources were made of wood.

Based on the evaluated data on the pattern of *dingklik* usage, characteristics of Javanese *dingklik* were recognized in more detail. *Dingklik* is a wooden bench with low legs that was mostly used by Javanese people in lower-class society. The placement of *dingklik* as furniture varies both indoors and outdoors, with the main use being seating equipment when trading and crafting. Findings regarding the large amount of data on the existence of *dingklik* in the colonial era indicate that *dingklik* became furniture that was familiar when community life still adhered to a floor-type setting and minimal furniture in their homes.

### ***Dingklik type representation based on visual elements and height***

The results of the content analysis, mapping of *dingklik* images through the timeline, and mapping of *dingklik* heights with graphs show that the visual elements and heights of *dingklik* played a role in identifying the types of *dingklik* commonly used by

Javanese people in socioeconomic activities during the colonial era. For example, a trading *dingklik* could be identified by the shape of the *dingklik*'s legs. The *dingklik* of carry traders generally used material profiles in the form of planks with three or four legs with a lightweight impression. Traditional traders (not kiosks) generally did not stay in one place, and their *dingklik* were portable and could be stored when not in use or carried with their wares. Meanwhile, *dingklik* for crafting generally used two wooden planks to support the left and right sides of the seat, which looked sturdier and steadier, according to the needs of the crafters' who stayed in one place while working. The volume of wood from the *dingklik* made of boards was greater than that from the *dingklik* made with wooden branch legs. Therefore, regarding the type of *dingklik* needed for economic activity, the form of the *dingklik* was oriented towards use and mobility.

There were unique differences in the characteristics of *dingklik*s for social activities. One was that *dingklik* was found to be a footstool used by nobles in their portraits. The addition of *dingklik* support as a footrest among nobles represented a proper sitting position and higher social status than the use of *dingklik* as seating equipment. This image can be seen in the visual mapping of the *dingklik* in the timeline where Javanese brides dressed in nobility styles sat with their feet propped up by footstools between 1866 and 1900. This type of *dingklik* had decorative features similar to that of Javanese palace furniture in the early Dutch colonial period. Since the occupation of Batavia by the *Vereenigde Oostindische Compagnie* in 1602 and the acculturation of Chinese traders on the Javanese coast in the 15<sup>th</sup> century, nobles were familiar with various table and chair furniture.<sup>39</sup> The palace furniture style was a form of acculturation of European and Chinese furniture styles created during social and political activities.

[Figure 11 near here]

Figure 11. *Dingklik* as a footstool for noble women (a) Ebony chairs of the Dutch East Indies as a gift to the Javanese prince (Courtesy of Carpenter, 2009); (b) Footstool of noble women in 1875 (Courtesy of National Museum of Ethnology in *Koninklijke Bibliotheek* collection); (c) Raden Ajoe portrait in 1870 (Courtesy of National Museum of Ethnology in *Koninklijke Bibliotheek* collection).

Figure 11 depicts the similarity in visual characteristics between the shape of the footstools used by Javanese female nobles and that of Javanese palace furniture in a series of ebony chairs. One observable similarity is the use of rattan mats in the footstools and ebony chairs, where the use of rattan mats in the colonial period symbolized luxury. At this time, rattan furniture not only served as a means of sitting but also as a gift, export commodity, and symbol of social class. Furniture manufacture was located in Batavia, where customers were the Dutch East Indies government, nobles, and wealthy merchants for personal and political needs such as giving gifts to local princes<sup>40</sup>. The nobles' own footstool was used as a partner for the wooden/rattan chair on which they sat. A common thread is that the nobles' footstool design was influenced by colonial furniture styles.

Another interesting finding is that noble footstools were only used by women. The norms of decency and impressions of appropriateness were indicated as reasons. In the *Negarakertagama* book (an ancient Javanese book describing customs, norms, and aspects of Javanese life in all fields), a sitting rule for Javanese women that stated that a sitting position with hanging legs was considered inappropriate/impolite<sup>41</sup>.

A 14<sup>th</sup>-century commentary in the *Negarakertagama* book written in 1365 A.D. Volume IV, Chapter IX, Canto 64, stanza 2, describes the use of benches as follows:

The benches (Skt. *talpa*, modern Jav. *Lincak*, *salu* or *amben*) no doubt also were made of split and plaited bamboo, without backs. As it was considered indecorous, especially for women, to sit with legs hanging down, people sat on the benches cross-legged. Probably many children sat or played or slept between or under the benches. In their separate small hall (*mandapa*) Royalty of course sat on mats. Elevated stages were out of place there.

Javanese noble women in the colonial era still seemed to maintain the sitting rules of their ancestors by preventing their legs from hanging down while sitting; therefore, footstools were an alternative solution. This statement about hanging legs being considered inappropriate was valid in the 14<sup>th</sup> to 19<sup>th</sup> centuries, in formal and informal situations, resulting in cultural solutions of sitting cross-legged on a bench in the 14<sup>th</sup> century, and adding footrests (*dingklik*) for nobles in the 19<sup>th</sup> century.

Interestingly, in the 14<sup>th</sup> century, a cross-legged sitting position with open legs was considered appropriate. For example, Bodhisattvas use this sitting position as religious leaders of the highest caste. In the relief depiction of Hindu/Buddhist temples in East Java, research has been conducted on the sitting position of high-caste people, in which 59 relief images from six temples use a cross-legged sitting position on low wooden boards/stone elevations with open legs<sup>42</sup>, while ordinary people sit cross-legged on the ground. This custom remained valid throughout the year.

Meanwhile, in the 19<sup>th</sup> century, Javanese nobles tended to sit in chairs with their legs closed; to achieve this, they used *dingklik* as footrests. Based on this phenomenon, there was a shift in the stigma of using *dingklik*. During the 14<sup>th</sup> century, a low-sitting position with the legs apart was the proper sitting position that could be supported by a low-elevation bench. When furniture came to Java and the nobles were familiar with chairs, the stigma of sitting properly was on a chair. However, keeping in mind that sitting with hanging legs was still considered inappropriate, the use of *dingklik* experienced a shift in formal situations, namely as a footrest.

The social strata and status of a person could be represented by the means of sitting<sup>43</sup>; the higher the social status, the higher the seat height. The enactment of sitting rules referred to social status and was strengthened since the table and chair furniture culture came to Indonesia with various adjustments to acculturation and lifestyle.

*Dingklik* as a footstool, is proof of adaptation to a sitting culture. As traditional furniture, *dingklik* that was originally used as seating equipment changed function into footrests, accompanying a noble's chair. The same object, with different functions, was adjusted to the rules of the social strata regarding the sitting position. Therefore, it can be assumed that based on the social aspect, the design *dingklik* directly referenced its philosophical meaning. *Dingklik* used as footstools by nobles, had decorative features in the form of carvings and cloth materials that were generally implemented on chairs used by nobles. This indicates that despite being used as a footrest, *dingklik* as a footstool characterizes luxury and majesty, which represent the social status of the nobility compared to ordinary people.

Meanwhile, regarding the seat height factor, there was no influence or relationship with the economic sub-activity at that time (from various mapping data), but it can be further highlighted in relation to social sub-activity. The height of *dingklik* which appeared to be significantly different, was found in *dingklik* as the footstool of the nobles and *dingklik* in the social interactions of natives and camp prisoners. In addition to the difference in function, in which the footstool with a height of less than 10 cm did not need adjustments, another factor was related to anthropometry. *Dingklik* for social interactions between natives and camp detainees, was found between 1922 and 1947 with 12 objects. During the Japanese occupation (1942-45), the use of *dingklik* set in detention camps increased. The Dutch influence and role were eliminated during the Japanese occupation when the Japanese came to Batavia in 1942, and Europeans

were put into internment camps to help work on Japanese projects during the war<sup>44</sup>. Camp prisoners who were Europeans had larger body dimensions than Asians. This allows the change in *dingklik* height in general (from that used by indigenous people) to be taller according to anthropometry. The existence of Javanese sitting facilities is related to social phenomena, including social strata and hierarchies<sup>45</sup>. Eventually, Javanese *dingklik*, like other Javanese sitting facilities in general, became oriented towards their social stratification/level. The background and context of the user type were represented by the significant sitting height.

## **Conclusion**

During the colonial era, when the Javanese natives still adhered to a culture of sitting low and the use of furniture became increasingly familiar, wooden *dingklik* existed as seating equipment for trade and crafting by lower-class people. The characteristics of the *dingklik* can be identified visually, and height can be determined by each type of socioeconomic activity. The form of *dingklik* in economic activity focuses on mobility of use. The types of *dingklik* in social activities represent philosophical meanings related to social strata, hierarchy, and user profile images/impressions.

Other factors such as the height of *dingklik* also had a significant influence on identifying the use of *dingklik*, especially in social activities. The means of sitting in Java during the colonial era were still guided by social strata. The difference in *dingklik* height represents the user's image.

Overall, the visual form of chairs was concluded to be influenced by the socioeconomic activities of the Javanese community in the colonial era. However, when examining *dingklik* height, only social activities were noted to have a significant effect. Therefore, to identify the transformation of the use of Javanese *dingklik* in the colonial

era, this research suggests an orientation towards decorative features of the *dingklik* and its height.

### **Disclosure statement**

No potential competing interest was reported by the authors.

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## Appendix

### **Visual works and photographic credits**

*Figure 3: Timeline of dingklik existence in the trade economic activities*

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*Figure 4: Timeline of dingklik existence in the craft economic activities*

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*Figure 5: Timeline of dingklik existence in the social activities*

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- 10 Collections of Woodbury & Page in <http://www.past-to-present.com/wpjava01.cfm>
- 11 Collections of Tropenmuseum in [http://oer2go.org:81/wikipedia\\_en\\_all\\_novid\\_2017-08/A/Street\\_food.html](http://oer2go.org:81/wikipedia_en_all_novid_2017-08/A/Street_food.html)
- 12 Collections of Leiden University Digital Collection in <https://digitalcollections.universiteitleiden.nl/>
- 13 Collections of unknown in Eye Filmmuseum Amsterdam-Corporate Film (<https://www.eyefilm.nl/>)
- 14 Collections of Nationale Filmfabriek Bloemendaal (Bloemendaal) in Eye Filmmuseum Amsterdam-Corporate Film (<https://www.eyefilm.nl/>)
- 15 Collections of P.R.W. van Gesseler Verschuur in Eye Filmmuseum Amsterdam-Corporate Film (<https://www.eyefilm.nl/>)
- 16 Collections of C. Jetses in Boekoe Peladjaran Bahasa Melajoe 3 (<http://www.jetses.nl/Indische%20Boeken.html>)
- 17 Collections of Cas Oorthuys, Indonesia Independent-photographs in *Koninklijke Bibliotheek* - National library of the Netherlands(<https://geheugen.delpher.nl/>)
- 18 Collections of Rustamadji in <https://lukisanku.id/karya-lukisan-rustamadji/>
- 19 Collections of Isidore van Kinsbergen in National Museum of Singapore (<http://www.luminous-lint.com/>)
- 20 Collections of KITLV in <https://www.culturekedatunkeagunganlampung.nl/royalties-ii>
- 21 Collections of <https://id.pinterest.com/pin/503066220845903133/>
- 22 Collections of Tropenmuseum in <http://collectie.wereldculturen.nl>
- 23 Collections of <http://javapost.nl/page/8/>

## Notes

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<sup>1</sup> Wiyancoko and Miyazaki, "Characteristics of Seating Facilities."

<sup>2</sup> Sachari and Sunarya, *Wacana Transformasi Budaya*; Magnis-Suseno, *Etika Jawa: Sebuah Analisa Falsafi Tentang Kebijakanaksanaan Hidup Jawa*, 21–23.

<sup>3</sup> Santiko and Nugrahani, *Hukum Karma Relief Karmawibhangga*, 42–122.

<sup>4</sup> Wardono and Willy, *Furnitur Tradisional*, 18.

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- <sup>5</sup> Lombard, *Nusa Jawa* 1, 159.
- <sup>6</sup> Zalay, "The Bersila Furniture Concept," 12.
- <sup>7</sup> Carpenter, *Javanese Antique Furniture*.
- <sup>8</sup> Cookson, "Chinese Influence English Chairs," 6–7.
- <sup>9</sup> Blackburn, *Jakarta: Sejarah 400 Tahun*, 79.
- <sup>10</sup> Marizar, *Kursi Kekuasaan Jawa*, 69.
- <sup>11</sup> Poerwadarminta, "Bausastra Jawa, Chapter 22: R."
- <sup>12</sup> Poerwadarminta, "Bausastra Jawa, Chapter 06: Dh."
- <sup>13</sup> Sachari and Sunarya, *Sejarah Perkembangan Desain Indonesia*.
- <sup>14</sup> Government School of Design, *Sommerset House, London, "Prospectus, 1848,"* 1–4.
- <sup>15</sup> Sriwarno et al., "Stool Height of Indonesians"; Wiyancoko and Miyazaki, "Characteristics of Seating Facilities," 49; Carpenter, *Javanese Antique Furniture*.; and see footnote 12 above.
- <sup>16</sup> Arlianti, Junaidy and Kaner, "Historical Study of the Use of the Dingklik in Java in the Economic Activity of the Colonial Era (1800-1900)," 71.
- <sup>17</sup> Paoletti, "Content Analysis: History of Costume"; Suwabe and Ishimura, "Rattan Chair in Postwar Japan."
- <sup>18</sup> Dingklik is known as a seat from wooden square board. See footnote 10 above.
- <sup>19</sup> In the 19th century, there was the discovery of wooden dingklik in varying heights. See Carpenter, *Javanese Antique Furniture*.; Dingklik as a low stool was defined in the height of 10-30 cm. See footnote 10 above.
- <sup>20</sup> See footnote 10 above.
- <sup>21</sup> Sriwarno et al., "Stool Height of Indonesians," 31; Chung, Lee, and Kee, "Stool Height of Squatting."
- <sup>22</sup> Arlianti, Junaidy and Kaner, "Historical Study of the Use of the Dingklik in Java in the Economic Activity of the Colonial Era (1800-1900)," 75-77.
- <sup>23</sup> Arlianti, Junaidy and Kaner, "Historical Study of the Use of the Dingklik in Java in the Economic Activity of the Colonial Era (1800-1900)," 78-79.
- <sup>24</sup> Rohmah, "Persepsi Pedagang Kecil," 15.

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- <sup>25</sup> Batik is a wax-patterned fabric and is one of the Javanese cultural heritages. In its early development, Batik was made for the nobles in the palaces then began to expand generally in the late 18th or early the 19th century by women in homes. Ulum, “Batik dan Kontribusinya.” (Batik and Its Contribution).
- <sup>26</sup> Arlianti, Junaidy and Kaner, "Historical Study of the Use of the Dingklik in Java in the Economic Activity of the Colonial Era (1800-1900)," 81.
- <sup>27</sup> See note 26 above.
- <sup>28</sup> Ibid., 82.
- <sup>29</sup> Ulum, “Batik dan Kontribusinya,” 23.
- <sup>30</sup> Europeans and Chinese were subjected to economic exploitation during Japanese occupation in 1942. European men were employed on craft projects which one of the most famous is the Burma-Siam railway project. See Blackburn, Jakarta: Sejarah 400 Tahun, 189; Heuken, Sejarah Jakarta Dalam Lukisan Dan Foto.
- <sup>31</sup> Heuken, Sejarah Jakarta Dalam Lukisan Dan Foto.
- <sup>32</sup> Natives continued to become servants in European homes during the first 20 years of the 19th century. In the literature it was found that European servants were Indonesians with their barefoot and each had a particular task for European women in the home. See Blackburn, Jakarta: Sejarah 400 Tahun, 78–79.
- <sup>33</sup> Around the 18th century, the economy had decreased as the colonial government relied on an agrarian feudal economic system that was oriented to self-sufficiency. As a result, in the 19th century, the economy shifted to non-agricultural industries. See Gustami, “Kerajinan Mebel Ukir Jepara,” 370.
- <sup>34</sup> Ulum, “Batik Dan Kontribusinya,” 23.
- <sup>35</sup> Blackburn, Jakarta: Sejarah 400 Tahun, 138–39.
- <sup>36</sup> See footnote 10 above.
- <sup>37</sup> Puspita, Sachari, and Sriwarno, “Budaya Material Furnitur Kayu.”
- <sup>38</sup> See footnote 10 above.
- <sup>39</sup> Reid, Southeast Asia 1450-1680; Lombard, Nusa Jawa 1.; see footnote 5 above.

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<sup>40</sup> See footnote 9 above.

<sup>41</sup> *Negarakertagama* or *Kakawin Nagarakartagama* was a book written by Rakawi Prapanca around the 14th century about the glory of Majapahit, the most famous kingdom in Java according to its life aspects such as cultural, economy, political, and social. See Pigeaud, *Java in the 14th Century*, 195.

<sup>42</sup> Balai Pelestarian Cagar Budaya Jawa Timur, *Pendokumentasian Relief Candi Penataran*.

<sup>43</sup> Marizar, *Kursi Kekuasaan Jawa*, 70.

<sup>44</sup> Blackburn, *Jakarta: Sejarah 400 Tahun*, 189.

<sup>45</sup> Marizar, *Kursi Kekuasaan Jawa*, 69–72.