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# Scribal Technique and Birch Bark Folio Repair Utilized in the Production of the Mūlasarvāstivāda *Dīrghāgama* Manuscript by a Scriptorium in Gilgit Around the 8th Century CE

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국문초록

본 논문은 1990년대에 파키스탄의 길기트 지역 혹은 그 주변지역에서 제작된 근본설일체유부『장아함』(長阿含) 사본의 생산과 관련한 측면들을 검토하고 있다. 이 사본은 오래된 서사(書寫) 전통의 산물이었고, 현존하는 유일한 사본적 증거(witness)는 여러 필사자(筆寫者)들이 소속되어 있던 하나의 필사실(筆寫室)에서 필사되었다.

논문 Ⅱ장에서는 필사자 C와 필사자 D로 명명된 한 쌍의 필사자들이 이 사본을 필사하기 위해 행했던 독특한 협업의 예를 제시하면서 그 두 명이 사용한 기술에 관해 상세히 논의하였다. 또한 자작나무 껍질로 만들어진 사본 폴리오에 남겨진 행간의 표시들에 대하여 살펴보았는데, 비교적 특정한 한 명의 필사자(필사자 D)가 남긴 것으로 보이는 이러한 표식들을 통해 우리는 사본들 전반에 걸쳐서 특정한 필사자의 작업을 식별할 수 있을 것이라는 희망적인 전망을 밝혔다.

Ⅲ장에서는『장아함』사본 폴리오를 수리한 것에 관하여 논의하면서, 길기트 지역에서 제작된 다른 사본들을 수선한 유사한 예를 지적하였다. 그리고 이를 통해 자작나무 껍질로 만들어진 사본 폴리오에 대한 생산에 관하여, 그리고 첫 번째 밀레니엄에 길기트에서 그 폴리오들이 어떻게 선택되고 사용되었는지에 관해 의문을 제기하였다.

**주제어**: 『장아함』, 길기트 사본, 고문서학, 사본학, 필사실, 필사자, 자작나무 껍질 사본, 근본설일체유부

# I. Introduction

The Mūlasarvāstivāda Buddhist tradition thrived in the first millennium CE and was prevalent in the areas of modern-day North India, Pakistan, Afghanistan, spreading into Central Asia, and the Himalayan Region.[1] While the Mūlasarvāstivāda *vinaya* is still followed by a large segment of the Buddhist monastic world, most notably in Tibetan and Himalayan regions, the *sūtra* literature of the tradition was generally lost for many centuries save for partial translations and quotations from this body of literature. This all changed through the course of several stunning manuscript finds in the area of Gilgit and surrounding areas in Pakistan in the last century starting with the famous 'Gilgit Manuscripts' found in the 1930s and more recently when a very long and surprisingly complete manuscript of the previously lost

1) Although no physical evidence is available, there is also the possibility that the Mūlasarvāstivādins were found in Southeast Asia as well. In his *A Record of Buddhist Practices Sent Home from the Southern Sea* (南海寄歸內法傳), Yijing notes: "In the islands of the Southern Sea–consisting of more than ten countries–the Mūlasarvāstivādanikāya has been almost universally adopted…" (Takakusu 1986, 10).

Mūlasarvāstivāda[2] *Dīrghāgama* came to the attention of scholars in the 1990s. The manuscript spanned over 450 folios when it was produced with around two thirds of that number still extant. While the Mūlasarvāstivāda *Dīrghāgama* manuscript surfaced in the shop of the Sam Fogg Rare Books and Manuscripts dealer in London and its exact find spot remains unknown with certainty, it is clear that the manuscript is from the Gilgit area and may be referred to as a Gilgit Manuscript.[3] Since its discovery by scholars, ongoing efforts have been underway to edit and translate the manuscript into various modern languages. Presently, around half of the thirty-seven extant *sūtra*s have been or are in the process of being edited.

This article examines two issues I have observed while working on this manuscript and thus focuses on the paleographical features of two of the scribes that may be used to identify their work in this and other manuscripts and the phenomenon of repair that was made to the birch bark folios that made up the manuscript. In examining these issues, I focus mainly on the folios from two *sūtra*s I have edited and translated: the *Prāsādika-sūtra* and *Prasādanīya-sūtra*, which together run to twenty-six folios with the *Prāsādika-sūtra* spanning seventeen (folios 274v5-290r4) and the *Prasādanīya-sūtra* ten (folios 290r5-299v3).

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2) The term 'Mūlasarvāstivāda' is used in this article to describe the school affiliation of this *Dīrghāgama* manuscript, but it should be read with full understanding that there is no colophon evidence stating who actually produced this manuscript and the use of the term 'Mūlasarvāstivāda' when referring to the *Dīrghāgama* manuscript found in Gilgit should always be assumed to suggest the more nebulous concept of '(Mūla-)Sarvāstivāda'. See Hartmann's noting of the issue: Hartmann 2014, 140 note 5 as well as Skilling 2002, 374–376.

3) For various details on the finding of the Mūlasarvāstivāda *Dīrghāgama* manuscript see Hartmann and Wille 2014, 137; von Hinüber 2014, 117–118; DiSimone 2016, 142; and DiSimone 2018, 137 note 1.

Table 1: the *Prāsādika* and *Prasādanīya sūtra*s.

| DĀ 15: *Prāsādika-sūtra* | DĀ 16: *Prasādanīya-sūtra* |
|---|---|
| Preserved as the 15th *sūtra* included in the (Mūla-)Sarvāstivāda *Dīrghāgama* ms. found at Gilgit, folios 274v5-290r4 | Preserved as the 16th *sūtra* included in the (Mūla-)Sarvāstivāda *Dīrghāgama* ms. found at Gilgit, folios 290r5-299v3 |
| Pali parallel: *Pāsādika-sutta*, 29th *sutta* of the Theravāda *Dīgha-nikāya*, DN III 117-141 | Pali parallel: *Sampasādanīya-sutta*, 28th *sutta* of the Theravāda *Dīgha-nikāya,* DN III 99-116 |
| Chinese parallel: 清淨經 (*Qīngjìng jīng*), 17th *sūtra* of the Dharmaguptaka *Dīrghāgama*, 長阿含經 (*Cháng āhán jīng*), T I 72c10-76b22 | Chinese parallels:<br>自歡喜經 (*Zì huānxǐ jīng*), 18th *sūtra* of the Dharmaguptaka *Dīrghāgama*, 長阿含經 (*Cháng āhán jīng*), T I 76b24-79a28<br><br>佛說信佛功德經 (*Fó shuō xìn fó gōngdé jīng*), T I 255a15-255b17 (T 18) |

It is from my experiences editing these *sūtra*s that the majority of my observations here about the manuscript have arisen and the folios making up these two texts provide an excellent snapshot of the state of the manuscript where we see examples of scribes at work and repair to the manuscript that are not always present in the *sūtra*s preserved in other folios. The folios of the *Prasādanīya-sūtra*, while damaged throughout, are all extant. The *Prāsādika-sūtra* on the other hand was missing nearly a quarter of its folios when I began working on it. I have been able to identify and partially digitally restore all of the folios and partially or completely reconstruct the text of all previously missing folios. Some I was able to piece together: some folios from various fragments missing their folio numbers, others I discovered were obscured by other folios due to the folios being stuck together. The reason so many folios were stuck together is unfortunately due to how the manuscript bundle was handled after being found. A picture (fig. 1) from when the manuscript was still held by the Sam-Fogg shop shows that the manuscript bundle had at some point been separated into at least three smaller bundles. It is unclear whether the manuscript had been in multiple bundles for many

centuries or if it had been divided after it was found. It appears likely that they were separated after having been together in one bundle for a long period as layers of adjacent folios are seen stuck to the topmost folios in the bundles and I suspect that the manuscript existed in these separate bundles for a further period before it was discovered. The *Prāsādika-sūtra* was split between the top and bottom of two of the bundles where folios seem to have been especially in danger of becoming fused together, perhaps from exposure to elements. Due to their being so close to the top and bottom of these bundles they appear to have suffered an unusual amount of damage when the folios were eventually separated for preservation. Unfortunately, this problem has affected several large sections of folios from throughout manuscript. Fortunately, digital restoration of the manuscript via Photoshop has been successful in many instances allowing for the majority of the damaged folios to be restored. However, there are still several folios that remain fused together that should be reexamined by a skilled conservator in the future.

Figure 1: Folio bundles of the DĀ with uppermost folios fused together.[4)]


4) Courtesy Kazunobu Matsuda.

# II. On Techniques Used by Scribes C and D of theDīrghāgama Manuscript Scriptorium

The *Dīrghāgama* was produced in a scriptorium and in the *Prāsādika-sūtra* one sees evidence of multiple hands with two different scribes writing various folios apparently trading back and forth from recto to verso. Gudrun Melzer, whose research on the paleography of the *Dīrghāgama* has uncovered that the manuscript is most likely the work of no more than five to seven scribes, names these two hands Scribe C and Scribe D whom she hypothesizes frequently sat together with one writing the recto and the other the verso in turn for spans of folios throughout the various sections of the DĀ manuscript including many in the *Prāsādika-sūtra*.[5] In the course of editing the *Prāsādika-sūtra*, I have been able to confirm that it is almost certainly the work of these two scribes working collaboratively. In Table 2 below, I list the folios scribes C and D have written that I have been able to directly observe.[6]

Table 2: Folios written by Scribes C and D in DĀ 15, DĀ 16, and surrounding folios.

| Scribe C | Scribe D |
|---|---|
| 262v (unidentified *sūtra*) | 262r (unidentified *sūtra*) |
| 264v (unidentified *sūtra*) | 264r (unidentified *sūtra*) |
| 274v (*Prāsādika-sūtra* begins) | 274r (*Govinda-sūtra*) |
| 275v | 275r |
| 276v | 276r |
| 277v | 277r |
| 278v | 278r |
| 279v | 279r |
| 280v | (probably 280r but folio is obscured) |

5) Melzer 2010, 79 and Melzer 2014, 249-251.

6) This table expands upon Melzer's previous table of the distribution of the *Dīrghāgama* scribes across the manuscript (Melzer 2014, 248).

| | |
|---|---|
| 281v1-2 (Scribe C begins the folio) | 281r<br>281v3–8 (Scribe D finishes 281v imitating style of Scribe C)[7] |
| 282v | 282r |
| 283v | 283r |
| 284r | 284v |
| 285v | 285r |
| | 286r, 286v |
| 287r–299v (*Prasādanīya-sūtra* ends)<br>300r–319 (*Pañcatraya, Māyājāla,* and beginning of *Kāmaṭhika sūtra*s) | |

After prolonged exposure to the manuscript, discerning the hand of the scribes becomes less a task of great effort in observation and more akin to a conversation with a familiar friend. Even so, one must rely on certain cues found within the handwriting of the various scribes' styles. As Melzer notes, Scribe C's "handwriting is characterized by a clear and even flow of lines. All *akṣara*s are carefully placed below the upper line" while "the script of scribe D is stocky and uneven."[8] This fundamental gap between the two scribes in their perspicuity of penmanship makes it possible to differentiate between them. From their different styles, one may note certain quirks of calligraphy, such as a way of writing a conjunct consonant, that especially reveals the identity of a scribe. The clearest example of such a difference in style I have found is that of the -*ṣṭ*- ligature. Scribe C's -*ṣṭ*- is, like his handwriting generally, eloquent and clear with a long line descending diagonally from the right lateral side of the ligature above the hook of the -*ṭ*- as a clear continuation of the lower diagonal stoke of the -*ṣ*- as can be seen in figures 2 and 3. Scribe D's -*ṣṭ*- is rather scrunched up with the diagonal line descending from the upper diagonal line of the -*ṣ*- while the hook of the -*ṭ*- resembles *ṛ* more than -*ṭ*- as is seen in figures 4 and 5.

7) Melzer writes that 281v is the work of Scribe D alone (Melzer 2014, 248) but I do not think this is the case.

8) Melzer 2014, 240 and 241.

Figures 2–5: ‘Style’ employed by scribes C and D.

Fig. 2: Scribe C *dṛṣṭī* (282v2)

Fig 3: Scribe C *pṛṣṭa* (291v4)

Fig 4: Scribe D *dṛṣṭī* (282r2)

Fig 5: Scribe D *dṛṣṭa* (282r2)

Scribe C usually copied the verso side of a folio and Scribe D the recto although sometimes they switched. In 281v we find both scribes working on the same side of the folio with Scribe C copying the first two lines and Scribe D the rest. Interestingly, on this folio alone, Scribe D eschews an aspect of his usual style in order to imitate Scribe C. This is made apparent when we see the telltale *-ṣṭ-* ligature written by both scribes. While Scribe C’s remains unchanged, as seen in figures 6 and 7, Scribe D’s are awkwardly contorted to mimic the style of Scribe C as shown in figures 8 and 9. It is quite unusual for the two scribes to have worked together on the same side of a folio and the reason they did so here remains unclear. My own suspicion is that the collaboration between Scribes C and D was one of master and apprentice or at least one with a disproportionate level of experience between the two scribes. Perhaps Scribe C was setting an example of some kind in the first lines of 281v for Scribe D to study and emulate. It is just as possible, however, that the two scribes writing on 281v was the result of some sort of mix up in the order of the workload for the day and once Scribe C realized he was writing the wrong side of the folio he handed it to Scribe D to finish.

Figures 6–9: Scribe D imitating Scribe C in 281v.

Fig. 6: Scribe C *dṛṣṭa* (281v1)

Fig. 7: Scribe C *dṛṣṭa* (281v1)

Fig. 8: Scribe D *dṛṣṭa* (281v4)

Fig. 9: Scribe D *dṛṣṭa* (281v5)

Starting at folio 287r we find a small number one in the margin of the lower left-hand corner written in what was at the time of the copying of the manuscript the new numeration system that is very similar to numbers in modern Devanāgarī and the basis of Hindu-Arabic numeration in use throughout the world today (figures 10–21). This number marks the first folio in a series of an alternate numeration system used in some sections of the manuscript. This particular series of numbers runs in sequence in the lower margin to the left of the last line of the recto side of every folio throughout the manuscript from 287r–316r marking off thirty folios. These folios span the end of the *Prāsādika-sūtra* and the entirety of the *Prasādanīya*, *Pañcatraya* (DĀ 17, 299v3–306r5), and *Māyājāla* (DĀ 18, 306r5–317v5) *sūtra*s.[9] With these numbers we see the end of Scribe C and D's collaboration in this section of the manuscript. The purpose of this series seems to have been to mark off a certain section for Scribe C to copy alone.

9) See Melzer 2014, 252–256 for further remarks on this numerations system used by the scribes.

Figures 10–21: Marginal Numerals in DĀ 15 and DĀ 16.[10)]

Fig. 10: 287r7 #1

Fig. 11: 288r8 #2

Fig. 12: 289r8 #3

Fig. 13: 291r8 #5

Fig. 14: 292r8 # 6

Fig. 15: 293r8 #7

Fig. 16: 294r8 #8

Fig. 17: 295r8 #9

Fig. 18: 296r8 # 10

Fig. 19: 297r8 #11

Fig. 20: 298r8 #12

Fig. 21: 299r8 #13

The *Prasādanīya-sūtra*, and the two immediately following texts, the *Pañcatraya* and *Māyājāla sūtra*s, appear to be the work of Scribe C alone. Reading Scribe C's much more accurate solo efforts, it becomes clear that collaborative work between scribes may have led to some of the textual problems in the *Prāsādika-sūtra* that could have been avoided had the scribes each focused on their own portions of the text and raises the question of why the trading of folios between scribes was practiced. It is possible that this collaborative effort in *sūtra* copying served some purpose of efficiency or utility. Perhaps a scribe would write the recto side of a folio and set it aside to dry moving on to another folio's recto side then the other scribe would move on to the verso side once it dried. As the two scribes traded back and forth in this way one can imagine that not having to wait for the ink to dry allowed

10) Note that the number '4' is not included as it is not preserved in the manuscript.

the copying to progress quickly even if this was at the expense of clarity and continuity in the text. Indeed, from the numerous mistakes and textual problems seen throughout the manuscript, it would not be surprising to learn that speed was held in greater esteem than accuracy in copying for there is a certain carelessness often seen throughout the manuscript. There are numerous examples of negation left out of the body of the manuscript that would be demanded by the context suggesting either a lack of understanding of the content or a manuscript tradition that had already been corrupted by the time the manuscript was copied (or perhaps both). There are also corrections made but these are relatively rare and appear to be the result of a scribe either catching his own mistake or correcting an error that was already in the witness he was copying from but still including in his copy to maintain the *akṣara* count for that line. The rather poor state of the copied composition of the content in the manuscript suggests that by the time the manuscript was copied, the *Dīrghāgama* as a text was possibly no longer as significant a work within the community[11] that held the manuscript as it might have been in previous centuries and that the copying of the manuscript was possibly either for merit making or for the sake of maintaining a library.[12]

One further paleographical issue I will touch upon here is the existence of what may be described as scribal marks in the manuscript. It is common to observe various marks and smudges on the birch bark due to the general state of damage throughout the manuscript resulting from the deterioration of the folios over the centuries and perhaps rough handling when the manuscript was found. This is most often from the ink of one folio, or even the uppermost layers of the birch bark, transferring onto another folio from centuries of lying atop one another. However, if one observes the manuscript in detail it becomes apparent that there are also marks present that were written by the scribes. Generally, these marks consist of dots or small tick-or-dash-like strokes usually to the left

11) We cannot say with absolute certainty if this community was even affiliated with the (Mūla-) Sarvāstivāda tradition.

12) Cf. Hartmann 2014, 156–157.

of the lower left quadrant of an *akṣara*. Both Scribes C and D made these marks at various points throughout the manuscript although it seems that Scribe D made use of them more often. These marks appear to have been made by the scribes in the course of copying the manuscript. Many of them are very likely drops of ink, and such marks appear as dots and are made by the scribes, although they are made more often by Scribe D (figures 22–24). Occasionally, we see multiple dots that appear to be purposefully made as opposed to ink drops (figures 25, 34 and 35). In fig. 25 we see a triangle of dots made by Scribe D, while Scribe C seems to have preferred making lines of dots as seen in figures 34 and 35. These dots are likely attempts to adjust the ink on the writing nib just as today one might make a squiggle on paper in an attempt to get the ink in a ballpoint pen running. Other marks appear to have been strokes made by the scribes, but it is not entirely clear what the purpose of these strokes may be (figures 26 and 27). The most likely explanation may be that they were made as what might be called 'practice strokes' that were used to clear excess ink from nib of their writing instrument in preparation of writing the often extremely thin lines used in portions of the *akṣara*s in the calligraphic style of the script. This may explain why Scribe D, the less accomplished scribe, made them more often and we might hypothesize that they do not seem to appear in Scribe C's work as he was skilled enough to make the thinner lines demanded by the script without having to remove excess ink from his instrument. Scribe D is also seen making similar, but thicker strokes on the left and right sides of *akṣara*s as can be seen in fig. 29 and above in fig. 4 where the top stroke of the *-dṛ- akṣara* is marked in this way. One also often sees a particular 'broken slash' that I have only observed used by Scribe D (figures 30–33). These strokes were also likely used as a way to offset the ink on the writing instrument, but the fact that there is a space in these strokes is puzzling. More research is needed, but this may be a peculiar habit developed by Scribe D and may be useful in identifying his work in other sections of the manuscript or perhaps even in other manuscripts.

After making a somewhat cursory examination of other Gilgit manuscripts, I can confirm that scribal marks similar to those described above are present

in other texts from the region. In fig. 36 we see a mark in the manuscript of the *Saṅghabhedavastu* part of the *Vinayavastu* of the Mūlasarvāstivāda *vinaya* which bears a striking resemblance to the marks we have seen used by Scribe D. This is especially true when compared fig. 37, which shows a detail of the same mark found in fig. 29. While it is tempting to speculate further about these marks, a much more in-depth study of this phenomenon in other manuscripts from the Gilgit area is needed before any further statements on this topic can be made. For the time being I simply wish to point out their existence and suggest that with further examination, there is the possibility that they may be used to help identify the scriptoriums that produced these manuscripts or perhaps even individual scribes.

Figures 22–33: Marks made by Scribe D.

Fig 22: 273r3 Scribe D

Fig 23: 274r5 Scribe D

Fig. 24: 273r7 Scribe D

Fig 25: 277r8 Scribe D

Fig. 26: 281r3 Scribe D

Fig 27: 281r4 Scribe D

Fig. 28: 285r5 Scribe D

Fig 29: 281r4 Scribe D

Fig. 30 274r6 Scribe D

Fig. 31: 277r2 Scribe D

Fig 32: 279r6 Scribe D

Fig. 33: 286v6 Scribe D

Figures 34–35: Marks made by Scribe C.

Fig. 34: 271r8 Scribe C

Fig. 35: 297v8 Scribe C

Fig 36: *Saṅghabhedavastu* 327a6 detail of mark near the string hole.[13]

Fig 37: 281r4 Scribe D, detail of mark near the string hole.

## III. On Repair to the Manuscript

As the *Dīrghāgama* manuscript extant today was perhaps not considered to have been an especially popular text at the time of its production and was somewhat carelessly copied, it is somewhat surprising to find instances of repair to the manuscript. In the middle of 285v we find a birch bark patch applied over portions of lines 4 and 5 (fig. 38). In 285v4 the scribe wrote 8 filler marks on the patch in the middle of the word *bhavanto*.[14] However, the patch is also applied to a smaller part of 285v5 where the scribe seemed content to continue writing the proper *akṣara*s of *ttaḥ abhavyaḥ* over the patch.[15] It appears that filler marks were only used on 285v4 and not 285v5 as the patch

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13) Photo of the *Saṅghabhedavastu* of the Mūlasarvāstivāda *Vinayavastvāgama* manuscript taken by Giuseppe Tucci courtesy Francesco Sferra.

14) 285v4: *+ + r uṣitaṃ bra[hm]acaryaṃ kṛtaṃ karaṇīyaṃ nāpara○m asmād bhavaṃ prajānāmīti yo sau bhava = = = = = = = = nto bhikṣur bhavaty arthaṃ .ī + + + + + + + + + + + + + + + +*

15) 285v5: y. .. *[h]rt. bhāro nuprāptasvakārtha parikṣīṇabhava○saṃyojanaḥ samyagājñāsuvimuktacittaḥ abhavyaḥ tasmiṃ samaye paṃcasthānāny [a] .y. .. [tu]. [k]. + + + + + [abh]. .y[o] rhad bhikṣuḥ*

was likely applied to cover either a crack in the folio that already existed or a flaw in the bark that was judged to be in danger of eventually cracking. We find just such a crack on the reverse side of the patch on 285r4 (fig. 39). Indeed, the crack is even now apparent in the patch itself. No patch is observed on the reverse side of the folio at 285r4&5[16] (fig. 39), which may suggest that the damage was considered to be more severe on 285v4&5. Seven *akṣara*s into 295v8[17] there is a birch bark patch that is clearly seen to be pasted atop the manuscript (fig. 40). Just as in the patch found on 285v4 above, instead of the content of the *sūtra* six filler marks are written on the patch. Filler marks appear regularly in the manuscript for a variety of reasons, especially (but not always) where the birch bark is warped or otherwise unsuitable to write on. However, the patch to the manuscript does not appear to be faulty. The bottom of the *-ṛ-* from *rahatkṛtaṃ* in line 7[18] has even been written on the patch as it obscured that akṣara, suggesting that the repair to the manuscript was made before the copying process began, and the only reason for the filler marks seems to be to indicate the damage that had been repaired. In fig. 41 we see 295r1,[19] the reverse side of the 295v8 where the patch was made. There was no repair made to the *recto* side of the folio and beyond a vertical line that appears to be an imprint from the repair on the verso there is no sign of repair.

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16) 285r4: *+ + + + + + + + + + + + + + + + + + + + + + ○ .y. .. + .. ti bhavaṃto vyākṛtam itīdaṃ duḥkhasamudayo yam idaṃ duḥkhanirodham iy.[ṃ] .u. kh[a] .[i] .. [dh]. g[ā]mi[nī] pra[t]i .. .. .. + + + +*

285r5: *+ + + + + + + + + + + + + + + + + + + + + + + + + ○ .. parivrājakā evaṃ vadeyuḥ kasmād bhavantaḥ śramaṇena gautamena ime dharmā ekāṃ .. na vyākṛtā iti pṛṣṭair idaṃ sy. r vacan. y[āḥ]*

17) 295v8: *[śat]i [cetasā]m api = = = = = = dharmān nādiśati yac ca tathā ādiśati tat sarvaṃ tat tathaiva bhavati nānyathā bhagavā[n] bhadanta paraṃ paśyaty av[i]tarkam avicāraṃ samādhiṃ samāpannaṃ dṛṣṭvā ca puna‹‹s te evaṃ bhavati››*

18) 295v7: *bhāṣitam a[py ā]diśati rahatkṛtaṃ rahobhāṣitam apy ādiśati dūre 'py ādiśaty antike py ādiśati atīt{{ānā}}m apy ādiśaty anāg[a]tam apy ādiśati pūrvavac cittam apy ādi*

19) 295r1: *[bhagavata ṛ]ddhir ity ucyate bhagavān bhadanta sarvaśa ākiṃcanyāyatanaṃ samatikramya naiva saṃjñānāsaṃjñāyatanam upasaṃpadya viharatīyaṃ bhadanta bhagavata riddhir ity ucyate bhagavān bhadanta*

The repair to the manuscript here has even affected the *akṣara* count on at least one line of the manuscript. Fig. 42 shows the right side of 295v8, on the right side of the folio of repaired patch seen in fig. 40, where the final six *akṣara*s of *s te evaṃ bhavati* are added interlinearly underneath the bottom of the line, thus connecting to the last words on the line proper: *dṛṣṭvā ca puna*, in order to maintain the fidelity of the *akṣara* count so that the copying of the folios could continue without diverging from the exemplar being copied. In 296v1&2,[20] seen in fig. 43, we see another patch repairing the beginning of the line (see fig. 44 for the reverse side of the repaired folio). Unfortunately, the latter portion of the folio is damaged and the final *akṣara*s of 296v1&2 are missing so we cannot confirm that *akṣara*s were added interlinearly to keep the *akṣara* count. Conversely, the beginning of 287v8[21] (fig. 45) is damaged and the first six *akṣara*s are lost but we find *kāmaguṇaiḥ* added interlinearly below the end of the line suggesting that there was a repair made to the manuscript at the beginning of the line.[22] A fourth patch is seen in the *Māyājāla-sūtra* on folio 307v2 towards the middle of the folio about sixteen *akṣara*s from the end of the line (fig. 46). This patch offers the clearest evidence of corresponding repair to the reverse side of the folio on 307r8 (fig. 47) where it appears that both sides of the manuscripts appear to have been repaired.

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20) 296v1: *= = = [=]gato vā āta .t. .v. .. [p]rahāṇānvayā bhāvanānvayā bahulīkārānvayā .. m. [ṅma]nasikārātayā tadrūpaṃ śāntaṃ cetaḥsamādhi .[e] .. sa[m]ādhiṃ spṛśati .. + + + + + + + +*

296v2: *= = = = tvāriṃśataṃ saṃvarttavivarttakalpān samanusmarati .. syaivaṃ bhavati etāvad .. .. lokaḥ saṃvarttiṣyate ca vivarttiṣyate ca yāvad e[v]. .. yānvayam a .i .. + + + + + + + + + +*

21) 287v8: *+ + + + + + .. .ātmā uc[ch]id[ya]te na vinaśyati na bhavati paraṃ maranād etāvad ayam ātmā samyaksamucchinno bhavati saṃti bhikṣava eke śramaṇabrāhmanā evaṃdṛṣṭaya evaṃvādino yataś cāyam ātmā paṃcabhiḥ ‹‹kāmaguṇaiḥ››*

22) While the smaller lettering of *kāmagunaiḥ* may appear at a glance as another hand, there is no evidence that such interlinear writings in the *Dīrghāgama* manuscript were added later by anyone beyond the copying scriptorium or that there were any later textual corrections made (this also further suggests that the manuscript was not used for active study). In fact, this is not even a separate script, but rather an example of Gilgit-Bamiyan Type II script written very small and thus the calligraphic elements are not present.

These repairs to the manuscript most probably occurred before or during the copying process because if they were repaired after the copying process, there would be no need to add *akṣara*s interlinearly. Or, if they were made to the manuscript while it was blank the use of filler marks may suggest that the scribe chose not to write on the repaired areas out of concern over the structural integrity of the manuscript where it had been patched. In either case, these repairs indicate that a certain level of care was taken in the manuscript's copying, at least regarding the birch bark folios the *sūtra*s were written upon. The purposes for employing this type of repair remains unclear. We have seen that while filler marks are usually written on these patches a few *akṣara*s, or parts of *akṣara*s are also often included. It seems that the *akṣara*s seen on these repaired sections appear to have been written according to the judgement of the scribe on sections of the patch that he might not have thought were too fragile to risk writing text upon. Holes, warps, and knots in the birch bark are seen frequently throughout the manuscript. While it is quite probable that the holes found in the manuscript were made in the ensuing centuries following its production, the members of the scriptorium did not seem overly concerned with warps and knots in the folios themselves and generally used filler marks over such impurities or simply avoided writing on those areas (see figures 48 and 49).[23] Therefore, it seems most probable that these repairs were made to patch holes or suctorial problem points that were present in the manuscript folios when they were first produced, further suggesting that they were made before the scribes began copying the text of the manuscript. However, this is difficult to substantiate when we look at the reverse side of the patches. Evidence of the repair is evident. However, no filler marks are used and evidence of damage on the reverse of these repaired folios is not always immediately apparent. A close examination of the physical folios is required in order to shed light on the situation as it stands.

23) Filler marks were additionally used, as their name indicates, simply to fill empty space and were additionally used for ending lines in order to provide a sense of symmetry to the manuscript. This is also seen commonly in later Buddhist manuscripts from other areas.

Although it seems most likely that these repairs were made to the birch bark during the creation of the folios themselves by whomever manufactured them, it is perhaps worth noting that the patches to the manuscript thus far uncovered all occur on folios copied by Scribe C, but an exhaustive search for other patches must be made throughout the entirety of the manuscript before we can speculate if the repairs have anything to do with this particular scribe.

Fig. 38: 285v4&5 repair to the ms. with eight filler signs (line 4) and *ttaḥ abhavyaḥ* (line 5).

Fig. 39: 285r4&5 reverse side of the patch on 285v4&5 (fig. 38) above.

Fig. 40: 295v8 repair to the ms. with six filler signs.

Fig. 41: 295r1, the reverse of the patch on 295v8 (fig. 40) above.

Fig. 42: 295v8 *puna‹‹s te evaṃ bhavati››* (six *akṣara*s) added to ms. to compensate damage.

Fig 43: 296v1&2 repair to the ms.

Fig. 44: 296r7&8, other side of repaired patch on 296v1&2 in fig. 43 above.

Fig. 45: 287v8 ‹‹*kāmaguṇaiḥ*›› written underneath bottom of line.

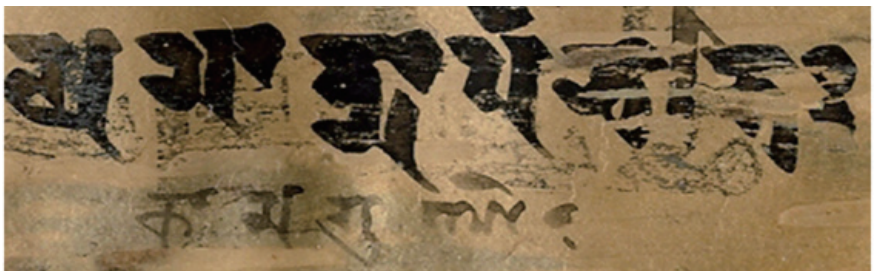


Fig. 46: Patch on folio 307v2: *bhavati* = = =.

Fig. 47: Patch on 307r8: *'ham asmīti manye*. Repair on the reverse side of repair on 307v2 (fig. 46) above.

Figures 48 and 49: Examples of how knots in the birch bark were dealt with.

Fig 48: Example of a knot in the birch bark where the scribe used filler marks.

Fig 49: Example of a knot in the birch bark where the scribe simply wrote around the knot.

Repair to the manuscript folios can be observed in other manuscripts produced in the Gilgit area to greater or lesser extent depending upon the

manuscript. While an exhaustive examination of all extant Gilgit material remains a desideratum, I have made a preliminary examination of five facsimile editions of the Gilgit Manuscripts preserved at the National Archives of India each containing either long manuscripts or multiple shorter manuscripts.[24] Only one of these collections of manuscript images failed to contain evidence of repair to a manuscript: Kudo's *Avadānas and Miscellaneous Texts*, which contains multiple shorter texts copied on what appear to have been rather high quality birch bark folios when the manuscripts were produced.[25] The manuscript of the *Samādhirāja-sūtra*, a lengthy Mahāyāna *sūtra* of nearly 200 folios contains just two instances of repair that I was able to discern, figures 50 and 51. Beyond that the manuscript appears to be generally free from structural issues that might make repair necessary. The birch bark folios even seem to have only a small number of knots present in throughout the manuscript. Of the four manuscripts collected in Mette and company's *Further Mahāyāna Sūtras*, I only found repair in two instances in the *Kāraṇḍavyūha* (figures 52 and 53), a relatively long text spanning around 80 folios, although the manuscript folios are of the shorter type often used for less lengthy texts as opposed to the longer folios used in the *Dīrghāgama* and other manuscripts of extensive length. The patches made in to the *Kāraṇḍavyūha* are not visible on the reverse side of the folios to which they were made. The patch in fig. 53 is of note as on the upper left-hand side of the patch on line 6 we see a clear instance of a darker cell ubiquitous in birch bark manuscripts being cut off. The *Vinaya Texts* facsimile volume edited by Shayne Clarke represents only a portion of the very lengthy Mūlasarvāstivāda *Vinayavastvāgama* manuscript. The quality of the folios is very good and I have observed patches in only five instances of the extant 212 folios appearing in the facsimile edition, with two of the patches exemplified here in figures 54–57. The repair to this manuscript appears to use a different

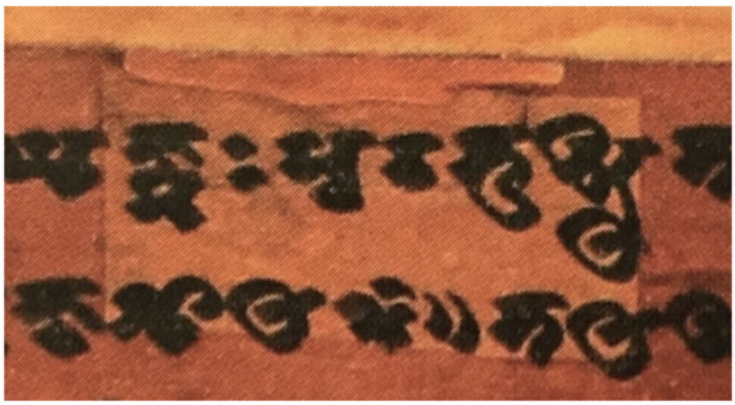
24) Specifically, I have examined Clarke 2014, Karashima et al. 2016, Kudo 2017, Kudo; Fukita; and Top of Formñ Tanaka 2018, and Mette et al. 2017.

25) Kudo 2017.

technique, or perhaps was designed to solve a different problem, than the repair seen in other manuscripts from Gilgit. These patches all appear to show a lighter portion of birch bark in the center surrounded by a cut birch bark square of a darker color. It is unclear why this type of repair is seen exclusively in this manuscript out of those that I have examined while the repaired patches in the other manuscripts are all generally similar to the type of repair we see in the *Dīrghāgama*. I did not find any patches in the 38 *Prātimokṣa* folios and 19 *Karmavācanā* folios also contained in the *Vinaya Texts* volume. The final facsimile edition I have consulted is Karashima and company's *Mahāyāna texts*: *Prajñāpāramitā Texts* (1). This volume contains only two *sūtra* manuscripts, the *Larger Prajñāpāramitā* and the *Vajracchedikā*. The *Vajracchedikā*, a brief manuscript of just twelve folios of which seven are extant, does not appear to contain any instances of repair. If we accept that repairs were most commonly performed on blank folios before the manuscripts were copied, then this may provide some support to the idea that shorter manuscripts were made with better quality birch bark and were thus not often subjected to such repair. The *Larger* Pra*jñāpāramitā*, a very long and intact manuscript of 307 folios with only 10 folios no longer extant, however, contains numerous instances of repair, often continuously from folio to folio throughout large spans of the manuscript, and I have only shared a sample of several examples here in figures 58–66. Interestingly, it appears that the first half of the manuscript contains more repairs than the second. We see something akin to an inconsistent constancy in the repairs to this manuscript. Those who made the repairs often seemed to be concerned with the aesthetic nature of the repairs often apparently trying to match up the horizontal level of the darker birch bark cells in the patches with underlying dark cells in the manuscript as we see in fig. 58, for example. However, less commonly, we find rather haphazardly applied patches such as in fig. 60 where the darker birch bark cell is radiating at a 20° southeast angle. Curiously, the bottom line of the patch in fig. 60 (folio 15r6) appears to be written atop the patch and the lower quadrants of these *akṣara*s appear to be obscured by the repair. This would

suggest an instance where the repair had been made *after* the *sūtra* had been copied and is the only such instance I have uncovered. All other instances of repair in this and the other manuscripts I have examined seem to have been made before the copying process began. In fig. 63 we find the darker cells, perhaps somewhat shockingly, at a 90° angle rising vertically when the birch bark cells on the folios used in these manuscripts were designed nearly exclusively so that the dark cells run horizontally along the folios as this was the surest way to obtain the birch bark in the necessary lengths for manuscript production. In fig. 64, the corresponding patch on the *verso* side of the repair seen in fig. 63, we see that a second patch seems to have been applied that does not correspond in shape or size to the patch on the *recto* side of the folio. Perhaps most noteworthy, we find instances where a patch running the entire vertical length of the folios is applied. In figures 65 and 66, the *recto* and *verso* of the same folio, we see such repair and find that again the darker cells of the birch bark are vertical to the rest of the folio. Such repair indicates that the structural integrity of such folios had been completely lost and are perhaps examples of a broken folio being made whole.

Fig. 50: *Samādhirāja-sūtra* 431v1-2.[26]



26) Kudo 2017, 39.

Fig. 51: *Samādhirāja-sūtra* 115v4-5.[27]

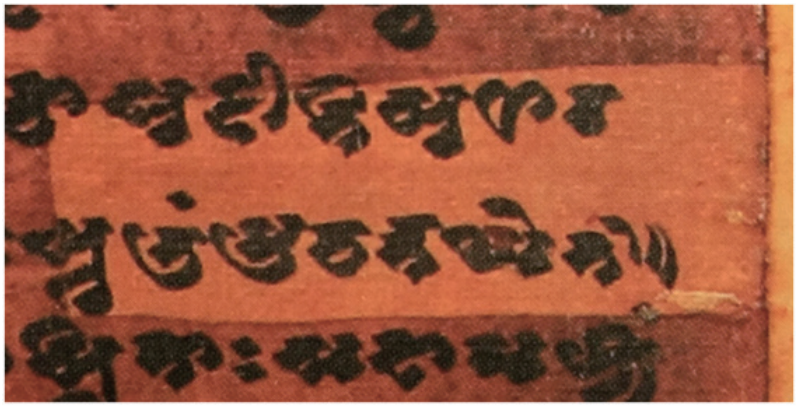


Fig. 52: *Kāraṇḍavyūha* 22r3.[28]

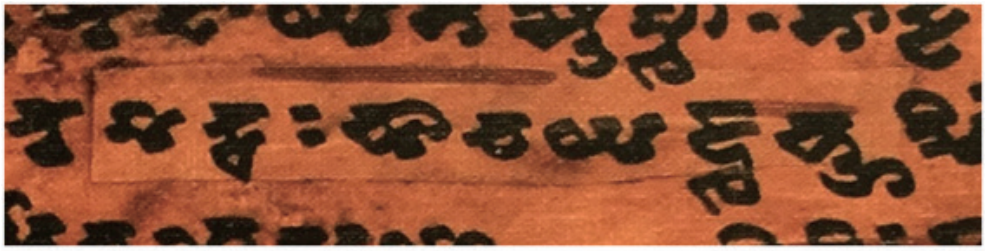
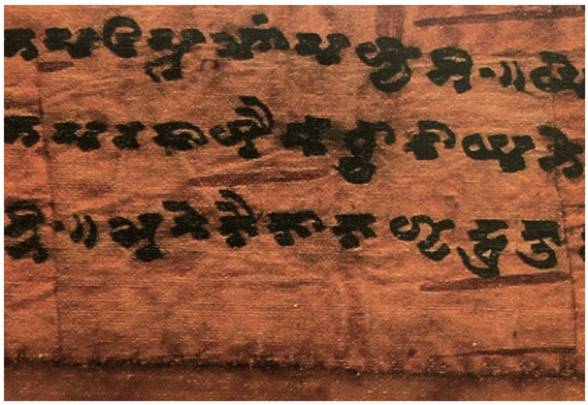


Fig. 53: *Kāraṇḍavyūha* 23r6–8.[29]



27) Kudo 2017, 110.
28) Mette *et al*. 2017, 77.
29) Mette *et al*. 2017, 78.

Figures 54–57: Examples of repair to the Mūlasarvāstivāda *Vinayavastvāgama* manuscript.

Fig. 54: *Bhaiṣajyavastu* 205rL6.[30]

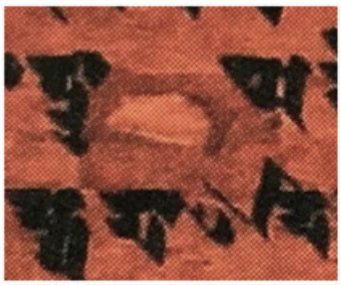


Fig. 55: *Bhaiṣajyavastu* 205vL5.[31]

Fig. 56: *Kaṭhinavastu* 277r6–7.4[32]

Fig. 57: *Kaṭhinavastu* 277r6–7.[33]

Figures 58–64: Repair to the Larger *Prajñāpāramitā* manuscript.

Fig. 58: *Larger Prajñāpāramitā* 13r3–4.[34]

Fig. 59: *Larger Prajñāpāramitā* 13v8–9 (reverse of fig. 58).[35]

30) Clarke 2014, 100.
31) Clarke 2014, 101.
32) Clarke 2014, 172.
33) Clarke 2014, 172.

Fig. 60: *Larger Prajñāpāramitā* 15r4–6.[36]

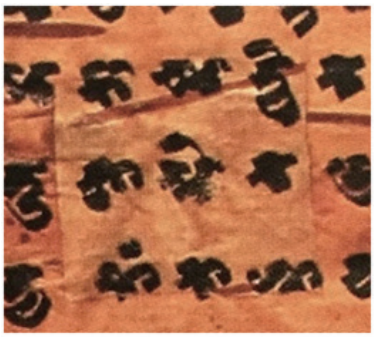
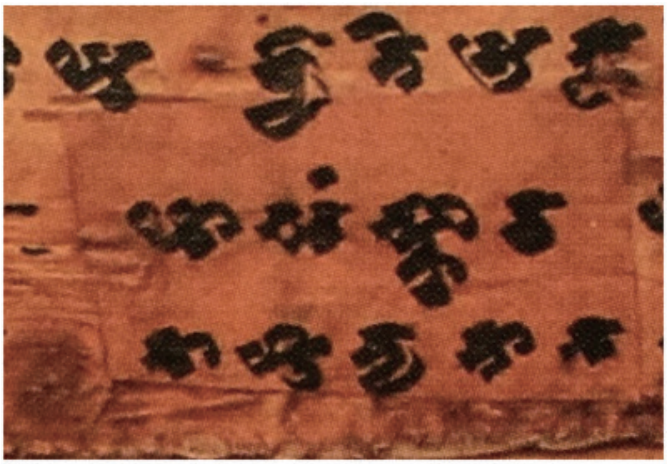


Fig. 61: *Larger Prajñāpāramitā* 15r4–5[37]

Fig. 62: *Larger Prajñāpāramitā* 21r10–11[38]



34) Karashima *et al*. 2016, 13.
35) Karashima *et al*. 2016, 13.
36) Karashima *et al*. 2016, 15.
37) Karashima *et al*. 2016, 15.
38) Karashima *et al*. 2016, 21.

Fig. 63: *Larger Prajñāpāramitā* 23r6[39]

Fig. 64: *Larger Prajñāpāramitā* 23v6 (reverse of fig. 63)[40]

Figures 65–66 Vertical repair to whole folios of the *Larger Prajñāpāramitā*.

Fig. 65: *Larger Prajñāpāramitā* 61r1-14.[41]

Fig. 66: *Larger Prajñāpāramitā* 61v1-13 (reverse of fig. 65).[42]

39) Karashima *et al*. 2016, 23.

40) Karashima *et al*. 2016, 23.

# IV. Conclusions

Where does this leave us? When contemplating the production of the *Dīrghāgama* manuscript from Gilgit, we must imagine a group of scribes working in tandem. This group probably either had only a minimal or passing knowledge of the material being copied and/or the language it was transmitted in, or if they did have knowledge of the material and its language, they were more concerned with the speed of the production of the copied text than the content. They planned their work ahead and divvied up the number of folios to be copied between them, sometimes marking folio spans with marginal numeration. Sometimes the work was dispersed by the length of the component *sūtra*s but other times they worked in teams with little regard apparent for the textual breaks between the *sūtra*s. When the latter happened, they often traded folios back and forth by *verso* and *recto*, which may have been the fastest way to copy a span of folios. They only rarely seemed to share the same side of a folio, and this is possibly an example of some confusion in the copying process or the resuming of work after some pause. We may speculate that the scriptorium consisted of more and less accomplished scribes and that some aspect of training of the lesser accomplished scribes might have occurred. The individual scribes appear to have made marks in on the folios in the process of their copying that are unique to each scribe. Further study of such marks may allow scholars to deduce information surrounding the skill level of a particular scribe or even help to identify the work of a scribe or scriptorium across multiple manuscripts.

The manuscript folios appear to have been repaired prior to the act of copying, although we cannot say that there were no patches added after copying as well. We also cannot be certain what criteria warranted this preemptive repair as irregularities within the birch bark material were

41) Karashima *et al*. 2016, 60.

42) Karashima *et al*. 2016, 60.

generally worked around. This repair has been witnessed in other manuscripts from the region and appears to have been practiced by whomever produced the birch bark folios themselves. It is unclear if the scribes of the scriptorium were trained only to copy the texts or also prepared the folios. In either case, it would seem that longer manuscripts contained more instances of repair. This may be due to whoever commissioned a given manuscript having 'bought in bulk', perhaps getting a better financial deal on more folios by accepting lower quality material. Or, it may be that the supply of birch bark serving as a raw material was not steady and, for whatever reason, it was not possible to consistently ensure a high quality of the birch bark folios so lower quality material that needed repair had to be utilized when material free from impurities could not be obtained. These suppositions may explain why it seems that instances of repair are more prevalent in longer manuscripts and may not occur often in shorter ones as the cost or ease of obtaining birch bark folios would have been easier in smaller quantities that were often several centimeters shorter or thinner than the folios traditionally used for longer texts. One might also speculate that some texts were considered of particular importance or value and the production of such their manuscripts were expressly commissioned with finer material. This might be a factor in how similarly lengthy texts such as the Mūlasarvāstivāda *Vinayavastvāgama* and *Larger Prajñāpāramitā* manuscripts discussed above would have such disparate amounts of repair. If this were indeed a consideration in manuscript production, it would raise further questions such as to whom would certain manuscripts be considered more important than others: the artisans producing the folios, the scribes (if they were a separate group from the folio manufacturers), the donor/s, a community of monastics?

The instances of repaired patches discussed in this article serve to note that the practice of manuscript repair appears to have been widely utilized in the Gilgit region. However, these examples are merely the tip of the iceberg and a thorough analysis of the entire Gilgit corpus of manuscripts needs to be undertaken in the future. Such a study may one day allow us to place specific

manuscripts into groups discerned from the material they were made from and the type of repair they were subjected to finetuning our understanding of the networks of Buddhist groups in that area and time. Moving forward, the elements in the production of the *Dīrghāgam*a manuscript should be further studied. This would entail a thorough examination and analysis of the entirety of the manuscript. Ideally, this would have been done in tandem with the work of editing the texts. However, the portions of the *Dīrghāgama* manuscript that have been edited were completed by various scholars who had greater and lesser levels of interest in such matters. This makes the situation somewhat difficult, but at least these aspects should be taken into consideration with the remaining portions to be edited. The physical manuscript should also be reexamined by a skilled conservator who might be able to finally separate the folios that are fused together. The anonymous owner of the largest collection of folios has not expressed an interest in pursuing such an action. Still, it may be possible if the proper funding is raised. Additionally, Jinkyoung Choi and I are preparing an English translation of the *Dīrghāgama* manuscript. It is hoped that this will provide an opportunity to return to the portions of the manuscript that have already been edited and further explore these features. Ultimately, all such marks and manuscript repair that I have remarked upon should be noted not just in the *Dīrghāgama* manuscript, but throughout the entirety of the Gilgit manuscripts so that we may make some sense of them in total, perhaps allowing us to definitively say whether these repairs and aspects of *sūtra* copying are just individual quirks in the writing styles of certain scribes and elements of manuscript production used solely by this scriptorium, or tools and techniques that were used throughout the region in the production of Buddhist and other textual material. This exacerbates the already overdue need to re-edit and translate the Gilgit material that has been found in the 1930s as well as the need to create new images of these manuscripts with modern equipment. Such work is slowly ongoing on both fronts. Fumi Yao, Jinkyoung Choi, Ryōji Kishino, and I are currently working on a new edition of the *Saṅghabhedavastu*, one of several projects concerning

editing Gilgit manuscripts presently underway. As for images, endeavors such as with the facsimile series of the material at the National Archives of India, for example, make it much easier for scholars to examine this material but much more needs to be done in the coming years to identify the location of collections that have become lost and digitize such material in high resolution and in color so that it may be made widely available. Finally, as new material from the area continues to occasionally come to light we should be mindful of these issues in the hope of understanding where these manuscripts were produced and by whom perhaps down to the individual scribe.

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| Abstract |

# Scribal Technique and Birch Bark Folio Repair Utilized in the Production of the Mūlasarvāstivāda *Dīrghāgama* Manuscript by a Scriptorium in Gilgit Around the 8th Century CE

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This article examines aspects of the production of the Mūlasarvāstivāda *Dīrghāgama* (Collection of Long Discourses) manuscript produced in or around the area of Gilgit in Pakistan that was discovered in last decade of the 20th century. The manuscript was the product of a long copying tradition and the only extant witness was copied by a scriptorium consisting of several scribes. The techniques used by a pair of scribes referred to as Scribe C and Scribe D are discussed demonstrating their unique collaboration to copy this manuscript. Interlinear marks left by these scribes on birch bark folios will be discussed with the hope that in pointing out such marks, which appear to be relatively unique to a particular scribe, we will be able to identify the work of certain scribes across manuscripts. The second portion of the article discusses the phenomenon of repair made to the birch bark folios of the *Dīrghāgama* manuscript as well as pointing out similar instances of repair in other manuscripts from the Gilgit area. These repairs to manuscripts raise questions concerning the production of birch bark folios and how they

were selected and used by Buddhist manuscript traditions in Gilgit in the first millennium of the Common Era.

**Keywords**: *Dīrghāgama*, Gilgit Manuscripts, Paleography, Codicology, Scriptorium, Scribes, Birch Bark Manuscripts, Mūlasarvāstivāda

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