# THE MATERIAL CULTURE REVIEW

# REVUE DE LA CULTURE MATÉRIELLE

Volume 97
SPRING 2024 / LE PRINTEMPS 2024

# Material Culture Review

# Revue de la culture matérielle

### Web Site / Site Internet
www.materialculturereview.com

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# Revue de la culture matérielle

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# ELENA NESI

Independent Scholar

Review of
Yan Pei-Ming. *Painting Histories*. Fondazione Palazzo Strozzi, Florence, Italy.
July 7 – September 3, 2023.

History has consistently served as a prevailing motif for artists across centuries. The passage of time, individual and collective odysseys, and the intricate interweaving of human lives have consistently kindled the creative imagination of artists hailing from diverse backgrounds and genres. Yan Pei-Ming's exhibition at Palazzo Strozzi in Florence offers a distinctive rendition of history. Under the elucidating title *Painting Histories*, the artist guides us through a journey that resonates with us all. Even when observing the trajectory of his personal life, we find ourselves able to connect with his struggles and extend empathy toward his experiences.

Commencing on July 7th and concluding on September 3rd, 2023, the exhibition featured an impressive collection of more than thirty artworks. Curated by Arturo Galansino, the exhibition has been organized in collaboration with the Fondazione Hillary Merkus Recordati.

Yan Pei-Ming was born on January 1, 1960, in Shanghai, China. He moved to France in the 1980s and later became a French citizen, where he pursued his artistic education at the École nationale supérieure des beaux-arts in Dijon. Growing up during the Cultural Revolution in China, Yan Pei-Ming's early life was shaped by significant historical and political events. Yan Pei-Ming's life story is marked by his journey from China to France and his subsequent development into a prominent contemporary artist on the international stage.

Yan Pei-Ming's artistic compositions often assume a monumental and monochromatic demeanor. He invites us to immerse ourselves in his canvases, akin to the experience of being within a movie theater—a source of artistic inspiration for him.

Yan Pei-Ming's approach to the canvas is marked by a raw intensity. Upon approaching the paintings, one becomes aware of the weighty, tactile brushstrokes that permeate the canvas. His canvases depict a world rife with animalistic apocalypse, where predators and prey not only engage in strife among themselves but also contest their own kin. This mirrors the underlying philosophy behind his artistic endeavors that asserts a tragic nature of history and a bleak reality wherein humanity faces an insurmountable plight.

This encapsulates his overarching concept.

In interviews, the artist expounds upon his belief that the survival of humanity is intrinsically linked to that of the animal kingdom. Disregarding animals—a tendency often rooted in human arrogance and conceit—can yield profound peril, a sentiment that appears to be disregarded even in artistic expression.



**Figure 1**
**"Yan Pei-Ming. Pittore di storie," Palazzo Strozzi, Firenze, 2023. Foto Ela Bialkowska, OKNO Studio. © Yan Pei-Ming, ADAGP, Paris, 2023.**

Amidst his array of works featuring animals, one encounters his landscapes: somber, haunting, and conducive to losing oneself within their depths. The interpretation of this darkness as either a sanctuary or a harbinger of naturalistic catastrophe is incumbent upon the viewer. Personally, I found myself experiencing a blend of emotions when confronted with the towering black forests that exude an air of menace and isolation at the peripheries of the canvases.

Indeed, the narrative of natural history converges with the artist's personal life. This is particularly evident in the dual portraits depicting the young painter alongside his father, symbolizing a departure from the natural order. By departing before his father, Yan Pei-Ming invokes an ancient Chinese adage: *White hair attends black hair's funeral.* Beyond a mere representation of father and son, the paintings evoke the profound, primal essence of the human archetype.

Portraiture is the fulcrum of Yan Pei-Ming's oeuvre. His approach to portraiture seeks to unveil the inherent essence of an individual, a process he views as an introspective endeavor. While he playfully jests about his limited colour palette, suggesting that he refrains from using colours to avoid challenging the prowess of the old masters and assuming the responsibility of competing with them, he predominantly employs black and white techniques.

Evident throughout his works are tributes to illustrious painters of the past. Notably, a massive triptych rendition of the Mona Lisa, the painting that initially ignited his passion for art during his youth, pays homage to Leonardo da Vinci. Similarly, tributes to Jacques-Louis David, Diego Velazquez, and Francisco Goya are discernible through his interpretations of *The Death of Marat*, *Portrait of Pope Innocent X*, and *The Third of May 1808*.

The recurrence of triptych compositions further evinces Pei-Ming's affinity for Medieval and Renaissance artistic traditions. He identifies himself as an artist rather than tethering his identity to a specific national or cultural context, seamlessly bridging the gap between Eastern and Western artistic sensibilities.

Amidst the diverse tapestry of histories Pei-Ming explores, a thematic thread of

historical personas and events emerges, perhaps serving as a reminder that history cyclically echoes, often in ways devoid of optimism.

The exhibition leads observers through a gradual historical progression of tragedy and realism, ultimately culminating in the 20$^{th}$ and 21$^{st}$ centuries. The presentation of pivotal moments in Italian history resonated deeply—events with which I, naturally, possess a particular familiarity. Instances such as the execution of Benito Mussolini, the assassination of Pier Paolo Pasolini, and the kidnapping of Aldo Moro assume prominence within the narrative.

Of special note is a room housing a portrayal of a barking dog juxtaposed with one of Yan Pei-Ming's evocative landscapes, positioned between depictions of Mussolini and Hitler. This

particular setting struck a chord, not only due to the malevolence associated with the subjects depicted, but rather due to the realization that the foreboding ambiance of a dark forest or the threat of a fierce dog pales in comparison to the disconcerting aura emanating from these two individuals of our own species. In my estimation, this prompts an introspective consideration of the relative dangers posed by a rabid canine, an ominous environment, and the actions of two human beings.

Ultimately, the exhibition segues into contemporary times and the history currently unfolding. Portraits of Volodimir Zelensky and Vladimir Putin feature prominently, perennially presented as a triptych and employing a monochromatic palette, whether black and white, red, or yellow and blue, reminiscent of the Ukrainian flag.

Between these two portraits, set within a lengthy and narrow chamber, a vast painting adorned with innumerable red skulls commands attention. This field of skulls symbolically signifies the ultimate outcome of history—not solely its current state but also its past and, regrettably, its anticipated future, according to both the artist and my personal viewpoint.

Amidst this unending saga of tragedy, paramount is the imperative to participate in a constructive manner, at the very least through a lens of realism. Documenting and recording events persists with the purpose of nurturing the hope that perseveres even in the face of adversity.

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*Socio-cognitive Impact of Artifact Replacement: The Curious Case of Amritsar Hand-Knotted Carpet Weaving in India*

## Introduction: Lacking Historical Aspect in Artifact Analysis

The current studies related to artifact analyses in domains like design, organizational, and management studies usually provide a static snapshot of an artifact with respect to its categories, functions, varieties and user engagements in a practice (Nomura et al 2006; Gurses et al. 2009; Heersmink 2013). These analyses fall short of revealing how users' engagement patterns with their artifacts came to be in the first place. This is because an artifact does not exist as a static entity in a practice, but co-evolves with its users, their tasks, and goals. The theorists in Cultural-Historical Activity Theory (Leontiev 1979; Engestrom 1987) and Situated-Distributed Cognition (Baber 2003, 2006; Hutchins 1999, Lave 1988; Suchman 2007; Osiurak et al. 2018; Woods 1998) have long championed the co-evolvement of artifact-task-practice-cognition couplings and inspired approaches like social construction of technology (SCOT) and Human-Artifact Model (Bodker and Klokmose 2011) for studying artifact development (Pinch and Bijker 1987; Bijker & Law 1992), artifacts-in-use (Bannon & Bodker 1991;

Quennerstedt et al. 2011) and artifact appropriation (Dourish 2003). In this literature, the least studied aspect is *artifact replacement* whereby one artifact completely replaces another artifact in its ecology. A theme that has come closest to this aspect is *artifact substitution*, whereby a new artifact substitutes an older one, but does not completely pushes the older artifact out of its ecology (Brodersen et al 2007). The current paper reports a case of *artifact replacement* in the practice of Amritsar carpet-weaving in India.

Amritsar carpet-weaving (ACW) has its roots in Kashmiri carpet-weaving (KCW) which is undertaken in the adjacent region of Kashmir, both in India, from which ACW inherited its technique and artifacts around the 1840s. Artifacts in a practice constitute any physical device, representation, tool, or document with which users can store and communicate information (Kirsh 2010, Hutchins 1995), facilitate collaboration (Hindmarsh and Heath 2000), coordinate their joint activities (Nomura et al 2006), enhance their planning and location awareness (Bardram and Bossen 2005), establish roles and hierarchies, enable

learning (Kafai 1996), structure the practice in turn (Hutchins 1995) and foster collective memory and cultural identity (Hutchins 1995; Heersmink 2021). ACW presents a unique case wherein due to technological needs of artisans in the aftermath of the Partition of India in 1947, *naksha*, replaced *talim*, the central artifact of the practice, over the course of a few years. *Naksha* is a grid-based design representation on which the design to be woven is drawn. In Kashmir, from a *naksha*, a symbolic script, called *talim*, is generated which the weavers read to weave the design (Kaur 2017). This *talim* completely disappeared from ACW post-1947 and was replaced by *naksha* which weavers started reading to weave their carpets. Before 1947, the Indian craft sector had experienced diverse technological changes like newer kinds of looms (Roy 2005) and increasing use of synthetic dyes (Mukund 1992; Roy 2004) caused by de-industrialization due to British industrial growth (Bagchi 1976), provision of new tools by government agencies (Bagchi 1976), and the motivation of profit for artisan capitalists (Roy 2020, 113). The colonial pressures thus extended the British political authority over textile and craft production (Mukund 1992). In this scenario, ACW presents a case where the impact of a political event, i.e. partition of the country in 1947, caused a direct technological change in the production process. In this impact, the central artifact of ACW, *talim*, was replaced by *naksha* in a short span of a few years to meet the technological needs of artisans. The longstanding socio-cognitive impact of this replacement, on the remaining artifact ecology of ACW, is reported in the present paper. In empirical studies related to artifact analysis, where artifact ecologies have primarily been studied in

corporate organizations (Dourish 2003), hospitals (Cormi et al 2022), academic settings (Belin & Prié 2012; Vasiliou et al 2017), volunteer-based communities (Bodker et al 2016), people's nomadic (Rossitto et al 2014), mobile (Jarrahi et al 2017), and smart work practices (Ko et al 2021), this study has come from the craft domain.

**The Study: Connecting Kashmir and Amritsar**

This study, ongoing since 2015, is on situated and distributed cognitive processes in Kashmiri carpet weaving (KCW) in India with special reference to a cryptographic system used in the practice. The study has been undertaken in Srinagar in the northern-most state of Kashmir using cognitive ethnographic methods with fieldwork spanning over 2.2 years from 2015–2018, including month-long studies in 2021 and 2023. Short periods of fieldwork in Amritsar, in the adjacent state of Punjab, were done in 2015 and 2019. KCW has three task contexts: *designing*, wherein designs are either created digitally via a CAD system or are manually drawn on graph-sheets (Kaur 2017) and colour-schemes are assigned via symbolic codes by designers (*naqash*); *coding*, wherein a cryptic script called *talim* is generated from these encoded graphs and written on long rolls of paper by code-writers *(talim-guru)* [1]; and *weaving*, wherein *talim* is read, decoded, interpreted and communicated by weavers (*kaalbaaf*) in an equally cryptic trade-language among their teams to weave the designs (Kaur 2020). The central artifact of KCW is, thus, *talim* (figure 1) whose structure has altered considerably since first documented by British linguist G. W. Leitner (1882) (Kaur 2017). Adjacent to Kashmir

**Figure 1**
**A typical Talim Roll. Courtesy of BMW Designers, Srinagar (Kashmir)**
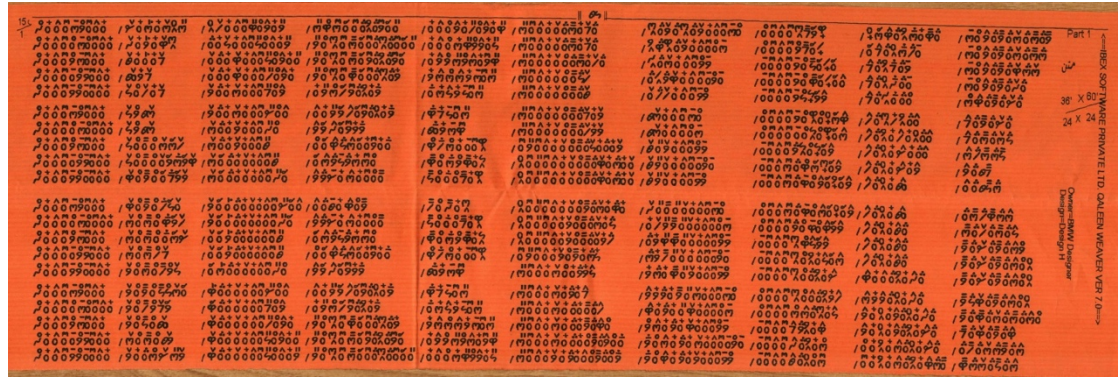
is Punjab, whose border city Amritsar has long been eulogized for weaving the finest pile carpets (Gazetteer of Amritsar 1883-84; Mukharji 1883; Watt & Brown 1903). Large-scale famine-induced migration of Kashmiri artisans around the 1840s first initiated the shawl and then pile-carpet weaving at Amritsar. These migrating artisans brought with them the techniques and artifacts of KCW to Amritsar (Hawley 1913, 255; Chattopadhyay 1970, 23; Eiland 1979, 166) including *talim*. From Henry Baden Powell's (1872, 26) brief mentioning of 'reading-out' patterns in Punjab carpet-weaving, we get the first detailed documentation of *talim*'s use in ACW by Lewis Mumford who mentions a "book" in which are "written down in Kashmiri characters all the stitches in each section, with the colors, and the exact sequence in which they must be put in" which is read-off by "a boy" specially assigned to this task (1900, 261). This "book" is none other than *talim*. At the turn of the 20th century, Eliza Ruhamah Scidmore notes how the pattern written in "Kashmir cipher" is called out by a reader and is followed by young boys working on the loom (1903, 309). This *talim*, "*taalim tereh*," "*raqsha kitab*," or "book of the pattern," is generated either "from the actual carpet to be copied, or from the ruled

section paper drawing" indicating a reverse-information flow whereby *talim* is generated from an existing carpet (Harris 1908, 60). Its usual generation from a graph-drawing is confirmed by Bipin K Sinha (1926, 486) and later by Murray L. Eiland Jr. & Murray III Eiland as they note, "weaving in Kashmir (as well as Amritsar) proceeds by the talim system" (1973, 298).

These sources provide ample evidence that *talim* originated out of Kashmir and was used in ACW after the 1840s and we continue to get scholarly references of its use until Sinha's 1926 observations. A conflicting picture from 1979 onward appears, however, as Eiland & Eiland note that "weaving in Kashmir (as well as Amritsar) proceed by *talim* system" (1973, 298), but four years later, the first author Murray L. Eiland contradicts his earlier claim, stating now that, "Amritsar also was long unique (aside from Kashmir) in India in using the *talim* system ... During the last several decades, this system has slowly been replaced by scale paper drawings" (Eiland 1979, 166). By 2001, *talim* was again claimed to be "widely used" in the "knotted carpet industry in Kashmir

and Punjab" by Peter Harris contributing to the already chequered history of scholarly treatment of *talim* in ACW (2001, 1).[2] Before we delve into *talim*'s eventual fate in ACW, a brief introduction to the practice:

Amritsar carpets: Amritsar carpets, handwoven in the district of Amritsar in Punjab (India), are wool-on-cotton, carpets of around 100 knots per square inch (kpsi) (figure 2). This 'knottage,' understood as the 'quality' of the carpet, is represented as *columns x rows*, e.g. a 7x13 quality carpet has 91 kpsi. In ACW, generally repetitive patterns like Bokhara are woven, wherein a single motif such as a box woven in five to six colours is repeated throughout the carpet. Like other cottage industries, ACW is dominated by the manufacturer, who acts as a primary decision-maker. Sourcing designs from freelance designers, they commission carpet to household weavers, providing them with loom, tools, raw material and design. Once the carpet is woven, the manufacturer takes it off the loom, and lays the warp for the new carpet. Weavers are paid piece-rate wages, usually partly in advance, while the rest is paid on completion. While weavers generally earn 3500 INR for a 4x6-foot carpet, taking them a month to weave, designers earn 1500 INR for small-size designs requiring a few days of labour.[3] Despite being paid slightly more than weavers vis-à-vis their time spent and effort, there is a significant dearth of designers in ACW. No more than two designers in the whole region could be found during my fieldwork, one of whom had retired recently (aD2 – Male, 74y) and the other (aD1 – M, 54y) was the creator of the principal pattern currently being woven at site. At present, only manual designing, involving design

creation on graph sheets, is being done with the exception of one manufacturer who sources digital designs from outside Amritsar.



**Figure 2**
**Map of India showing Srinagar and Amritsar in northern-most states. Courtesy of Nationsonline.**

Task structure: ACW has two task contexts: designing and weaving having a linear information-flow from one to the other. In the design phase, the designer draws the design, without colours, on graph-paper and fills the cells pertaining to motif-outlines with a sketch pen. This black and white design is called the 'master-copy' from which further copies, as and when needed, are reproduced. The colours are added to the design later and the colour-designed graph, called *naksha,* is given to the weavers to be read for weaving.

Tools and artifacts: The weavers use a vertical loom with two wooden rollers with cotton-warp stretched between them (figure 3). They sit on a bench

around 1-foot high on the side facing the rollers. A wooden strip *(panakh)* (figure 3b) is fixed to the carpet on the loom's backside, and it is adjusted every few days as the woven carpet rolls over the lower roller. The weavers access yarn by pulling it from the top of the loom, while unused yarn-rolls either lie on the floor at the loom's backside or are casually hang over the loom's side-beams. The weavers follow their *naksha* without looking at it. Usually, it is preserved under their sitting-bench cover, or in some basket kept nearby, or in some other room.

The design representation: The *naksha* is a typical design "transference device" (Davis, 1972, 7) used in weaving practices like that of Agra in India (Schuster 2008), Tibet (O'Neill 1999), Nepal (Goswami, 2009, 193), Iran/Persia, etc. (Topalbekirog et al 2005). In ACW, *naksha's* quality varies as per its grid-size, e.g., a grid-block measuring 1.25 inches-square in a 10x16 graph-sheet comprises 160 cells in 10 columns and 16 rows. A typical graph sheet is comprised of rows and columns, where these rows and columns are further organized into blocks (grid-block), e.g. a 20x20 graph means its one grid-block has 20 rows and 20

**Figures 3a (Left) and 3b (Right)**
**Front and backside of Amritsari loom. Contrast the sitting position of weavers with sitting position of weavers in Kashmiri carpet weaving in figure 4.**



**Figure 4**
**In KCW, weavers sit on backside of the loom while lower rollers point towards the other side. In ACW (figure 3), weavers sit on the side facing the rollers.**

columns.[4] The quality of graphs in ACW has altered over the years with 16x16 graphs being used in the 1980s and 10x18 graphs being used from 2000 onwards, which further reduced to the 10x16, 9x16 and 8x17 grid-graphs being used at present, showing decreasing columns in the grid-block measuring an inch. This reduction is often compared with a corresponding decrease in the carpet's quality/knottage over these years. K. K. Goswami remarks that, "The quality of

the graph paper will vary, depending on the complexity of the design, particularly the number of knots or tufts per square inch" (2009, 199). The carpet-knottage and graph-quality relation is not this rigid, however, as any knottage can be designed on any graph. Figure 5 shows an 8x16 knottage-design (128 kpsi) drawn on 10x18 quality-graph (180 cells to an inch) designed in 2014. This becomes possible because a graph is just a representation and any graph can accommodate any knottage for which all that the designer needs is the required computation to work out the design area (Kaur 2018).

Patterns: In ACW, generally the Bokhara pattern is woven, wherein a single motif or a floral-box is repeated throughout the carpet. In this category, the leading design currently being woven is called *parda* (curtain) in which a cup-resembling motif is repeated throughout the carpet giving a semblance of a curtain (figure 5). This cup-resembling motif is of a fixed dimension and is woven in 19x19 rows and columns, in black colour, taking shape beginning with the nineth column in the first row. Due to its fixed dimension, the motif does not alter its size even in larger carpet-sizes where only its frequency increases and an additional border, resembling the border on the sides, is repeated in the middle of the carpet, which bifurcates the whole design into two equal windows in which these cups are repeated. Around 6 colours are usually woven in *parda* pattern: black is used for the motif outline, another colour for the carpet-background, and the remaining colours for other smaller motifs in the borders.



**Figure 5**
*Naksha* showing *parda* pattern. Courtesy of Rajwant Singh, Amritsar.

## Methodology

During 2.2 years of fieldwork in Kashmir (India) from 2015–2019, work was also done in Amritsar (Punjab, India) which included visiting twenty-one villages near the border with Pakistan in the Ajnala block of Distt. Amritsar.[5] The snowballing method was used to identify villages and community members. Early on, it was clear that a mere visit to a village may or may not result in meeting the community as weavers had 'rapidly been uprooting their looms' (*khaddi putt dena*) over the past few years and shifting to seasonal agrarian jobs. Consequently, during my 2019 fieldwork, four villages were found to have only one functional loom, ten villages had two–three looms, one village had six looms, while three villages were found to have no looms at all. During fieldwork, unstructured interactions were undertaken with two designers (M, 64y avg. age), six manufacturers (M, 59y avg. age) and twenty-five weavers (incl. 12 females with 35.8y avg. age) excluding four teenage female household-weavers. The discussions primarily centred around their weaving/designing activities and

their usage of tools and representations to understand their strategies of information retrieval, team communication and coordination while recording these interactions wherever permitted. The interactions took place in Punjabi, the native language of both the researcher and respondents. To deeply understand the interplay between their design representation (*naksha*) and weaving, a month-long cognitive ethnography was done at a *karkhana* (factory) in the village Rajasansi, which, being the forerunner of carpet weaving, acted as a guiding source of patterns, material, and marketing in the region. This *karkhana* was housed in a poorly built shed with window-holes on the upper portion of one wall. It had nine looms placed in two rows irrespective of the direction of light falling on them. To compensate for an otherwise dark hall, a 60w bulb, dangling from ceiling, was fixed in the middle. Among those nine looms, five were functional on which eight male weavers (46.25y avg. age with exp. avg. 28.12y) wove medium to large size carpets in *parda* pattern. A daily video-recording of their activities from warp-laying to weaving on two looms with four weavers was done for a month in 2019.

Besides this, an archive of designs beginning in 1975 was created to understand developments in graphing and design over the years. The claims regarding the use of *talim* in ACW, as was made in the literature discussed in section two, were verified with field observations and community interactions during which, a researcher-generated sample *talim* was shown to respondents to see how familiar they were with it; had they seen or heard about it being used, or could they figure out its logic? The fieldnotes and

transcripts of these interactions were subjected to qualitative analysis and themes were generated that relate to representation-use, designs and patterns, actors' cognitive activities related to information retrieval, team coordination, and communication. This analysis led to the following findings.

**Findings 1: Mis-information on *Talim*-use in Literature Post-1947: Case of Replacing of an Artifact (*talim*) by a New Artifact (*naksha*) in ACW**

The observation of their activities and community interactions revealed no trace of *talim* in ACW, contrary to the claims made in the literature post-1947. At all looms in twenty-one villages, *naksha*, instead of *talim*, was found with weavers. As per the memory of my elderly respondents, *talim never existed in Amritsar at all*, let alone seen or used by them. No one admitted to even hearing about it, even in their childhood. As weaver aW19 (Female, 60y) said:

> aW19: I have been doing this work for many years … since childhood … for almost 35–40 years!

> Researcher: In all those years, have you ever seen *talim* like this or heard about it?

> aW19: No, I haven't seen … not even heard … I had a brother who used to make *nakshas* but he has grown old now … there was one more brother, GS, who also did the same work.

> Researcher: Could they know about it?

aW19: No, there is only *naksha*, which you have seen. We never saw or heard this kind of thing (referring to talim). [Translated from Punjabi to English]

Similar comments were made by others. The designer, aD2 (M, 74y), argued that even if *talim* existed, it, most probably, did before India's partition in 1947. His own experience dated back to 1965 when *naksha* was already prevalent. This conjecture aligns with Eiland's observation where he mentions, "During the last several *decades*, this system has *slowly been replaced by scale paper drawings*" (1979, 166, italics added). The word "decades" in this 1979 study roughly refers back to 1947 when India was partitioned into India and Pakistan dividing its northern states of Punjab and Kashmir. After Partition, while Amritsar remained on the Indian side, Lahore, about 30 miles from it, went to Pakistan. The Partition caused mass exodus and hugely impacted the demography, resources, industries, and trade on both sides. Carpet-weaving, including designing at Amritsar (Gazetteer of Amritsar 1883–84, 45) was chiefly carried by Muslim weavers (Gazetteer of Amritsar 1893, 114; Macfarquhar 1947; Raheel 1980), mostly by Kashmiris themselves (Gazetteer of Amritsar 1893, 116; Sheikh & Budh 2009, 85). The Partition caused large-scale migration of Muslims from Indian Punjab to Pakistan Punjab including the weaving community as Roy notes, "especially the *ustads*, emigrated from India to Lahore, Multan, and Lyallpur. The effect in Amritsar in particular was devastating" (2004, 228). Pakistan Carpet Manufacturers and Exporters Association (PCMEA), too, attributes Pakistan Punjabi weaving to

this migration: The manufacturing of carpets in Pakistan began in the same way as in India and when the country was separated from India most of the weavers, which were Muslims, moved to the Pakistani side (PCMEA). Resultantly, the industry, which employed around 5000 persons at the turn of 20th century, started declining around 1947. A sign of this decline, as per Roy was, "the relative rarity of young apprentices" (2004, 216–17). This migration might have caused a dearth of *talim*-writers at Amritsar without the possibility of their replenishment from the remaining population. This is because *talim*-writing requires nuanced literacy skills, including mathematics, which makes it different from the physical knot-tying skills required of a weaver, which could be locally replenished from allied industries like shawl-weaving, which had switched to carpet-weaving in the 1870s, or from the emigrated population from Pakistan. The lack of *talim*-writers would have forced designers to make decisions on which design representation to use: continue with existing *talims* encoding the old designs or stop using *talim* altogether and start communicating design information from the *naksha* itself. The latter solution was eventually adopted. This reduced the need and demand for *talim*-writers in the practice and led to the eventual disappearance of *talim* from ACW.

I admit that a deeper investigation of socio-political factors causing this situation is required. What is clear from available data, however, is that: 1) *talim was* used by the ACW community for which literary sources from section two are evidence, and 2) it *did* disappear from ACW post-1947 and was replaced by *naksha* as is evident from our current

observations. The socio-cognitive impact of this replacement can be gauged by comparing actors' current engagement patterns with *naksha* at Amritsar and with *talim* at Kashmir.

## Findings 2: Cognitive Impact of New Artifact *Naksha:* On Practice and Users

As artifacts co-evolve and co-adapt with their users and tasks (Kirsh 2010), evolved/replaced artifacts, too, facilitate some tasks and cognitive processes at the cost of others (Raczaszek-Leonardi, et al. 2019, Hutchins 1999, 127) by limiting choices of action (Zhang and Norman 1994). Going by this, there should be some tasks facilitated by *talim* but not by *naksha*, and vice versa, though both are design representations evolved to achieve the same goal of representing and communicating design information to weavers and coordinating their weaving. In this context, the community interactions and *karkhana*-observations revealed following patterns in actors' cognitive activities:

### 1. Memory-based weaving

Despite *naksha* being present, weavers were found *not* to engage with it on any regular basis, rather, they rarely consulted *naksha* for weaving which was a surprising finding. The particularities of the design being woven were found to be the chief reason for this rare engagement. *Parda,* the most frequently woven design in ACW currently, has only one cup-motif repeated throughout the carpet. Its fixed dimensions and canonical colour (black) facilitate memorizing its details after which *naksha* becomes redundant for weavers. On the commissioning of a new carpet, only the background colour is changed, for which weavers do not need to consult their *naksha* again. Even for weaving different sizes, they need only to figure out the number of motif-repetitions wherein the motif's fixed dimensions help and are often provided by their manufacturer as well. Thus, three factors facilitate design-memorization by weavers: motif repetition, its fixed dimension leading to its calculable frequency, and less colours. Together, these make *naksha* a redundant artifact and diminish its existence to a mere formality. Many household weavers, in fact, did not even have *naksha* with them. Those who had *naksha* with them, had it carefully stashed in their closets as something supplied by their manufacturer who had commissioned the carpet from them. This *naksha* is dug out occasionally by them to show to the visitors or novice-apprentices. Once, novices memorize the pattern, *naksha* becomes useless for them as well.

Thus, despite studies mentioning the existence of "scale-drawings" (Eiland 1979, 166) or "graph papers" (Bawa and Joseph 2010, 4) in ACW, the fact is that the actual practice is *not even* graph-based, but memory-based. There is a difference between actual mediation performed by a representation in an activity and its superficial existence. Mere existence of a representation in an activity does not establish its causal connection with that activity. For that to happen, the user must engage with that representation regularly so that it can act as a mediating link. In this context, ACW presents a case of a superficial or cosmetic representation, unlike a mediating representation like *talim* in Kashmiri carpet weaving (KCW), which is necessarily consulted by the

weavers there to weave the design (Kaur 2020).

## 2. *Information representation and retrieval*

Besides cup-based *parda,* repeating boxes are also woven in ACW wherein a floral box (*dabbi*) is repeated throughout the carpet. As per variations in internal foliage and/or colours, these boxed-patterns go by different names like *mohri dabbi, Afghani dabbi, Pakistani dabbi*, etc. In this *naksha*, one such box is drawn, while the number of repetitions of that box are either mentioned in the margins of that *naksha* (figure 6) or are conveyed verbally to the weavers. On encountering novel variations, weavers do consult *naksha* initially to know the basics of the repeating motif to be woven. In this consultation, graph-properties like grid-blocks were found to play a significant role. The cells of the *naksha* grid-block enable location identification and calculation of row/column/cells involved in the drawn motif. Simultaneously to this, depiction of single representative motif in the *naksha* restricts weaver's attention to a particular spot only. For example, the grid-block in figure 6 is of 9x16 rows/columns and has 160 cells, but it does not have any internal boundaries (as shown in third block of figure 7). Because of this, extracting information from even a single motif is difficult. In large sizes involving less repetition and novel motifs, the cognitive effort required for extracting information from such graphs increases significantly. A grid is a basic building block in a graph-based representation (Bokil 2012) but if it is not appropriately structured, it increases the cognitive effort of the graph-processor instead of facilitating his or her task (Kaur 2021). Due to this, a reluctance for novel patterns was found

among weavers in ACW. On being shown Kashmiri designs, almost all respondents admitted that it would be difficult to read *naksha* of curvilinear patterns like these due to their being extremely complex, though some admitted that they could weave it, but it would cost more, e.g. aM4 (M, 60) said,

> aM4: If its' *naksha* is given, we'll make it … but it will cost more. Naksha is difficult to read, and if designs are like those of Kashmiris, who draw so many flowers-and-petals, their *nakshas* would also be complex requiring more labour. We already don't get paid much. … manufacturer does not pay enough, so, what's use of making this one? [Translated from Punjabi to English]

## 3. *Team communication*

Since weavers actually engage in memory-based weaving, hardly any activity-related communication was observed among weaver-teams working on the same loom, e.g at the *karkhana*. When asked about novel patterns, teams preferred consulting *naksha* of those novel patterns individually or discussing them before weaving. While they admitted that one could call out the pattern from the *naksha* aloud to other weavers in principle, the system of reading out *naksha* had eroded a long time ago. Since they remembered the *parda*-pattern, which they had been weaving for the last 10–12 years, there was no need to read the *naksha* aloud. For demonstration purposes, however, *karkhana*-weavers performed the reading aloud of a *naksha* on one occasion and aspects of that were noted. The *naksha* of their loom was taken out of a closet in an

adjacent room and was read aloud by a weaver at loom-1. The reading consisted of largely disjointed phrases, e.g. "leave four, weave three," "weave five black," "weave seven blue," etc. Apart from this demonstration, no naturally occurring reading aloud of *naksha*, either at *karkhana* or at home-looms in villages, was observed. This contrasts completely with the engagement of *talim* in KCW where not only is it *necessarily* consulted, but it is read aloud like a text in an extremely rich, cryptic trade-language among the weaver teams. This reading aloud significantly transforms weavers' code-perception and facilitates team communication and coordination in KCW (Kaur 2020).



**Figure 6**
**Afghani dabbi pattern. Courtesy of Rajwant Singh, Amritsar.**
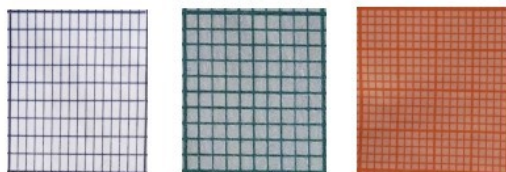


**Figure 7**
**Grid blocks in different graph representations.** **Image courtesy of the author.**

## 4. Team coordination

Lack of communication among weaver teams in ACW was found to have a visible impact on coordinating the weavers' team activity. The coordination in team activities is achieved either explicitly by artifacts (Fiore & Wiltshire 2016; Andersen et al. 2002), representations (Garbis & Wærn 1999), material signals (Clark 2005), language (Fusaroli & Tylén 2012), or implicitly via monitoring team members' actions and anticipating their needs (Rico et al. 2011). Language and artifacts are important means of generating and maintaining workspace awareness (Gutwin & Greenberg 2004, 183) and both were absent in the weavers' teams in ACW since neither *naksha* nor its reading aloud mediated their joint activity. Weaving entirely from their memory, they required no information retrieval from others, making them work individually despite working with others on the same loom. This made them responsible only for *their* portion or territory on the loom. These territories were neither fixed nor clearly specified on the loom, impacting fair division of labour. Though some thread-markers were found on the loom, these were fixed during warp-laying to indicate threads fixed per feet. Beyond acting as memory-aides during that activity, these thread-markers were not taken advantage of by weavers, e.g. to divide their weaving area or territory on the loom and thereby coordinate their activity as is done in KCW (Kaur 2018). This internally disconnected weaving impacted their cohesion as a team where a speedily working weaver would need to wait until another weaver finished his portion. In one instance, a weaver wove only his portion on a loom at *karkhana* for many rows without touching the

other side as the weaver for that portion was absent during that period. This resulted in several inches of partial weaving on the loom. In contrast, KCW uses *talim* to coordinate a team's weaving, which, via its reading-aloud, ensures that no member weaves ahead or behind the instruction relayed during the reading aloud of *talim*. This further ensures that the team starts and finishes weaving the row at the same time and avoids partial weaving (Kaur 2018; Kaur 2020).

The above-mentioned patterns of engagement with *naksha* have impacted the cognitive profile of weavers in ACW. As artifacts and cognition co-evolve, the cognitive profile of users is impacted by the artifacts they use, whether these are their tools, representations, or language (Norman 1991; Hutchins 1999; Magnani 2007; Kirsh 2010). Minimal, irregular, and poor engagement with *naksha* has impacted not only the weaving of ACW weavers, but also its conceptualization by them, for example:

1. Low awareness regarding basics: The majority of weavers were found ignorant of the *whys* and *hows* of basic concepts of weaving even though they had been weaving for many years: e.g. when asked about the number of warp threads fixed on their loom most weavers could not provide a satisfactory answer. Being a basic question, one would expect that a weaver with many years of experience would know the number of warp threads fixed on their loom, but this was not the case. Two reasons were found accounting for this:

1.1 Non-participation in warp-laying: A direct way to obtain the information related to the number of warps is via warp-laying. Now, the warp is generally laid by the manufacturer, and not by weavers themselves, especially women-weavers who stay aloof from warp-laying, considering it a man's activity (*bandeyaan da kamm*). Only one weaver in the whole region, aW10 (M, 54y), was found to know warp-laying. In contrast, all *karkhana*-weavers knew it. The shared social settings have direct bearing in organizing people's work experiences (Kiesler and Cummings 2002) which let them stay updated. Working in a professional environment of *karkhana* where no specific division of labour between warp-layers and weavers existed, everyone was required to lay warp on his loom himself before starting a new carpet. This regular participation made them knowledgeable about the details of warp-laying.

1.2 Poor engagement with representation: Another way of getting warp information is via design representation which maps, one-to-one, with the loom structure, e.g. by counting the number of columns in the *naksha* one can know the number of warp-threads fixed on the loom. For Bokhara-style repetitive patterns, the total number of columns are multiplied with the number of repetitions to figure out the total number of warp-threads, while in other repetitive patterns, the column-total is doubled to get the eventual figure. This method, too, is not applied in ACW because weavers conduct memory-based weaving. For them, *naksha* is a repository of design information only and not something that corresponds with the loom structure. Because of this non-awareness about the correct and complete functionality of *naksha,* many weavers, even when hinted, were not able to extract the required information from their *naksha*. Likewise,

when asked about round carpets, the majority of them concluded that it was not possible to weave them from a rectangular graph-sheet, which, was possible according to *karkhana* weavers. This again shows the household weavers' limited conceptualization of *naksha* and its possibilities, as well as a disconnect from their practice's historicity. Round carpets have been regularly woven at Amritsar and its adjacent city, Lahore, in earlier times (Erdmann 1966, 199) just like they are woven in Kashmir today. In contrast, in KCW, any lay-weaver can tell the warp-number, even on the looms of others, due to their regular engagement with *talim* combined with the knowledge that it maps one-to-one with warp-threads that are fixed on the loom. As a result, they can subject *talim* to yield further information, e.g. the current row being woven, stage of design progression, number of knots in carpet, etc. (Kaur 2018).

2. Low-awareness about weaving: Besides basics, ACW weavers displayed low-awareness regarding other aspects of weaving, e.g. none of them could tell why weaving outlines of motifs is called *doing talim*. The reason for this is that ACW has retained this phrase from its Kashmiri-roots. Carpet-weaving is bifurcated into two weave actions: weaving motif-outlines first, while leaving gaps pertaining to their internal body and background for later weaving. Once all outlines are woven, the gaps are filled in later. In KCW, *talim*-reading gives indications of weaving outlines which are woven *simultaneously* to that reading-aloud, leaving other portions for later weaving. Once all outlines are woven, *talim* reading is stopped and gaps are woven silently by weavers (Kaur 2020). For of this reason,

weaving outlines is called *doing talim* in KCW. Thus, where KCW weavers could answer why weaving outlines is called *doing talim*, ACW weavers could not as they could not associate their weaving with this phrase. Neither their representation, *naksha*, is called *talim*, nor it is read aloud like *talim* which could indicate outlines or background-weaving corresponding to their weaving activity and thereby anchoring that phrase in their experience. The phrase *doing talim* is a relic that ACW has retained from its historical Kashmiri roots. Something which is there, but hardly anyone knows why. The artifact (*talim*), which gave rise to this phrase, is long lost, but its linguistic appropriation has lingered.

This is what happens when a new artifact replaces another artifact in a practice under duress in a short timespan: it replaces the older artifact only superficially, as the arrival of the new artifact does not automatically bring new patterns of engagement as these patterns develop gradually over years or decades. Consequently, engagement patterns of old artifacts remain, but are disassociated from the new artifact. The resulting patterns that emerge have utility, but no meaning for the actors. This is why ACW presents an interesting case: it has a new artifact (*naksha*) but with shallow historical roots, while appropriation of an old artifact (*talim*) still remains, simultaneously. Even seventy years after India's Partition, ACW still seems to be in transition trying to adjust to both bygone and new eras insofar as its artifacts are concerned.

### Findings 3: Social impact of new artifact *naksha* on practice

Artifacts shape the activity they are part of (Bodker and Klokmose 2011; Bodker et al 2016) impacting the cognitive profiles of their users (Hutchins 1995; Kirsh 2010; Norman 1991), other artifacts in their ecology (Callon 2004; Ueno et al 2017) and the resultant social structure of the practice and thereby, evolve in the process. Along with this evolvement, they alter the roles and relationships of actors. Besides significantly impacting the weavers' cognitive profile and their tasks, *naksha* has cast a deep social impact on ACW. Besides reducing ACW's task structure from three (designer, *talim*-writer, and weaver) to two actors (designer and weaver), this impact is most visible in the design complexity and creativity of ACW. Weaving of complex designs and the technology required to retrieve and execute design information are tied to each other. Together they impact the weavers' economic condition via their wage-rate, especially if they are working for a piece-rate wage (Roman 2016) as would be found in ACW. Due to complex information retrieval from *naksha*, ACW weavers showed less enthusiasm for complex patterns that would require relinquishing their established memory-based information retrieval. This is because reading complex patterns from *naksha* would require employing rigorous retrieval strategies and thereby require investing extra cognitive effort. Currently, ACW weavers are hugely underpaid: a regular carpet of 4x6 feet, taking a month to weave, fetches them merely 3500 INR. The extra cognitive effort required to weave complex patterns would not get them more wages. Hence, it makes sense to them to continue weaving simple patterns which they remember so well instead of weaving complex patterns at the same wage. Ideally, complex curvilinear patterns can be woven from *naksha* as is evident in Persian carpets (Topalbekirog et al. 2005), but in ACW, only if weavers are sufficiently paid. Low wages have consistently been rated as one of the primary challenges faced by weavers across the Indian carpet industry (Das et al. 2018; Majeed and Swalehin 2020) and ACW is no exception (Bawa and Joseph, 2010; Gill 2017). Without sufficient wages, weavers prefer weaving memorized patterns, and manufacturers, in order not to invest extra money, order the same pattern over and over again.

This weaving of the same pattern due to low wages and rigorous information extraction from *naksha* and vice versa is a vicious circle in which ACW was found engulfed. This has led to a very unique situation, perhaps unheard of in any practice so far: on 98% looms in the twenty-one villages visited by this researcher, *only one, single pattern, parda,* was found being woven. Figure 8 shows looms from three different villages weaving the same pattern with the only difference being that of colour and size. The remaining 2% showed other repetitive boxed-patterns like *mohri dabbi*. The weaving of a single pattern in the entire region has led to massive creative inertia in ACW where no new designs have come forth for many decades. A weaver, aW11 (M, 43y), revealed that he had been weaving *parda* for the last twenty-one years! The *karkhana*, where fieldwork was done for an extended period, had been weaving the *parda* pattern in different colours on all of its five functional looms. In one exception, a small *karkhana* of two looms was found weaving abstract

patterns whose digital designs were sourced by the owner from another weaving-city, Gwalior.

It may be thought at this juncture that digital creation of designs may alter this situation. Community interaction, however, has identified economic factors primarily directing the current design scenario. Hence, even if digitality is introduced in ACW, the situation is likely to remain the same: *the design representation, naksha, itself, whether manually or digitally created, does not allow easy information extraction* and *weavers are not willing to* spend extra cognitive effort on the same wages. Digitality is likely to ease the *designer's* work and change *their* situation, not the weaver's. Yet, the benefits of digitality cannot be undermined, e.g. in KCW, 90% of designing is done digitally (Kaur 2017) keeping manual setting to a minimum and where economic factors have hardly a say on design creativity *from the perspective of the weaver's ability* to weave the design. The weaver reads the *talim* and expends the same cognitive effort in its reading whether the encoded design is old or new, repetitive, running, simple, complex, or even three-dimensional. Even

**Figure 8a (Left), 8b (Middle), 8c (Right) Looms from three villages.**

after years of weaving the same design, no one can memorize it given the complex nature of even simple repetitions. More importantly, there's no *need* to memorize the design when the required information can be extracted from *talim* at any time. If "the world is its own best model" as Brooks says (1995, 54), why build another representation in the mind, like the weaver's memorized design, as seen in ACW?

## Discussion

ACW presents a rare opportunity for studying the artifact-task-practice-cognition matrix where one artifact (*naksha*) completely replaced another artifact (*talim*) in a few years, pushing it out of its artifact ecology, and casting a longstanding socio-cognitive impact on tasks, users, and the practice. In cognitive science, artifact analysis of craft practices is a poorly studied domain (Kaur 2018) and even less studied is the historical analysis of artifacts generally. Historical analysis of an artifact's evolution and

appropriation over time can show the foundations of current user-artifact engagement patterns in a practice and the possible future trajectories of this nexus. Besides helping designers of those artifacts identify relevant points of observation in practical design (Kuutti 2011, 4), the prediction of future trajectories may enable policy-makers to make better policies regarding artisans working with their particular tools and remove glitches in those relationships like difficult information retrieval from *naksha* vs an easier one from *talim*, thereby improving the production process. Such policies are especially crucial in the context of Indian carpet industry which is facing huge challenges (Malik and Prasad 2015). Technological advancement is one of the solutions recommended to remedy the challenges faced by the carpet industry (Jahan and Mohan 2015; Gayatri et al 2022 ). The impact of user-artifact analysis range from financial to socio-cognitive and go a long way to improving the artisan experience. A straight line of action could be working upon the technology-design-wage matrix. In textile crafts, executing complex designs usually requires sophisticated representational technologies for easy retrieval and execution that then involves higher wages for weavers to compensate for the high cognitive and physical labour involved in operating such technologies, e.g. higher wages involved in operating jacquards to weave complex designs (Ramon 2016; Ramon 1992). Improving one knot of this link, i.e. the technology (*naksha* to *talim*), may ease the pressure of other units of this matrix. Weaving complex designs may not require higher wages if representational technology is good enough. Consider KCW where weaving of a complex curvilinear or simple boxed-

pattern fetches the same wages for the weaver. As artifacts exist in their ever-evolving artifact ecologies, introduction or re-moval of any artifact has a corresponding impact on its users, tasks, and practice. When an artifact gets replaced with another artifact in that ecology, the users' task, defined by that previous artifact, is changed, and with it changes the goals and preferences of the user. This leads to altered patterns of engagement. Centuries ago, when Persian carpet weaving was introduced in Kashmir in the 16th century (Gervis 1954; Saraf 1987), *talim*, a Kashmiri innovation (Harris 2001) was already being used in Kashmiri shawl-weaving (Harris 2001; Sajnani 2001). From the shawl-artifact ecology, *talim* was introduced to carpet-ecology, altering the imported carpet-artifact ecology from Persia forever, which still uses the *naksha*, called *cartoons* in Persia/Iran (Topalbekirog et al. 2005, 540). When, and under what conditions, *talim* replaced *naksha* in KCW is unknown. Besides shawl-weaving, *pile* carpet-weaving spread to Amritsar around 1840 via migrating Kashmiri artisans (Hawley 1913, 255; Chattopadhyay 1970, 23). These artisans had brought their designs, techniques, and materials of KCW with them (Armstrong 2022, 32) and after the Partition of India in 1947, *talim* was replaced by *naksha* because Amritsar was dismantling its hitherto established ecology inherited from Kashmir. This altered its actors' tasks and practice forever. With *talim*, the weaver's task was to *read* the design information, with *naksha*, this was changed to *figuring out* the design information. The altered task involved a series of operations like identification of row, column, and cells, and the calculation of cells falling under a particular colour, thereby increasing the weaver's cognitive

load. When *talim* disappeared from ACW, ways of engaging disappeared with it, e.g. information retrieval, but some appropriation remained, some linguistic relics like *doing talim*, a phrase that weavers still use without knowing why.

Socially, the artifact replacement had a dire impact on the structure of ACW as it led to the vanishing of an actor from the practice after the Partition of India in 1947: the *talim*-writer. This shifted the goals and responsibilities of *talim*-writers onto the designer, diminishing the *talim*-writer's need further and leading to his eventual extinction from the practice. This altered the practice's structure from (designer → *talim*-writer → weaver) to (designer → weaver), giving rise to new roles, relationships, and sets of goals that competed with each other. Beside addressing creative issues, the designer, post-Partition, needed to ensure accurate communication and execution of design information. The new set of goals, i.e. executability or creativity, competed with each other under constraints posed by market forces and the weaver's cognitive load. One factor won out in the end: executability! One could bear the repetition, but failures in execution that stall activity were detrimental. Thus, one could afford to get one design made again and again, but not in the situation where design information was not retrievable at all. The result: the same design being woven over and over and over, but a correctly woven design! Creative inertia, but correct weaving!

Thus, poor engagement patterns with the new artifact, *naksha*, hampered the design creativity of the industry in the long run. The ability to weave complex designs have mutually evolved with technological advances in handloom weaving (Roman 2016). As the "home of carpet weaving" (Mumford 1900, 259) pre-1947 Amritsar was considered the "most important carpet weaving centre" of India (Watt & Brown 1903, 430), known for wool and even "pashmina" carpets (Watt & Brown 1903, 261). Producing the "finest of modern Indian rugs" (Holt 1901, 65) exported chiefly to America (Twigg 1907, 82), its designs and methods were followed by art schools across the country (Twigg 1907, 8). The designs of pre-Partition Amritsar carpets strongly resembled their Kashmiri counterparts (Colonial and Indian Exhibition 1886, 255), which involved "shawl pattern" motifs with "dark coloring" and light texture (Gazetteer of Amritsar 1883, 45). These were characterized by Kashmiri floral patterns, and at times, "large, simplified motifs with dense pile" (Armstrong 2021, 34). From 1880 onwards, ACW introduced "innovations in design, palette, and materials" and together with its unique business model transformed itself into a flourishing export industry (Armstrong 2021, 34). The situation, however, deteriorated after Partition with ACW registering a decline in design diversity, knottage, and number of colours over the years. Amritsar carpet weavers wove around 400 kpsi in 1920 (Playne 1920, 606) which declined to 200–400 kpsi in the 1980s (Hasan 1984, 15), to 120 kpsi in the 1970s (Eiland & Eiland 1973, 298), and to a bare 100 kpsi at present. Likewise, for colours: as complex patterns are generally woven with large number of colours, in ACW, only five to six colours are being woven nowadays. This corresponds with its design simplicity as compared to 10+ colours used in the pre-Partition era, showing a miserable decline of design diversity as

this brief catalogue of antique carpets in Figure 9 shows. ACW is a classic case of a riches-to-rags rug-story. Amritsar is a centre whose commerical productions and even prisons (Gazetteer of Amritsar 1883, 45; Baker 1915; Watt & Brown 1903, 426; McGowan 2008) produced the highest quality carpets, which were worth displaying in the Great Exhibitions of London in 1851 (Baker 1915, 252) and 1862 (Kipling quoted in Mukharji 1888, 393), in the Calcutta Exhibition of 1883 (Gazetteer of Amritsar 1883, 45), and the Delhi Exhibition of 1903 (Watt and Brown 1903, 430), but the centre now produces only one simple repetitive pattern which indicates a gloomy state of affairs.

This is the co-evolution of artifacts, tasks, actors, and practice that cultural-historical-activity theory (CHAT) and situated-distributed cognition (SIT-DCOG) argues for (Callon 2004; Lave 1988; Hutchins 1995; Kirsh 2010; Vasiliou et al. 2017). ACW contributes a curious case of *artifact replacement* to the landscape of artifact ecologies where one artifact (*naksha*) completely replaces the other (*talim*) in a short span of a few years, casting a longstanding socio-cognitive impact on users, tasks, and practice. An improvement, if any, that has occurred in ACW, over these years, has been in the loom structure, i.e. the use of a wooden strip (*panakh*) on the loom's backside which keeps the carpet stretched between both ends during weaving (figure 3b). When and how this very important innovation occurred, whether through "horizontal transfer" among adjacent weaving communities or invention (Buckley and Boudot 2017) is not known as it is found neither in Kashmiri nor in Persian carpet-weaving. This shows that despite being

adjacent to Amritsar, Kashmir remained aloof of this critical innovation where carpets often cave in from the sides, forcing manufacturers to do repairs before sale.

**Recommendations**

Market-wise, ACW fares a little better than KCW, yet, more aggressive efforts are required to salvage the declining practice (Bawa and Joseph, 2010; Gill 2017). Besides improving marketing and wage-infrastructure, its artifacts need to be reconfigured in order to make the artifact-task link more meaningful, robust, and cognitively economical for the actors, thereby improving their weaving experience. One option is to bring the *talim* back. This will not only ease weavers' cognitive load during design information retrieval, but also boost the design creativity of the industry and lift it out of the creative inertia in which it is immersed today. Besides that, it will revive the lost heritage of larger Punjabi culture. Another option is to encourage computer-aided design (CAD) intervention which may attract young designers producing a wider repertoire of design.

**Summary**

Amritsar carpet-weaving (ACW) presents a rare chance for studying the co-evolvement of artifact-task-user-practice coupling and resultant socio-cognitive impact where one artifact completely replaces another artifact in a short span of time, pushing it out of its ecology altogether. Post India's Partition in 1947, the practice changed with *naksha* replacing the existing artifact *talim*, which it had inherited from its Kashmiri-roots. The resultant patterns of engagement with *naksha* cast significant cognitive impact

[Fig. Antique Amritsar Carpet, 1890
15'1" x 11'5", Farnaham Antique Carpets, UK]

[Fig. B Antique Amritsar "Garden Rug", 1875,
3' 10" x 5' 10", Claremont Rug Company, USA]

[Fig. C Antique Amritsar Carpet, late 19th Century,
7.9 x 9.2, Heirloom, USA]

[Fig. D. Amritsar Prayer Rug, 5.10 x 3.4,
Holt 1910: 64-65.]

**Figure 9**
**Amritsar Pre-Partition Catalogue of Designs.**

on weavers and their tasks causing difficult information retrieval and impacting design communication and coordination among their teams. Coupled with economic factors, this caused widespread resistance to novel and complex patterns, triggering a massive creative inertia, leading to a situation where only one pattern is currently being woven in the entire practice. This is not to say that complex patterns in Amritsar carpets will not be found in market at all. Such designs could be found, but most of these designs are either old stocks sold as antiques or are standalone efforts of a handful of manufacturers seeking intervention from other centres and hence, are *not* representative of ACW at large.

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Figure-9A: Available in 10 Year Anniversary Collection Brochure at: https://www.farnhamantiquecarpets.com/wp-content/uploads/media/34754-Farnham-Antique-Carpets-10th-Anniversary-Brochure-210x265mm-web-links.pdf?download, p. 15. Courtesy: Farnaham Antique Carpets, UK

Figure-9B: Available at https://www.claremontrug.com/antique-oriental-rugs-carpets/indian/neutral/amritsar-garden-rug-indian-antique-rug-6209/massive/ Courtesy: Claremont Rug Company, USA

Figure-9C: Available at https://www.heirloombk.com/products/antique-amritsar-rug-7-9-x-9-2 Courtesy: Heirloom, USA Nationsonline: https://www.nationsonline.org/gallery/India/India-Admin-Map-M.jpg. Accessed on 5 June, 2023.

PCMEA: https://pcmea.org.pk/about-pcmea/ Accessed on 12 December, 2021.

1 When designs are created digitally, the *talim* is generated by the CAD system itself. There is no difference between a manually generated or a digitally generate *talim*. Both *talims* are written on similar long rolls of paper. For further details, see Kaur 2017 b, 2021.

2 Regarding *talim*'s use in Amritsar carpet weaving, see also Langton (1904, 212); Journal of RSA (1914); Chattopadhyay (1976, 68); Gans-Ruedin (1989); Saraf (1990, 93); Bawa & Joseph (2010).

3 3500 converted to US dollars is roughly $50, while 1500 is $20 (as of June, 2023).

4 Graph/graph-sheets/*naksha* are usually used interchangeably in ACW and KCW. However, for the purposes of clarity in this paper, graph can be understood as any grid-based sheet, comprising rows and columns organized in blocks. When design is drawn over such graphs, it is called *naksha*.

5 There are 23 districts in the province of Punjab, one of which is Amritsar. The district has a city of the same name of Amritsar as well which is also the headquarter of this district. The district has 9 blocks one of which is Ajnala and 776 villages. The Ajnala block lies adjacent to the international border with Pakistan and has around 165 villages. Ajnala block is around 26 kms away from the city of Amritsar. The fieldwork was done in 21 villages of this block. The weaving is carried out mainly in this block and also in some villages near the city of Amritsar.

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### *Gift and Glory: Two Narratives of a Safavid Mission in Venice*

Several months before Shah Abbas I (r. 1587–1629) of Safavid Persia initiated another conflict against the Ottomans, a Persian delegation arrived in Venice. On March 5, 1603, they were formally received in the *Sala del Collegio*. This event is documented in a copy kept in the State Archive of Venice.[1] The Venetian artist Gabriele Caliari (1568–1630) immortalized this event through a grand painting in Palazzo Ducale, Venice, during the same year (figure 1). Led by two Safavid ambassadors, Muhammad Amin Beg and Fathi Beg, this documented mission carried a letter and precious gifts to present to the Doge of Venice. Caliari seemingly captured the moment when the Persians presented these splendid gifts to the majesty of the Republic. Before delving into an examination of Caliari's painting, I aim to closely analyze the catalogue and characteristics of the gifts bestowed by Shah Abbas I upon his Venetian counterpart. This initial inquiry is essential for understanding the significance of gifts and their material embodiment in illuminating the Persian strategy towards cultivating an alliance with Venice. Moreover, it will enable an evaluation of whether Caliari's artwork successfully encapsulates the intricate intentions communicated through the Persian offerings.[2] The following outlines the gifts[3]:

> Nine items (*yek toghūz*) were selected by the Shah to be presented as gifts to the Republic: one mantle of gold-embroidered fabric, a velvet carpet with gold threads, one gold-embroidered velvet with the figures of Christ and Mary (*ʿĪsā va Maryam*), three *tāq* (each tāq is about fifty meters) gold-embroidered fabrics, and three *tāq* plain fabrics.

This list, which was originally written in the calligraphic *Nastaʿlīq* hand in the Persian language, is recorded in three other documents at the State Archive of Venice, including one by the *Procuratori di Supra* (Administrators of the properties of St Mark's Basilica).[4] In the latter document, recorded on March 9, 1603, the gifts are described with more explicit details. According to this document, the velvet carpet had silk and gold threads and was four to three *braccia* (about four meters and seventy-five centimeters) and the Christ and Mary velvet was a seven *braccia* (about four-and-half meters) silk. The pack of six *tāq* fabrics was composed of three silk cloths with golden patterns and three robes of plain silk (no gold).[5]

The receipt for the presents specifies that the Christ and Mary velvet cloth had fourteen figures (*con quattordeci figure*).[6]

As is evident, all nine gift items were textiles and among those, silk particularly stands out. The material culture of the gifts was a vehicle for Shah Abbas's 'diplomatic marketing,' as I would call it. By the start of the seventeenth century, Shah Abbas had turned the two important raw silk-producing cities of Gilan and Mazandaran along the southern coast of the Caspian Sea into crown-owned estates (*Khasseh*) and established a state monopoly on the production and exportation of silk (Steinmann 1987). The Shah's dominion over foreign trade swiftly developed a centralized economic system under his rule in which silk was the main item for sale.[7] Thus, the Shah's gifts of silk to Venice signified his imperial self-fashioning and a boast

**Figure 1**
**Gabriele Caliari, *Il Doge Marino Grimani riceve i doni degli ambasciatori persiani nel 1603*, Venice, Palazzo Ducale, Sala delle Quattro Porte.**
https://commons.wikimedia.org/wiki/File:Emb assy_to_Europe.jpg

about his flourishing silk industry and market. At the same time, the Shah rehearsed another integration of Christian figural representations within a Safavid gift with the figure of Christ and Mary embroidered on a silk velvet that spoke to the visual idioms with which the Doge and his Venetian entourage were most identified, yet it was immersed in Safavid Persian connotations through its material culture and Shi'a iconography.[8]

Only three years prior to Fathi Beg's mission, in May 1600, Shah Abbas's envoy Asad Beg presented a gift of a velvet with gold-embroidered scenes of

the Annunciation of the Virgin Mary woven in repeating patterns to the Republic of Venice.[9] The gift was highly admired in Venice and was later hung in the Ducal Palace in the Hall of the most important governing body of the Republic, the Council of Ten (*Consiglio dei Dieci*).[10] Thus, the Christ and Mary velvet is seen as another diplomatic practice in which the Shah incorporated Biblical subject matter to cater towards his Christian allies and incite his European targets to pursue their alliance with the court of Persia.

In addition to the connotations conveyed by this particular cultural amalgamation, the figural depiction on the Christ and Mary velvet holds significant distinction from the Annunciation velvet. In the subsequent paragraphs, after conducting a thorough visual analysis of the textile gift, I will highlight the incorporation of this specific biblical scene into the Shah's silk, a source of his great pride, and its presentation as an appropriate gift to the Republic of Venice.

On the gold-embroidered silk presented by Fathi Beg in March 1603, the Virgin Mary is represented in a cross-legged seated position in a landscape, nursing the Christ Child (figure 2).[11] As the Virgin holds him in her right arm, she reveals her breast for the Child to suckle, while the Christ Child extends his hand to grasp it. Both figures are distinguished by halos adorned with golden pointed flames, a characteristic feature of Safavid depictions of Shi'a Muslim holy figures.[12] This stylized visual hierarchy distinguishes the Virgin and Christ Child from another female companion, who stands modestly next to the Virgin holding a cloth, presumably to hold the Child afterwards. On

the receipt of the Shah's gifts to the Republic in 1603, this silk was recorded as a brocade with fourteen figures embroidered on it. However, since fourteen is an even number, and in each scene, three figures are represented, the number must reflect the unit of the three figures that was originally repeated fourteen times on the seven-*braccia* silk velvet (Berchet, 1865, 46; Gallo 1967, 261).[13]



**Figure 2**
**Silk Velvet with the figures of the Virgin Mary and Christ Child, Isfahan, late sixteenth and early seventeenth century, Venice, Museo di Palazzo Mocenigo, CI. XXII, II.37.**

Between the holy figures and the attendant, there is a pond with fish and a landscape with shrubs and sprouting flowers. In a 1994 publication, Gauvin Bailey suggested that the shrubs were references to the palm tree that is associated with the Nativity in Islamic tradition (Bailey 1995, 33). Sinem Casale elaborated on Bailey's interpretation and referred to the Qur'anic version of the Nativity, which translates:

And the pains of childbirth drove her to the trunk of a palm-tree: She cried (in her anguish): "Ah! would that I had died before this! would that I had been a thing forgotten and out of sight!" But (a voice) cried to her from beneath the (palm-tree): "Grieve not! for thy Lord hath provided a rivulet beneath thee; and shake towards thyself the trunk of the palm-tree; it will let fall fresh ripe dates upon thee.[14]

Casale argued that because the Virgin Mary was alone in the Qur'anic version of the Nativity, the attendant "might be intended to represent an angelic being whose voice calms Mary by telling her about the stream and the palm tree" (Casale 2015, 643). Clearly, there is a pond and a tree included in this composition. I disagree, however, that this is a scene of the "Nativity" as in such imageries, the scene typically includes the infant Christ lying in a manger with Mary and Joseph standing or sitting nearby. Often, there are also animals present, such as cows, sheep, or donkeys, as well as shepherds who have come to worship the newborn Christ. In the absence of the representations of Joseph, the above-mentioned animals, and any visual clues to a stable where Christ was born or a manger, I reread the scene on the Safavid velvet as a *Madonna del Latte* (Madonna Lactans), a Christian iconographic representation of the Virgin Mary suckling the infant Christ. The image essentially celebrates the Virgin's maternal devotion and model piety as well as the human nature of Christ.

As recorded in the Venetian accounts of Fathi Beg's reception, the Safavid ambassador delivered the Shah's wish to the Doge about displaying the velvet with the figure of Christ and Mary in the *Church* of San Marco.[15] This particular request, I argue, buttresses the theory that the Safavid *Madonna del Latte* velvet was a gift tailored not only to the beliefs of its Christian recipient, as argued previously by Casale, but also to the desired setting for its display in the Church of San Marco to manifest the Shah's recognition of the Church. Nevertheless, it remains uncertain whether the Shah also aimed to incorporate the iconographic implications of the *Madonna del Latte*, which symbolize Mary as the Mother of the Church, interceding for the Church and its adherents. As was requested by the Shah, this gift of velvet was designed for the Church of San Marco and this was even distinguished from that silk velvet carpet among the gifts that the Shah, relayed by Fathi Beg, wished to offer to the Treasury of San Marco, so the luxurious carpet would be on view once every year.[16]

The Shah's requests about his gifts being displayed in specific settings reveal two important observations. First, the Shah was well informed about the religious and cultural circumstances of these two interrelated Venetian institutions. Second, designing the Persian *Madonna del Latte* for the Church of San Marco connotes that the Shah had knowledgeable Christian advisors at his court to enlighten him with those subtle iconographical references. This may be contextualized by the fact that, in 1599, two Portuguese friars arrived in Isfahan via the southern port city of Hormuz, the Franciscan Fra Alfonso Cordero, and the Dominican Nicolau de Melo (Pinto 2018, 154). The Dominican friar declared himself the Bishop of Hormuz and a

nuncio of the pope and the King of Spain.[17] The Shah gratefully welcomed the friars and gave Nicolau de Melo a (now lost) precious thirteenth-century golden cross, embellished with diamonds, turquoise, and rubies.[18] During their stay at the Court of Isfahan, the Shah shared his curiosity about the state of the papacy and asked fundamental questions about Christian rituals, and finally in 1599, he dispatched them with his ambassadors Anthony Shirley and Husayn `Ali Beg Bāyāt to Europe to facilitate the anti-Ottoman negotiations (Falsafī 2015, 14–15; Alonso 1989, 161–65).

The two Portuguese friars were not the only Christian missionaries at the court of Shah Abbas in Persia. In 1600, Pope Clement VIII (r. 1592–1605) dispatched two Portuguese nuncios, Francisco da Costa (Jesuit) and Diego de Miranda (layman), to Isfahan. This was in response to the "false" news rumored by Asad Beg in Venice about the Safavid Shah's willingness to convert with his children to Roman Catholicism and to establish a Portuguese Augustinian mission in Hormuz (Kāwūsī ʿIrāqī 2000, 11). The Pope immediately sent the two nuncios to express his joy over the good news of the Shah's inclination to join the Christian religion and to propose a joint action against their most hostile enemy (Savory 2007, 107). Between 1602 and 1608, more nuncios arrived at the Court of Isfahan that reinforced the cross-religious relations between the Safavids and the Roman Church (Kāwūsī ʿIrāqī 2000, 135). The fundamental role that these figures played in the course of the Safavid-European, anti-Ottoman campaign in the early seventeenth century is a substantial topic that is beyond the scope

of this paper.[19] Nevertheless, it is illuminating to note that the Shah allowed those nuncios and their Christian communities to preach freely, perform their rituals, and build churches in different provinces of the Safavid realm. Furthermore, the Shah had local sources of knowledge about Christianity, namely the Armenians who were a group of minorities under the Safavid reign, whose state was a public reflection of the Shahs' 'tolerance' and position towards Christendom. The Safavid acceptance of the Christian developments in Persia was a tactic to obtain the Church's support against the mutual enemy. Hence, it is not inconceivable to envision that the Shah must have had religious advisors at his court for his negotiations with Christian Europe, and that those priests presumably counseled him in his selection and modifications of the diplomatic gifts.[20]

Although the Safavid *Madonna del Latte* thematically blended seamlessly with its desired setting, the visual features, such as the pointed flame-haloes and the cross-legged seating position of the Virgin made the object oscillate between the two cultures. The fiery halo symbolizes the Shi'a concept of divine enlightenment (*Nūr-e Mohammadi*) of Prophet Mohammad and his cousin, Alī ibn Abī Ṭāleb, who, according to Shi'a ideology, was the rightful successor of the Prophet (Rubin 1975, 105). A fine example of the Safavid vision of the Prophetic enlightenment is a mid-sixteenth-century illustration that is nestled in a manuscript titled *Fālnāma* (The Book of Divinations) (figure 3).[21] The illustration narrates a miraculous event from the life of Prophet Muhammad, in which the prophet heals a sick boy. The Prophet is depicted veiled

in conventional Islamic tradition and haloed with pointed flames of light in Shi'a Safavid fashion, which is comparable to the haloes in the gifted velvet (Welch 1979, 138–41). As a visual rendition of sanctity in Shi'a Safavid painting, the flame-halo in the *Madonna del Latte* velvet signifies an inherent, yet emblematic artistic exchange, through which the Shah communicated a two-fold message; his knowledge and tolerance toward his Christian subjects and his attempts to cross the divide and define a shared visual language that spoke to both cultures.[22] The Shah's *Madonna del Latte* associated the holiest figures of Christianity with those of Shi'ism through the visual element of a stylized halo. In addition, the crossed-legged sitting position of the Virgin visually 'Persianized' Mary through a traditional gesture long rooted in Persian painting.[23]

Shi'ism was a Safavid religious establishment in Persia between 1501 and 1722. By the time of the rise of the Safavids to power in the early sixteenth century and their strategic conversion to Twelver Imami Shi'ism, the Persians developed clashing theological viewpoints with the neighboring Sunni Ottomans, compounding their historical struggles over territory.[24] The intensified tensions between the two Muslim courts of the period led the Persians to reinforce a military alliance with Europe to assault the Porte (Ottoman Court) on both sides, from sea and land.[25] The Safavid promulgation of Shi'ism prevented Persia's potential annexation into Sunni Ottoman possession and put Persia in permanent hostility with the Sunni Turks (Falsafī 2015, 13–14). As a theocratic state where religion and politics were intricately intertwined, the establishment of Shi'ism

in Persia was, on the one hand, a defensive move to free the Safavid reign from Sunni-Ottoman hegemony. On the other hand, the intensity of this religious discrepancy brought the Persians closer to their European allies, as both shared the same enemy, who threatened them territorially and religiously.



**Figure 3**
**"Muhammad Revives the Sick Boy" featuring the Shi'a Safavid flame-halo, Folio from a *Fālnāma* (Book of Divination) of Ja'far al-Sadiq (d. 765), ca. 1550, New York, Metropolitan Museum of Art.**
https://www.metmuseum.org/art/collection/search/451016

When read in these contexts, the Safavid *Madonna del Latte* silk velvet connoted the Shah's economic, artistic, religious, and political prowess in his relations with Europe. The material culture of the gift conveyed the Shah's luxury gained by his monopoly over silk production and exportation, as well as his military potency in imposing his power over

those formerly independent provinces with a flourishing silk industry. The figural imagery of the textile stood between a Safavid painting of Shi'a sanctity and a Christian iconography of Mary and Christ Child. The Shah's request for the velvet's display in the Church of San Marco recalled his acquaintance with those iconographical significances, which emerged from a religio-political campaign between Persia and the Roman Church that developed Christian communities, convents, and churches in Persia. Finally, Shah Abbas's Persianized *Madonna del Latte* in the Church of San Marco projected the Safavid Shah's recognition of this Venetian ecclesiastical institution within the political body of the Republic, wherein Shah Abbas wished to settle an agent of his court.

## Gabriele Caliari's Painting of the Persian Reception

Shah Abbas's lavish textile gifts served to add nuance to the imperial image that he sought European powers to acknowledge. However, in Gabriele Caliari's painting *Il Doge Marino Grimani riceve I doni dagli ambasciatori persiani* ("Doge Marino Grimani Receives the Gifts of the Persian Ambassadors") at the *Palazzo Ducale*, I posit that the reception of Fathi Beg was approached from a distinct perspective, one that reflected the values and interests of the Venetian Republic [figure 1]. The painting is oil on a grand canvas in *Sala delle Quattro Porte,* which was the antechamber to the more important rooms of the *Sala dell'Anticollegio* and the *Sala del Senato* of the Ducal Palace in Venice.[26] Caliari adorned the wall on the right of the entrance to the Senate Room with Fathi Beg's reception, for the

contemplation of those in passage to or waiting to be received in the Chamber of the Great Council.

The painting captures the moment when the luxurious gifts of the Shah are being taken out of a box and his letter is being read to the Doge. Four Venetians in black garments and white neck ruffles spot the painting in places where different episodes of the reception ceremonies are taking place. One of the Venetians in the foreground has his right arm on another figure in a red vestment and a green cape. The Venetian has been identified as the official interpreter and dragoman of the Republic, Giacomo de Nores, who organized this visit (Berchet 1865, 44–45). In Caliari's painting, he has been bestowed with a visual emphasis as he actively introduces the other figure, presumably another Armenian in the group of the Persian legates, who accompanied Fathi Beg.[27] At the very center of the foreground, a glamorous gift of a silk with a gold-embroidered decorative pattern in a symmetrical design catches the eye of the viewer. Observing the gift-giving scene and the reception in progress, the Venetian officials of different political ranks in red and blue garments are represented seated in two levels, on the right side of the mid-ground.

Shifted to the left upper part of the canvas, Doge Grimani is enthroned on his seat atop a number of steps and an oriental carpet under his feet marks his elevated rank. Two Persian dignitaries in official Safavid regalia flank the Doge.[28] Toward the center of the canvas, on the Doge's left side, sits another Persian dignitary in splendid garments with his left hand grabbing the edge of his shimmering coat: a golden cloak

embellished with delicate vegetal pattern over a bright robe with similar golden design distinguishes this figure from the other turbaned dignitaries in traditional "Safavid ambassador" costumes, with plain silk mantles and golden frog buttons over a bright *qabāʾ* (a long garment with sleeves) with a twisted silk belt wrapped around their waist (figure 4). The shine in his regalia reveals that it was of fine silk, just like the gift of textile with golden design in the foreground that has already created astonishment among the Venetians. The turbaned figure in rich silk garments is Fathi Beg, Shah Abbas's special agent, who, accompanied with six other Persians and three Armenians, led the second Persian mission in Venice, in March 1603 (Tonini 2014, 28–29). The Persian dignitaries' distinct *dastār* (white turbans) with twelve folds that symbolized their Twelver-Imami Shi'a faith and a red baton on top (*tāj-e Safavi*) distinguish them from other figures in the painting: the Venetians, the Armenians, and other Persians of lower ranks.[29]

In the most apparent interpretation, Caliari's painting illustrates Fathi Beg's reception and the opulent gifts he presented to the Doge of Venice on behalf of his master, Shah Abbas I. Caliari's painting was a contribution to the decorative program of a hall with a group of allegorical sculptures of the virtues, frescoes of mythological subjects and cities under Venetian dominion in a self-celebrating decorative scheme honoring the city of Venice, and her institutions, aristocratic heritage, and role as *antemurale della Christianità* (bulwark of Christendom) (Rota 2009, 232; Wolters 1983, 228–29). Caliari's artistic interpretation of Fathi Beg's reception, I believe, was a visual medium to propagate the

excellence of the Venetian Republic.[30] The painting renders the scene with Muslim Persians offering precious gifts to the *Serenissima* (Venetian, the Most Serene Republic). The Doge's stare from his majestic seat at the glittering gold-embroidered silk brocade in the foreground promotes the idea that Caliari's painting was to stress the Republic's prosperity in global diplomacy and commerce. While a Venetian official is reading the Shah's letter to the Doge and an interpreter is whispering to the Persian ambassador, the Doge directs his gaze towards the luxurious textiles from the far land of silk-producing centers and monopoly of global silk trade, offered in honor of his State.



**Figure 4**
**Giovanni Grevembroch, "Persian Ambassador" in** *Gli abiti de Veneziani di quasi ogni età con diligenza raccolti e dipinti nel secolo XVIII* **(Book of Habits in Venice Collected and Painted in the Eighteenth century),Venice, Museo Correr, Biblioteca, Ms. Gradenigo Dolfin 49, vol. II, tav. 122.**

From the Safavid perspective, along with the silk carpet sent by the Shah as a tribute to the Treasury and the *Madonna del Latte* velvet intended for the Church of San Marco, an exquisite gold-embroidered mantle was also sent. (*un manto tessuto d'oro*), as relayed by the Persian envoy. The Shah had it tailored especially for the Doge in one piece with no seams, as a memento of himself. In a scholarly context, this suggests that the Shah intended to recognize prominent figures within the ecclesiastical and political body of the Republic, aiming to reconcile with them through his individual gifts. Historical records attest that the Persian envoy informed the Doge that a similar mantle had been crafted for the Shah's ally, Mughal Emperor Akbar I (r. 1556–1605).[31] Considering that this is indeed the case, as evidenced by the document, Shah Abbas signaled his alliance with the Mughals (1526–1857), to the Doge of Venice. This gesture aimed to bolster his diplomatic and commercial pact with *Serenissima,* thereby securing advantages privileges for the Republic, such as a safe trade route to the flourishing market of India.

In September 1603, Fathi Beg and his retainers returned to their master with a ducal letter, a copy of which archived in Venice, expressing kinship between the two states and gifts worth 3,360 ducats.[32] In addition to the Venetian royal presents, Fathi Beg returned with the weaponry that was requested by the Shah in his message to the Doge.[33] Within the archived letter explored earlier in this paper, the Shah sought the Doge's assistance in procuring the necessary artillery and superior combat equipment (*Yerāgh*) for the Persian agents (figure 5). The documented return of the Shah's envoy with the said weapons suggests that the Republic either permitted or facilitated the Persians' acquisition of necessary military equipment for their conflicts against the Ottomans, which included forthcoming battles from 1603 to 1612. In essence, the Venetians indirectly supported the Persian forces in their anti-Ottoman engagements.



**Figure 5**
**Archivio di Stato di Venezia, Fasc. Persia, Doc. 8, no. 25 (ex. XII.8.25) Persian copy.**

The Venetian gifts included a bowl with gilded silver figural engravings, silver bowls and jugs, a silver flask with studded glass, a full suit of armor (scale armor), and four harquebuses decorated with pearls and gold.[34] The nature of the ducal gifts to Persia, with all the gold and silver supplies and decorated weapons, affirm two notions. First, the Shah's trade in Persian silk facilitated the commercial exchange with Europeans. Among all the

items that he ordered his agents to purchase were fine suits of armor and battle equipment, which illuminates the privileges the Shah gained through his international commerce. Second, through his silk trade with Europe, the Shah acquired silver and gold to strike coins to be used in global commerce, particularly with India (Canby 2009, 24, 72). In fact, the monetary value of those ducal gifts (3,360 ducats) to Fathi Beg compared to that of Asad Beg's earlier mission (200 ducats) already indicates that the Shah had immensely developed trade with the Republic.[35] Reciprocally, the *Serenissima* recognized the value of the Shah's embassy to Venice, as well as this cross-religious diplomacy through his royal gifts.

However, upon initial observation, Caliari's painting fails to depict the mutual recognition inherent in this historical event. Instead, the artwork presents a scene wherein the Shah's gifts deliberately evoke a sense of tribute (*pīškaš*) (Pedani 1994, 69).[36] In my analysis, this portrayal serves to manipulate the perception of Shah Abbas's intentions with his embassy to Venice, particularly the message he intended his valuable gifts to convey. Caliari's depiction of Fathi Beg's reception essentially glorifies the Venetian Republic, asserting its superiority over Muslims. However, there are deeper layers of connotation that warrant further exploration.

**Visual Hierarchies and Symbolic Motifs in Caliari's Painting**

In the forefront of the painting, positioned before the Doge's throne, two dogs of distinct breeds are depicted—one held by a Venetian figure and the other

under the care of a young Persian servant. Camillo Tonini has suggested that the portrayal of these two dogs, depicted with grace, may symbolize faithfulness.[37] However, it remains uncertain whether this portrayal of loyalty, as suggested by Tonini, symbolized a mutual allegiance between the two powers or was intended to depict the Persians' devotion to the Republic. In the subsequent analysis, I explore the subtle implications brought forth by these compositional elements, particularly the dogs, within Caliari's painting at the Palazzo Ducale. Supported by the examination of additional diplomatic gifts, such as a missive from Shah Abbas to the King of Spain, and an earlier papal communication, I posit that these two dogs serve as a visual allusion to the Turks.

Following the Peace of Zsitvatorok in November 1606, which marked the end of a fifteen-year war between Holy Roman Emperor Rudolf II Hapsburg and Sultan Ahmed I, the Ottomans shifted their focus to uprisings in Asia, including those in Persia. In 1607, Shah Abbas dispatched a diplomatic mission to Philip III of Spain, who held sway over Portuguese territories (including Goa) and parts of southern and northern Italy. In his letter, the Shah implored the Spanish king to deploy his formidable fleet to the Persian Gulf, providing assistance to the Persians in their struggle against Turkish invasions with harquebuses and artillery.[38] In a bid to secure the King's military support, the Shah articulated his ambition to reclaim the territories once ruled by his ancestor "Ismael" (Esmāʿīl II Safavid (r. 1576–1577), including the prominent cities of Baghdad and Cairo. He underscored his commitment to ensuring that all

Christian inhabitants within his realm would be afforded the same rights and freedoms as their Muslim counterparts (Cockerell and Plummer 1969, 13–14). Shah Abbas conveyed to Philip III his assurance that, with his support, they could overthrow the Turkish regime, leading to Philip's ascendancy as the Emperor of Istanbul (formerly Constantinople), while Shah Abbas would seamlessly assume control over Egypt and Syria (specifically Cairo and Baghdad). This declaration under-scored a mutual benefit: an expansion of territories under Shah Abbas's rule would also provide the Roman Church with an extended Asiatic domain to advance Catholicism, with the added prospect of Constantinople's restoration to Christian hands.

Shah Abbas pledged to the Spanish King that, once they vanquished their common enemy, they would jointly govern the world in tranquility through their alliance. In the concluding remarks of the letter, the Shah implored the King's formidable authority to confront this "dog" ("*questo cane*"), alluding to the Turkish adversary, "whose influence would only grow if left unchecked."[39] In employing the metaphorical term 'dog,' Shah Abbas unmistakably referenced the Ottoman Sultan.

To emphasize his stance against the Ottomans, Shah Abbas complemented his letter to Philip III with a selection of gifts, including depictions of Ismael and Tahmasp (r. 1524–1576), alongside his own opulent portrait adorned with precious gemstones and pearls. As documented, a copy of which is housed in the State Archive of Florence, he also presented four live dogs of varying colors (figure 6). These gifts, while intriguing, serve as a manifestation of his proposal. The metaphorical use of dogs in his letter to refer to the Ottomans finds a curious parallel in the actual gift of live dogs. This practice of referring to the Ottomans as 'dogs' was not uncommon in historical discourse. Pope Sixtus IV's 1471 encyclical letter to his nuncios, for instance, speaks of an anti-Turkish legation established to unite Christendom against the Ottoman threat. The Ottomans were described as "followers of the impious dog Mohammed [Mehmed II]," emphasizing their perceived antagonism to the Christian faith (Setton 1976, 315).[40] Given the historical context, where referring to the enemy as 'dogs' was a common insult not necessarily directed at Ottoman functionaries, and considering that hunting animals were frequently given as royal gifts, the depiction of dogs in this context serves as another example of such symbolic gestures.

In Caliari's painting, both dogs are securely under control. The one in the lower-left corner of the composition faces outward and stands meekly with its leash grabbed by the Persian *paggio*. The other one, with a golden leash-chain, has turned his head towards the Venetian who is holding him back, right next to the scene with the glimmering gift of silk that has caught the attention of the Venetians in the painting and its viewers. Within the context of the 'secret' negotiations concerning the military aid the Republic might extend to the Safavid Persians in their forthcoming conflicts against the Ottomans, I interpret the depiction of the two dogs as dual references, symbolizing both royal stature and subtly alluding to the presence of the enemy underlying the embassy's purpose. This interpretation

subtly underscores the anti-Ottoman essence of the Persian mission in Venice. While the Republic refrained from overt military involvement against the Ottomans, its alliance with the Persians conveyed a tacit warning against the Sublime Porte's expansionist endeavors.
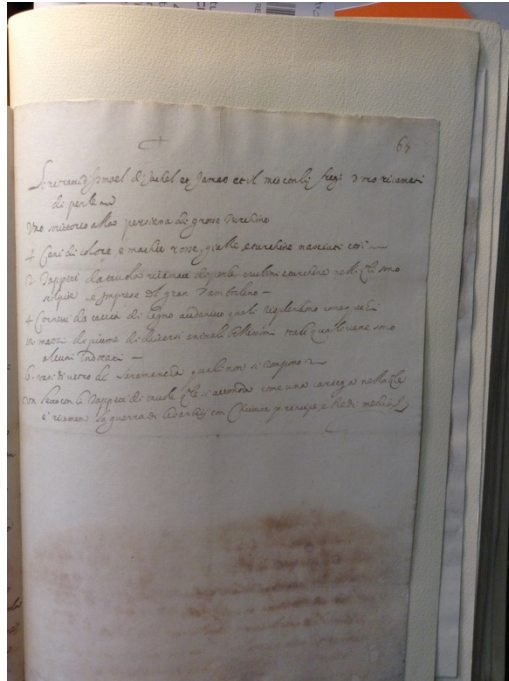


**Figure 6**
**Archivio di Stato di Firenze, Carte Strozziane, Prima Serie, fol. 65. Record of Shah Abbas's gifts to Philip III.**

In conclusion, Caliari's painting provides dual layers of documentation regarding the Safavid mission of 1603 in Venice. Firstly, it serves as a visual record, albeit with a Veneto-centric bias, immortalizing the opulent gifts bestowed by the Safavids upon the *Serenissima* while downplaying the military motives of the mission. This portrayal favors the cultural and political hierarchies in favor of the Republic. Secondly, the painting strategically reshapes the historical narrative

perceived by the Venetian dignitaries as they traversed the *Sala delle Quattro Porte* before entering the four chambers.[41] It does so by accentuating Persian gifts and figures to enhance the prestige of the *Serenissima*. Nevertheless, this representation significantly underestimates the role of these gifts as dynamic agents in the cross-confessional interactions between the Safavid Empire and the Republic of Venice, particularly in the context of their opposition to the Ottoman Empire.

Shah Abbas's gift of luxurious gold-embroidered velvet, featuring the image of Mary and Christ presented to the Church of San Marco, among others, represents a meticulously crafted overture. This gesture not only highlighted Persian artistic excellence but also signaled cultural recognition, strategically designed to allure the Venetian Republic into a cross-confessional alliance. The gifts from the Safavid court, distinguished by their sumptuous materials and intricate designs, were emblematic of the dynasty's opulence and a testament to their intent to cultivate Venetian trust. These offerings, particularly Shah Abbas's *Madonna del Latte* velvet, were not only lavish but deliberately adorned with Christian iconography, showcasing the Shah's deep understanding of Venetian religious sensibilities. Despite this, Caliari's portrayal tends to obscure these layered historical and cultural significances, instead emphasizing the grandeur of Venice.

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[1] Venezia, Archivio di Stato di Venezia (ASV), *Fase Persia,* Doc. 8 (Copia). Also ASV. *Cerimoniali* cit.

[2] In addition to the archival resources in endnote 1, see Elisa Gagliardi Mangilli, Ciampiero Bellingeri, and Fondazione Musei Civici di Venezia, eds. *I doni di Shah Abbas il Grande alla Serenissima: relazioni diplomatiche tra la Repubblica di Venezia e la Persia Safavide* [mostra ; Venezia, Palazzo Ducale, 28 settembre 2013 – 12 gennaio 2014], Venezia: Marsilio, 2013; Sinem Arcak Casale,"The Persian Madonna and Child: Commodified Gifts between Diplomacy and Armed Struggle," *Art History* 38, no. 4 (September 2015): 636–51; Guglielmo Berchet, *La Repubblica di Venezia e la Persia*, Turin, 1865, 43–6, 192–7; and Giorgio Rota, *Under Two Lions: On the Knowledge of Persia in the Republic of Venice* (ca. 1450–1797), Vienna, 2009, 19.

[3] For the list of gifts in Persian transcripts in *Nastaʿliq* font, see Venezia, ASV, Collegio, Esposizioni principi, *filza* 14r–14v. For other copies, see ASV, *Esp. Principi.* (Traduzione della

Nota del presente del re di Persia, bollata con il suo proprio bollo): "...Un manto tessuto d'oro, Un tappeto di velluto tessuto con oro et argento, Un panno di velluto tessuto in oro con figure di Cristo et di sua madre Maria, Tre cavezzi tessuti in oro, Tre schietti tessuti con seta." Also ASV, Secreta Commemoriali, *registro* 26, fols. 179b–180a. For published works on this document, see Rota, "Safavid Envoys in Venice," Appendix 4 and 5, and Plate 1 and 2. For the publication of the list in a secondary source, see Berchet, *Venezia e la Persia,* 198.

[4] ASV, Secreta, Commemoriali, *registro* 26, fols. 180°–180b.

[5] "… Un Manto tessuto d'oro, Un Tapeto di seta, et d'oro à Figure di braza 7, Un Panno di seta, et d'oro à Figure di braza 7, Tre Vesti di seta, et d'oro à Figure, Tre altre Vesti di tela di seta senza oro à figure..." ASV,Secreta, Commemoriali, *registro* 26, fols. 179b–180a.

[6] " …Un Panno di seta, et d'oro à Figure longo braza sette, in circa, con quattordeci figure…"

ASV, Secreta, Commemoriali, *registro* 26, fols. 180a–180b.

[7] For more information on the British East Indian Company, see Niels Steensgaard, *The Asian Trade Revolution of the Seventeenth Century.* (London: University of Chicago, 1974).

[8] For the most recent study on Safavid gifts of velvet to Venice, see Casale S.A. "The Persian Madonna and Child: Commodified Gifts between Diplomacy and Armed Struggle." *Art History* 38, no. 4 (2015): 637–651.

[9] Venezia, ASVe, *Collegio. Esposizioni Principi,* Registro 14.

[10] Venezia, ASV, *Libro cerimoniali.* Arch. gen.

[11] A fragment of this silk is now at the *Museo di Palazzo Mocenigo* in Venice.

[12] In the context of Islamic religious paintings, the depiction of a fiery halo serves as a significant pictorial motif, see Oleg Grabar, "The Story of Portraits of the Prophet Muhammad," *Studia Islamica* 96 (2003): 19–38; Christiane Gruber, "Between Logos (Kalima) And Light (Nūr): Representations Of The Prophet Muhammad In Islamic Painting," *Muqarnas Online* 26, no. 1 (2009): 229–62.

[13] Berchet, *La Repubblica di Venezia e la Persia*, 1865, 46; Gallo, *Il tesoro di S. Marco e la sua storia*, 261.

[14] Qur'an, verse 23–25, chapter 19 (sūrat Maryam): فَأَجَاءَهَا الْمَخَاضُ إِلَى جِذْعِ النَّخْلَةِ قَالَتْ يَا لَيْتَنِي مِتُّ قَبْلَ هَذَا وَكُنْتُ نَسْيًا مَنْسِيًّا ﴿٢٣﴾ فَنَادَاهَا مِنْ تَحْتِهَا أَلَّا تَحْزَنِي قَدْ جَعَلَ رَبُّكِ تَحْتَكِ سَرِيًّا ﴿٢٤﴾ وَهُزِّي إِلَيْكِ بِجِذْعِ النَّخْلَةِ تُسَاقِطْ عَلَيْكِ رُطَبًا جَنِيًّا ﴿٢٥﴾
For English translations see Abdullah Yusuf Ali, *Koran: An English Interpretation of the Holy Quran with Full Arabic Text.* (Lahore: Muhammad Ashraf, 1992), Sūrat Maryam.

[15] "E questo, disse il persiano, il re manda perchè sia presentato alla chiesa di S. Marco," Berchet, *La Repubblica di Venezia e la Persia*, 1865, 45–46.

[16] "Questo, disse il persiano, è dei più belli tappeti che si facciano. Il mio re avendo inteso che ogni anno si mette fuori il tesoro di S. Marco, tanto famoso per tutto il mondo, lo manda alla

Serenità Vostra, perchè si contenti ordinare che ogni [46] volta che si esporrà il tesoro sia esso esposto sopra questo tappeto per la sua gran bellezza," Berchet, 46.

[17] The Portuguese appeared in the southern port-city of Hormuz in the Persian Gulf in early-sixteenth century. By 1515, the Portuguese fully occupied Hormuz to use as a vassal for their trade from Europe to India. See John M. Flannery, *The Mission of the Portuguese Augustinians to Persia and beyond (1602-1747),* Studies in Christian Mission, Volume 43 (Leiden; Boston: Brill, 2013); Carlos Alonso, "El P. Simón de Moraes, Pionero de Las Misiones Agustinianas En Persia," *Analecta Augustiniana* 62 (1979): 343–72; Carla Alferes Pinto, 150–53.

[18] This gift of the Shah to the Dominican friar is indeed another enlightening subject of study. However, because my focus in this study is on the gifts in Italian collections, I will leave this gift for future research.

[19] See Flannery, *The Mission of the Portuguese Augustinians to Persia and beyond (1602–1747) for more information.*

[20] For further art historical evidence, see Noel William and Daniel H Weiss, *The Book of Kings: Art War and the Morgan Library's Medieval Picture Bible*, London and Baltimore: Third Millennium Pub; Walters Art Museum 2002. Distributed in the U.S. and Canada by Antique Collectors Club.

[21] Īraj Afšār, "FĀL-NĀMA," *Encyclopædia Iranica*, IX/2, pp. 172–176. This article is also available online at http://www.iranicaonline.org/articles/fal-nama.

[22] For comparative literature, see Casale, "The Persian Madonna and Child," pp.644–45.

[23] For Persian painting and its visual modes, Cfr. Oleg Grabar, *Mostly Miniatures: An Introduction to Persian Painting* (Princeton, N.J. and Chichester: Princeton University Press, 2002); Sheila R Canby, *Persian Masters: Five Centuries of Paintings* (Bombay: Marg Publications, 1990).

[24] The principal point of division between the Twelver Imami Shi'is and orthodox Sunnis is based on their conviction about the legitimate successors of Prophet Muhammad. The Twelver

Shi'is believe 'Ali ibn Abi Taleb, the cousin and son-in-law of Muhammad, and his descendants are the only legitimate successors of the prophet. The Twelver Shi'a rejects the Sunni tradition of the three "Rightly Guided Caliphs" (Abu Bakr al-Siddiq , Umar ibn al-Khattab , Uthman ibn Affan) leadership after Muhammad. For an introduction to Twelver Shi'a principals, Cfr. Mohammad Ali Amir-Moezzi,  "Shi'ite doctrine," *Encyclopedia Iranica,* July 20, 2005; for Safavid sentiments towards Sunnis, Cfr. Rosemary Stanfield Johnson, "Sunni Survival in Safavid Iran: Anti-Sunni Activities during the Reign of Tahmasp I," *Iranian Studies* 27, no. 1–4 (1994): 123–33; Palmira Brummett, "The Myth of Shah Ismail Safavi: Political Rhetoric and Divine Kingship," in *Medieval Christian Perceptions of Islam : A Book of Essays*, ed. John Victor Tolan (New York: Garland Press, 1996), 331–59; for Twelver Imami Shi'ism in Safavid Persia, Cfr. Rula Jurdi Abisaab, *Converting Persia: Religion and Power in the Safavid Empire* (London: Tauris, 2015) and Said Amir Arjomand, *The Shadow of God and the Hidden Imam: Religion, Political Order, and Societal Change in Shi'ite Iran from the Beginning to 1890*, Publications of the Center for Middle Eastern Studies, no. 17 (Chicago: University of Chicago Press, 1984).

[25] In Ottoman literature, the Ottoman court or government is called The Sublime Porte or the Porte, which is the translation of the Turkish/Arabic word "Bâb-e âli" (the Gate of Eminence).

[26] Sala delle Quattro Porte (hall of the Four Doors) in the Doge's Palace of Venice served as a waiting room to the four chambers where pivotal governmental proceedings unfolded within the Venetian Republic. Operating as an oligarchy, the governance of Venice was vested in its noble families and patricians, who traversed through the antechamber before accessing the quartet of chambers dedicated to the College, the Senate, the Council of Ten, and the Chancellery. For more information on Venetian Oligarchy, see McClellan, George B., and Shapiro Bruce Rogers Collection (Library of Congress). 1904. The Oligarchy of Venice : An Essay. Boston, [Mass.]: Houghton, Mifflin and Company.

[27] Cristelle Baskins believes that the figure who is reading the letter to the Doge is Dragoman

Nores. See Cristelle Baskins, "Framing Khoja Sefer in the Sala Regia of the Quirinal Palace in Rome (1610–1617)," *Journal of the Society for Armenian Studies* 24 (2015): 16. For the role of Armenians in Safavid Persia, Cfr.Savory, *Iran under the Safavids*, 1–26, 174–75, 198.

[28] Official Safavid costumes were also recorded in the 18th-century drawings of the Venetian artist Giovanni Grevembroch in a volum, *Gli abiti de Veneziani di quasi ogni età con diligenza raccolti e dipinti nel secolo XVIII,*Venezia, now preserved in the Museo Correr, Biblioteca, Ms. Gradenigo Dolfin 49, vol. II, tav. 122

[29] The Muslim Persians had their turbans on throughout all official ceremonies, because wearing a turban was (and still is) a *Sunnah Mu'akkadah (السنة المؤكدة )*, meaning practices emphasized by the Prophet Muhammad and refusal to observe those prohibits the Muslim devotees from reaching perfection.

[30] Among other paintings of the *Sala delle Quatro Porte* at the time of Caliari's painting were: Vicellio Tiziano's (1490–1576) painting of *Doge Antonio Grimani (1436–1523) Kneeling Before Faith* and Jacopo Tintoretto (1517–1594) decorative scheme from 1578 onwards. Cfr. Fantelli, Pier Luigi. "La sala delle Quattro Porte." Quaderni della Soprintendenza ai Beni Artistici e Storici di Venezia / Ministero per i Beni Culturali e Ambientali., 1979, 81–82; "Il 'Paradiso' del Tintoretto torna a Palazzo Ducale a Venezia." Amici dei musei / Federazione Italiana delle Associazioni degli Amici dei Musei., 1985.

[31] "Questo, disse il persiano, il mio re ha fatto fabbricare apposta per la Serenità Vostra, ed è tutto di un pezzo senza cucitura, e lo manda a Lei in particolare, acciocchè si contenti per amor suo ed in memoria di S. M. portarlo Ella stessa in dosso. Ne ha fatto fare un altro simile a questo, e lo ha mandato a presentare al re di Mogol suo grande amico," Berchet, *La Repubblica di Venezia e la Persia*, 1865, 46.

[32] Guglielmo Berchet, *La repubblica di Venezia e la Persia* (Tehran: Imperial Organization for Social Services, 1976). DOCUMENTO XXXV.

[33] In addition to all the noted items, Fathi Beg returned to Persia with eight oil paintings with religious and secular subject matters, including

the Nativity, naked female portraits, and a portrait of the Queen of Cyprus. The Queen was Caterina Cornaro (r.1473–1489), daughter of Emperor John IV of Trebizond and Despina Khatun's sister, who was married to the Venetian aristocrat, Nicolò Crispo. She was second cousin thrice removed of Shāh Abbās. For a complete list of gifts see Simpson, "The Morgan Bible and the Giving of Religious Gifts between Iran and Europe/Europe and Iran during the Reign of Shah 'Abbas I," 147. Rota, "Safavid Envoys in Venice," 233, no. 57.

34 "un bacile con ramino d'argento dorato a figure, ed uno simile di argento puro, un catino d'argento con oro e brocca simile, due fiaschi d'argento intagliati col vetro, un'armatura completa, due zacchi forniti l'uno verde in oro, l'altro rosso, e quattro archibugi lavorati in radice con perle e oro" see Berchet, *La Repubblica di Venezia e la Persia*, 1865, 47.

35 For the development of Safavid trade with Europe, Cfr. Matthee, *The Politics of Trade in Safavid Iran*; Matthee, "Between Venice and Surat: The Trade in Gold in Late Safavid Iran"; Matthee, "Anti-Ottoman Politics and Transit Rights : The Seventeenth-Century Trade in Silk between Safavid Iran and Muscovy"; Ranjbar and Manesh, "New Routes to Iran's International Trade in the Safavid Era."

36 From a comparable standpoint, see Berchet, *La Repubblica di Venezia e la Persia*, 1865, 47; for an opposing argument see Wolfgang Wolters, *Der Bilderschmuck des Dogenpalastes : Untersuchungen zur Selbstdarstellung der Republik Venedig im 16. Jahrhundert* (Wiesbaden: Steiner, 1983), 228.

37 "...forse la fedeltà" see Tonini, "I doni degli ambascistori Persiani alla Serenissima nella tela di Gabriele Caliari," 29.

38 Firenze, ASV. *Carte Strozziane* serie 1, no. 15 (Copia di una lettera che scrive il Re di Persia al Re di Spagna tradotto di linga armenia in spagnola e poi in italiana).

39 "…Mostra signore la tua gran possanza contro a questo cane che ce magneria il core se potesse." Archivio di Stato di Firenze (ASF). *Carte Strozziane* serie 1, no. 15. My sincere thanks to Dr. Maurizio Arfaioli from the Medici Archive Project, who generously helped me with translation and transcription of the letters.

40 The letter is archived in Rome, Acta Consistorialia, in *Arch. Segr. Vaticano, Arm. XXXI*, tom. 52, fol. 77r.

41 The governance structure of the Venetian Republic was notably divided into three distinct classes: Patricians (nobles), Cittadini (citizens), and Popolani (common people), each playing a role in the bureaucratic system that sustained the state's power. Together, these three classes formed a hierarchical but interdependent system that defined the oligarchic nature of Venetian governance, maintaining a balance between aristocratic privilege and a meritocratic bureaucracy essential for the republic's economic and political influence in the Mediterranean and beyond. For more information on the hierarchies in venetian society, see "A Note on the Venetian Social Class System and venetian Geography", *Inventing the Business of Opera: The Impresario and His World in Seventeenth-Century Venice* (New York, 2006; online edn, Oxford Academic, 1 May 2008); Monika Schmitter. "'Virtuous Riches': The Bricolage of Cittadini Identities in Early-Sixteenth-Century Venice." *Renaissance Quarterly* 57, no. 3 (2004): 908–69. http://www.jstor.org/stable/4143570.

# REBECCA WHITELEY

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*Paper Dolls: Medicine, Play, and Shibata Kōichi's Obstetric Phantoms*

The history of midwifery has a source problem. While there is an absolute abundance of sources treating childbirth and medical attendance from the nineteenth century—medical books and journals, institutional records, political tracts, registers and casebooks—together they amount to only a partial history. Overwhelmingly male-authored and focused on the professional and institutional, they can lead to a conflation of obstetrics specifically with the whole wider world of childbirth. Many of the sources imply, if they do not outright state, that the work of women midwives and the social world of childbirth are of lesser importance. Historians must tread carefully to avoid repeating these implications, especially given the relative scarcity of corrective sources written by midwives and birthing people before the twentieth century. In this article, I propose material culture as one method for tackling this problem. Taking one of the many institutional, masculine sources for midwifery in the late nineteenth century, I read it against the grain, as an object bearing the traces not just of systematized masculine medical training, but of women's work, of affect, and of play.

## The Phantoms

Shibata Kōichi's *Geburtshülfliche Taschen-Phantome* (Obstetrical Pocket-Phantom, 1891, figure 1) comprises a brief printed pamphlet, a cardboard slot in the shape of a pelvis, and two articulated paper models of a fetus, one facing forwards and the other sideways. These models, one example of the obstetric simulators often called 'phantoms' in the eighteenth and nineteenth centuries, could be positioned and then passed through the pelvis to simulate the complete array of fetal presentations, and medical interventions.

To fit into their storage pocket, the phantoms must have their limbs folded up, so that when removed, they emerge curled, pinkish and vulnerable (figure 2). Small enough to lie on the palm of a hand, made of paper, ink and wire, they are light and thin, and so evoke the smallness and inconceivable lightness of the newly born. Yet, despite their material makeup, they do not feel all that fragile. Their admirable construction means they can be manipulated easily and smoothly and can withstand quite a lot of use without tearing or detaching. The remarkable mobility of the articulated limbs allows them to assume all kinds of possible, as well as

many impossible, postures. These objects invite play: they can dance, wave, perform bold acrobatics or shyly hide their faces. Like real neonates, Shibata's phantoms evoke sturdiness and fragility, health and vulnerability, an ageless seriousness and an endearing playfulness.
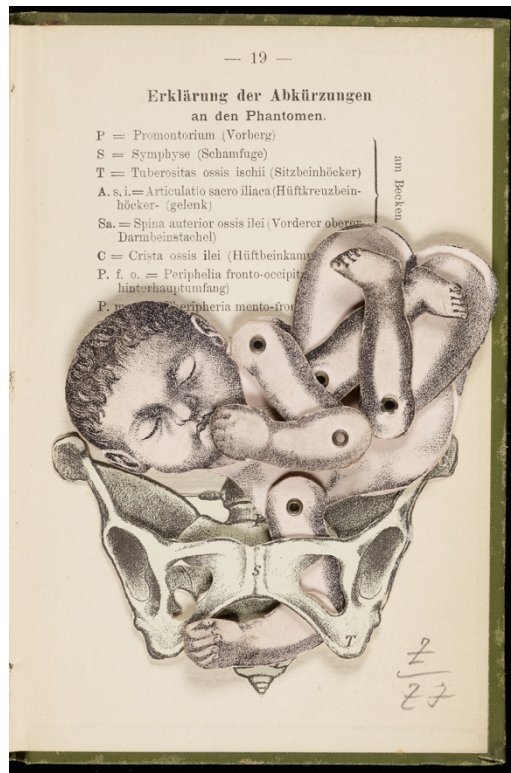


**Figure 1**
**Shibata Kōichi, 'Obstetric Phantom', lithograph on coloured paper with metal grommets. From Shibata, K. *Geburtshülfliche Taschen-Phantome* 3rd ed (Munich: J.F. Lehmann, 1895). The Bodleian Libraries, University of Oxford, Rc. F.84.**

I introduce these objects with a description of their materiality and my embodied and affective reactions to them because, in this article, I explore what this materiality can tell us about the various, unrecorded historical uses of these objects. I will look beyond the rhetoric of

mechanistic anatomy and professionalized medical training to the invitations that these objects make for creative play and affective engagement. In doing so, I recenter the place of play and of emotion in late nineteenth-century medical training—a period in which medicine was increasingly characterized as disinterested, technical, and masculine. Indeed, the dichotomous nature of midwifery work: masculine and feminine; medical and 'natural'; professionalized and personal; serious and playful, is embodied in Shibata's phantoms. To get at the less spoken, more sublimated latter halves of these pairings, we must begin with the context of late nineteenth-century medicine and medical education.

**Medical Models**

Shibata's pamphlet was first published in 1891 in Germany while Shibata, a Japanese physician, was pursuing further study in the obstetric clinic of Franz von Winckel (Shibata 1891). Having met with moderate success, it went through several German editions, and was published in Japanese in Tokyo and in English in Philadelphia and Montreal between the 1890s and the 1910s.

Initially aimed at male medical students, the second edition of less than a year later was adapted to be useful also to women midwifery students. The text was lengthened and simplified, and 'birth figures' showing different fetal presentations were added. According to the various prefaces in its many editions, the pamphlet was intended: for private study by students; for use alongside other models and simulators in the lecture theatre; for comparison with the patient body in the

**Figure 2**
**Shibata Kōichi, 'Obstetric Phantoms', lithograph on coloured paper with metal grommets. From Shibata, K. *Geburtshülfliche Taschen-Phantome* 3rd ed (Munich: J.F. Lehmann, 1895). The Bodleian Libraries, University of Oxford, Rc. F.84.**

clinic; and for the assessment of midwives. It formed part of the intermedial equipment of a newly formalized, lengthy, technical, and masculine medical training (Bonner 1995, 251–79; La Berge and Hannaway 1998). This project was not unique to Munich or to Germany, but was taken up all over Europe and North America, as well as other parts of the world that were 'Westernizing' both voluntarily and under duress (Kim 2014).

The term 'Western' is problematic in many contexts, and certainly with regards to medical history, where it can imply both a fictional geographic location for a particular medical culture, and a universality of that culture across space and time. In this article, I use the term as a

necessary, if flawed, shorthand for a global phenomenon that certainly did exist in the late nineteenth century. A shared medical culture grew up in Europe and North America, and was then exported globally, through publications, mass-produced objects, and the travelling of students and teachers between centers of learning. While each country, region, and individual experienced this 'Western' medicine differently, it was also something that was consciously standardized

between individuals and locations. A term is necessary, therefore, to distinguish it from other medical cultures, including those less formalized and prestigious, and learned medical cultures that originated in other places. To write a history of the 'Western' medical objects of this period, particularly when they were published in different places, is to recognize both the uniqueness of each country's medical culture, and the hegemony of the Imperial medical machine.

The character of Western medicine changed dramatically in the nineteenth century. Of particular relevance for studies of childbirth were the professionalization and specialization of medicine, the formalizing and lengthening of training and the establishment of obstetrics as a discipline. While some surgeons and physicians had attended labors before this, it was in the nineteenth century that much of Europe and North America saw medicine move to claim all the lucrative parts of practice—emergency and difficult cases, wealthy patients, hospital and teaching positions. Midwives, in most places, were retained to cover the bulk of deliveries and to provide nursing care, but were more firmly brought into the medical machine on a subordinate footing through training programs and medical regulation and licensing (Donnison 1977; Summers 1989; Fallwell 2013, 33–56; Bashford 1998; Brickman 1983; Nuttall 2012). State-level anxiety over population numbers and health were also rife late in the century, and often resulted in the training of midwives as social hygiene educators and protectors of infant health (Blom 2008; Steger 1994; Terazawa 2003; Al-Gailani 2018; Weindling 1989, 188–214; Fallwell 2013, 47–48). In Germany, more formalized

midwifery schools were established in many cities, where women could be trained and licensed before returning to their communities. The teachers and administrators at these schools were male physicians and surgeons. The educational content was of a similar brand to that provided to the male medical students, but for the midwives it was circumscribed, sometimes simplified, and emphasis was placed on the limits of their practice and the situations in which they would need to call a physician. There were also expectations around their continued care of both laboring women and infants that were not present for the medical students (Fallwell 2013, 156).

It is worth noting that while there were rigid gendered expectations around training and practice at this time, they were not unassailable. As Lynne Fallwell has shown, some midwives took initiative and authority over their own training, demanding better professional recognition (Fallwell 2013, 33–56; Donnison 1977, 88–115). On the other hand, while the standard model of childbirth attendance assumed a female midwife and a male obstetrician, by the 1890s women were able to train and practice as physicians in Germany, and many specialized in obstetrics (Bonner 1995, 309–24; Peitzman 2000; Wells 2001; Blake 1990). Moreover, in the world of practice, midwives often did much more than was set out for them in training, especially if they worked in rural areas where no doctors practiced, or in poor ones where other medical assistance was unaffordable (Badger 2014; Fallwell 2013, 33–56). So, training in childbirth attendance operated on a kind of two-tier system with midwifery and medical students engaging in the same world of medical knowledge, but with

different levels of access and support. Medical students often came from middling circumstances and could hope to make a good living. Midwifery students were mainly drawn from working class families and the prospects for lucrative employment were poor. Reputational problems relating to respectability and even personal safety also proved a barrier to entry for women from more affluent backgrounds (Fallwell 2013, 50–51).

In the USA, physicians more thoroughly recategorized childbirth attendance as a medical discipline, investing less in the training of midwives and aiming for a wider coverage by obstetricians. Of course, this was not a complete transformation, and many people were still attended by traditional midwives. In North America, these were often immigrants who had trained in other countries and served their own ethnic communities (Brickman 1983; Leavitt 2016, 87–115; Smith 2005). In Japan, where Shibata returned and published several Japanese editions of the *Phantome*, the government actively adopted Western medicine, and particularly German medicine, as part of its plan of 'modernization'. While childbirth culture had been, and continued to be very different in Japan, the imposition of Western medical education and a Western-inspired system for regulating midwives meant that there were also striking similarities. Newly Westernized doctors moved, in turn, to Westernize and 'rationalize' midwifery practice, slowly squeezing out traditional practitioners in favor of new, young, medically trained midwives who returned to their communities to deliver babies but also to monitor populations and spread social hygiene practices (Terazawa 2003; Homei 2005; 2006; Steger 1994). In every country where the *Phantome* was published then—Germany, Japan, the USA, and Canada—it formed part of a much broader project to medicalize and institutionalize midwifery, and to subordinate and control midwives.

It did so as one element in the wider intermedial realm of the medical school and museum. By the late nineteenth century, images, books, specimens, and models were considered absolutely crucial to medical education. These objects augmented what could be learned from the patient body in the clinic (Alberti 2011; Berkowitz 2011; Graciano 2019; Hallam 2016, 278–315; Owen 2016; Whiteley 2022; Wils, de Bont, and Au 2017). Central to midwifery training was the obstetric phantom, also called a manikin, mannequin, or machine. These objects were usually life-sized, three-dimensional simulators of the physiological processes of birth. They usually comprised the abdomen of a pregnant body with an accessible uterus into which the instructor could place a fetal doll or a preserved fetal cadaver, which the student could then 'deliver'. They varied enormously in material, sometimes including human remains such as adult pelvises, fetal skulls and whole fetuses preserved in alcohol, but also other materials from basketwork and wood, to metal, leather and rubber. In the nineteenth century many included mechanical elements that simulated contractions, flexibility in the pelvis and coccyx, and elasticity of the perineal muscles, cervix, and vagina. These objects purported to simulate the material and physical conditions of labor. They worked both in an abstract mode, to help students envision fetal presentation and methods to assist in labor, and in a physical mode, replicating the haptic

experience of practice (figure 3) (Kosmin 2021; Lieske 2000; Owen 2016, 69–244; Stephens 2021).

Shibata presented his paper phantoms as a 'pocket' version of the large, expensive and three-dimensional phantoms that many students could only access for limited periods during teaching hours (Shibata 1893, 7; 1895, iv–v, 3; Owen 2016, 135). But, of course, Shibata's models do not materially simulate the body in the same way as these larger, more three-dimensional phantoms did, so how were they useful and how were they used? Unfortunately, we do not have any direct records of how students approached these objects. Instead, I rely on what the author, editors, and reviewers wrote about them, a contextual knowledge of the material practices of medical learning, and my own experience of handling them.

Shibata, his mentor in Munich, Franz von Winckel, and the English language editors of the pamphlet Ada Howard-Audenried and J.C. Cameron, all weighed in on the usefulness of the phantom. According to them, it allowed students to think through the mechanics of labor and the different potential presentations. This might be done by students during private study, consolidating and reconstructing what they had learned on the full-sized phantom during lectures. It might, according to both Cameron and Winckel, be used by practitioners in clinical situations to translate what they felt at the cervix of a laboring patient into a fuller understanding of fetal presentation (Shibata 1903, 1; 1895, iii–iv). Winckel also notes that the phantoms would be useful tools for assessing midwives (Shibata 1895, v).
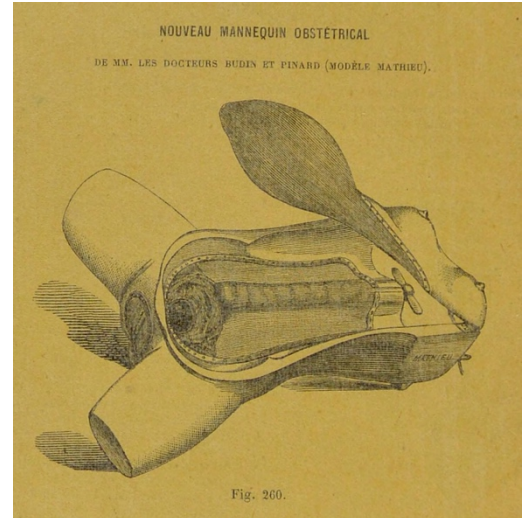


**Figure 3**
**Anon., 'Nouveau Mannequin Obstétrical de MM. les Docteurs Budin et Pinard', wood engraving. In Mathieu, L.,** *Liste des instruments nouveaux créés et des instruments anciens modifiés depuis l'exposition de 1878* **(Paris: Imprimeries Réunies, 1889), p.140. Wellcome Collection.**

These objects could not simulate the haptics of birth, as the full-sized phantoms could. Rather they taught the abstract, mechanized view of birth and the body that had risen to prominence in the eighteenth century, one that could be fully understood and then assisted by the practitioner. Indeed, translating bodies into two-dimensional articulated paper is an expression, in itself, of the essentially abstract, mechanical, and intellectual knowledge required of the obstetrics student. As I have argued elsewhere, these abstracted images of childbirth, focusing on the positioning of the fetus and its relation to the shape of the pelvis, had been a central tool for developing midwifery knowledge and for establishing medicalized, mechanized epistemologies of the birthing body since at least the seventeenth century (Whiteley 2023, 87–180). Shibata's phantoms seem to fall

consciously between these two media: the 'birth figure' illustration and the more material simulation of the birthing body, also known as the phantom or mannequin. Indeed, according to the Canadian editor J.C. Cameron, they form a bridge between the body itself and the book as a source of knowledge: he instructs his readers when in the clinic to examine their patient, then to refer to birth figures to see which presentation fits best what they have felt, then to use Shibata's paper phantom to model what this might look like and, presumably, how the fetal body might be moved and aided to pass through the pelvis (Shibata 1903, 1).

This use of paper to make a model that was at once interactive, cheap, and accessible was not unique in this period. Paper was a crucial material for learning in all kinds of ways: from extensive notetaking, to making copies of illustrations in lectures, to making one's own models (Hallam 2016, 310–15). It is likely that most medical students of the 1890s knew from existing training with illustrations, with paper objects and models, and with obstetric phantoms, how to make good use of Shibata's phantoms. Indeed, the large number of editions, and the favorable reviews in the medical press, suggest that Shibata's phantoms were a valued object of medical education (Owen 2016, 153–54; see, for example, Anon. 1891a; 1891b). While all simulations of childbirth were criticized by some factions of the medical establishment, either for their dislocation from the real body, or for the way they encouraged over-confident, rough, or precipitate interventions, they remained a core part of medical education in this period everywhere that Western systems were enacted.

## Paper Dolls

This account of Shibata's phantoms as technical tools of medical education is only part of their story. The people who encountered them were various: women as well as men, professionals, students, and potentially also patients. These groups differed in their levels of medical training, outlooks on their profession, experiences of childbirth, and relationships with patients. We can safely assume, then, that their approaches to and uses of Shibata's phantoms would have been various too. Moreover, while paper models were a common part of medical training, it was not the only material and cultural context in which the phantoms worked. Not mentioned textually, but obvious materially, Shibata's phantoms are paper dolls. In recognizing this, we can make use of Robin Bernstein's concept of 'scriptive things', or objects that, within their cultural context, script particular kinds of interaction (Bernstein 2011, 69–91). As Bernstein points out, these scripts can be resisted as well as followed, but their presence inflects the object's meaning. In this section, I argue that Shibata's phantoms were scripted for contemporary users as dolls, as well as medical models.

Paper dolls had been part of European popular culture for well over a century by the time Shibata published his pamphlet, with origins in articulated 'pantin' and printed fashion dolls (Adams and Keene 2017; Mitchell and Reid-Walsh 2002, 175–77). Throughout the nineteenth century in Europe, printed paper dolls increased in number and diversity. Some were explicitly for children, a subset attended by moral stories (Field 2012). Some were specifically for boys and

involved fantastical costume changes. Others were aimed at adult women and even men as part of a growing participation in commercialized leisure activities. Adult women crafted elaborate fashions for paper dolls, exhibiting both their taste and their paper-crafting skills. In the 1890s, Germany was a dominant global player in the production and export of dolls, as well as medical culture (Ganaway 2018, 134). One innovation in the market for paper dolls that emerged in this period was a chromolithographed, articulated fashion doll, called 'activated dolls' by collectors (figure 4). Produced by the German firm Littauer & Bauer and exported internationally, these dolls had limbs articulated in the same manner as Shibata's phantoms, and often came with kits of crêpe, tissue and lace for the production of elaborate outfits (Fawcett 1989, 138–55; Wallach 1982, 29–31). The availability of child, as well as adult, activated dolls suggests that maternal, nurturing or domestic play was also countenanced by producers. The articulations, presumably primarily allowing for different limb positions for the better demonstration different outfits, also encourage narrative and indeed comic play, evoking earlier 'pantin'. These dolls, like many in this period, also contributed to the formation of cultures of racism and white supremacy (Bernstein 2011). The question of race and its relevance to Shibata's phantoms is treated by Sonia Favi and myself elsewhere (Favi and Whiteley forthcoming).

It is possible that Shibata took inspiration from these paper dolls in the development of his phantoms, or that the publisher copied production techniques from the same source. We cannot be certain that Shibata, a foreigner who stayed a relatively short time in Germany, knew of the resonances he had created, but the material similarities between the two genres, and the general popularity of the paper doll, make it likely. It is certain, however, that many users of the phantoms would have noted it. But what would these connections have meant to users in the late nineteenth century? By this time, paper dolls were one part of a rich doll culture in Europe and North America. There is space here only to briefly characterize the literature on this topic, but it is important to note that dolls by the 1890s carried several important associations: firstly, with commercial fashion and the problematics of vanity—both women and children used dolls to model or train their taste in fashion (Adams and Keene 2017, 102–18; Field 2012). Secondly, at the time and ever since, critics have noted the role of dolls in crafting gender identity. This is by no means simple, and while some have argued that dolls modelled passivity and objectification as crucial aspects of womanhood, other scholars see dolls also allowing girls to gain agency and control, and to engage in subversive and taboo-breaking play. Finally, dolls were a symbol of the increasing value placed on both childhood as a state separate from adulthood and play as of fundamental importance to childhood (Armstrong 1996; Flanagan 2009, 17–62; Formanek-Brunell 1993; Ganaway 2018; Marcus 2007, 111–66).

Some users of Shibata's phantoms would have rejected or ignored these resonances with a world of feminine concerns, children's play, and popular entertainment. Certainly, none of the reviews or adverts I have encountered mention this context. But this textual silence does not mean a

lack of awareness, or even necessarily disapproval. Rather, I argue, Shibata's production of an obstetric paper doll was a strategic response to the perceived needs and perspectives of his intended audience: students and midwives. Paper was cheap, so the models were financially accessible to medical and midwifery students. But they were also *culturally* more accessible than the large, three-dimensional, mechanical obstetric phantoms in school lecture theatres.

The full-sized phantoms so clearly rendered the female body passive, the object upon which the male agent practiced. They often made use of more 'masculine' coded materials—wood, metal, ceramic, rubber—and newly mechanized production processes. They often contained mechanical parts or included new patented inventions (see figure 3). In short, they were part of the masculine world of mechanical production, invention, and entrepreneurship. For midwives and midwifery students, who typically had more experience with the living female body in labor, these machines may have seemed less accessible or simply less appealing as a representation of the patient body. As Bonnie Blackwell has noted, the obstetric phantom in the lecture theatre encouraged students to employ force to achieve a quick delivery (Blackwell 2000, 92–93). Not only was resistance part of what these phantoms simulated, but the environment in which they were used, in group teaching settings where each student had limited time to engage and a pressure to perform in front of teachers and peers, encouraged a perception of the laboring body as a machine to be set working as quickly as possible. Miriam Formanek-Brunell makes a similar argument about the gendered division of

materials and production techniques in doll design in this period, noting that dolls designed by men made use of hard manufactured materials and mechanical elements, and tended to prescribe play: "Girls who played with dolls as they 'should' were now forced to keep up with the dolls' inexorable machine pace. To do so required order, discipline, and little imagination. The doll was a machine that performed one specialized function and did so over and over again—at least until it broke" (Formanek-Brunell 1993, 59–60).



**Figure 4**
**Dennison Co.; Littauer & Bauer, *Paper Doll*, 1880, colour-lithographed paper with metal grommets. Courtesy of The Strong National Museum of Play, Rochester, New York.**

The realms of feminine-coded production, and of woman-dominated midwifery, created quite another culture. Women were also producers and inventors, of course, but they worked most often in private settings and with other kinds of materials: textiles, fibers, and papers. According to Talia Schaffer, such feminine handicrafts were understood in explicit opposition to the masculine world of commerce and the mechanically produced object, even while they formed part of both arenas (Schaffer 2011, 9–13; Dunlap Bercaw 1991). In doll production in America in this period, for instance, while men were making mass-produced and mechanical dolls, some women reformers were making cloth dolls in domestic workshops. These dolls were softer and more materially appealing, but also more hard-wearing (Formanek-Brunell 1993, 61–89). And they were intended to facilitate more open-ended and imaginative play. In obstetric simulation, similar gender dynamics can be found. While I have not found any evidence of women identified as inventors or producers of the full-sized obstetric phantoms of the late nineteenth century, there are examples from before and after this period. Madame du Coudray's cloth simulators of the mid-eighteenth century were softer and smaller than the mechanical late nineteenth-century versions, and made no use of human remains. Du Coudray's phantoms not only made use of her feminine-coded crafting skills, but made an argument for the feminine nature of midwifery itself (Stephens 2021). In the twentieth century, as Anna Harris and John Nott have shown, the knitted uterus, an object heavily associated both with feminine production and the 'women's health' movement, was considered by instructors at Maastricht University to be a 'more dynamic and simple' tool for simulation (Nott and Harris 2020, 49).

It is undeniable that midwifery and obstetrics, and women's and men's practice, created very different cultures of childbirth. Characterizations of masculine medical obstetrics as technical, detached, and inclined to intervention, and feminine midwifery as social, emotionally engaged, and less interventionist are certainly useful. But they are also heavy generalizations: neither gender nor childbirth practices can actually be split into a binary, and Shibata's phantoms are an interesting case in point. In some ways, they are quite obviously invested in the mechanical and the medicalized view of childbirth. They were also made by a man, and so demonstrate that paper crafting and paper culture was far from *only* a feminine concern. But their materiality does seem both to reference the feminine realms of crafting and of dolls, and to script a very different kind of interaction to the full-sized phantoms. Made of paper, they cannot encourage speed and force. They required, instead, delicate handling and contemplative engagement—they encouraged the student and not the teacher to set the malpresentation. And, as 'pocket' models for use in private and in one-to-one teaching settings, they did not involve the problem of limited time and group performance. Outside of these very prescriptive settings, too, they could be played with in much more diverse and creative ways, as I shall explore further. Like the late-nineteenth-century American woman-made and 'reform' dolls described above, Shibata's phantoms facilitated play of many kinds, and materially encouraged gentle and

explorative handling (Formanek-Brunell 1993, 62; Ganaway 2018, 135). They evoke, too, the centuries-old rhetoric around the physical skills of the midwife. Since at least the early modern period midwifery had been associated with a particular dexterity and sensitivity of the hand (Whiteley 2023, 137–78), and this is expressed in Shibata's paper dolls, their need for relatively delicate handling and minute adjustments. Simply, I argue, the use of articulated printed paper dolls as a pedagogic tool was not just practical (paper being cheap and portable) but also ideological, associating midwifery practice with women's spheres of expertise in material production, in dexterity and sensitivity, and with their more nurturing and holistic, less mechanistic and operation-based approach to childbirth.

An obstetric model that was also a paper doll reconciled two very different worlds: it helped women to understand the medical in material and cultural terms with which they were familiar. It also feminized medical practice and provided an acceptable narrative for thinking about female medical skill—not the same as the doctor's technical and forceps-focused skill but feminized, 'craftified', domesticated. Despite the longstanding presence of women and traditionally 'feminine' skills in medicine, and the increasing presence of qualified and registered women practitioners in the late nineteenth century, medical women remained difficult and anxiety-producing figures. Feminizing medical practices and objects helped people in the period to reconcile the disconnect between what medicine involved, and the roles and capacities felt to be suitable for (bourgeois) women (e.g. Brock 2017, 13). For example, at the Woman's Medical College (WMC) in

Philadelphia, where the first English edition of Shibata's *Phantome* was produced by Ada Howard-Audenried, the female medical students employed various feminine crafts to neutralize their medical practice. In 1876, WMC students provided objects for the Centennial Exhibition in Fairmount Park, engaging in the kind of work regularly undertaken by middle-class women, but instead of more conventional handicrafts, the medical students showed off their prowess in pharmacy (Peitzman 2000, 42). As Steven J. Peitzman notes, this was hardly the most cutting-edge or useful skill gained by the medical students, but it did have the advantage of producing beautiful objects, and so worked to reassure an anxious public that women could become doctors without losing their gender identity, becoming unsexed, mannish, or degraded. It also worked to feminize medicine, to indicate that skills traditionally associated with women did in fact form a crucial part of medical practice. Moreover, as Jessica Dandona has shown, students used the creation of photographs and albums to shape their personal and group identities as women practitioners (Dandona 2022). Here, again, the feminine-coded skills of album-making, often employed to construct the identity of family and social groups, was combined with the cultures of masculine fraternity in medical education.

Indeed, looking at this wider world of 'feminized' crafts supports my material and cultural analysis of Shibata's phantoms as dolls as well as medical simulators. Often left out of histories of medicine, fêtes and fairs were regularly used to spread medical knowledge, to raise political awareness or solicit charitable donations. In these spaces, dolls of all

**Figure 5**
**Anon., Barselhjemutstillingen 1916. Utstyr til helsestasjon [Maternity Home Exhibition 1916. Equipment for a health centre], 1916, photograph. Norsk Teknisk Museum.**

kinds rubbed shoulders with medical models, instruments, and tools. The 'Barselhjemsutstillingen' or Maternity Home Exhibition that toured Norwegian cities in 1916–17, for example, sought to improve conditions for women giving birth and raising young children. It combined anatomical models and medical equipment, medical and domestic dioramas, and less obviously medical objects like children's clothing and dolls (Loring 2023). Some of the dolls were used to model types of children's clothing, swaddling and diapering techniques, or in dioramas of clinics and homes, but others were simply toys, ranging from simple rag dolls to expensive porcelain fashion dolls (figure 5).[1] Cases such as this show that the realm of masculine medicine overlapped extensively with the feminine and the domestic, with the political, and with

the woman-influenced movements for social reform and hygienic education. The material cultures of all these realms were in constant conversation. Our current inclination to separate objects into disciplines: the obstetric phantom in one box and the paper doll in another, does not accurately reflect the way such objects actually circulated and interacted in the late nineteenth century.

Cases such as these puncture the myth of the 'separate spheres'. Medicine as a masculine profession and the female realm of the domestic were not so separate as medical rhetoric argued. Wives, sisters,

and daughters got involved in the work of their male relatives in all kinds of ways, from management to fundraising to assisting in medical practice. Increasing numbers of women *were* medical practitioners, from doctors and surgeons to midwives, matrons, and nurses (Brock 2017; Wells 2001; Blake 1990). Indeed, nursing is another overlooked sphere in which the feminine was centrally important to the practice of modern medicine (see, for example, Bashford 1998). Objects like Shibata's phantom were used to reconcile the seeming contradictions in this involvement. Medical rhetoric at the time and historic bias since has often rendered these 'feminine' influences on medicine invisible, but they must surely have formed an unignorable part of medicine to both practitioners and patients at the time.

**Medical Play**

This ideological shaping of midwifery as a particularly feminized branch of largely masculine medicine is borne out if we look more closely at the representation of the fetus in Shibata's *Phantome.* Compared to the fetal dolls of leather and bone or the preserved fetal cadavers used in the full-sized phantoms, Shibata's phantoms present a much more appealing, humanized, 'babified' fetus—one the user could conceivably mother as well as deliver. Not only are the fetuses appealingly sized to fit in the hand, but they are also subtly pink and represent less the fetus *in utero* and more the newborn infant: they have hair, serene expressions, well-fleshed limbs, and not a hint of an umbilicus. They are cute. In my book *Birth Figures,* I have described the long history of appealing representations of fetuses as babies in midwifery illustrations, where the image

makes an argument for medicine's capacity to produce beautiful and healthy infants, and indeed could act as an object of power towards these ends (Whiteley 2023). Shibata's phantoms fit this pattern, and in the material world of other kinds of obstetric simulation, they also make an association between feminine midwifery practice and the fetus as baby, whereas in more masculinized objects the fetus remains a fetus. Thus, the phantoms script not only medical play, but maternal and caring play much more broadly, by pointing both to living babies and to child and infant dolls.

I have handled Shibata's phantoms in several libraries, and I have made facsimiles using printed card, a hole punch, and split pins. In the library, I handled the objects with gentle care, examining them, attempting to pass them through the pelvis as the text instructs, and returning them to their pockets in the same position I found them. When I made my facsimiles, I was less gentle, more playful. I made them wave and dance on my desk, I joked with friends about using them as part of Christmas decorations, and when I was clearing up, instead of putting them away with my other facsimiles I set them up on a bookshelf so I could see them. I felt an immediate affection towards them, treated them more like dolls than like medical models. Other facsimiles I have made of obstetric paper models have not inspired the same reactions in me. Indeed, when divorced from the pelvis, as they easily are, there is very little to indicate that they *are* medical objects. Fetal skull measurements are printed on the heads, and the title of the pamphlet on the torso, but these are easy to ignore if what the user wants to see is a baby doll.

The great influence that codes of environment and expected behavior had over my interaction with these objects is indicative of the potentially wide uses they had for contemporary audiences. In the lecture theatre and the clinic, we may assume they were largely used as obstetric models for training, demonstration, or experiment. But these were pocket guides intended to be accessible to students directly: how did midwives use them among themselves, at home, or in the company of their patients? In these scenarios, where the obstetric phantom and masculine medical authority recedes, perhaps doll-play and paper crafting contexts restructured their use. My own material and affective engagement with these objects leads me to conclude that they invite not just structured learning, but play. Of course, play is a difficult concept to define, but we may use Brian Sutton-Smith's inclusive definition of "a very exciting kind of activity that players carry on because they like doing so" (Sutton-Smith 1997, 17). This is a helpful concept to establish here because it reifies a sensation I had when handling the objects, that they facilitated creative, open-ended and fun uses, they were not limited to a set of technical and closely-defined learning-oriented functions.

We have no written proof that women played with the phantoms as if they were paper dolls, but using Bernstein's concept of the 'scriptive thing', we can confidently assume that such uses were undertaken. Visually, as I have pointed out, the phantoms look more like babies or young children than like fetuses. Popular printed toys, albums and games would likely have offered a script for interacting with them. Late in the nineteenth century, paper dolls were only one form of a prolific

and diverse paper culture that encouraged both adults and children of a very wide variety of incomes to play with paper. Play styles ranged from world-creation, to narrative and domestic play, to identity and community creation, to subversive and even destructive play (Field 2019; Flanagan 2009, 28; Parsons 2020; Townsend 2018). As Bernstein points out, reading the visual scripting of Shibata's phantoms, in the context of late nineteenth-century paper culture, is arguably *stronger* evidence than written accounts of the objects' use (Bernstein 2011, 80). Textual sources, found in medical books and journals, tell us that these are tools of education, but the writers had a vested interest in controlling and limiting the narrative around these objects, indeed in using them to *create* rather than *describe* a particular kind of function. The scripting of the object itself, which encourages paper play, could certainly be rejected or subverted, but it would still have been *seen* by any 'competent' contemporary user (Bernstein 2011, 78–79).

So, what kind of play, exactly, would the phantoms have scripted? Dolls in the nineteenth century (and since) had both very specific intended play functions (mothering, dressing, social rituals, domestic work), and widely practiced subversions (death, injury, punishment, domestic conflict, identity change) (Formanek-Brunell 1993, 7–34; Marcus 2007, 111–66; Flanagan 2009, 27–33). Indeed, in the context of dollhouses, Frances Armstrong suggests that the presence of prescription itself encourages subversive play—the same might well be said for the medical model once the user is not under medical supervision (Armstrong 1996, 36). And how would these contexts have shaped the play of midwives and their

patients? Of course, they may have been very useful explainers of the process of birth for patients in the home as well as for student midwives in the lecture theatre. Midwives and patients may equally, or indeed simultaneously, have mothered and cared for these paper dolls, and indeed this kind of play is hard even to categorize as subversive. If it isn't the stated use in Shibata's text, it was considered a part of the midwife's duty and something she could hopefully regulate and improve in her patients. Mitchell and Reid-Walsh argue that feminist scholars have, in fact, spent too much time looking for 'subversive' doll-play and that "perhaps the act of handling the commodified emblems of conventional, Western femininity in a leisure activity has provided, and continued to provide, girls with a way to literally and conceptually manipulate the concept of commodified homogenous womanhood" (Mitchell and Reid-Walsh 2002, 202). The phantoms allowed midwives and their patients to handle and manipulate their expected roles as caregivers, healers, mothers. As such, in domestic spaces and between women, interactions with the phantoms might have included examination and admiration, use of the phantoms as models for hoping for and imagining a healthy baby, or more active mothering play including feeding, swaddling, kissing, and embracing. In the home, where most births still took place, the medical aspects of midwifery could not be separated from the domestic concerns of the patient and their family. The separation between the paper doll and the obstetric phantom would have been difficult to maintain.

Play with the phantoms might have been simply playful, but it might also have been more explicitly demonstrative. As I have already mentioned, midwives in this period were also increasingly becoming social regulators, expected to teach their patients skills in mothering and hygiene. The little pocket phantoms could easily become models not of the processes of birth, but the best techniques in washing, feeding, and dressing. Indeed, as Formanek-Brunell has shown, dolls in America in this period were explicitly presented as objects that "taught both middle- and working-class children the importance of health and hygiene in the home" (Formanek-Brunell 1993, 5). The dollmaker Martha Chase even produced a range of dolls specifically to teach medical subjects. A full-sized female doll was produced for training nurses, and a series of infant dolls of different ages were used as part of social reformist education drives. In these classes, the dolls were used to enact, literally to play, the approved methods of mothering and domestic maintenance (Formanek-Brunell 1993, 85–86). So why not Shibata's phantoms? In the pocket of the midwife, they might well become demonstrators for all kinds of care practices and medical treatments.

This interpretation of the phantoms also demonstrates how women empowered themselves and valued their own knowledge and skills within a deeply patriarchal system of medicine. Unlike in the medical schools, where care and sociability were ever more strictly separated from medical practice, the paper dolls in the home embodied a different kind of expertise. For some this may have been a consciously 'proto-feminist' act: to educate and empower women as experts in childbirth and childrearing. For many more, it was a less consciously political turning away from the realm of masculine medicine,

and an acknowledgement of the importance of one's own authority, within the home, and among communities of women. In these spaces, just as the domestic could not be separated from work, play could not be separated from care.

Play and learning are of course deeply entangled processes, but not always with such explicit outcomes as described above (Sutton-Smith 1997, 18–34). For some midwives, the disconnect between the abstracted and dehumanized patient in the clinic, and the actual women and infants they attended, often in their own homes, may have been very great. The phantoms might have worked to reconcile these two identities through play—by endowing the phantom with life, the medical fetus and the social baby could be drawn together. Another disconnect in the identity of the newborn was between the ideal healthy child of the obstetrical textbook and the many sick and failing infants that midwives inevitably encountered in their practice. There is much evidence that, in the late nineteenth century, not only did children use dolls to play out scenes of sickness and death, but such play was a recognized phenomenon, and one catered-to by commercial toy companies (Formanek-Brunell 1993, 20 and 32; Armstrong 1996). In the context of a culture familiar with doll sickbeds, miraculous recoveries of dolls, and doll funerals, Shibata's phantoms may have lent themselves to the processing of infant morbidity and mortality through play. Such play, which can be done casually, almost unconsciously with these little hand-sized paper dolls, may have allowed midwives to process difficult aspects of their jobs.

As the case of Martha Chase's dolls show, learning delivery techniques, practicing infant care, processing the difficulties of a medical career, and negotiating social identity all count as more or less 'sanctioned' kinds of play with the paper phantom. Other kinds of play may have been more expressively subversive. While such aspects of medical culture have left little evidence, and have been little studied, we do know that dark and morbid humor was a widespread cultural reaction to the difficulties of medical study and practice (Sappol 2002, 74–97; Peitzman 2000, 90). Many medical students, for instance, personified and developed comical and affectionate relationships with the skeletons in their classrooms and the cadavers they dissected. Midwives may have done the same with their paper phantoms. It is so easy to make them dance, wave, and perform contortions, and this kind of play may have felt needful to young women working in demanding studentships, or midwives balancing caseloads with financial, emotional, and academic pressures. To make the phantom caper might have been a release from the sadness of losing a patient, a step back from the pressure of a challenging exam, or an act of defiance in the face of an oppressive or misogynistic supervisor or teacher. To make the medical model a tool for the subversion of the medical system and its hierarchies may have offered a profound relief for those at the bottom of the pyramid: students, midwives, patients.

But what of the male medical students? In many of the editions of the *Phantome*, it is they and not midwives who are identified as the primary audience. Did they engage in any of this wider doll culture? Certainly, they must have been aware of

it, just as they were aware that obstetrics was still seen as a 'low' and almost shameful discipline within medicine largely *because* of its association with women. But, on the other hand, boys and men were not wholly estranged from dolls. Formanek-Brunell shows that American boys in the nineteenth century often played with dolls, though she notes that, "While girls pretended to be little mothers to their dolls, boys often assumed authoritative public roles such as doctor, preacher, and undertaker to sick, dying, and dead dolls" (Formanek-Brunell 1993, 30). Doll-play was feminized, but not to the exclusion of male engagement. Indeed, perhaps it was seen as somehow suitable that these male students employ a doll-model in this feminized realm of medicine. They could turn it to their own ends in enacting more heroic, medicalized, and tool-oriented births, or by using it as a symbol of their authority over midwives and patients (see Blackwell 2000; Wilson 1995; Yeniyurt 2014). Other aspects of humorous and affectionate play with these mobile infants may have been just as appealing, rewarding, and cathartic to men as women. By centering supposedly feminine contexts (handicrafts, dolls, and doll-play) we gain an insight into the experience of women in the realm of medicine. But we also enrich our understanding of men's experience of medicine: the feminine aspects of its practice that surely existed, yet rarely reach medical histories.

**Ningyō**

Germany, the USA, and Canada each had their own individual cultures of medicine, print, and play, but the increasingly global and hegemonic power of 'Western' medicine, and the globalized trade in recreational prints and toys, meant that these cultures were also linked and increasingly mutually influential. The most popular obstetric phantoms, including Shibata's, predicated their success on their export to and use in many countries, both in Europe and America, and increasingly in the countries these Imperialist nations colonized (Maerker 2019, 186–89; Nott and Harris 2020).

Japan, the other place where the phantoms were published and where Shibata built his career, deserves a more individualized look. While this section does not constitute a full study of Shibata's phantoms in Japan, I consider it essential to recognize and to sketch (as far as research constraints allow) a Japanese history of the object *alongside* that of Germany and North America. As Martin W. Lewis and Kären E. Wigen have pointed out, some definitions of that amorphous concept of the 'West' include Japan on the grounds of economic power and shared culture (Lewis and Wigen 2014, 56–57). Indeed, by the late nineteenth century, Japan was well into its project of 'modernizing' the country by adopting aspects of European and North American culture, including both medical training and popular print (Zohar 2020; Zohar and Miller 2022). The medicalization and professionalization of midwifery in Japan happened very quickly in the late nineteenth and early twentieth centuries, in some ways enacting at warp speed the process undergone in Europe (Kim 2014). Traditional midwives and their practices were denigrated by doctors, and new young midwives were recruited, trained in schools in major cities, and sent back to their homes not only to improve practice, but to provide a bridge between medical and state authorities and their communities

(Terazawa 2018; Homei 2005). As such, the medical pedagogic role of Shibata's phantoms in Japan likely bore a strong resemblance to their role in the other places they were published. They were used in the midwifery and medical schools to explain and to model fetal presentation. They linked the patient body and the textbook illustration, and they worked as a cheaper and more accessible version of the full-sized phantoms owned by midwifery schools and lecturers (Shibata 1893, 7).

But as this article has demonstrated, Shibata's phantoms were objects that invited other kinds of uses and easily made their way into other social and professsional contexts. As in Europe and North America, while there is little direct evidence of midwives owning these phantoms, it is one of the purposes stated in the Japanese preface (Shibata 1893, 8). Yuki Terazawa also cites evidence in her book *Knowledge, Power and Women's Reproductive Health in Japan, 1690-1945* of midwives training almost exclusively on 'paper models' (Terazawa 2018, 141). Indeed, the affordable paper models would have provided midwives with a useful tool not just for study, but for engagement with their patients. Even more so than in Europe and North America, because the cultural change was being propelled much faster, many people objected to the new and medicalized practices of the *shin-sanba* or new midwives, and persuasion and explanation made up much of their workload (Nishikawa 2003, 91–98; Homei 2005, 74–76; Terazawa 2018, 141–54).

Because the phantoms in Japan would have had an association with foreign medicine and perceptions of and

practices on the body that were still both strange and much at odds with more established medical systems, it is even more likely that the phantoms were used and interpreted in many different ways by varied users. Added to this, Japan had a longstanding and important culture of *ningyō,* most often translated as 'doll'. In Japanese culture, however, *ningyō* had much greater reach and prestige than Western dolls. They could be works of art, they could be objects of political power, or ones of religious or emotional importance. They could be life-sized or miniature, made of many and various materials from wood to cloth to paper, and they could be fully three-dimensional or flat paper models. Alongside their many other uses, *ningyō* in Japan could be children's toys, fashion models, and medical teaching aids (Pate 2005; Hodge 2013). Shibata does not use the term 'ningyō' in the Japanese editions, just as 'doll' is not used in the English ones, but this does not mean that there was no cultural overlap with *ningyō*, or even that Shibata would have objected to such a connection. The rhetoric of medicine presented a culture much more technical, unified, and homogenous than that encountered in actual practice. In reality, many aspects of *ningyō* culture would have been readily available to script the uses and interpretations of Shibata's phantoms.

*Dō-ningyō* or 'bronze dolls' were originally produced to teach acupuncture according to the tenets of Chinese medicine. These often-life-sized dolls were originally made in bronze, though later were produced in other materials. Well before the Meiji era (1868–1912), though with increasing rapidity after the forced opening of the borders in 1853, Western medicine became more thoroughly incorporated

into Japanese practice. So, the term *dō-ningyō* came to be used also for Western and Western-style anatomical models (Pate 2005, 273–74; Hodge 2013, 88–92). Combining these Western anatomical models with an increasing interest in extremely life-like dolls called *iki-ningyō,* dolls representing the stages of pregnancy and the processes of birth were produced in the nineteenth century. Different sets of models simulated: gestational development, different positions of the fetal head during birth, and the physiology of birth using a flexible fetal doll and full maternal body ("Mechanism Arts in the Edo Era" 2001). These models were surely influenced by European obstetric phantoms and anatomical waxes, but also adopted Japanese craft techniques and interests. They also had a complex cultural life in Japan—not simply tools of medical education but also popular entertainments. Anatomical and obstetric models were an established aspect of the great street fairs that grew up in Edo called *misemono* (Pate 2005, 268; Hodge 2013, 98–99; Markus 1985, 521). The double life as professional tool and public spectacle has resonances with the popular anatomical museums and shows that spread around Europe in the nineteenth century, though there they had been mainly suppressed by the 1890s, and anatomical museums more firmly established as private spaces for professionals (Alberti 2011; Bates 2008). In Japan, however, the interest of lay people in Western anatomy was catered to by models that were intended to produce wonder and to entertain, as well as to inform. It is easy to imagine, then, that Shibata's phantoms might have served a similar purpose, where a doctor or midwife wanted to educate or entertain a patient. Indeed, the knowledge of fetal presentation and the mechanics of

birth was the same as these older pregnant *ningyō* were already providing.

This was not the only context that likely informed interpretations of Shibata's phantoms. Popular print, and especially woodblock, was of great importance in the nineteenth century in Japan. Again, the medium incorporated some aspects of modern Western print culture alongside longer-standing visual and technological traditions. Meiji popular prints included Western style paper dolls with both traditional and Western fashions that could be overlayed using tabs (Salter 2006, 135). Other prints took foreign bodies as their subject, depicting the features, dress, and actions of the foreigners who were present in Japan in increasing numbers (Fabricand-Person 2012). More broadly, paper dolls formed part of toy prints in many ways—from 'big sister' fashion dolls to elaborate paper theatres (Salter 2006, 130–201). All this is to say that Japanese users would have been primed, much like their Western counterparts, to *play* with Shibata's phantoms (Salter 2006, 163). In Japan, too, they may have had an added interest in being interpreted as 'foreign' bodies, as Sonia Favi and I have discussed in our chapter 'Phantoms of Race' (Favi and Whiteley forthcoming). The features of the fetuses are not overtly racialized and while they might have been strongly identified as objects of a foreign Western epistemology by some, others may have seen and understood a Japanese infant, particularly within the growing rhetoric that identified the Japanese race as superior, essentially more 'white', than neighboring and colonized Asian races (Kowner 2016). Midwives, medical students, and lay people may simply have used the phantoms as toys unrelated to their pedagogic aims,

or as objects of release from the anxieties of medical study or the contradictions of clashing medical cultures. They may also have used the phantoms when engaging with patients, employing longstanding cultures that associated both prints and *ningyō* with the promotion of health. The Meiji period had also seen a much wider and more radical shift of attitude in terms of women and girls' education and their role within the home. According to Koyama Shizuko, Edo period thought placed little emphasis on the skills of motherhood, but the Meiji concept of *ryōsai kenbo* or 'good wife, wise mother', argued that women needed to be educated so they could be active mothers (Koyama 2013, 11–52). This shift in attitude was deeply entwined with the perceived need to improve both the 'quality' and number of Japanese citizens. In this context, just as in Europe and North America, the adaptability of Shibata's phantoms may have made them useful didactic tools not just for midwifery but for mothercraft.

Both prints and dolls were used as medical charms or talismans in Japan. In general, *ningyō* "functioned in both perceptual and practical ways to preserve and promote an individual's health. Perceptually, *ningyō* were culturally empowered with the capacity to divert disease and evil influences, absorbing the malevolent, and thereby purifying the individual" (Pate 2005, 268). Particular prints were employed to ward off measles and smallpox. Some dolls were produced as something between art object and talisman specifically for pregnant women and infants. Crawling baby dolls were produced to celebrate the birth of a baby, and acted as talismans that drew evil influences away from the infant (Pate 2005, 24). Other

kinds of baby dolls were kept specifically in the birthing room to protect the birthing woman and child (Pate 2005, 177). In this context, the identification of Shibata's phantoms with a talismanic power seems entirely possible. Childbirth cultures in Japan changed sporadically in the late nineteenth and early twentieth century and while some Westernized physicians may have scorned such practices, that would have done little to diminish their power. The 'new' midwives had a particularly tough time in combating traditional childbirth practices, and for them the phantoms may have been conveniently flexible—protective talisman one minute, medical explainer the next.

We cannot know which, if any, of these cultural contexts were employed when users encountered Shibata's phantoms. But a study of prints and dolls in Japan more broadly does suggest that Japanese users, professional and lay, would have approached the phantoms with the ability to interpret variously, and to incorporate new Western medical epistemologies with existing knowledge systems that were still highly valued. As the phantoms spread, were purchased, used, and copied, it is simply unlikely that they remained exclusively in the medical pedagogic realm as explainers of fetal presentation. Indeed, it is important to look beyond the narrative of Western medicine as imposed wholesale upon Japan. Rather, Japanese people consciously incorporated Western knowledge and objects to the degree they felt was most effective and appropriate. Moreover, not all users would have approached the phantoms from a purely Japanese or Western cultural background: by the late nineteenth century, increasing

numbers of Japanese were emigrating to America and other parts of the West, and white Europeans and Americans had an increasing presence in Japan. The combinations of midwifery cultures described by Susan Smith in her study of Japanese American midwives, for example, demonstrates just how fallacious it would be to propose particular 'Japanese' or 'Western' interpretations of Shibata's phantoms (Smith 2005). What a consciousness of wider cultural contexts shows is that Japanese audiences were primed to invest the phantoms with power, agency, and humanity, and to use them as tools in their ongoing negotiation of Japanese modernity.

## Conclusion

Play is a difficult word—it is hard to define, to characterize, or to limit. In Western culture today we see play as both an inherent capacity of the human species, and also a highly specific cultural phenomenon (Sutton-Smith 1997). The word is, some might say, too diffuse to be useful. And perhaps my employment of it to describe the use of medical phantoms for learning is a case in point. But it can also be argued another way: by using 'play' to think about medical history we open new avenues both for the kinds of histories we can tell, and how we tell them. I argue that play is useful both as a concept for thinking about medical learning in the past, and for how methodologically we undertake the writing of such histories. Play can be an antidote to the earnestness of medical histories; yes, medical training in the nineteenth century, as today, was a serious business, it involved hard work and commitment, and encouraged a detached professionalism. But we *know* that humor, play, and

the breaking of social codes was also a crucial part of the experience of medical training in this period (see, for example, Kerley 2014). We also know that tracing these histories is harder—there are fewer records, and indeed there are many records that deny or forbid the presence of play, humor, and the personal in the realm of medicine. So, too often, we end up excessively cautious about discussing these parts of medical culture. We need to take a leaf out of the 'play' book.

Attention to the material possibilities of Shibata's phantoms, combined with a consciousness of their cultural contexts, can give us a much richer and more inclusive history of their use. This involves a kind of play on the part of the historian, an imaginative wondering about how, why, and what is possible. We are very unlikely to uncover multiple first-hand sources describing midwives' use of their paper phantoms, yet thinking about these histories is still important. There is a place for speculative play in writing histories that include the unspoken-for. Thinking about Shibata's phantoms as paper dolls and objects of play, we can see the playful in medical culture, we can understand the richness of the midwife's working life, and the complexity of the epistemologies of childbirth in the birthing room, where new and old social and medical traditions met. And, indeed, we can allow ourselves to play with objects that so obviously and kindly invite us to do so.

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# PATRICK CARROLL

Independent Scholar

## *The Stone Fireplaces of Denendeh*

"The era of the stone fireplaces is very deeply embedded into Tlicho memory and history."
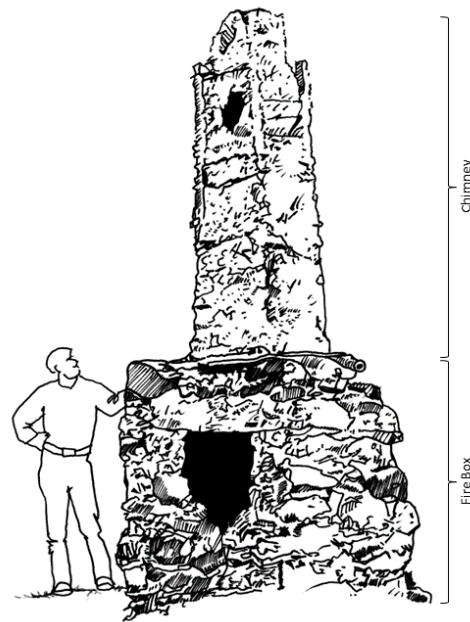    — John B. Zoe

In various locations in the Northwest Territories—from Great Bear Lake to the east end of Great Slave Lake and west to the junction of the Liard and South Nahanni rivers—there are the remains of log houses, constructed of squared logs with dovetailed corners, with wooden plank floors, gable roofs, and stone fireplaces (figure 1).[48] These remains date from the early nineteenth to the early twentieth century. The log houses and associated stone and clay fireboxes with wooden framed clay chimneys were built by the Dene, the Indigenous people of Denendeh.[49]

The log house and fireplace designs were adapted by Dene craftsmen based on examples they encountered when engaging with Euro-Canadian traders and explorers (figure 2). The Indigenous houses and fireplaces were built during a period of transition in Dene culture, at a time when they began the process of integrating into a fur trade economy. The fireplaces and houses are elements of Euro-Canadian vernacular architecture adapted by Indigenous people in the north. The Indigenous houses and fireplaces are an example of cultural diffusion, the process by which ideas are spread between cultures and, in some instances, they might have also been expressions of social status. In most cases, other than memories, all that is left today of these houses is a mounded outline representing the footprint of the structure and a pile of rubble that are the remains of the fireplace. Using primary and secondary sources of information this article will explore the cultural heritage of the stone fireplaces of Denendeh.



**Figure 1**
**Tłı̨chǫ Chimney Project webpage. The webpage provides background on the stone chimneys as well as video documentation and a link to the "Tłı̨chǫ Chimney Project" report (Clarskon 2010). Tłı̨chǫ Chimney Project | Tlicho History (https://tlichohistory.ca/en/stories/tlicho-chimney-project)**

**Figure 2**
**Drawing of Fort Reliance fireplace identifying the firebox and the chimney. P. Carroll.**

A member of the Tłı̨chǫ (tlee-cho) Nation and an advocate for the preservation of Tłı̨chǫ fireplaces, John B. Zoe wrote:

> In the 1850s when the fur trade eventually reached the Tłı̨chǫ, trading posts and support buildings were built … These buildings required heat, so local rocks and clay material were used to build fireplaces and chimneys. These were the technologies brought in from further south accompanying the pioneers who went into the hinterland to set up trading posts. When the Tłı̨chǫ first entered the trading posts, they observed the buildings and the fireplaces and eventually they replicated within their harvesting areas what

they saw for their own Trading Chiefs. (Clarkson 2010, 3)

I was familiar with John B. Zoe's writing about the Tłı̨chǫ fireplaces when, in 2021 I visited the Hudson's Bay Company's wintering post, Fort Reliance, also known as the site of Back's Chimneys, on the East Arm of Great Slave Lake.[50] Zoe's writing about the Tłı̨chǫ fireplaces and their association with Dene Trading Chiefs engaged my interest in the cultural heritage of these architectural features (Clarkson 2010; Zoe and Dunkin 2020). Visiting the fireplaces at Fort Reliance I was struck by their deteriorating condition. Zoe's writing also made me aware of the fragility and cultural value of the Tłı̨chǫ fireplaces and, furthermore, of the relevance of the fireplaces as a point of cultural connection between the Indigenous and non-Indigenous people in this part of the north.

My curiosity was piqued. What was available to support and elucidate the relationship between the Euro-Canadian fireplaces and the Dene fireplaces? Who are these Indigenous Trading Chiefs and how did they function within Dene society? How did the fireplaces express social values and hierarchies? Do the fireplaces reflect a period of cultural change among the Tłı̨chǫ? Why did the Dene stop building stone fireplaces and log houses? What can the Tłı̨chǫ fireplaces tell us about other sites in the broader region where fireplaces have also been identified, specifically Chimney Point on the Liard River? Taking my lead from John B. Zoe's comments, I indulged in a search for answers to these questions, beginning with the memories of the Dene themselves.

## Traditional Craftsmanship: Building a Chimney

From 1991 to 1993 Tłı̨chǫ elders and community members worked with archaeologists from the Prince of Wales Northern Heritage Centre to record traditional knowledge and document cultural sites associated with the Įdaà Trail that runs between Great Bear and Great Slave lakes. Many of the memories of the Tłı̨chǫ quoted in this article are taken from the three-volume archaeological permit report compiled by the Government of the Northwest Territories (GNWT 1999a, 1999b). The following description of a fireplace's use and construction was provided by an elderly Tłı̨chǫ woman who recalled stone fireplaces being used when she was a child (c. 1910–1920) and her aunt's memories of the effort required to build them:

> Yes, that's all they used to use at that time because there were not [iron] stoves back then … my aunt took me in and raised me … we came back to Hislop Lake. There were houses there, people were living there. But people didn't live in some of the houses. And at that time, there were mud fireplaces and chimneys. I was a bit older and I've seen fire burning inside these things. I have seen that … and that's all they had there. There was a fire burning and smoke coming out of the chimney. That's what they used to cook their food with and for heat. That's all they used to use at that time. I have observed fire burning in those things … My aunt used to tell me stories. And I would ask her what

they used to make these fireplaces and chimneys. I have not observed them making these things because they probably made them when I was still very small. And I ask her about it. She said they would backpack, haul all the mud, with rocks mixed in there. And they would mix it all with water. So, with the mixture of mud and rocks they would churn that. And as they build the fireplace up, it would dry. They place the rocks on top of each other and build it like that. They smear it with mud that's like water, they cover it with mud. So, when it dries, it hardens like that. And there are rock mixed with it, so that's how they were able to have fire burning in there. (GNWT 1999b, 73–74)

The speaker's memories belong to the end of the era of the stone fireplaces as she does not recall seeing any being made but she does note the transition to iron stoves. The following description draws on the memories of an elderly Dene who shared his knowledge of building fireplaces.

In 1974, archaeologist Robert Janes conducted excavations at the Northwest Company's post, Fort Alexander, which operated between the years 1817 and 1821 at the junction of the Willowlake and Mackenzie rivers in the Northwest Territories. Janes's excavations, supported by his crew of four assistants from the Mackenzie Region, included the remains of several stone fireplaces. The eighty-four-year-old brother of one of his Dene assistants "could recall constructing fireplaces in the early 1900s, very similar to the ones uncovered at Fort Alexander" (Janes 1974, 32). What

follows is an extended description of a fireplace's construction based on Indigenous knowledge as well as the archaeologist's observations:

The lower portion of the fireplace, approximately 4–5 feet in height, was constructed of river cobbles using river mud as a mortar. The mud would burn and crack and then more mud would be added. Eventually the exterior surface would become very smooth through this process. The fireplace was constructed upon large, flat rocks, as wooden flooring was not laid where the fireplace was to stand. The flat basal rocks were arranged in such a manner as to form a concave depression to allow the accumulation of ash. In this way constant ash removal was eliminated.

The chimneys of Fort Alexander fireplaces were constructed of wattle and daub. The wattle, or framework, was made of round sticks about 1–2 inches in diameter. Specific details concerning the manner in which they were fastened together to form the framework is lacking. Our informant stated that he used nails. Evidence for the use of nails in this manner is lacking at Fort Alexander, and it is possible that the sticks were woven together in wickerwork fashion to form the framework. River mud was then packed both inside and outside this wattle framework, forming the chimney. Constant upkeep was necessary, as the mud would dry out with repeated use of the fireplace, become brittle and break off. Renewing this mud, or daub, was a regular chore. The fire

hazard inherent in this type of chimney construction is obvious.

The chimney was joined to the stone fireplace by uprights which were situated in each corner of the fireplace. Apparently, these uprights could have been located outside of the fireplace proper or inserted in the stonework. More detailed information on this aspect of construction is not available. (32–34)

The previous quotations show that knowledge of stone fireplaces persists in Dene culture. As physical features, though, very few Indigenous or Euro-Canadian examples still exist. In 2010, the remains of several fireboxes were still standing at Faber Lake in the Tłıchǫ region south of Gameti, in the Northwest Territories (figure 3) ; in 2011, one chimney and the remains of a firebox were all that were still standing of the four fireplaces at Fort Confidence on Great Bear Lake (figure 4 and 5); and in 2021, the remains of two chimneys and two fireboxes were still in place at Fort Reliance National Historic Site on the East Arm of Great Slave Lake (figures 6, 7, and 8). These three sites represent the extent of known, relatively intact remains of stone fireplaces in the Northwest Territories of Canada. These three sites also represent a period of relatively intense cultural contact and cultural influence for the Dene during which they transitioned into a fur-trade economy and a system of colonial governance.

**Figure 3**
Remains of two stone fireplaces at Faber Lake in 2010. Tłı̨chǫ Chimney Project | Tlicho History (https://tlichohistory.ca/en/stories/tlicho-chimney-project)

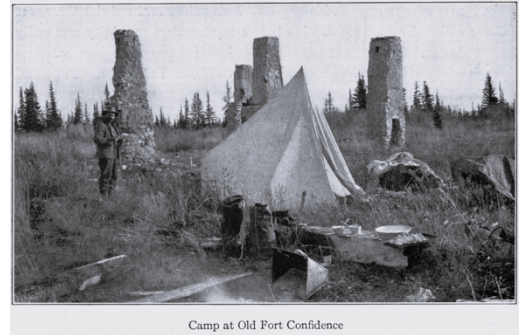

Camp at Old Fort Confidence

**Figure 5**
Fort Confidence in 1911. George Douglas from "Lands Forlorn: A Story of an Expedition to Hearne's Coppermine River," 1914. Internet Archive: https://archive.org/details/landsforlornstor00dou-guoft/page/144/mode/2up.



**Figure 4**
Remains of Fort Confidence chimneys in 2011. A. Bunker, "Bunk's Outdoor Angle," Aug. 16, 2011. https://bunksoutdoorangle.com/awarded-the-arctic/



**Figure 6**
Remains of one of four chimneys at Fort Reliance in 2021. Notice the wooden lattice framing the chimney. P. Carroll.

**Figure 7**
**Chimneys at Fort Reliance in 1900. J.W. Tyrell, "The Barren Lands Collection." University of Toronto. Photo reference no. barrenlands_P10083_0001. https://discover-archives.library.utoronto.ca/index.php/joseph-burr-tyrrell-papers.**



**Figure 8**
**Remains of one of four chimneys at Fort Reliance in 2021. P. Carroll.**

## The Incipient-Early Contact Period in the Upper Mackenzie Region

Throughout the time-period covered by this paper, Dene culture can be understood as being in a state of transition and adaptation to a way of life that accorded with the emergence of a fur-trade based economy. Changes in Dene society included increased sedentism and a social structure based around the fur trade.

The phrase "incipient-early contact" was proposed by ethnologist June Helm[51] as a way of identifying periods of transition in Dene culture in the Upper Mackenzie

Region arising from contact with Euro-Canadians (Helm et al. 2000). The incipient-early contact stage is followed by the contact-traditional stage. The progression between the two stages is defined by increased direct engagement between Indigenous and White cultures and the degree to which the Indigenous groups become integrated into the fur trade. During the incipient-early contact period the Indigenous group has access to trade items either through Indigenous intermediaries or direct contact with Euro-Canadians. In this period, Indigenous groups are not dependent on these items and are therefore not fully committed to a dual economy and the subsequent social changes that more sustained contact will bring. The contact-traditional stage begins once a group has regular contact with a trading post resulting in changes in seasonal and social behaviour arising from involvement in the fur-trade economy. For a variety of reasons, the degree of contact and rate of cultural change occurred at different times for different groups. In general, the transition from incipient-early contact to contact-traditional in the Mackenzie Region occurred between 1800 and 1850.[52] Key historic events to affect this transition include the amalgamation of the Northwest Company (NWC) and the Hudson's Bay Company (HBC) in 1821 that created a fur trade monopoly for the HBC, and the transfer of Rupert's Land from the HBC to the Government of Canada in 1870. Amalgamation resulted in a more intensified effort by the HBC to expand the fur trade into the hinterlands of the north. The acquisition of Rupert's Land by the Canadian government initiated an influx of non-Indigenous pioneers and settlers and increased the rate and influence of contact on Indigenous peoples who were already being impacted by Western culture through engagement with the fur trade and religion.

Dene society went through various stages of adaptation throughout this period of increasing contact. The role of Trading Chiefs was created by Euro-Canadian traders who sought to establish alliances with individual Indigenous groups. Indigenous groups, likewise, addressed the increasing value of trade by incorporating the role of intermediary, or Trading Chief, into their social structure. At first with responsibilities limited to representation of their social groups at trading posts, the role of intermediary became a more central part of a community's social structure, eventually becoming part of the characteristics required for successful leadership.

**The Rise and Demise of *Donek'awi***

In his ethnography, "Moose-Deer Island House People," David M. Smith writes about traditional Dene leadership in the Fort Resolution area (Smith 1982, 33–37). According to Smith, a leader was ultimately the person that would best provide for his followers. Authority was exerted through kinship, strength, charisma, and ability to organize successful hunts resulting in the redistribution of food. Smith identifies two levels of leadership: the local and the regional. Local leadership was considered subservient to the regional leader, but both levels were fluid and dependent upon their successful ability to provide for their followers. While the Dene remained not dependent on the fur trade and utilized trade on their own terms to supplement their needs, traditional leadership roles persisted and the

Trading Chief remained a secondary figure whose authority did not extend beyond the trading post. As the Dene became more immersed in and dependent on the fur trade economy, the role of the trade intermediary appears to have been adopted by the existing leadership and became an expression of their social status as a provider (Smith 1982, 64–66). This rise in authority of the role of the trade intermediary corresponded with changes in traditional economies and in subsistence patterns resulting in the creation of settlements that included the building of log houses and stone chimneys.

Rather than using the phrase Trading Chief, Helm uses the Dene word *donek'awi* [53] which translates as 'people's trader' in reference to their role in representing their community group in trading at an HBC post. Helm states *donek'awi* was a "leader who operated as a Trading Chief by receiving supplies on credit from the [HBC] with which he aided his followers" (Helm et al 2000, 152). Over time, the role of intermediary at trading posts grew in social authority. This transition can be understood as the secondary role of Trading Chief becoming the more authoritative *donek'awi*.[54] From being only one of a variety of subsistence strategies in the earliest days of contact, trade with fur traders and consequently the role of *donek'awi* became central to Dene social organization until the position's dissolution with the arrival of free-traders in the mid-twentieth century and the collapse of the HBC's trade monopoly.

Zoe, while travelling on ancient Tłı̨chǫ trails in the mid-1990's, recalled:

We saw from the canoe making sites at Nı̨dzı̨ı̨ka Kògolaa on Semı̀tì (Faber Lake) that this was a traditional campsite. However, the presence of a stone chimney … revealed that this camp continued to be used during the fur trade era. The stone chimney was once part of a log cabin belonging to K'aàwı̨daà, a well-known Tłı̨chǫ Trading Chief. Trading Chiefs often built cabins in central locations, filling them with goods they received on credit from the HBC or free traders. Over time, they exchanged the goods in their cabins for furs from hunters and trappers. When the cabin was full, the trading chief, along with a brigade, would travel to the post. (Zoe and Dunkin 2020, 5–6)

In the earliest contact period, the Trading Chief's value was primarily dependent upon his success in trading. His social authority very seldom extended beyond being an intermediary at the trading posts. Writing in the 1770s, the fur trader and explorer Samuel Hearne noted that "the authority of those great men, when absent from the Company's Factory, never extends beyond their own family; and the trifling respect shown them by their countrymen … proceeds from motives of [self] interest" (qtd. in Helm et al. 2000, 173). Sir John Richardson wrote in 1851 that "a free expenditure by the chief of the presents that he receives from the traders, and even of his produce of furs, is the main bulwark of his authority" (qtd. in Helm et al. 2000, 185). The Trading Chief had a role to play, although, in the earliest period of contact it was a lesser role in Dene community structure because Indigenous groups remained aloof of the fur trade.

Joseph Naedzo spoke about the increased influence that the role of fur trade intermediary would acquire for the Dene as it transitioned from the secondary Trading Chief to *donek'awi*. June Helm described Naedzo as a highly respected Tłı̨chǫ elder and prophet when she interviewed him in the 1960s. Born in 1887, Naedzo's life spanned the many changes occurring through the contact-traditional period. Naedzo recalled, "We had a good time in the old days, because there was just the post manager and his [Metis] interpreter and the mission [priest]. These were the only three whites" (Helm et al. 2000, 164). According to Naedzo,

> Everybody follows *donek'awi* in those days. Whatever *donek'awi* says, we do. Which way you're going to go to trap, to hunt, *donek'awi* knows the country. He knows where there are marten, fox, where you can find muskox. Groups of five or six trappers and their families would go different directions for fur. We used to get all kinds of fur in those days. *Donek'awi* used to bring all kinds of fur, many bales, to the trader. The more fur they bring, the more side pay *donek'awi* gets. In those days, it couldn't be better, everyone was so happy, everything was going fine. (164)

In Naedzo's example, the authority of *donek'awi* is based upon his knowledge of the land and his ability to organize his followers to successfully procure the resources the land provides. His leadership is based on traditional criteria as described previously by Smith for the Fort Resolution area, but he is also directing his followers' efforts toward the trapping of fur which he will take to trade on behalf of his community. As described by Naedzo, the role of trade intermediary had become a key part of the *donek'awi*'s leadership role.

Among the three *donek'awi* that Naedzo identified for the Fort Rae trading post region was a man named K'aàwıdaà. K'aàwıdaà was repeatedly referenced as the *K'awi* in the oral histories from Tłı̨chǫ living near Fabre Lake, where there is a settlement with the remains of log houses and associated stone chimneys (GNWT 1999a).

In 1962, Vital Thomas, an Indigenous member of the Tłı̨chǫ Nation, provided Helm with a Tłı̨chǫ perspective on the role of *donek'awi*. According to Thomas:

> There couldn't be any higher man; he was a great man. If strangers came, they asked for *donek'awi's* tent. They shook hands with him before anyone else, and he had to feed them all. The Hudson's Bay Company used to give all kinds of supplies, clothing, and ammunition to *donek'awi*. (Helm et al. 2000, 185)

According to Thomas, the *donek'awi* was personally responsible for the welfare of his group, or followers:

> *Donek'awi* and his helpers had to feed the whole band, so pretty near all of the Indians had to follow him to whatever place was a good hunting place, a good trapping place. Maybe there would be a hundred people following him and everybody got the same amount. He didn't charge anything. It did not matter if

a man was poor, lazy, or lame. *Ek'awi* had to help everyone. (186)

Anyone could follow any *donek'awi*. Leadership was based on the strength of the personality and personal ability of a leader to provide his followers with success in hunting, success in trapping, and success in trade. As contact and involvement in the fur trade grew, access to trade goods and the role of trade intermediary gained equal authority to the other qualities that defined leadership.

By the end of the nineteenth century, major social and economic changes came to the Mackenzie Region instigated by the transfer of Rupert's Land to the Government of Canada. Among these was the arrival of free traders. These were traders that operated independently of the HBC, consequently creating a more competitive and less-regulated fur trade. The authority of *donek'awi* was to be challenged by the vagaries of aggressive capitalism. According to Vital Thomas, "When Old Hislop [the first free trader] came, then there were two traders [the HBC and Hislop.] Everybody could [and did] go anyplace, wherever they wanted to. And that's how they cut out *donek'awi*" (186). In describing the end of the *donek'awi* period, Naedzo is much more succinct: "I told you that we had a good time and lots of fun, because there was just straight Indians, no whites. We didn't have to worry about anything … And then almost all the old people died and all the *donek'awi* also died" (164).

Contact, spurred by a dramatic influx of Western institutions and settlers into the North, was manifest in the fur trade by a shift in control in favour of the trader. The Dene had completed the transition to a fur-trade-based economy. Trade items were no longer acquired by Trading Chiefs on behalf of their community, rather Indigenous traders travelled to communities on behalf of trading companies; the difference is subtle, but it expresses the dissolution of this aspect of the Dene social structure and a diminishing of their cultural independence:

> The [Indigenous] free trader was designated *naindidon*, "buy-and-sell man." Very shortly, in place of the *donek'awi* emerged the counterpart of the white free trader, the Indian *naindidon*, who operated as a kind of exchange conduit between a trader at the fort … and the Indian trappers in the bush. (152)

*Donek'awi* were given 'side pay' or benefits from trader's for bringing in furs and maintaining their group's relationship with a specific post. They remained a respected member of their community and were understood to be working for the benefit of their followers. The *naindidon*, in contrast, was provided with a commission of free goods and seen as working for the trading post, that is, no longer solely representing the interests of the Indigenous community; "unlike *donek'awi*, the role of *naindidon* did not per se involve band leadership" (153).

**Indigenous Fireplaces and Log Houses**

Stone fireplaces co-exist with the log houses built to contain them. While not all log structures had fireplaces, the emergence of Indigenous crafted log houses and fireplaces occurred simultaneously. As Zoe stated, "When the Tlicho first entered the trading posts, they observed

the buildings and the fireplaces and eventually they replicated within their harvesting areas what they saw for their Trading Chiefs" (Clarkson 2010, 3). The building of log houses, therefore, is another indicator of the transition among the Dene into what Helm refers to as the contact-traditional period of their history. According to Helm:

> The prime criterion that we have set for the advent of the contact-traditional horizon is the establishment of all-native communities made up of permanent dwellings … we consider this physical evidence of significant decline in the nomadism and cultural independence of the aboriginal and early contact period. (Helm and Damas 1963, 10–11)

The Dene log houses that epitomize this period are intended for permanent or semi-permanent occupation. They are crafted pieces of architecture with squared logs, dovetail cornering, planked flooring, and gabled roofs. They closely resembled the design of the HBC structures. Less crafted and more utilitarian log cabins likely appeared around this same time, but archaeological records only associate stone fireplaces with the log houses previously described.

Log houses may have been built especially for the *donek'awi* of a given group, as suggested by Zoe, but this is not supported by the information provided in the interviews conducted among the Tłı̨chǫ in the early 1990s (GNWT 1999b). Instead, it seems that log houses were occupied by community members and expressed the prestige of the *donek'awi* because they were built under the direction of the *donek'awi* at

settlements from which the *donek'awi* retained primary access to nearby traders. These settlements were at established gathering places that provided a predictable food supply. Again, according to Helm, the contact-traditional period involves two main forms of social organization occurring simultaneously. One is the emergent permanent base community characterized by the building of log houses. The second she refers to as a "residual category that we term 'camps'" (Helm and Damas 1963, 11). These are residual in the sense that they represent traditional seasonal movements and are not tied to residency in any single location; they are the continuation of traditional Dene culture in the face of changes being introduced by incipient contact.

Tłı̨chǫ elders recounted a dual culture of nomadism and sedentism based around seasonal gathering places. "Long ago things were scarce and they didn't bother to build houses. Most of the time people lived in tents" (GNWT 1999b, 157). Another informant recalled that his grandfather built a house on an island where he lived "for many years with other people living nearby in tents. This was the place to live in those days" (24). Faber Lake was one of the larger Tłı̨chǫ settlements that became a permanent community:

> long before treaty signing in 1921, our people have come here [Fabre Lake]. There were houses there, some as old as seventy and eighty years old. Generation after generation of people came here. That area was very significant to the survival of our people. They would live here

all summer and winter, raising their children. (10)

Faber Lake was the site of an important fishery; "the houses were there because the people at the time who have always lived in the bush liked to live near a place where it is good for fish" (45). While in the very old days, seasonal gatherings at fisheries were part of a larger cycle of mobility, increased access to trade items created greater sedentism among some Dene, in part based on the leadership of *donek'awi*:

> I remember when the houses were in good shape, and all that was based on how K'aàwıdaà, wanted things, for he was a *Kawi*. He did not have a cabin built for him, but he helped them make their cabins, and there must have been at least twenty houses and some people lived there, now they are all gone. (46)

Log houses, fireplaces, and access to trade items provided a feeling of security in a life that could otherwise be seen as, as one informant said, a struggle. In a very practical sense, sedentism would not provide people with the resources required: not only the food required, but also the items of material culture. Settlement sites remained gathering places where Helm's "permanent" and "residual" groups could continue to meet and exchange goods and information and, through *donek'awi*, engage in trade with non-Indigenous traders; "people congregated at this village and hardly went to trade" (157). *Donek'awi* was a bridge between his community and the trading post and, in this way, he was a key provider of necessary items; both food and material objects.

Access to and ready acquisition of Western goods and having acquired the knowledge and skills to emulate the fur traders' log houses and fireplaces on their own terms and for their own purposes provided the Dene with a sense of pride. This was evident in several of the Tłı̨chǫ interviews that stressed that these things were built by Dene. The following expresses the speaker's pride in the adaptability and resourcefulness of her Dene ancestors:

> When we arrived [at Faber Lake] by boat there were lots of houses. All those things there were not made by the white people. There was nothing there from the white people. Everything that was made there was done by our people. Tables were made, chairs were made and there were no nails. Wooden sticks were used as nails and that's what was used to make these chairs. They make holes and make nails out of these wooden sticks. They used mud fireplace and chimneys. That's what they all had. And there were no stoves. (73–74)

As both Joseph Naedzo and Vital Thomas said, life at this time was good.

As noted previously, the early twentieth century brought great changes to the North. Contact and the influences of outside cultures increased and further affected the daily life of Indigenous people. The introduction of two items of material culture are specific to this research: iron stoves and lumber. Both had the effect of subverting the traditional knowledge and skills required to build and maintain log houses and fireplaces. One informant recalled that when she arrived at Hislop Lake as a child, some of

the houses were empty (abandoned) and that, by the end of her time there some of the chimneys and fireboxes had collapsed. This suggests that the log houses were already old by the time she was living there. She goes on to describe the transition from hand hewn log houses to houses built from purchased materials:

> Then Kwatizo bought some plywood/timber and brought them over there. And he made a house by those other houses. There's one house that's standing there with plywood roofing which you have probably seen, that's his house. That's the house he made. There's another house just next to it and that's the one he made the first time. That's the one that had the mud fireplace and chimney but it all fell down. It is still there just like that. (74)

Archaeologists from the Government of the Northwest Territories have documented a Tłı̨chǫ village by Red Willow Lake that is another example of the changes occurring by the mid-twentieth century (GNWT 1999a, 147–151). The village was abandoned shortly after the influenza epidemic of 1928. It contains the remains of seven houses and several associated features. All but one of the houses had a stone fireplace as evidenced by a rubble pile inside each of them. The village was constructed sometime after 1900. The one house that did not have evidence of a stone fireplace belonged to a man named Harry Black, the father of the last family to occupy the site. Nick Black, Harry's son, remembers living there as a young child in the early 1930s. There is no fireplace rubble inside the building, but a large pile of rocks is located outside the northeast window. According to Nick Black, his father removed the fireplace when they obtained a metal stove for the house.

**A Possible Answer to a Big Question: Chimney Point / Tache**

Chimney Point is a place on the north side of the Liard River at the mouth of the South Nahanni River. In the past it was a small community of several log buildings with stone fireplaces. Except for its name, all trace of the community is now gone. The origins of the structures and the fireplaces remains a mystery.

Jack LaFlair, Bill Clarke, and Gus Kraus,[55] three non-Indigenous old-timers who prospected and trapped in the South Nahanni River area in the first half of the twentieth century, recalled visiting the remains of the chimneys and cabins at Chimney Point. Jack LaFlair arrived in the Nahanni area in 1914 and built his cabin on the banks of the Liard River. By the time he had arrived in 1914, the houses at Chimney Point had been burned to the ground and the chimneys had collapsed. According to Gus Kraus who homesteaded in the Nahanni between 1941 and 1971,

> Nobody knows whose they were. Even Jack [LaFlair] didn't. And I asked the Indians and they said they didn't know. They were all burnt, but you can see everyplace where they [had built] houses … where they banked it up with dirt and there's the solid squares. (Addison 1975, 150)

Bill Clark, interviewed in the 1970s, recalled the remains of the fireplaces and

that they had been abandoned a long time ago:

> Those old chimneys sticking up there right on the Liard River … There was three, at least three that I recall. That was all that was left [of] the chimneys … This was old chimneys, of old, old Indians … they were abandoned. The Indians spent, in those days and later on for quite a while, spent most of the time in the bush. (Addison and Anthony 1976, 78)

Wendel White was a teacher in Nahanni Butte. In 1984 he published an oral history of the Nahanni/Liard Valley. His research included the area known as Tache ('where the rivers meet') which is the Indigenous name for Chimney Point. Charle Yohin, an elder Dene living in Nahanni Butte, was born at Tache. He recounted his memories of growing up in Tache to White. According to White,

> [Yohin] recalls at least nine families living at that camp. Paul Tesou lived at Tache as did his wife's mother and father. An old man from Simpson by the name of Etcha lived there as well. Some people lived in teepee structures and tents while others lived in pole log and full log homes. The larger log homes had chimneys made of clay and stone. An important man known as Nahania (Small Naha) carried on trade for the Bay with the people of the camp. He was of short build and well on in years and chose not to live with his people. However, there were occasions when some of his relatives would come to Tache to visit. The people were sad when Nahania died

and they drifted in search of other places that would provide the same peace as Tache. (White 1984, 64)

Based on Yohin's memories, Nahania therefore, was seen as working independently of the community. This suggests that he was a later period *naindidon* and not a *donek'awi*.

While Yohin recalled people living in log homes with clay and stone fireplaces, he did not know who had built them. White suggests that the log homes with fireplaces were from a forgotten past. He concludes by affirming that little is known of the original occupants of Tache "and the origin of the chimneys posed a big question [for Yohin]" (64). It is interesting that Yohin does not mention the houses and fireplaces being built by Nahania. Nahania was 'well on in years' when Yohin was a child (c. 1900–1910), so we can expect that Nahania's general knowledge of the area, and by extension the community's history, should have extended back into at least the mid-nineteenth century.

Gus Kraus mentioned there being several copper kettles associated with the remains of the log houses when Jack LaFlair was living there. According to Kraus, when interviewed in the 1970s,

> they were in good shape. Some of them was real good. Even that tin inside yet, you know. They were all tinned, them copper kettles … some real … the old-shaped one. Narrow on the bottom and big heavy handle on 'em, old-fashioned kettle. So, there might be more in there, but Mary and I and the Indian Agent in Simpson one time, we went to look

there but it … thick growth in there now and the windfalls. (Addison 1975, 150)

Charles Amsden conducted archaeological testing at the site in 1977 and partial excavation in 1978. His work at the site recovered numerous artifacts that are indicative of trade items including: beads, buttons, leather fragments, a candle mould, a possible gaming piece, nails, screws, strips of metal, sheets of tin, door lock fragments, and fragments of glass. Cartridge casings and a piece of iron stove marked "The Gurney Tilden Co." were also found. These latter artifacts are of particular interest because they can be dated, giving us a more concrete idea of when the site was occupied. According to Amsden,

> A maximum age for this occupation of the site is indicated by the four cartridge cases found at the site, one of which (the .45-70 caliber) was found in situ in a level which almost certainly is associated with the occupation of the structures. Both the .45-70 and .44-40 caliber cartridges were first introduced in 1873, and the .38-55 first appeared in 1884 … It is unlikely, therefore, that the chimneyed structures predate 1874 or, more likely, a few years after that. (Amsden 1978, 106)

Based in Hamilton, Ontario, the Gurney, Tilden Co. manufactured cast iron stoves. The company began in 1845 as the Gurney and Carpenter Iron Foundry. After several manifestations, it became the Gurney, Tilden Company in the late 1880s until it was taken over in 1910 by the Hamilton Stove Heater Company. Therefore, the 'Gurney Tilden Co.'

fragment can be dated to no earlier than the late 1880s.

Based on the artifacts that can be given a date of origin, the site was operating as a trading post from some point after 1874 and was burned before 1914. These dates would correspond with the time during which Nahania is noted as trading in this area. We might expect Charle Yohin to have had some knowledge of another trader working in that area if Nahania had taken over an existing trade. Instead, the origins of the log houses and fireplaces remain, even for Charle Yohin, a 'big question.'

Research to date refutes any suggestion that the houses were built by Indigenous people. Alvin Paquette, the son of Jack LaFlair, stated that the houses "are not within [Indigenous] cultural context" (White 1984, 57). Amsden refuted Bill Clark's suggestion that the houses were built by "old, old Indians," saying this was "highly unlikely … considering the nature of the features," and the associated trade goods (1978, 106). Amsden asserts that the houses were not Indigenous, but rather were a separate occupation of the area by Euro-Canadian traders subsequent to an Indigenous occupation as evidenced by the presence of stone artifacts:

> In any event there is less than a forty-year time frame during which the structures at Chimney Point could have been built [i.e. 1874–1914]. All the evidence encountered to date strongly suggests that the builders of these structures were not natives; however, the buildings might very well have served as a trading post or similar institution

closely associated with a resident native population. This would explain the chi-tho [stone hide working tool] on the beach. This type of implement is common in northern Athapaskan sites of the later prehistoric and early historic periods. It is also possible, of course, that the chi-tho represents a still earlier occupation of the Chimney Point site. (Amsden 1978, 106)

The chi-tho could also represent an Indigenous occupation of this site contemporaneous to the log houses if they had originally been built and occupied by a *denak'awi* and his followers. Researchers have been unable to consider that the structures might have been built by Indigenous people and could belong to a much earlier period, preceding its use by Nahania.

Charle Yohin grew up among the log houses and fireplaces when Nahania was operating his trading post. Yohin had a connection to the earlier history of the community and very readily supported the idea that the houses were built by 'old, old Indians,' and that they were likely built at a "point in time [when] the Dene people had been exposed to white men long enough to pick up some useful skills and thus the chimney construction could have been an adaptation" (White 1984, 64). For Charle Yohin, the fireplaces are an example of cultural diffusion.

**A Shared Heritage**

Stone fireplaces were central features in early Euro-Canadian trading posts. Prior to the advent of iron heating and cooking stoves, stone fireplaces were essential for cooking and for providing warmth in buildings intended to be occupied throughout a northern winter. The earliest stone fireplaces in the north were built by NWC traders as they spread northward from Lake Athabasca in the late eighteenth century. The HBC's Fort Reliance (1833–1835) and Fort Confidence (1837–1839) are two locations in the Northwest Territories where original stone fireplaces built by Euro-Canadians are still standing. Elements of all four of the original fireplaces are still present at Fort Reliance.[56]

The fireplaces at forts Reliance and Confidence represent the extant remains of what is the ur-type or prototype for Indigenous stone fireplaces in the Northwest Territories. As vernacular architecture, the fireplaces and associated log houses are a tangible expression of the early contact period between Indigenous and non-Indigenous cultures. They are also an expression of a period of dramatic change for Dene culture as social structures adapted to a fur trade economy and the advent of southern interests in the North. John B. Zoe is an enthusiastic proponent for the preservation and heritage value of the Tłıchǫ fireplaces. His comments can be extended to include the fur trade sites:

> Most of the trading posts' log buildings and fireplaces no longer exist except for the Tłıchǫ [fireboxes].[57] In other words the design has been kept alive by the Tłıchǫ, and these log buildings with the fireplaces still exist on Tłıchǫ lands … these monuments are in danger of eventual collapse and vandalism. The Tłıchǫ landscape has preserved a living design that goes back at least

160 years … the era of the stone fireplaces is very deeply embedded into Tłı̨chǫ memory and history. (Clarkson 2010, 3)

Indigenous and Euro-Canadian stone fireplaces have been documented in various locations across the Northwest Territories.[58] Unfortunately, most of the documented fireplaces and log houses are now not more than rubble and rotted timbers. The Tłı̨chǫ and forts Reliance and Confidence fireplaces are all that remain of these period structures. Together they are part of a common heritage of the earliest periods of cultural contact and change in the Northwest Territories. They are an expression of both the tangibles and intangibles of cultural diffusion. The trading post fireplaces represent the origins of colonial expansion into Canada's north. The Tłı̨chǫ fireplaces and houses are a testament to the resourcefulness and craftsmanship of Dene people and to their ability to adapt to changing circumstances. The Indigenous and Euro-Canadian stone fireplaces of Denendeh are relics of our shared cultural heritage.

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[48] A fireplace is composed of two main components: firebox and chimney. Fireplace is used throughout this paper as a generic term to identify the architectural feature. Firebox is used when only the lower portion remains. Chimney refers to a fireplace where both the firebox and the chimney remain intact. Thus, Fort Reliance includes the remains of four fireplaces: two chimneys and two separate fireboxes.

[49] The following is from the Dene Nation webpage: "Today, many Athapaskan-speaking people, particularly those who live in Canada's Northwest Territories, are known as 'Dene' which, means 'people' in their language. The Dene have always called their homeland 'Denendeh' which means the 'Land of the People.' Denendeh is located in the western part of the Northwest Territories in northern Canada … Geographical conditions in Denendeh have created the groups of people who make up the Dene Nation ─ Denesoline (Chipewyan), Tlicho (Dogrib), Deh Gah Got'ine (Slavey) K'ashot'ine (Hareskin) and Dinjii Zhuh (Gwich'in, once called Loucheux)." Dene Nation. "About Us."

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[50] Admiral Sir George Back was a British Navy officer. The HBC built Fort Reliance for him to use as a wintering post to stage his expedition in search of John Ross and his subsequent mapping of the Thlewe-ee-choh (Great Fish River).

[51] In 1959, the Tlicho (Dogrib) people became the focus of Helm's fieldwork, which entailed ten trips to the Northwest Territories between 1959–1979. For more information on Helm's work with the Tlicho see: Live.Learn.Experience Tlicho. "June Helm Ph.D." Accessed May 15, 2024. https://tlichohistory.ca/en/stories/june-helm-phd/

[52] June Helm states that the assigning of a time period for contact with "the Dogribs [Tłįchǫ] poses a problem … They did not have a point-of-trade central to their own territory until the establishment of old Fort Rae in 1852 … on the whole, the Dogribs stand out as an isolate in the generally easy trade contact afforded the

neighbouring peoples of the Upper Mackenzie drainage by 1820" (Helm et al 113).

[53] The words *ek'awi* and *k'awi* are also used in various documents. They are abbreviated versions of the term *donek'awi*. The outline of Dene social structure presented here is intended to solely provide a framework for considering the role of the Trading Chief, or *donek'awi*, and how it changed over time.

[54] The term *donek'awi* may have been used by the Dene since the beginning of trade. Trading Chief was the term first used in the fur trade records. The term *donek'awi* only enters the written record with Helm's work in the 1960s. In order to create a frame of reference to discuss the changing role of trade intermediary in Dene culture, the term Trading Chief is used to represent the earliest stages of contact and trade, while the term *donek'awi* is presented as the more recent term to imply a change in the social authority of the individual based on what Smith reports for the Dene of the Fort Resolution area.

[55] Jack LaFlair arrived in the Nahanni in 1914 and operated a trading post near what is today Nahanni Butte. Bill Clark came to Canada from Scotland in 1923 as a clerk with the Hudson's Bay Company. He later trapped and prospected in the South Nahanni area. Gus Kraus arrived in the Nahanni region in 1934 and later homesteaded on the South Nahanni where he made a living as a trapper and prospector.

[56] Fort Reliance was designated a National Historic Site of Canada in 1953. In 1986 an in-depth research project was conducted on the history of the site. The work was conducted by the Prince of Wales Northern Heritage Centre including conservation of the chimneys by Parks Canada masons.

[57] John B. Zoe uses the word "replicas" which has the connotation of being a copy or imitation. While the Indigenous chimneys were inspired by examples in traders' posts, the Indigenous chimneys are unique and authentic elements of Dene vernacular architecture.

[58] The archaeological sites database for the Northwest Territories includes a variety of Indigenous and Euro-Canadian sites, as well as some that are not culturally identified, containing the rubble remains of stone chimneys.