THE MYTH OF SYMMETRY

Detail of a *hinggi* in *hondu kappit kihhil*, PC 019 (see Fig. 28). Note the *uttu tepuk* stitch recalling the pattern on the trees of *tuak* palms (see chapter 'Special Techniques').

Until the publication in 2022 of the author's doctoral thesis *Ikat from Timor and Its Outer Islands: Insular and Interwoven*, the magnificently decorated and widely collected Sumbanese men's wraps, *hinggi*, had generally been considered to be 'biaxially symmetric'. There appears to have been no awareness of hidden visual devices that dyers invented to mischievously break symmetry. In other words, the cloth's top and bottom were assumed to be mirror images by definition.

This is how *hinggi* were usually discussed. In illustrated books on Indonesian textiles, occasionally only half of a Sumbanese men's wrap might be shown, as the other half was thought to be identical by definition. Auction houses on their websites frequently display only a quarter of a *hinggi*, on the apparent assumption that the other three quarters are mere repetitions.

Assumptions of symmetry became firmly rooted already in the early 20th century, when they were first shown to the public. In 1912 Jasper & Pirngadie, clearly not familiar with more complex high-end constructions, stated:

> The *hinggi kombu* or *selendang* of Sumba is, as far as the decoration is concerned, symmetrically divided into several narrower and wider bands, which from the middle to the selvedges are repeated in exactly the same order (1912:285) [translation PtH].

In 1940 the ethnologist Nooteboom also analysed *hinggi* design, stressing the biaxial symmetry:

> All men's cloths are composed of four identical parts. [...] Each of the two constituent panels can be divided in two by an imaginary line across their widths. The four sections thus created form pairs that have to mirror each other perfectly (1940:89) [translation PtH].

This indeed correctly described at least 95 per cent of all Sumbanese men's wraps because the constituent panels' left and right halves also tend to be identical. In the most common design format, called *hondu kappit*, the entire cloth is created from eight or twelve repeats of a single, relatively small and indeed narrow design that we shall refer to as 'basic ikated motif' (ten Hoopen 2018:47, 48) and a separately ikated centrefield.

Three decades later the notion of *hinggi* being symmetric along both axes was reinforced by an explicit scholarly statement formulated like an axiom. Marie Jeanne 'Monni' Adams (1920–2014), the founder of systematic ikat research—whose work has inspired and informed this author's investigations—categorically declared *hinggi* to be biaxially symmetric:

> Structurally, the cloth is composed of four identical quarters, i.e. two identical panels, each of which consists of mirrored halves (1969:102).
>
> The number of bands is always uneven and the center row of designs spans the middle of the cloth. Above and below this center the sequence of color bands and designs are identical. Thus the cloth consists of mirror-image halves. [...T]he schematic design in the centerband is *biaxial* [emphasis added, PtH]. To inventory the designs, it is sufficient to see one half of the cloth plus the full centerband (Adams 1972:4).

Actually, in the cited article Adams depicts two axially asymmetric *hinggi* (1972: Figs. 4B, 9), the first with pattern compression in the motifs gracing the centrefield. The halves above and below the axis are formally alike, but those above are 28 per cent taller than their counterparts below. Even though the difference is numerically substantial, it is easy to overlook because our processing of visual input is programmed to assume regularity rather than dissimilarity. It is unlikely, therefore, that the present author would have noticed the design deviation if he had not previously discovered the phenomenon of pattern compression in endfields (see chapter 'Pattern Compression').

In another of her publications, an article in the authoritative *American Anthropologist*, Adams writes:

> An examination of hundreds of examples of the men's decorated textiles or *hinggi* collected over the past hundred years shows that there are principles which consistently order the designs into a structured whole. [...] The first important principle of composition concerns the ordering of designs into a dyadic-triadic set. This term summarizes the relationships among the three design sections of the cloth and between each pair of those sections. The arrangement of the designs within the bands divides the surface into three areas: two endfields (upper and lower) containing designs which are identical [in all but a very rare class of high quality *hinggi*, PtH] but oriented in opposite directions (thus when the cloth hangs from the center, these designs stand upright) and one unique centerfield consisting of designs which are biaxial, that is, they face in both directions, possessing a like value whether viewed from one endfield or the other. Thus the cloth comprises a pair of opposed but identical endfields plus a biaxial centerfield which, in this pivotal position, exhibits a like relation to either end. The set or combination of relationships among these design areas is characterized hereafter as a dyadic-triadic one (1973:268).

Elsewhere we read in a caption to a *hinggi* of which only little more than half was depicted:

> A mantle [note the indefinite article, PtH] consists of two lengthwise panels forming a large rectangle measuring approximately three yards in length and one-and-one half in width. Upper half (not shown) is identical to lower, except that designs are oriented in the opposite direction from the center (Adams 1973:267).

The reality is significantly more complex. Only six cloths in this publication (see Figs. 3, 20, 21, 24, 26, 42) conform to the early authorities' description. All of the others do not.

Fig. 3 In 1970 Adams was presented with this *hinggi* by the wife of Raja Kapunduk. Its axial asymmetry is hidden in plain sight. In 2006 she donated it to Boston's Museum of Fine Arts. The year of acquisition precedes by two, respectively three years, publications (1972, 1973) in which Adams confirmed her previously (1969) formulated design canon describing *hinggi* as biaxially symmetric. This makes clear that she did not notice the aberration from her canon. *Source:* Museum of Fine Arts, Boston, accession N° 2006.1275.

AN AXIOM OVERTURNED

Adams was not the last to make one think of *hinggi* as biaxially symmetric. Later notable works of scholarship, such as those by Gittinger (1979), Fischer (1979), Holmgren & Spertus (1989), Adams, Forshee *et. al.* (1999), Granucci (2005), Marval & Breguet (2008) and Brinkgreve & Stuart-Fox (2015) did not contradict the supposed canon of symmetry along both axes, even when they showed textiles that deviated from it. Nor, for that matter, did the present author's 2018 *Ikat Textiles of the Indonesian Archipelago.* Taylor & Aragon do mention asymmetry in *hinggi*, but in just a single sentence, showing an example without ingenious hidden devices (1991:18, Note 1; Fig. VII.39). The oft cited work by Langewis & Wagner (1964) showed two axially asymmetric *hinggi* without mentioning the aberration, instead highlighting their 'metrically repeated' patterns.

We may well conclude, then, that the notion of biaxial symmetry of Sumbanese *hinggi* was codified nearly to the point of being ossified. But this new research shows: a) that Sumba's noble dyers displayed an impressive ingenuity in breaking symmetry by the insertion of visual devices, typically of their own invention, often expressly made to be overlooked; and b) that cloths of the very highest class, the most technically and intellectually demanding, were not symmetric along any axis.

Asymmetry was found to be created in two disparate ways: by stealthy pattern deviation and pattern compression. These findings force a revision of our knowledge about East Sumbanese ikat textiles predicated on a new understanding of the design desiderata cherished by elite, high caste weavers. As visual analysis of their designs reveals, the prime target in 'deviant' cloths was *introducing asymmetry without seeming to*. This curious aspect of Sumbanese textile art, with creative, psychological and social ramifications, has not been described before.

The following chapters will analyse the creative ways in which East Sumbanese dyers broke asymmetry in their designs, often with awe-inspiring ingenuity. We will also find that, ironically, two decades after her work on Sumbanese ikat, in which she failed to notice certain irregularities and declared *hinggi* more regular than they turned out to be, Adams provided keys to fathom the mystery of hidden irregularity—not during further studies of Indonesian textiles, but in the course of her study of design irregularity in West and Central Africa. This part of Adams' later work, as well as Georg Simmel's writings on secrecy, which she cites, will be discussed in the chapter 'How to Create Asymmetry'.

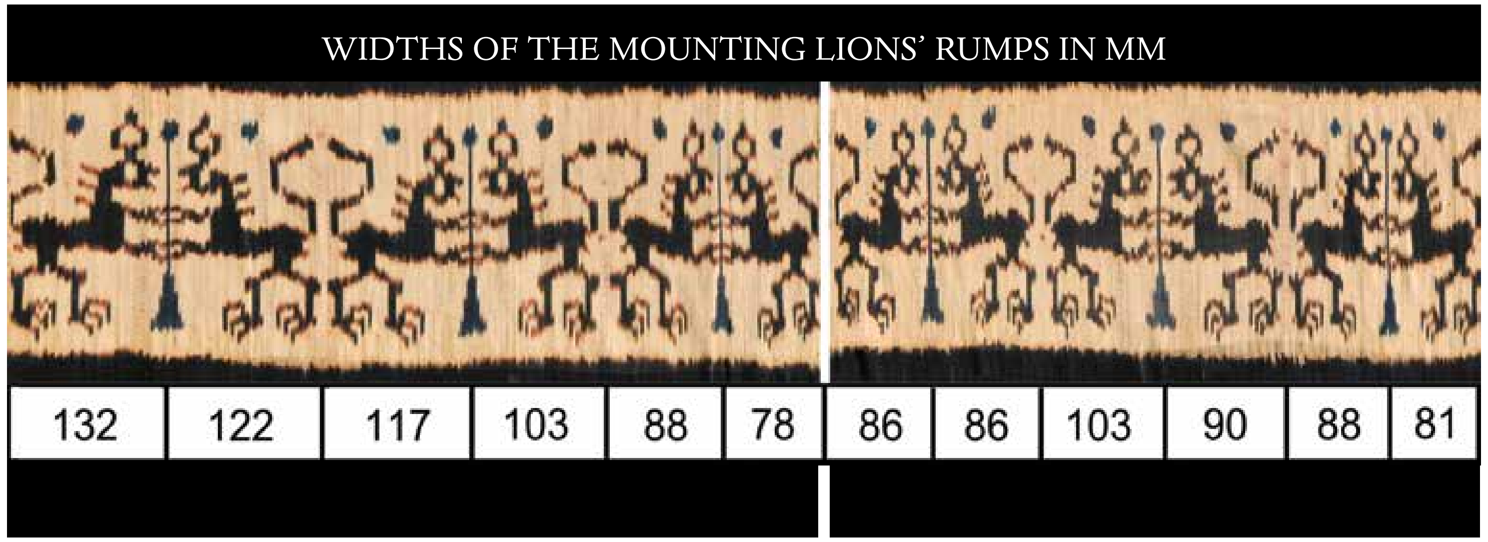

Fig. 78 (Left) A *hinggi* created by Rambu Dai Ataluda in *hondu wallah* with an asymmetric centreband and Method 2 pattern compression. *Source:* Collection of the author, PC 319.

Fig. 79 (Above) Analysis of the varying degrees of Method 2 pattern compression in a *hinggi* with *wallah* construction (PC 319, see Figs. 78, 105). The numbers indicate the width of the lions' rumps in mm.

METHOD 2

This method consists of the creation of two disparate warps with patterning of unequal compactness. This was observed only six times, and only in high-class *hinggi*. It requires ikating two entirely different panels, both on a double warp, yielding four panels in total, for a twin set of asymmetric wraps. This is assumed to have been general practice in the region under study, wherever Method 2 asymmetry was practiced. It certainly was on Sumba and in the past on Savu as well (Duggan 2013:12). It is proven for an antique men's wrap from Kisar (ten Hoopen 2022:462) which is known to have a twin.[1]

One apex cloth from East Sumba (shown on the left) recognised by members of the Dongga family as designed by the brilliant Rambu Dai Ataluda, shows a way to achieve asymmetry not encountered elsewhere. It has the high-class combination of two complications—an asymmetric centrefield (the red and white dots in the *karihu* motifs are asymmetrically distributed, those above the axis not matching the ones below) and construction in *hondu wallah*. But in a display of virtuosity so immoderate that it may well betray a touch of arrogance, yet another form of asymmetry was added as an extra labour-expensive complication—the two panels are entirely different as a result of the random pattern compression.

The ultra-lightweight textile (229 g/m^2) is made of very fine hand-spun yarn, woven tightly at 40 yarns per cm, and evenly spaced. While the pattern compression is not immediately obvious (except perhaps for those who look for it intently), measuring design details makes it show up incontrovertibly.

The rump lengths of the mounting lions, *mahang talabba*, were chosen as the primary subject for measurement because they are solid dark blocks, clearly demarcated. (The fine rendering of the *mahang* is almost identical to that in a highly refined *hinggi* created by Dai Ataluda's mother, Rambu Laka Ata Ambu, see Fig. 70). Fig. 79 shows the drawing's widely divergent degrees of compactness. There is no mathematical regularity in the range of widths.

Other design details, too, muster small but measurable variations. A horse's leg can be 9 yarns wide, but also 11; a sceptre-like shape is 3 or 5 yarns wide; the thickest part of a horse's tail 7 or 10 yarns. This evinces that a) the two panels are not the same; and b) that there was no replication within the constituent panels along their longitudinal axes. The only replication consists of a mirroring of the endfields, which were tied in *wallah* style, i.e. without warp folding over the panels' longitudinal axes.

It is hard to envisage how Rambu Dai Ataluda managed to create twelve parallel versions of an entire pattern ensemble that look identical but are not. Yet this appears to be what she did, in line with the court culture that the author's investigation revealed. Noble East Sumbanese dyers were keen to flaunt their intelligence, as well as their lavish expenditure of labour. She took care not to offend. The largest motifs emulate royal *habaku*, but are subtly different.

A *hinggi* such as this represents a great deal of painstaking work; but with enough slaves around the household to place myriad additional bindings, would Dai Ataluda have seen this as an obstacle to demonstrating her creative genius?

1. Its twin is in a Japanese collection. Both specimens originate from an early Dutch collection.

Source: Collection of the author, PC 319.

Fig. 80 Example of *hondu wallah* with an asymmetric centrefield and additional asymmetry produced by pattern compression in the two constituent panels; 2-fold replication in the endfields.

Keys: *Kihhil* hidden. Additional asymmetry produced by Method 2 pattern compression.

This early *hinggi* of unknown origin, dated 'before 1950' as this was when it was acquired in a swap by the Amsterdam Tropenmuseum, belongs to the most complex specimens encountered during this investigation. Small design elements (some marked in white) produce asymmetry along the horizontal axis. The centrefield is decorated with rows of what appear to be flying fish. *Kihhil* keys are floating between their fins: differently coloured dots, red versus blue. Three other sets of keys are found in the fish's bodies. Sceptics will argue that they resulted from error rather than intent; but it is a moot point, as either way they evince that the entire *kundu duku* was ikated separately, not just the central row.

The pattern compression is quite extreme: motifs on the right panel are 29 per cent narrower than those on the left. A staff member of the museum graciously made macro-photographs which allowed thread counting. Random spot checks on both panels returned results in the range of 46–50 yarns per cm, a negligible variation (and proof that very fine yarn was used). These random density measurements confirm that this *hinggi* was made in Method 2 pattern compression, which requires two separately ikated panels, one with compressed patterning.

Source: Collection of the Stichting Nationaal Museum van Wereldculturen, N° TM-1950-3. Photographed by Irene de Groot.

Fig. 84 Example of a *hondu*, most likely *wallah*, with an axially symmetric centrefield and simulated 12-fold replication in the endfields, which benefit from hidden longitudinal asymmetry created by means of pattern compression.

This 1930s *hinggi was* created in Kambera. At first glance it appears to have been constructed with 12-fold replication in the endfields, but the vertical design bands are not even close to the same width, ruling out replication. The outer two in each panel are more or less the same width, but the inner ones (those closest to the seam) are 12.5 per cent narrower.

The author's first thought was that this might result from the relatively simple Method 1 pattern compression (closer spacing of the warp yarns), but random thread counts across the width of the cloth, yielding a range of 48–50 yarns per cm, show no more than the common 4 per cent variation (as well as dense weaving).

This establishes that the difference in width of the patterns resulted from the far more time-consuming Method 2 pattern compression, which entails separate drawing of the motifs with unequal degrees of compactness. In theory the skeins with the wider motifs (which are the same width) could have been replicated, but as the clarity of drawing is identical across the width of each panel this seems unlikely. Far more likely is that the *hinggi* was constructed in *hondu wallah*.

The lower supports of the skull trees (marked with rectangles) are not identical. On one side they fully enclose the house-like shape, on the other side they are open at the top with red flowing up. Also, the white lines on the closed side are about three times as wide as those on the open side. The author is not sure what to make of this. It could simply be a drawing error, or yet another element (rather superfluous given the stark difference in the widths of the motifs) creating longitudinal asymmetry.

Another remarkable aspect of this royal *hinggi* is its weight. The cloth has uncommonly generous proportions (160 x 240 cm); yet, as the result of the use of ultra fine yarn, it is also uncommonly light (835 g, 217 g/m2). This rare combination places it in a numerically minute class of *hinggi* that are both of over-average design quality and light on the shoulders.

The light weight may seem of negligible importance, until it is recognised that it adds substantially to the dyer's work load. The finer the yarn, the more bindings need to be tied into the warp to achieve a certain width, which in this case was exceptional to begin with. The effect is also noticeable in the above-mentioned thread count, which is circa 30 per cent higher than an average *hinggi*. A detailed exposé of the technical consequences of working in very fine yarn is given in ten Hoopen 2022:49–51.

This *hinggi* is similar to a 19th- to early 20th-century specimen in the Metropolitan Museum of Art, N° 1970.227.2, but larger and more detailed. The centrefield is similar in terms of overall design to that of another example in the same institution, dated early 20th century, N° 2016.736.5, but asymmetric and more refined.

Source: Collection of the author, PC 375.

Fig. 85 Example of an enigmatic *hinggi* with an axially asymmetric centrefield that simulates construction in *hondu kappit* and 8-fold replication in the endfields, but likely consists of two different panels.

Keys: Kihhil, hidden. *Wallah*, hidden.

A circa 1940 Sumbanese *hinggi* with pattern compression and axially asymmetric design, as revealed by small keys that only experts would notice. At Sumbanese courts in the early 20th century this must have included essentially all other women, but in the 1940s may have included only a few elderly ladies. In the centreband the dyer tied in 16 slanted S-shapes. Those below the axis are all white, but half of those above it are blue. The main motifs are gala portraits of Dutch Queen Wilhelmina wearing a tiara, a row of crowns floating overhead. While there are several details 'proving' replication along the longitudinal axis, the queens are of unequal widths.

In the centrefield the dyer included visual devices which appear intended to disprove [sic] a *wallah* construction: red squiggles in very fine lines (marked with rectangular boxes). Those to the left of the panels' longitudinal axis mirror those on the right. This should ensure that both panels were replicated (as normal) along their longitudinal axes. The same applies to white spots on the clover leaves near the cloth's extremities, indications of replication along the vertical axes.

But what if these indications are deceptive? Those in the centrefield are suggestive but meaningless, as this part of the cloth is ikated separately, without replication of any kind. When we study the queen's heads meticulously, we notice that their widths diverge substantially, inviting assessment. On the lower half the second and third heads from the left (measured from ear to ear) are roughly the same width, 73–75 mm, but the rightmost measures 84 mm, no less than 15 per cent wider. The band of white crowns shows a comparable variation. On the right panel the base of the narrowest crown, the one on the left, is 118 mm wide. The widest, the rightmost one, measures 140 mm, a variation of 18 per cent.

While substantial, differences of this magnitude could, at least in theory, result from accidental differences in warp spacing (which might result from weaving by two different women), or from intentional Method 2 pattern compression. To dispel uncertainty, both panels were subjected to thread counting, yielding a range of 38 to 42 yarns per cm, a variation of 10 per cent that cannot explain away an 18 per cent difference in the width of the crowns. This suggests the absence of replication, hence ikating across the width of the panels, *hondu wallah*. Oddly, there are similar variations on the left panel, but those on the right are far more pronounced than those on the left, strengthening the case for individual creation of the panels.

As in several other *hinggi* that simulate tripartite construction, the width variations of the motifs in the *kundu duku* match those in the endfields. Because the centrefield is ikated before the endfields, this proves premeditation to create longitudinally asymmetric panels with perfect internal alignment over the warp's entire length. In summary, the various width discrepancies suggest that both panels, notwithstanding devices 'proving' replication along the panels' longitudinal axes, were actually made in *hondu wallah*. Finally, the two constituent panels are not even close to identical.

Source: Collection of the author, PC 073.