

## String Figures



# **String Figures**

A Cultural Practice between Art,  
Anthropology, and Theory

**Edited by Mario Schulze and Sarine Waltenspül**

**DIAPHANES**



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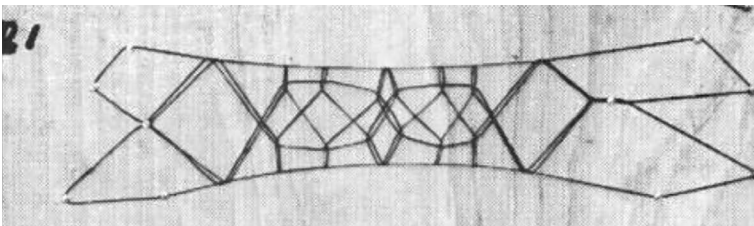
# An Introduction to String Figures between Art, Anthropology, and Theory



Fig. 1.1: Simon Quanijo, who co-invented the figure *Administration Staffs* with Ijauwe in 1937. The photograph is the frontispiece in Honor Maude's book on Nauruan string figures and is the only photograph of a person in it.

Fig. 1.2: The archival description of the photo reads "Honor Maude demonstrating a Nauruan string figure, 'Administration staff' no. 135, about 1960." However, the figure Maude holds in her hands is not the pattern *Administration Staffs*.

Fig. 1.3: Pattern *Administration Staffs* pinned on wood.



## Prologue on Administration Staffs

The string figures of the Pacific island of Nauru are among the most complex in the world. Many of the string figures, which are called *kawada*, go back to the contests of the young men on the island, who—especially in pre-colonial times—competed annu-

ally in creating new figures and imitating the newly-invented ones as quickly as possible. Of intriguing complexity is the figure *Administration Staffs*, the final stage of which is shown above as mounted on wood. Conceived in 1937 by Simon Quanijo, the Native Medical Superintendent on Nauru (fig. 1.1),<sup>1</sup> and Ijauwe, about whom we could not find out more, it depicts the then-Administrator (i.e. the colonial governor) of Nauru, Rupert Clare Garsia, flanked by members of his staff (fig. 1.3).<sup>2</sup> The string of the mounted figure is made of human hair because it slips more easily over the fingers, which makes it more convenient to create such complex figures with numerous intermediate steps.<sup>3</sup>

Quanijo and Ijauwe created this figure after Honor Maude had visited Nauru. Maude, who in the photo above proudly presents a figure that she developed herself based on Nauruan techniques (fig. 1.2), was one of the most dedicated experts on string figures in the twentieth century.<sup>4</sup> She had visited the island for six weeks in 1937 because she knew of the beauty and complexity of the Nauruan string figures, but was unable to reproduce the patterns herself. Maude had learned about the figures from the most important work on string figures to date, Caroline Furness Jayne's book *A Study of Cat's-Cradle in Many Lands*, published in 1906, which contained some Nauruan figures as mounted patterns, but gave no information on their making.<sup>5</sup> When Honor Maude returned to

1 See Henry E. Maude to P.L. Ryan, September 9, 1970, University of Adelaide, Part I, Series D: Honor Maude Papers, Correspondence re Nauru String Figures 1965–1970.

2 Honor Maude, *The String Figures of Nauru Island* (Adelaide: Libraries Board of South Australia, 1971), pp. 135–137. Unlike all the other figures, *Administration Staffs* does not have a Nauruan name.

3 Furthermore, the Nauruan strings were considerably longer than the conventional ones (more than 4.5 meters instead of 1.8 meters), which is necessary to make such complex figures.

4 See fig. 24 in Joseph D'Antoni, "Variation on Nauru Island String Figures," *Bulletin of the International String Figure Association* 1 (1994), pp. 27–68. According to the archival information on the photo, it is the figure "Administration Staff no. 135." However, the pattern in Maude's hands is another one. We thank Mark Sherman, director of the International String Figures Association, for his help in identifying the figure Maude is holding in her hands. On Maude, see Mark Sherman, "Honor C. Maude: A Tribute to the World's Foremost Authority on Pacific Island String Figures," *Bulletin of the International String Figure Association* 5 (1998), pp. 1–38.

5 Furness Jayne had never visited Nauru, but had received fifteen Nauruan string figures mounted on paper from her brother William Henry Furness III (a physician turned anthropologist). Caroline Furness Jayne, *String Figures: A Study of Cat's-Cra-*

the island of Nauru a year after her first visit—for just a few hours—she learned that the men on the island had invented sixteen new figures. Some of them, including *Administration Staffs*, referred to the presence of the whites, the colonizers like Garsia or Maude and her husband Henry Evans (known as Harry). Harry Maude served as a British colonial administrator for the British colony neighboring Nauru, the Gilbert and Ellice Islands, which are as well known for their string figure proficiency. He later became a professor of South Pacific studies in Canberra.

More than thirty years after her second visit to Nauru, Maude wrote a book about the Nauruan string figures, in which she gathered well over a hundred figures. The foreword to the book, written by Maude's husband Harry, draws a remarkable line from the mounted figures in Caroline Furness Jayne's book to the tragic history of the island: "She [Furness Jayne] published her book in 1906 and the following year Nauru became well known: not, however, for its string figures but for exporting its first cargo of phosphate."<sup>6</sup> "Cargo" is a euphemistic term in this case. Nauru gained sad notoriety because large parts of the island were turned into wasteland by decades of phosphate mining, phosphate being an important fertilizer for industrial agriculture. Furthermore, Harry Maude writes in his preface that all string figure informants—including Simon Quanijo and Ijauwe—died of starvation or privation during the Japanese occupation in the Second World War and the associated deportations.<sup>7</sup> The story of the island is, in a nutshell, one of the most horrific tales in the history of extractivist colonialism. Since 2001 it has been home to an Australian offshore migrant detention center, building on the infrastructure and the mindset that was established during the phosphate years. In her recently-published ethnography of Nauru's offshore asylum arrangement and migration industry, Julia Morris describes

*dle in Many Lands* (New York: Charles Scribner's Sons, 1906), pp. 366–370; Robyn McKenzie, "One continuous loop: making and meaning in the string figures of Yirrkala," (Ph.D. diss., The Australian National University, 2016), p. 99.

<sup>6</sup> Henry E. Maude, "Preface. The Cultural Setting," in Honor Maude, *The String Figures of Nauru Island*, pp. 11–16, here p. 11.

<sup>7</sup> *Ibid.*, p. 16. See also Henry E. Maude to P.L. Ryan, University of Adelaide, Honor Maude Papers.

the role that string figures play on the island today:<sup>8</sup> “At industry events like today, the coconut-bra mannequin and string-figure collection are always brought out from the dusty vaults of Nauru’s Culture Department, along with the group of young Nauruan girls [wearing hula skirts and bikini tops].”<sup>9</sup>

## Challenging Patterns

*Administration Staffs* is challenging for many reasons. The story that this pattern unfolds leads into the history of twentieth-century colonial violence and cannot be told independently of it. At the same time, *Administration Staffs* symbolizes the beauty, playfulness and complexity of a proud cultural technique that has been and continues to be marginalized. Our hope with this book is that the power of string figures to connect people, to bridge past and present, to be hybrid and ephemeral, can help to imagine an alternate present and future that build on and acknowledge the wounds of the past without dwelling on them. In our work on string figures, we kept asking ourselves: how can we simultaneously acknowledge the past—in all its complexity and cruelty—and yet turn towards a present that allows for “decolonial” relations, for example through cultural/artistic practices. For this book, we have made various attempts at contact and collaboration with string figure players, with string figure creator societies and with heritage institutions holding string figure collections, as well as reaching out to artists and researchers who have already established such collaborations. Although not all of these attempts have been successful, we are happy to be able to include a range of texts, artworks, and perspectives from at least

8 On the historical connection of extraction and asylum on Nauru Island, see Julia Morris, *Asylum and Extraction in the Republic of Nauru* (Ithaca, N.Y.: Cornell University Press, 2023). Morris manages to explain “the expanding reach of capital into domains of human resources that depend on prior civilizational projects of discovery and plunder,” p. 17. Essential reading on the phosphate trade in the Pacific is Katerina Martina Teaiwa’s book *Consuming Ocean Island: Stories of People and Phosphate from Banaba* (Bloomington and Indianapolis: Indiana University Press, 2015), which focuses on the other prominent phosphate island in the Pacific, Banaba, where string figures have been well developed as well.

9 Morris, *Asylum and Extraction*, p. 192.

some of the places where string figures have been, or continue to be, a proud cultural practice.

The figure *Administration Staffs* introduces at least some of the topics dealt with in this book. Firstly, there is the often neglected complexity and breadth of the subject of string figures, not only in Nauru but in many parts of the world. The pattern shows how finely chiseled string figures can be, and how much manual and intellectual skill is required to perform them. Secondly, the pattern *Administration Staffs* exemplifies two of the many possible functions or meanings that string figures can have. On Nauru, they were a way to compete with others or a (cathartic) way to deal with the colonial reality. Elsewhere, string figures can be a game, an origin story, a pastime, a mythological tale or a death ritual. They are often something deeply embedded in the “way of being” of a culture. Thirdly, Honor Maude represents the development of string figure studies into a distinct sub-discipline within anthropology. Even though some prominent, discipline-building male anthropologists worked on string figures, their studies remained largely marginalized. This was mainly because of the status of those who pursued it more intensively and shaped its content, the “sisters [Furness Jayne], daughters, and wives [Maude]”<sup>10</sup> of more or less well-known anthropologists, who, as women, stood and worked at the margins of their field. It was also because of the subject matter, which is considered a trivial children’s game in Europe, with far less complex figures than in Nauru or other regions of the world. In their marginalization, string figure studies reflect the history of anthropology: the search for universalisms in the vernacular, the idea of “saving” cultures (“salvage anthropology”) or at least their objects and practices from disappearing, and the non-innocent practices of collecting Indigenous artefacts, aesthetics and practices. Fourthly—and we would like to discuss this point in more detail—, *Administration Staffs* takes us into the “coloniality” with which the exploration of string figures on Nauru and elsewhere was associated. String figures can seldom be separated from what Rolando Vázquez calls the “colonial wound”: a wound caused by the erasure of lifeworlds,

10 McKenzie, “One continuous loop,” p. 93.

people and knowledge that the European project of modernity brought with it globally; a wound that those striving to decolonize need to engage with in order to create a ground for healing and repair. String figures will not break the cycle of exploitation that removes resources from poor countries in order to benefit wealthy ones, but might offer ways to think through the possibilities of epistemic and aesthetic restitution.<sup>11</sup> *Administration Staffs* can be placed in a series of other examples that mimic colonizers in Indigenous art forms.<sup>12</sup> This does not necessarily mean that the figure should be seen as an “embodied opposition to colonial rule” that makes us aware of the colonizers’ role,<sup>13</sup> of the global project of colonialism of which the Maudes themselves were a part. It remains an open and probably unanswerable question whether the figure describes, captures, uses or subverts the locally-conceived power dynamics between colonizers and Nauruans. In any case, the encounter between Maude and the Nauruan string figure artists Simon Quanijo and Ijauwe does not signify a one-sided appropriation of Indigenous knowledge by a white amateur anthropologist, nor does a primary interpretation of the pattern as resistance to the colonial order seem plausible. Rather, the invention of new patterns amounts to a gesture of relationality in which the coloniality of contact is negotiated. The figure would not exist without the collaboration of the “‘science’ of Western anthropology on the one hand and Indigenous culture on the other,”<sup>14</sup> nor would it have been preserved to this day. While the string figures pinned to cardboard or wood reveal the logics of collecting, ownership, preservation, uprooting and systematization along geographical and sometimes racial categories that dominate ethnological collections, the concrete string figures invented and performed by people tell “of earthhood, of

11 Rolando Vázquez, “Aesthetic and Epistemic Restitution for the Joy of Life. Recalling Earth, Overcoming the Contemporary, Knowing Otherwise,” *Errant Journal* 5 (2023), pp. 51–62, here p. 53.

12 For example the colon statues of the Baoulé or the Mbari houses of the Owerrigbo. Prominent anthropologists like James Clifford, Michael Taussig and Paul Stoller have offered different, partly controversial interpretations of these artifacts. For an overview of these debates, see Paul Stoller, *Embodying Colonial Memories: Spirit Possession, Power and the Hauka in West Africa* (New York: Routledge, 1995).

13 *Ibid.*, p. 90.

14 McKenzie, “One continuous loop,” p. 11.

communalhood, of ancestralhood,”<sup>15</sup> they tell us of the weaving of relations between Indigenous culture and anthropology.

In recent years, string figures have experienced a boom as a metaphor, figure of thought and tangible practice in both art and theory. Apparently, string figures are a suitable form that lends itself to thinking and acting. In avant-garde art—and ergo mostly, but by no means only, Western art—, a multitude of references to string figures can be found. Artists were fascinated by the fact that string figures subvert traditional distinctions (such as medium/form or sign/signifier), that they make relationalities conceivable, or that they are an expression of Indigenous knowledges and novel aesthetics. The history of museum art dealing with string figures includes the names of frequently exhibited, genre- and school-forming, male, white, metropolitan artists such as Marcel Duchamp, Andy Warhol and Fred Sandback. Alongside them, however, are the names of fringe, female or Indigenous artists who have worked intensively with the ambiguity, ephemerality and/or historical complexity of string figures, such as Harry Smith, Maya Deren and Maureen Lander. This volume explores some of these better- and lesser-known positions in the context of their emergence and aims to add narratives to art history that strategically transcend ethnographic and art historical categorizations, question ideas of center and periphery, and make positions beyond the heroically overcharged Franco-American modernism tangible.

At the intersection of art and theory string figures have gained even more prominence: Donna Haraway promotes string figures as a method of interdisciplinary and interspecies thinking and collaboration. Unlike the technicist metaphor of the network, Haraway’s string figures provide a playful, process-oriented, embodied (and non-Western) way of thinking, emphasizing responsibility. In Haraway’s work, not only the distinctions between disciplines implode, but also those between practice and metaphor. For her, string figures are not only the figures that can be created with strings on hands, but a way of thinking, of signifying and of being together. Many artists have taken up Haraway’s SF method and used it in their work.

15 Vázquez, “Aesthetic and Epistemic Restitution,” p. 62.

This book is published on the occasion of the exhibition *String Figures / Fadenspiele: A Research Exhibition*, curated by us, Mario Schulze and Sarine Waltenspül, and co-curated by Andres Pardey, at the Museum Tinguely, Basel, Switzerland. The exhibition takes place in an art museum and juxtaposes historical and contemporary pieces of art with objects from ethnographic collections in order to re:search, re:define, and re:signify both past and present string figure practices. In preparation for the exhibition and the book the workshop “String Figures: An Interdisciplinary Workshop” took place on June 8 and 9, 2023, at the Ethnographic Museum in Zurich, organized together with Mareile Flitsch. This book is the first (as far as we know) to approach string figures from so many different fields of thought and action. In addition to a variety of disciplines and voices from different regions of the world, the volume brings together people from all academic levels and from different research institutions and traditions, including universities, museums, archives, art schools, film festivals and others. It brings together two types of texts: peer-reviewed essays on the broader topic of string figures, and shorter texts focusing on specific exhibits. The following introduction to the history and presence of string figures in anthropology and art serves also as an introduction to the various contributions and the works presented in the exhibition—authors and participating artists are in bold.

## **A Brief History of String Figures in Anthropology**

The study of string figures—in the sense of turning string figure practices into an object of knowledge—has always been closely linked to the history of anthropology. The elusive ontological status of string figures between object, game, amusement, embodied practice, storytelling and performance kept on both fascinating anthropologists and at the same time challenging the concepts of their discipline. Accordingly, research into string figures was not only linked to the respective anthropological *Zeitgeist* (and its paradigms), but also to the changing media possibilities and recording systems (pen and paper, photo or film camera, audio

recorder, etc.), and the publication methods and locations of the research (museums, film collections, journals, etc.). In the following brief history of string figure studies, we are guided above all by the writings of the cultural anthropologist Robyn McKenzie, who has also contributed to this volume.

The historiography of European-American string figures research begins with the observations of “travelers” (i.e. traders, missionaries or adventurers) in the middle of the nineteenth century, who were fascinated to discover, firstly, that Indigenous string figures were far more complex, varied and beautiful than the “real cat’s cradle twentieth century art” they were familiar with, and secondly, that the string figures appeared to be representations of things, animals or people.<sup>16</sup> The systematic anthropological study of string figures, which began at the end of the nineteenth century, was then primarily undertaken with the intention of salvaging. This “salvage anthropology” was based on the assumption that string figures would soon disappear due to increasing contact with Europeans, including anthropologists—along with the entire way of life of the Indigenous communities being studied. Presumably due to the collecting-orientated character of early anthropology, the traveler-researchers mostly tried to turn the string figures into objects. The challenge was to make collectible something that was comparatively difficult to buy, exchange or steal. The ephemeral, processual, narrative string figures were taken from the fingers, hands and bodies of their makers, to which they were actually connected, and stapled or sewn onto wood or cardboard. Preserved in this way, the string figures were transported to the places of ethnological research, often the metropolises, and—sooner or later—found their way into numerous collections and museums in Europe, North America and Australia (fig. 2.1 and 2.2).<sup>17</sup> McKenzie associates this practice

16 McKenzie, “One continuous loop,” p. 91. The captain of the *Bounty*, William Bligh, already mentioned string figures on Tahiti in 1790, without going into more detail. See Honor Maude, “Cradles of Civilisation,” *Rain*, no. 16 (1976), p. 6.

17 Martin Probert writes about over 1,200 mounted figures in over twenty museums. We believe that there are actually much more because his list of collections is far from complete. See Martin Probert, “The Torres Strait String Figures in the British Museum A. C. Haddon Collection,” *Journal of Museum Ethnography*, no. 16 (2004), pp. 140–156, here p. 141.

with the “methods of collecting animal and plant specimens in the biological sciences,” from which many early anthropologists had emerged.<sup>18</sup>

It was Franz Boas who first published instructions on *ajarorpoq* (string figures of the Inuit of Cumberland Sound in Baffin Land) in 1888, thus countering the loss of methods of making associated with the fixation of patterns. Boas also learned some of the figures himself.<sup>19</sup> In his essay for this book, Rainer Hatoum contextualizes Franz Boas’ contributions to the study of string figures among the Inuit and the Kwakwaka’wakw and delves into the legacy of his early interests in the game. He also provides further material, like the songs that Boas recorded along with the string figures.

Around 1900, interest in how to make string figures grew and finally culminated in the development of nomenclatures for recording the method of making string figures by the two Cambridge scholars Alfred Cort Haddon and William Halse Rivers Rivers.<sup>20</sup> Like Boas, Haddon and Rivers are regarded as influential pioneers of fieldwork, especially through their expedition to the Torres Strait (the channel between northern Australia and New Guinea), on which they collected *wame* (as string figures are called there) as a sequence of manual operations. The trained zoologist Haddon had already collected mounted figures during his first visit to the Torres Strait in 1888, which he made to study coral reefs. The method developed on his second expedition to describe the string figures developed into a standard and Haddon became a central figure in string figure research. In this way, Haddon and Rivers’ nomenclature became “part of the anthropologist’s tool kit, equipping them for the field.”<sup>21</sup>

Subsequently, many anthropologists researched string figures, including some who would go down in history as defining the discipline—alongside Boas, for example, Claude Lévi-Strauss

18 McKenzie, “One continuous loop,” p. 95.

19 Franz Boas, “The Game of Cat’s Cradle,” *Internationales Archiv für Ethnographie* 1 (1888), pp. 229–230.

20 W.H.R. Rivers and A. C. Haddon, “A Method of Recording String Figures and Tricks,” *Man* 2 (1902), pp. 146–153.

21 McKenzie, “One continuous loop,” p. 103.

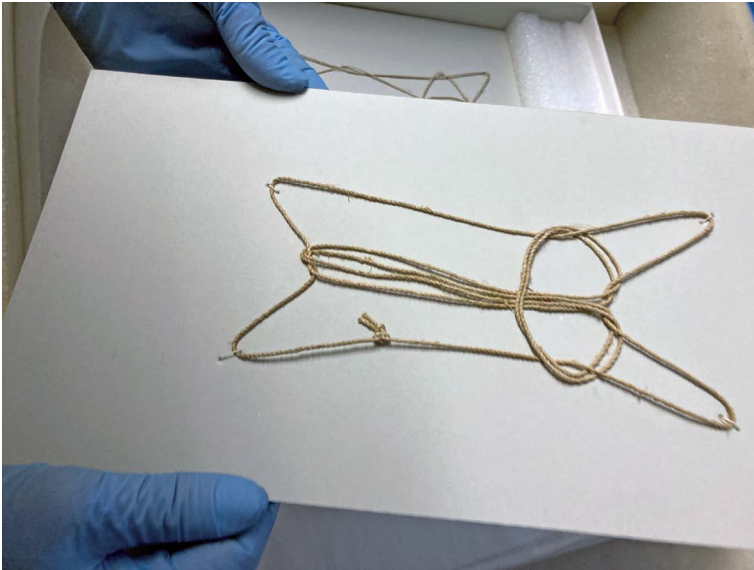
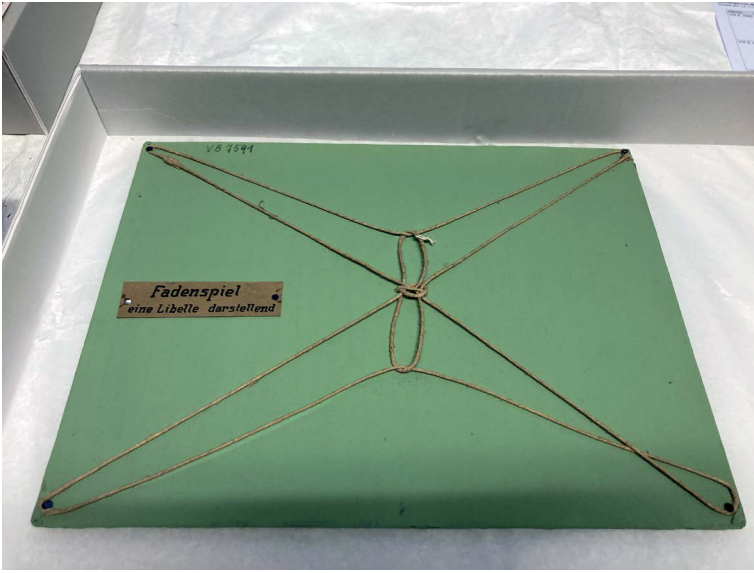


Fig. 2.1 and 2.2: Two of the many mounted string figures in the depot of the Ethnological Museum of Berlin with information about the collector but no information about the creator of the figure.

and Bronisław Malinowski.<sup>22</sup> The documentation of the finished figures, on wood or cardboard or in drawings and photographs, remained a central practice. In some cases, the mounted figures and photos were combined with film in order to do justice to the processuality. Among the earliest of such films are recordings of the Taulipang made by the German ethnologist Theodor Koch-Grünberg in Guyana in 1911.<sup>23</sup> Based on Haddon's nomenclature, numerous reports of a similar structure were published until the 1940s, documenting the string figure repertoire of individual communities: they consisted of the instructions for creating the figures with illustrations of the finished patterns, their local names and their English/German/French translations and, where appropriate, the songs, chants and stories associated with them. The focus was on the Pacific region, from the Pacific Northwest to the Oceanic islands and Australia.<sup>24</sup> Theoretically, these studies were motivated by diffusionist or, more rarely, evolutionary paradigms. Either comparisons of as many different string figures as possible from more or less neighboring communities were intended to provide information about contacts, influences or migration routes, i.e. cultural diffusion. Or the string figures were seen as independent interventions of non-literate cultures that were on a universal, cross-cultural path of human development towards modernity, i.e. cultural evolution.

Arguably the most important contributions to the systematic analysis of string figures, however, were made by the aforementioned sisters, daughters and wives of anthropologists. In the field of string figures, women could be the experts, as Robyn McKenzie

22 Bronisław Malinowski, *The Sexual Life of Savages in North-Western Melanesia: An Ethnographic Account of Courtship, Marriage, and Family Life among the Natives of the Trobriand Islands* (London: Routledge & Kegan Paul, 1929), pp. 396–402. For more on Lévi-Strauss' and Dina Dreyfus' collections of string figures, see David Jabin, "Fixer l'éphémère: les jeux de ficelle caduveo," *Carnets de Terrain* (November 10, 2020), <https://doi.org/10.58079/m2nq> (accessed November 18, 2024).

23 *Life among the Taulipang of Guiana—Film Documents from the Year 1911* (1962, Theodor Koch-Grünberg, IWF Göttingen, TIB).

24 McKenzie, "One continuous loop," p. 110. For Papua New Guinea alone, there were reports from Thilenius (Yule Island), Barton (Southeast Papua), Eschlimann (Kuni), Haddon (Torres Strait), Landtman (Kiwai) and Jenness (Goodenough Island). List of studies taken from Georg Höltker, "Zum Problem der Fadenspiele, speziell in Neuguinea," *Bulletin der Schweizerischen Gesellschaft für Anthropologie und Ethnologie* XIX (1942/43), pp. 23–43.

points out.<sup>25</sup> The case of Dina Dreyfus, the first wife of Claude Lévi-Strauss, is exemplary, since it was probably Dreyfus who first became interested in string figures. In her short contribution for this volume, **Ellen Spielmann** describes Dreyfus as an influential but forgotten anthropologist between Brazil and France.

It is not easy to answer to what this female expert role can be attributed and it probably varies from case to case.<sup>26</sup> It certainly has a lot to do with the European-American gender norms of the twentieth century and with the structure of universities, which mostly excluded women. Concrete reasons may be found in the fact that textile practices were feminized; that women in their marginalized position were more likely to succeed in the supposedly marginal subjects; that learning and notating not only meant a lot of manual dexterity, but also a lot of diligent work, which suited the purported “female virtues”; and also that the string figures required an embodied ethnography—an interest in learning the figures with your own hands and body. This interest in the body as a site and subject of knowledge corresponds to the usual identification of women with the body within the “deeply somatophobic tradition of [Western] thought.”<sup>27</sup> It is worth investigating the ways in which these female experts researched string figures, because they developed new relationships between the researcher and the researched.

1906 saw the publication of the aforementioned book *String Figures: A Study of Cat's-Cradle in Many Lands* by Caroline Furness Jayne, probably one of the most relevant works of string figure studies. Furness Jayne was not primarily interested in collecting new figures, but in sharing ways that enabled an interested public to learn the figures. Most importantly, she shifted the focus from a comparative study of the final patterns to an analytical study of the methods of making the figures. She organized the written instructions for the creation of a figure into sequentially

25 McKenzie, “One continuous loop,” p. 93.

26 See for example Bettina Beer, *Frauen in der deutschsprachigen Ethnologie. Ein Handbuch* (Cologne, Weimar, Vienna: Böhlau Verlag, 2007).

27 Shatema Threadcraft, “Embodiment,” in *The Oxford Handbook of Feminist Theory*, ed. Lisa Disch and Mary Hawkesworth (Oxford: Oxford University Press, 2015), pp. 207–226, here. p. 207.

numbered movements, paired with corresponding illustrations. Thus, string figures became a series of permutations and combinations, and variations with shared movement sequences.<sup>28</sup> This analytical approach shaped her book: It was organized by similar “openings,” the starting position of the string around the fingers, rather than by race or tribe. Jaynes’ method simplified and homogenized the collection of string figures and, hence, added to the approaches of comparative analysis and furthered diffusionist hopes that cultural relationship might be better understood through comparing and systematizing string figure techniques. Furness Jayne was never “in the field,”—or rather her field was the colonial exhibitions and world fairs—yet she revealed more of the relationships that were the prerequisite for her knowledge of string figures than many of her fellow anthropologists, simply by being one of the first to name her informants.

Unlike Furness Jayne, Kathleen Haddon proved to be a passionate field researcher. She accompanied her father, the Haddon who established the first nomenclature for string figures, on his expeditions and became another important exponent of string figure studies. Her tool kit simply consisted of two strings—one for herself and one for the Indigenous string-playing person, her informant. Haddon learned the figure by participating and subsequently notated how it was made. String figures were her way of accessing Indigenous groups, of making contact: “And by contact, [she meant] not mere acquaintance and observation, but the more subtle contact of mind and sympathy.”<sup>29</sup> A contact that she, as a woman playing the string, sometimes managed better than her father or other white men. Malinowski, who later did field work in the same regions, even noted in a caustic comment in his diary: “In the village Haddon and his daughter loafed about; he (with) boats, she—cat’s cradle.”<sup>30</sup> Her method went hand in hand with a different involvement based on the reciprocal relationship between learning and teaching. According to McKenzie, the location and role of the researcher changed: from the deck

28 McKenzie, “One continuous loop,” pp. 99–100.

29 Kathleen Haddon, *Artists in String* (New York: E.P. Dutton and Co., 1930), p. 7. For more on Haddon, see McKenzie, “One continuous loop.”

30 Malinowski, *Sexual Life of Savages*, p. 36.

of the mission ship to the middle of the village, from questioner to participant with the inclusion of the researcher’s “embodied subjectivity.”<sup>31</sup> This was accompanied not only by an experiential immersion in the area of research, which was to become typical of field research, but also to a certain extent by a relationality based on embodied knowledge—possibly a less violent form of contact.

While W. W. Rouse Ball—ethnomathematician *avant la lettre*—had given the advice in 1920 that “no self-respecting anthropologist ought to travel” without a piece of string in his pocket, string figures largely disappeared as an accepted subject of mainstream anthropology in the course of the 1950s to the 1970s.<sup>32</sup> Paul Sillitoe in 1976 judged harshly: “The study of string figures is an oddity, if not something of a joke, to present day anthropologists.”<sup>33</sup> Diffusionism and evolutionism were regarded as untenable theoretical positions, as naive paradigms of a discipline in its infancy, and had been superseded by functionalism and structuralism as central theoretical paradigms. As a result, string figures could only thrive at the margins of the discipline—in ethnomathematics, for example, and in some countries longer than in others, such as in German ethnology—or in self-created refuges: for example, in the world of children’s literature or in art, to which we will return. These refuges also include the International String Figures Association, ISFA, which was founded around 1979 on the initiative of the Japanese mathematician Hiroshi Noguchi and the Scottish missionary and mathematician **Philip Noble**. Noble contributed his expert knowledge to this volume and made interactive videos of selected figures for the exhibition, for which we are very grateful to him.<sup>34</sup> The current director of the ISFA, **Mark Sherman**, has outlined the history of the ISFA over the last thirty years in a short text for this volume. Honor Maude herself was one of the first seven members of the

31 McKenzie, “One continuous loop,” p. 105. For a development of this argument, see Robyn McKenzie, “‘Such intimate relations’: On the process of collecting string figures and the paradigm of participant observation fieldwork,” *Anthropology and Art online pamphlet series* 4 (2022).

32 Rouse Ball (1920) quoted in Paul Sillitoe, “Why String Figures?,” *The Cambridge Journal of Anthropology* 3, no. 1 (1976), pp. 13–26, here p. 20.

33 *Ibid.*, p. 13.

34 Hiroshi Noguchi and Philip Noble, “The Cradle’s First Cats: A History of the International String Figure Association,” *Bulletin of the International String Figure Association* 3 (1996), pp. 1–7.

ISFA and can be seen as a bridge between early diffusionist string figures research, attempts to systematize the nomenclature, and more recent approaches to the study of string figures.

## **Contemporary String Figures Anthropology: Reconnecting Collections and Collaborative Research with Creator Societies**

String figures have returned to the center of anthropological attention in the last two decades. This has coincided with the rise of various theoretical strands within contemporary anthropology and beyond, such as sensory ethnography, critical museology or archive studies, new approaches to Indigenous knowledges, the performative turn across many humanities disciplines, and the relational approach to cultural artifacts. All these powerful reorientations have allowed for new approaches to string figures and their representation in museums—which are again challenged by but also drawn to the ontological status of string figures between knowledge, performance, craft and object. A large part of these more recent engagements with string figures and their history can be encountered in this volume.

The foremost example is the research of **Robyn McKenzie** and her collaborative work with the Buku-Larrnggay Mulka Art Centre of the Yolngu community at Yirrkala (Northern Territory of Australia), among them **Mulkun Wirrpanda** and others whose soft ground etchings of *maitka-uma* (Yolngu term for string figures) are presented in the exhibition. The starting point for McKenzie's research was the world's largest collection of mounted figures from one place, now held by the Australian Museum in Sydney. By reconnecting the museum collection with the source community in a reciprocal dialogic way, she further developed the path of embodied encounter and re-engagement begun by Honor Maude, and by conducting in-depth provenance research, she created "new layers of significance for the collection."<sup>35</sup> Perhaps more

35 McKenzie, "One continuous loop," pp. 10–11; Robyn McKenzie, "The String Figures of Yirrkala: Examination of a Legacy," in *Exploring the Legacy of the 1948*

importantly, by collaborating, the Yolngu were able to generate discussions about the value of their knowledge and material culture which then extended to exhibitions and into the art market. In her contribution to the catalog, McKenzie recounts the legacy of their collaboration (fig. 3).

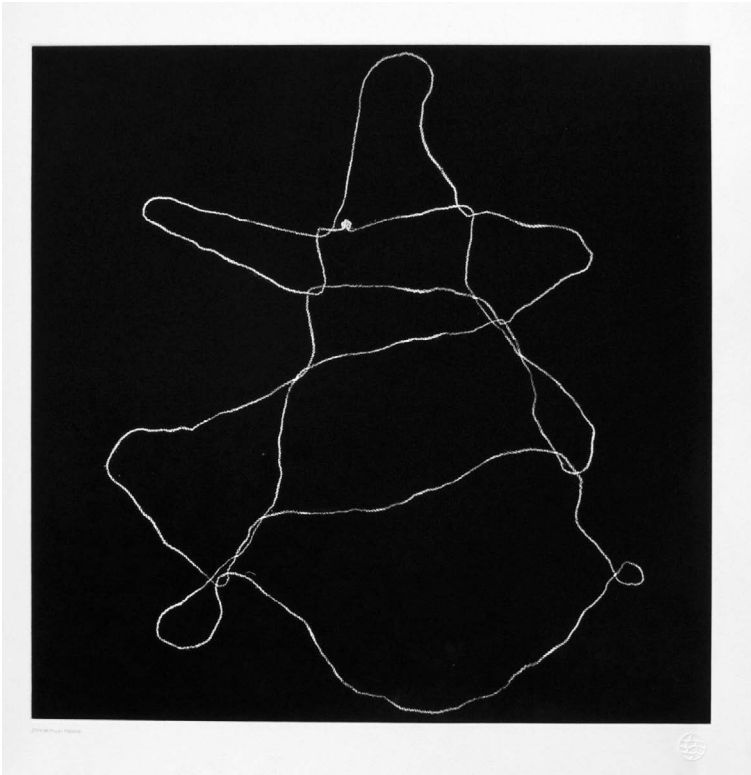


Fig. 3: Mulkun Wirrpanda, *Minhala/Long-necked tortoise*, 2013.

**Mareile Flitsch** adds the perspective of an anthropology of skilled practice, formulating a call to research string figures as skilled practice, skilled vision, and skilled hands, in order to find and acknowledge Indigenous knowledges. She calls for the sharing of string figures in collections in new ways, to create new agendas of

*Arnhem Land Expedition*, ed. Martin Thomas and Margo Neale (Canberra: ANU Press, 2011), pp. 191–212.

collaborative research with creator societies. She also introduces the idea of “string figure literacy,” a concept that (at least implicitly) follows the path laid out by Kathleen Haddon, suggesting a shared, embodied knowledge of string figures that can transcend cultural boundaries, while also highlighting the specificities of different societies. Rather than focusing on universality, Flitsch urges us to look for the “hesitant hand” moments when individuals encounter unfamiliar string figures. These moments can reveal deeper layers of social meaning and skill, and can provide insights into the broader socio-material and cultural contexts of string figures.

**Paul Basu** presents his exhibition project [*Re:]Entanglements: Colonial Collections in Decolonial Times*, which “explored the affordances of the colonial anthropological archive to interrogate the coloniality of the archive itself” and asked “whether such archives also afford the possibility of ‘thinking decoloniality.’”<sup>36</sup> The starting point for his reflections are not mounted figures, but fifteen photographs of *Okpukpa* (Igbo term for string figures), taken by the British anthropologist Northcote Whitridge Thomas in his role as a so-called “government anthropologist” during a survey in Southern Nigeria in 1911. With support from the texts of Donna Haraway, Basu discusses the extent to which the string figures could be a material metaphor to think entanglements with colonial history and its epistemic violence. Reengagement and reconnection are also key in this case. A central design motif of the exhibition was developed by the Nigerian artist and designer Alafuro Sikoki-Coleman enlarging and extending the patterns from Thomas’s photographs.

**Sarine Waltenspül**’s point of departure is neither mounted figures nor photos, but the film of the string figure performance by Ailima (daughter of) Saipela, which the German ethnologist Gerd Koch made on Niutao, Ellice Islands (today Tuvalu), in 1963. In her text, Waltenspül delves into the ethical complexities surrounding the display and ownership of anthropological films. She advocates for a shift towards a feminist “ethics of care,” which

36 Paul Basu, “Exhibiting Colonial Entanglements: String Figures and Material Metaphors,” in this volume, p. 70.

ideally implies an engagement with the communities represented in these films. By following the different actors involved in making or circulating the film, she raises questions about consent, anthropological representation, and the colonial gaze embedded in such archival material. Waltenspül critiques how anthropological films like the one with Ailima Saipele, stripped of context and Indigenous agency, continue to be controlled by institutions in the Global North. The article also examines the challenges of ethical restitution and the responsibility of curators to contextualize these materials sensitively.

In their co-authored text, **Andrea Scholz** and **Diana Guzmán Mirigõ** reconnect the mounted figures collected by the ethnologist Theodor Koch-Grünberg in the Upper Rio Negro (north-west Amazonia), which are now in the Ethnological Museum of Berlin, with the stories that are related to these figures. Guzmán Mirigõ, who runs different Indigenous heritage projects in Colombia, tells the story of the being Bede-riyo, in whose memory string games were made for a long time, but are now no longer practiced. Scholz, who is the curator for transcultural relations at the Ethnological Museum of Berlin, points at the relationship between the museum and Indigenous communities, which now goes beyond the preservation of knowledge and the purely material presence of objects to an understanding of artifacts as the materialized result of practices.

**Eric Vandendriessche** follows the long line of mathematicians interested in string figures for the operations that they entail. He discusses the further development (following Haddon, Ball, Noble and Noguchi) of modeling tools to better understand and compare string figures, showing how they function as both cultural expressions and complex mathematical activities. Through his ethnomathematical lens, Vandendriessche explains the underlying mathematical concepts like algorithms, transformations, and spatial configurations. More generally, he highlights the potential of string figure research to offer new insights into the relationship between culture and mathematics.

## A Brief History of String Figures in the Avant-garde

When interest in string figures slowly began to wane in anthropology in the 1940s and 1950s (which does not mean that some ethnologists and researchers from other disciplines did not continue to work on string figures), they were given a new lease of life in the Western art world. Avant-garde artists engaged with string figures inspired by anthropological studies. The complex experiential qualities of string figures between performance, object, non-linguistic sign, song and narrative served the avant-gardes as an aesthetic resource, a resource for the production of one of their central values: novelty, the advancement that is inscribed in the term avant-garde. This appropriation of string figures for the gallery space or the cinema always fluctuated between references to foreign and “other” aesthetics and an engagement with the respective artist’s “own” string game tradition. In both cases, new levels of meaning were created for the string figures that revolved around their relationality.

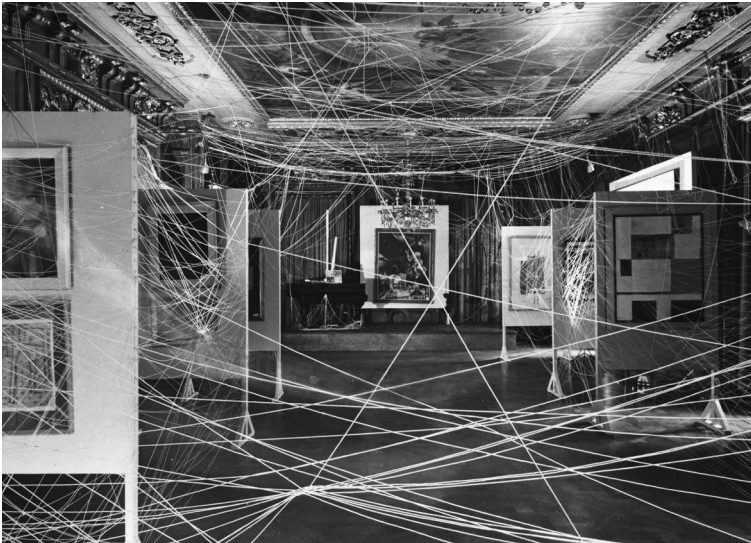


Fig. 4: Installation shot of Marcel Duchamp's *Sixteen Miles of String or His Twine*, 1942.

In 1942, **Marcel Duchamp**, who had again emigrated to the USA, wove miles of string through the exhibition space at 551 Madison Avenue in New York. The installation, which became known as

*Sixteen Miles of String or His Twine*, was part of the *First Papers of Surrealism* show organized by him and André Breton (fig. 4).<sup>37</sup> These strings interrupted or obstructed the view of the artworks, playing with the usual reception situation of art. Although they did not represent a string figure in the strict sense (however, the installation was called a “cat’s cradle” in the press), it is very likely that Duchamp was inspired by string figures, an aspect that has not yet been analyzed in the extensive literature on the work. As can be seen in Maya Deren’s film *The Witch’s Cradle* from 1943, Duchamp himself was able to make string figures that are more complex than cat’s cradle. Furthermore, he had probably seen the string figures collected by Dina Dreyfus and Claude Lévi-Strauss in Paris. Dreyfus and Lévi-Strauss had bequeathed the objects they had “‘collected’, not to say looted (exchanged or bought for derisory sums),” on their expedition to the Matto Grosso, including a string figure of the Kadiwéu on wood and the films of its making, to the soon-to-be Musée de l’Homme.<sup>38</sup> In 1937 they set up an exhibition based on this collection at the Gazette des Beaux-Arts gallery. Exactly one year later, the *Exposition Internationale du Surréalisme* organized by Breton took place at the same location, also featuring scenographies by Duchamp. Breton and Duchamp, who had become friends with Lévi-Strauss during their emigration—all lived within a few blocks of each other in New York—were to expand on these curatorial works with *First Papers of Surrealism* in 1942.

There is increasing literature on the role of native and Indigenous art in Duchamp’s work. Duchamp is not one of the usual suspects of “primitivist” modernism, such as Pablo Picasso or Paul Gauguin. Nevertheless, as Susan Power and Thomas Folland have elaborated, his work, right down to his ready-mades, is imbued with numerous connections to the concept with which artists in the twentieth century sought to escape hegemonic Western cul-

37 Brian O’Doherty, “Inside the White Cube Part III: Context as Content,” *Artforum* 15, no. 3 (1973); Elena Filipovic, *The Apparently Marginal Activities of Marcel Duchamp* (Cambridge, Mass.: The MIT Press, 2016).

38 See Paola Berenstein Jacques, *Pensamentos selvagens: montagem de uma outra herança* (Salvador: EDUFBA, 2021), p. 303. Translated from Portuguese to English with deepL.

ture, while at the same time reproducing ideas of cultural superiority.<sup>39</sup> For example, the texts of the *First Papers of Surrealism* show were saturated with references to so-called “primitive art,” among them references to the collections of Lévi-Strauss.<sup>40</sup> The politics of these references were contradictory, “at once opposing and unconsciously perpetuating the colonialist discourse of their day”; they also had “far-reaching implications for destabilizing and exposing racial constructs.”<sup>41</sup> While in one reading, Indigenous art was degraded to a mere inspiration for an art that asserts sovereignty over the civilizing process and declares Europe/North America to be the (itself not positioned) center of history and geography, in another reading Duchamp’s work also reveals the profound shock that contact with Indigenous cultural forms triggered in the aesthetic sensibilities of the time. In this sense, the string figures are particularly interesting because, unlike masks or pictorial works, they do not merely allow the adoption of forms and materials, but have dissolved the boundaries between performance and object—and in this they coincide with Duchamp’s *Sixteen Miles of String*.

From Duchamp and his *Sixteen Miles of String*, a cat’s cradle—this time in a figurative sense—subsequently unfolded that extends to the present day. In 1943, experimental film pioneer **Maya Deren**, who had fled from the Ukraine to the USA in 1922, shot scenes for her first solo, but unfinished, film *The Witch’s Cradle*.<sup>42</sup> In the title of the film, the Cat’s has become the Witch’s Cradle, which is reminiscent of the term for string figures that is common in German-speaking countries: *Hexenspiele* (witches’ games). In some of the footage, string figures can be seen, made by Marcel Duchamp, sitting in front of the Café Brevoort in New York (fig. 5).

39 Thomas Folland, “Readymade Primitivism: Marcel Duchamp, Dada, and African Art,” *Art History* 43, no. 4 (2020), pp. 802–826.

40 Susan Power, “Bound Objects and Blurry Boundaries: Surrealist Display and (Anti)Nationalism,” *Journal of Surrealism and the Americas* 2, no. 1 (2008), pp. 95–113, here p. 100–101.

41 *Ibid.*, p. 103. Power refers to Amanda Stansell, “Surrealist Racial Politics at the Borders of ‘Reason’: Whiteness, Primitivism and Négritude,” in *Surrealism, Politics and Culture*, ed. Raymond Spiteri and Donald LaCoss (Aldershot: Ashgate, 2003), pp. 111–126.

42 Sarah Keller, *Maya Deren: Incomplete Control* (New York: Columbia University Press, 2015), pp. 56–79.



Fig. 5: Marcel Duchamp doing string figures in Maya Deren's *Witch's Cradle*, 1943.

In other sequences, the film's lead actress Anne Matta Clark—mother of Gordon, who was born in the same year—wanders through Peggy Guggenheim's Art of This Century gallery, passing by works that are now part of the canon of so-called modernism, including a version of Marcel Duchamp's portable museum *Boîte en valise*. Another actor in the film is the "Alive String,"<sup>43</sup> a ("bewitched") thread that seems to glide by itself over naked and dressed body parts and finally strangles Marcel Duchamp, who is doing string figures (fig. 6.1–6.3). Deren's investigation of "magic, symbols, and modern art within the context of a formal cinematic language"<sup>44</sup> culminates in the film's reckoning with the male-dominated art world, embodied by Duchamp himself. The camera techniques that bring the thread to life execute the reckoning. Pronounced interests in anthropology and several references to anthropology can also be identified in Deren's work. In the years before making the film, she had worked as a secretary for Katherine Dunham, dancer, anthropologist and activist of the New Negro Movement. Subsequently Deren became involved

43 This notion comes from Deren's brief notes on the film, see *ibid.*, p. 59.

44 *Ibid.*

with Haitian voodoo.<sup>45</sup> Ute Holl deals with Maya Deren's film in a more detailed way in this volume and reflects on the inner connections of the two media, film and string figures.



Fig. 6.1-6.3: In Maya Deren's *Witch's Cradle*, the living thread winds around the neck and throat of Marcel Duchamp, who holds a barely recognizable string figure in his hands.

In the work of **Harry Everett Smith**, a frequently homeless polymath (meaning bohemian, experimental filmmaker, painter, occultist, lay anthropologist, folklorist, etc.) who considered himself a foremost authority on string figures, the strands of experimental film, conceptual art, surrealism and primitivism come together (fig. 7). Smith also belonged to the close-knit avant-garde scene in New York, between Greenwich and the East Village, which has repeatedly been described as a web and sometimes even as a string figure.<sup>46</sup> The story goes like this: In 1951, Smith supposedly only moved to New York to meet Marcel Duchamp. In New York, Smith also made the acquaintance of Peggy Guggenheim, whom he asked for money and support. Finally, in 1964, **Andy Warhol** included a string game-playing Harry Smith in his series of 16mm *Screen Tests*, which brought together famous and unknown persons from the New York scene. **Andres Pardey** dedicates a text in this volume to this encounter and the resulting three minutes of film.

45 Elliot Evans has pointed out the diversity of primitivisms in the avant-garde and in particular distinguished Deren's from the primitivisms of Gauguin and others. Elliot Evans, "THE 'WHITE DARKNESS': Considering Modernist Investments in the 'Primitive' through Maya Deren's Work in Haiti (1947-53)," *Angelaki* 27, no. 3-4 (2022), pp. 143-162.

46 Kevin Dann, *Enchanted New York: A Journey along Broadway through Manhattan's Magical Past* (New York: NYU Press, 2022), p. 257. On Smith's biography, see John Szwed, *Cosmic Scholar: The Life and Times of Harry Smith* (New York: Farrar, Straus and Giroux, 2023).



Fig. 7: Harry Smith with string figure, photographed by John Palmer.

Smith's involvement with string figures goes back to his youth. Growing up in the immediate vicinity of the reservations of Coast Salish-speaking Indigenous people in the Pacific Northwest, he developed a fascination for anthropology at the age of fifteen and used a phonograph and camera to document the lives of the Lummi, Swinomish and Coast Salish. In this volume, **Rani Singh**, director of the Harry Smith Archive, outlines Smith's multifaceted engagements with string figures: his delicate mounted figures that speak of symmetry and abstraction; his films, that combine string figures with animation, Kurt Weill's operas and New York City life through multiscreen imagery; and his constant drive to collect new figures wherever he could. Singh describes Smith's "lifelong search for and pursuit of the universal, ancient and infinite," in which string figures "related to his other cross-cultural comparisons, whether they be folk songs, Seminole patchwork fabrics, Ukrainian Easter eggs, tarot cards or any of his other interests."<sup>47</sup> While Smith seems to follow a classic primitiv-

47 Rani Singh, "From Buffalo Skin to Intertwined Snakes: The String Figures of Harry Smith," in this volume, p. 192, p. 207.

ist pattern here, to use non-Western art in a quest for the timeless and universal, his engagement with string figures was also driven by a genuine interest in and knowledge of these cultures and art forms, rather than just a means to reinvigorate his art or Western art in general.

It is precisely this latent or explicit fascination of the avant-garde for what Duchamp, Smith and others called the “primitive” that the artist **Maureen Lander** challenges with her site-specific multimedia installation *String Games* from 1998 (fig. 8). The work was commissioned for the opening of the Te Papa Tongarewa

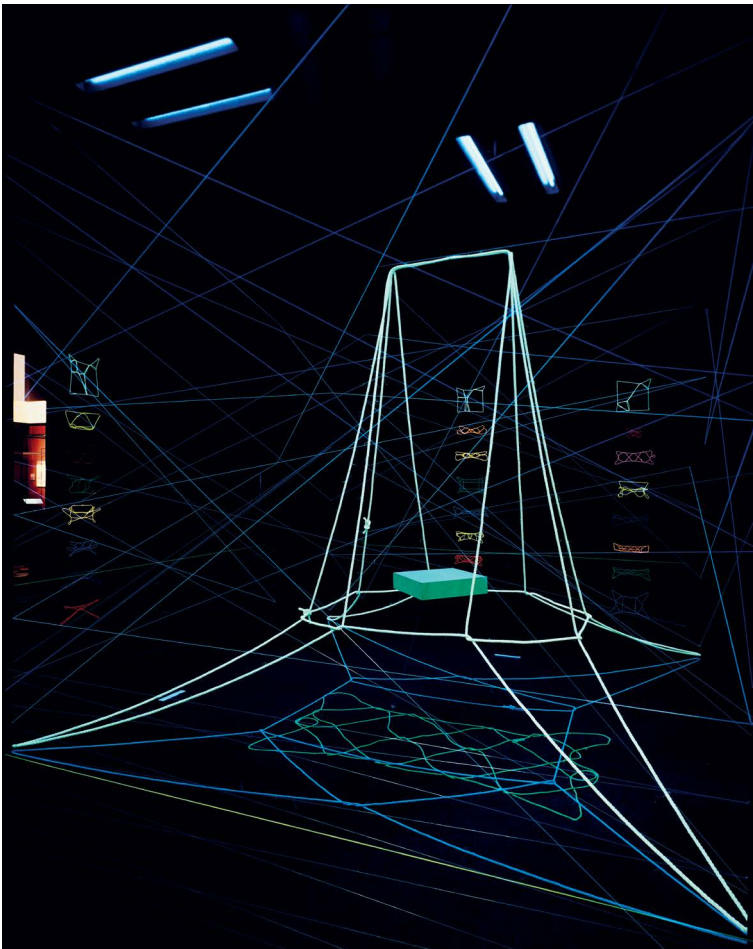


Fig. 8: Installation shot of Maureen Lander's *String Games*, 1998, photographed by Haru Sameshima.

Museum of New Zealand/Aotearoa, a merging of the National Museum of New Zealand and the National Art Gallery. Lander—of Ngāpuhi, Te Hikutū and Pākehā descent—brings together various elements in her work, including sixty-four neon-colored *whai* (Māori string games) on the wall that glow under black light and a giant *whare kēhua* (or house of spirits) pattern that encompasses a fluorescent green replica of Marcel Duchamp's *Boîte en valise*, that museum in the form of a briefcase with miniaturized photographic reproductions of his own works. Lander also produced two videos, one of which combines anthropological footage from the Te Papa collection with contemporary *whai*, while the other shows how Duchamp's *Boîte* (also from the Te Papa collection) is first unpacked and then repacked with *whai* and a mussel shell. Lander's work encapsulates a decolonization of the museum collection that is exemplary of the path that museums around the world must take with their collections; while the continuation of the cat's cradle in the figurative sense with Duchamp and his work is representative of the new narratives that are needed in the historiography of twentieth-century art, narratives that provincialize the European avant-garde. By producing herself an artwork for the gallery context, Lander resignified the notion of modern art and reappropriated Duchamp's appropriation of non-Western aesthetics.<sup>48</sup> For more on Lander's *String Games*, see **Moya Lawson's** text in this volume.

Sophisticated artistic explorations of string figures took place in the twentieth century not only in the USA and Aotearoa, but above all in Canada—which is surely related to the string figures cultures of the different Inuit groups. **Henry Adam Svec** dedicates his article to this Canadian lineage and begins with Ishu Patel's Oscar-winning animation film *Bead Game* (1977) that tells the story of the universe from the first atom to the atom bomb. In its final sequence we see a cat's cradle with an atom in the middle. Svec then focuses on the Montreal-based artists Jean-Paul Riopelle and Vera Frenkel, whom we were unable to include in the exhibition

48 Te Papa has become instrumental in the development of Indigenous museum practices, pioneering a specific Māori museology and Māori co-leadership. Conal McCarthy, *Museums and Maori: Heritage Professionals, Indigenous Collections, Current Practice* (New York: Routledge, 2011).

due to a lack of space and funding. Both of their aesthetic engagements with string figures were exhibited internationally in the 1970s. Riopelle followed a mystical and universalist approach and painted string figures in thick acrylic brushstrokes on paper made of discarded lithographs. He took some of the patterns directly from the survey of the string figures of the Arviligjuarmiut Inuit (Central Canadian Arctic) by the anthropologist and missionary priest Guy Mary-Rousselière.<sup>49</sup> Frenkel, in turn, reimagined string figures within the context of contemporary telecommunication technology by engaging two groups in a long-distance remote cat's cradle. With her complex installation *String Games: Improvisations for Inter-City Video* from 1974 she pioneered telematic art. Based on the media-theoretical concept of remediation, which reflects on the processes by which old media are translated into other/new media, Svec suggests that these works prompt a reconsideration of media evolution, questioning whether older forms might offer solutions to contemporary technological challenges.

## **Contemporary String Figures Art, Film and Theory: Exhibiting String Figures**

The museum usually stands for stasis, it is filled with objects that have been decontextualized, appropriated, systematized, and prepared for exhibition. Performativity, ephemerality and relationality had for a long time no place in the ontology and praxeology of the museum. In a sense, those string figure patterns that are mounted on cardboard or wood typify how the museum usually operates: They come from lived practices such as playing, storytelling, competing, or ritualizing, and they originate from contact and interaction. But when they enter the museum they are successively immobilized and musealized as frozen objects representing a group of people or for a culture. However, instead of shelving the plan to organize a museum exhibition on string figures because of these contradictions, we asked ourselves how

49 Guy Mary-Rousselière, *Les Jeux de ficelle des Arviligjuarmiut* (Ottawa: Musées nationaux du Canada, 1969).

a string figure exhibition might address these tensions between stasis and circulation, representation and practice, culture and art. Inspired by the manifold curatorial strategies that have questioned and transcended the borders of art and anthropology in the last forty years, we would like to highlight three different curatorial decisions:<sup>50</sup>

First, we seek to challenge or bypass the “persistent and modernist paradigms of art and artefact.”<sup>51</sup> We do this not by leveling out the differences between objects from anthropological collections and works from art collections, but through various strategies that aim to complicate or collapse the distinction. This includes exhibiting works that are the result of processes involving Indigenous communities and anthropologists as well as art galleries, such as the works of the Buku-Larrnggay Mulka Art Centre described above. By bringing these works together in the same space with the avant-garde works of Harry Smith, which have only an indirect connection to the creator societies, as well as the mounted string figure patterns that are usually overlooked in the depots of ethnological museums, the categorizations and the usual value hierarchies of these objects are not only challenged, but their different histories can be addressed. Following

50 For a comprehensive overview of these positions, and interviews with their most prominent curators such as Clémentine Deliss, Wayne Modest and Bonaventure Ndikung, see Margareta von Oswald and Jonas Tinius, eds., *Across Anthropology: Troubling Colonial Legacies, Museums, and the Curatorial* (Leuven: Leuven University Press, 2020). See also Philipp Schorch, Conal McCarthy and Eveline Dürr, “Introduction,” in *Curatopia: Museums and the Future of Curatorship*, ed. Philipp Schorch and Conal McCarthy (Manchester: Manchester University Press, 2019). Furthermore, the idea of the “para-museum” developed by the Vienna network for exhibition theory schnittpunkt guided us; see Martina Griesser-Stermscheg, Christine Haupt-Stummer, Renate Höllwart, Beatrice Jaschke, Monika Sommer, Nora Sternfeld and Luisa Ziaja, “Das Museum der Zukunft,” in *Das Museum der Zukunft: 43 neue Beiträge zur Diskussion über die Zukunft des Museums*, ed. schnittpunkt and Joachim Baur (Bielefeld: transcript, 2020), pp. 17–31, here p. 29. These decisions probably stem also from our position as researchers funded by the Swiss National Science Foundation, working as independent curators with no or very limited access to the institutional policies and agenda of the museum where the exhibition is held. This museum is a cultural engagement of the pharmaceutical company Roche and is dedicated to the avant-garde artist Jean Tinguely.

51 Ruth Phillips, “Exhibiting Africa after Modernism: Globalization, Pluralism, and the Persistent Paradigms of Art and Artifact,” in *Museums After Modernism*, ed. Griselda Pollock and Joyce Zemans (Malden, Mass.: Blackwell, 2007), pp. 80–103, here p. 98. Quoted from Oswald and Tinius, *Across Anthropology*, p. 19.

a similar logic but from the side of the art object, the exhibition presents various artistic approaches that question the status of the art object in a gallery space. Some of these have already been mentioned: Duchamp's strings that creep into the art connoisseur's field of vision, Deren's film techniques that bewitch the Art of This Century gallery, and Maureen Lander's repackaging of the suitcase museum with a string figure collection that inverts ideas of the modernist canon.

Second, we attempt to circumvent the dichotomy of practices and representations. We are not interested in replacing cultural representations that stand for cultural entities with staged and performed culture, but in both their histories and their specificities. For this reason, the exhibition strategically juxtaposes various media that represent, document or further explore string figures: mounted figures next to TikTok videos, multiscreen imagery next to photos, string figure survey books next to soft ground etchings, installation views next to 16mm films. With this media diversity, we hope to contribute to a reflection on the status of the object in a museum exhibition, the "nature" of string figures and the possibilities and limitations of particular media.

Third, the exhibition seeks to open up a cross-cultural space that is not based on universalism but on the reconnection of different localities. It is about patterns like *Administration Staffs* or *whare kēhua* as witnesses of colonization and/or as aesthetic proposals for decolonizing our knowledge. It is about ways of centering Indigenous forms of knowledge in order to (re)appropriate them from Western modernity. But it is also about patterns prominent in Basel like *Häxebäse* (witch's broom) and *Glettibrätt* (ironing board). It is about presenting very differently localized stories of reconnecting museum collections to their creators. Whenever possible, we took the exhibition as a starting point to initiate cat's cradles in the metaphorical sense of handovers, of playing together, in order to weave a convivial world. In the following we will briefly portray some of these cat's cradles.

## String Figures as a Metaphor and Method of Thinking and Working Together

Donna Haraway's proposal of cat's cradle and later of string figures or SF as a method of transdisciplinary and trans-species thinking is both the subject of the exhibition and one of its central inspirations. Donna Haraway is a zoologist by training, but her home ground has always been the history of science and gender studies. She pioneered the transdisciplinary thinking of—in her 1994 words—multicultural, anti-racist cultural studies, and has become a ubiquitous reference in the global exhibition system of contemporary art at least since her participation in *dOCUMENTA (13)* in Germany in 2012.<sup>52</sup> Haraway conceptualizes the practice of cat's cradle as an intra-action of thinking, making, worlding and patterning between many different players/critters. Haraway's SF concept has a history that goes back long before her contribution to *dOCUMENTA*. In his article for this volume, **Mario Schulze** focuses on the history of SF in Haraway's writings. He traces Haraway's use of textile metaphors since the 1980s, examines the acronym SF and shows how Haraway initially positioned cat's cradle as a counter-concept to the network and actor-network-theory. It was only later that Haraway's interest in *na'atl'o'* (as string figures are called in the Navaho language) and her increased engagement with Indigenous knowledges led her away from cat's cradles and towards string figures.

Haraway's cat's cradle method also gained prominence through the visual forms it was given. On **Nasser Mufti's** poster design *Playing Cat's Cradle with Companion Species* from 2011, which he created for a lecture by Haraway (fig. 9), threads are stretched between claws, paws, flippers and fingers. The design congenially illustrates Haraway's claim to always consider the co-agency of the various species that co-constitute our world. In his short contribution for this volume, Mufti tells the surprising story of his poster between a personal account of what happened and an historical materialist analysis of his work—without making any

52 Donna Haraway, *SF: Speculative Fabulation and String Figures* (Ostfildern: Hatje Cantz, 2011).

reference to other species. Nasser Mufti’s design was an inspiration for many artists and designers. In Isabel McLeish’s *Aquaculture Cradle* from 2021–2022, for example, the claws and paws are exchanged for corals and shells—both natural shells and Shell’s corporate logo. With *Aquaculture Cradle* McLeish points to the impact of the current intensive fishing industry, to climate change and to demands for “regenerative and respectful methods of food production and connection to place and ecology.”<sup>53</sup>

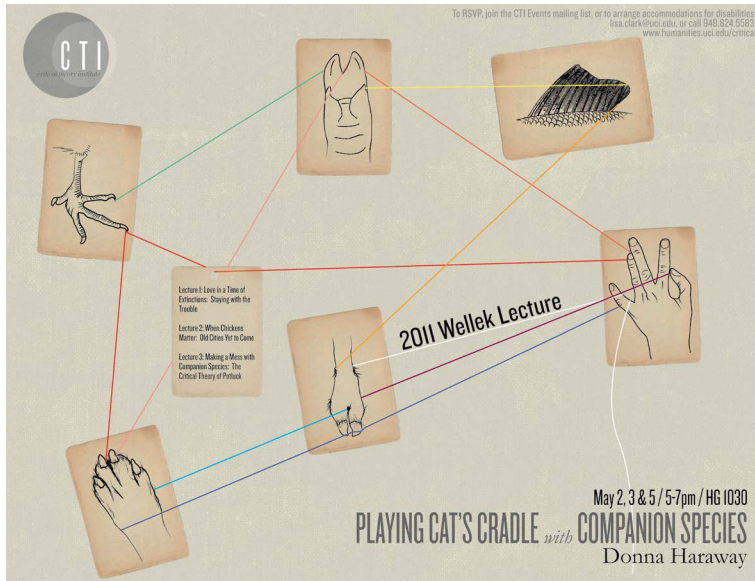


Fig. 9: Nasser Mufti, *Playing Cat’s Cradle with Companion Species*, 2011.

String figures were and are in widespread use not only as a model for multispecies agency, but also as a method for feminist, trans-disciplinary collaboration. In her article Ines Kleesattel takes up Haraway’s threads, and relates them to a selection of transdisciplinary and process-oriented artistic practices that she calls *Hexenspiele* (Witches’ Games). She describes how artists like Maya Deren, Lygia Clark, Doris Stauffer, and Chantal Küng developed practices that embody relational aesthetics and challenge

53 Isabel McLeish, *Aquaculture Cradle*, 2021–2022, <https://www.isabelmcleish.com/art/aquaculture-cradle> (accessed September 9, 2024).

traditional disciplinary boundaries. By emphasizing the critical and speculative potentials of queer-feminist witchery, she promotes relational and affective aesthetics that allow for the ongoing creation and re-creation of meaning through collaborative, non-linear processes.

We also invited artists to play a part in the exhibition's cat's cradle. **Toby Christian's** *Stringer*—an artificial intelligence that generates images in dialogue with the speech and text it hears—contributed to the exhibition. *Stringer*, which produces a kind of string images, made a new piece fed with the input of names of string figures that are or were common in Basel, the location of the exhibition. For more on Christian's *Stringer*, see **Lynton Talbot's** contribution in this volume. **Seraina Dür** and **Jonas Gillmann** explore their concept of “modes of relationships” in art education and creative producing, arguing that art should center on the ways it relates to its context and participants. They advocate for recognizing the relational processes that underpin artistic endeavors and suggest that these relational practices generate unique, context-specific experiences that might even lead to societal transformation. Together with the graphic designer and comic artist **Jan Bachmann**, they transferred their ideas into a visual web of relationships that took Mufti's *Multispecies Cat's Cradle* as inspiration.

## **Film, Photography and String Figures: Reconnecting, Appropriating, Performing**

Film has a special place within string figure art. Film and string figures formed a connection early on: from the oldest known film footage of a string game from 1903, in which a couple use the string as a make-out aid in the typical vaudeville style of early film, to the countless anthropological films, to tutorials and performances on Tiktok. The combination of film or video and string figures is not only a successful one, but also an entertaining and often aesthetically convincing one. Kathleen Haddon went so far as to describe string figures as a cinematographic form in general.

In her film *Mobilize* from 2015, the multidisciplinary artist **Caroline Monnet** remixes films from the archives of the National Film Board of Canada. Part of *Mobilize* is the string figure footage from the anthropological classic *Cree Hunters of Mistassini* (1974, Boyce Richardson and Tony Ianzelo). Monnet transforms the serene ethnological recordings into a powerful and fast-paced visual pull, underscoring them with Inuk throat singing by Tanya Tagaq. By this visual and acoustical appropriation she transforms the string figures into a “prismatic celebration of Indigeneity.”<sup>54</sup> In this volume, film curator **Adam Piron** engages with *Mobilize*.

String figures are prominent on social media. **David Ket’acik Nicolai** alias Yup’ik Dave learned *airraq* from his father and grandmother. For several years he performed them for audiences at the Alaska Native Heritage Center in Anchorage. During the Covid-19 pandemic, he began sharing his string figures online on TikTok and YouTube. With his videos Nicolai hopes to put a smile on people’s faces and encourage them to learn more about string figures; he writes in his brief account of his one video that went viral.

A rich source for films of string figures is the historical collection of scientific and anthropological films *Encyclopaedia Cinematographica* (EC).<sup>55</sup> Many artists have explored this fascinating and intimidating collection.<sup>56</sup> The exhibition presents positions that deal specifically with the string figure films. Belgian artist **Katrien Vermeire**’s 16mm black-and-white film *Touwfiguren* (Dutch for string figures) shows two unnamed children standing on a rooftop in the middle of Brussels, playing string figures. Vermeire was inspired by Hans-Rudolf Haefelfinger’s EC film *Mitteleuropa, Basel-Land – Fadenspiele*, made almost fifty years earlier, which shows the two young sisters Ruth and Gertrud Beriger playing string figures on the roof of the Natural History Museum

54 Adam Piron, “Powered by Indigenous Life and Grit: On Caroline Monnet’s *Mobilize*,” in this volume, p. 310.

55 See Moritz Greiner-Petter, “Reconfiguring the Encyclopaedia Cinematographica: On the E-EC Interfaces,” and Sarine Waltenspül, “Who Owns the Films? Who Shows the Films? A Film of String Figures in a Web of Relationships,” in this volume.

56 See for example the installation *Encyclopaedia Cinematographica* from 2001 by Christoph Keller, the play *Blackbox IWF* from 2019 by Ute Sengebusch and Michael Westrich, and *Creatively Utilising the Encyclopaedia Cinematographica Film Project: Visual Repatriation of the Masakin* from 2020 by Isao Murahashi.

in Basel. In her film, Vermeire adapts the folkloristic and ethnological gaze that characterizes the EC films to her own surroundings: (not so) distant Basel becomes Brussels, the museum roof becomes the roof terrace of the house she lives in, the children from the 1960s become the neighbor's children from her present. For this volume, the foremost authority on European string figures, **Stephan Claassen**, has analyzed Vermeire's film from the perspective of the string figure repertoires shown in the two films. Self-designated "halfie anthropologist" **Maria Julia Fernandes Vicentin** and artist **Edgar Calel** also turn the EC's historical-ethnological gaze to the present. In their photographic essay *Ru setelen chaj* (a large circle of ashes in Mayan Kaqchikel language) from 2022 they playfully reappropriate the EC film by the Brazilian ethnologists Vilma Chiara and Harald Schultz, which shows Krahô people doing string figures in the outskirts of São Paulo (fig. 10.1 and 10.2). With their work, they invite us to imagine with them "ways to 'critically fabulate' anthropological knowledge production through these images."<sup>57</sup> As Vicentin points out, in her text for the volume on Chiara and Schultz, string figures might "challenge not only [...] divisions between art and science, subjectivity and objectivity, but also the affections, and therefore, the effects that they engender in aesthetics and politics."<sup>58</sup>

We—**Mario Schulze** and **Sarine Waltenspül**—have also ventured into a cinematic appropriation as part of our research on scientific films and the EC. The essay film *Unlearning Flow* (2019), which we made together with the artist **Christoph Oeschger**, traces the history of the EC and of the Institute for Scientific Film Göttingen that hosted the EC collection. In the course of its making, about six years ago, we came across the string figure films in the EC, which eventually led us to engage more closely with the subject. We probably never dreamed that this nerdy interest would lead to an exhibition, to this volume, and to the research project that provides the framework for our work. For the exhibi-

57 Maria Julia Fernandes Vicentin, "Entangling Forms of Knowledge Production: On Vilma Chiara, Harald Schultz, and the String Figures of the Krahô People," in this volume, p. 339.

58 Ibid.

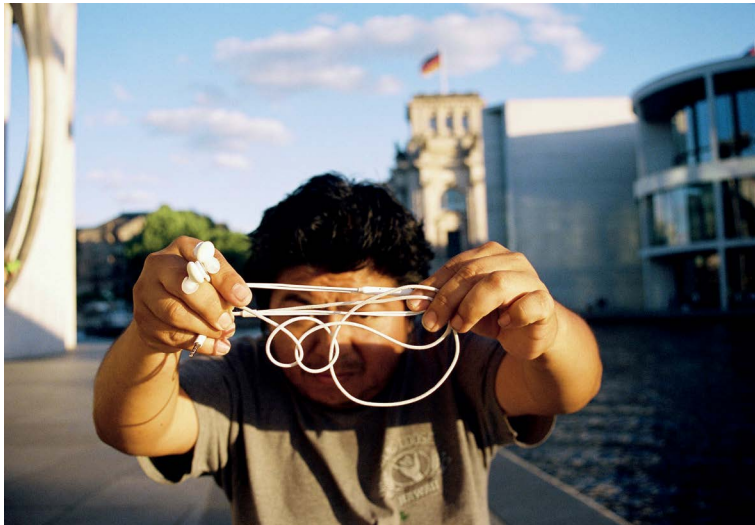


Fig. 10.1 and 10.2: Two photos from the series *Ru setelen chaj* by Maria Julia Fernandes Vicentin and Edgar Calel, 2024.

tion, design researcher **Moritz Greiner-Petter** developed two interfaces entitled *E-EC*—“E” for electronic, expanded or entangled EC, indicating the reconfiguration of the collection under digital conditions, or “E” for encountering, examining or enquiring to highlight the research character of the interfaces. The interfaces are tools for critical encounters with the EC collection in all its fascinating and monstrous ambivalence. Accompanying the *E-EC* are



Fig. 11.1: Screenshot from Hans-Rudolf Haefelfinger's *Mitteleuropa, Basel-Land-Fadenspiele* (IWF 1975). Ruth and Gertrud Beriger playing Cat's Cradle in 1969.

two vitrines, in which we—Mario and Sarine—present the stories of three of the films from the EC in more detail—two from Kiribati and one from Switzerland. We collaborated with the string figure players from the film and with the heritage institutions from the creator's societies, to add their contemporary perspectives to the historical material.

It was also, but not only, in this context that we could experience the quality of string figures that is so often invoked in literature: In contact with players, researchers and heritage institutions, we encountered a great passion for string figures, gratitude for the attention given to this rather marginal topic and a lot of willingness to collaborate. It was probably no less exciting for Ruth Altenbach and Dunia (formerly Gertrud) Lingner—the two sisters from the Swiss string figure film, which was shot on the roof of the Natural History Museum in Basel (fig. 11.1)—to do an interview about string figures and their experience than it was for us (fig. 11.2 and 11.3). The Basel connection was important to us, not only because the exhibition takes place in Basel, but also because it allows Sarine to connect with the city of her birth and both of us with the cat's cradles we grew up playing with our siblings or friends on boring car rides or at family gatherings.



Fig. 11.2 and 11.3: Interview with Ruth Altenbach and Dunia (formerly Gertrud) Lingner in 2024, filmed by Piet Esch, Point de Vue.

We were also confronted with unpredictable outcomes: String figures have always been the starting point, but not always the end point of our research and our collaborations. Based on the films of string figures that were made on the islands of Onotoa and Tabiteuea (formerly part of the Gilbert Islands, now Kiribati), by the German ethnologist Gerd Koch, we got in touch with Meere Kenana and Kirikara Koraua, the curators of the Te Umanibong, which is the Culture and Museum Department of Kiribati and the only heritage institution of the state that is neighbor to Nauru. In our video call, in which we talked about a possible contribution to the exhibition on their part, they asked us about the “old songs.” Gerd Koch had not only collected objects and made films of string

figures, but also recorded songs. It was the songs they were interested in and wanted to have their copies of. Dorothea Deterts, curator of the Oceania Collection of the Ethnological Museum of Berlin, responded immediately to our request and sent the relevant files digitally. For the time being, this restitution of digital files of the old songs is as far as we have got, but we like to think of it as the beginning of a cat's cradle.

## **Acknowledgements**

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# **I. Essays**

Anthropology



## Recollections of the String Figures of Yirrkala

In the Australian Museum in Sydney are 193 mounted string figures, collected in 1948 in Yirrkala in North-East Arnhem Land by Museum anthropologist Frederick McCarthy (fig. 1). One of the largest museum collections of its kind,<sup>1</sup> it was made when McCarthy was seconded to work on the American-Australian Scientific Expedition to Arnhem Land, an eight month long multi-disciplinary research venture, jointly sponsored by the National Geographic Society, the Smithsonian Institute and the Commonwealth Government of Australia.<sup>2</sup> In addition to the mounted figures, in the Museum archives are McCarthy's notebooks recording the instructions for making the figures and a series of photographs of his principal collaborator Ngarrawu Mununggurr, displaying the final designs (fig. 2).<sup>3</sup> As objects—both strange and beautiful—the mounted string figures declare their status as hybrid artefacts of cross-cultural encounter and exchange.

1 Martin Probert, "Museums and Other Institutions with String Figure Artefacts—an inventory of string figures mounted on card, string figures on film, string figure photographs, and recordings of string figure songs," <https://math-sf.guineaflower.org/archives.html> (accessed June 9, 2024). This inventory was compiled 1999–2003. There are collections missing from Probert's list. In Europe, for example, the mounted figures in the Ethnological Museum Berlin, Germany and the Museum of World Culture, Gothenburg, Sweden.

2 See Martin Thomas, "A short history of the 1948 Arnhem Land Expedition," *Aboriginal History* 34 (2010), pp. 143–170.

3 The instructions were recorded in two dedicated notebooks. One of these is held by the Australian Museum: F. D. McCarthy, 1948, Arnhem Land Expedition Diary No. 6, String-figure techniques, Yirrkalla and Oenpelli, AMS515, Australian Museum Archives, Sydney. The original of the other is held at AIATSIS with the larger part of McCarthy's personal papers: F. D. McCarthy, 1948, Arnhem Land Expedition Diary No. 7, String-figure techniques Yirrkala, Papers of Frederick D. McCarthy, MS3513/14/6, AIATSIS.

String figures are patterns made with a loop of string (in McCarthy's words) "by the co-ordinated movements of the fingers of both hands, assisted by the teeth, neck, elbows, knees and toes when necessary."<sup>4</sup> Completed designs are usually displayed on the hands, sometimes using other body parts as supports. Commonly executed by a single person, some require two or more participants. String figures are understood in mathematical typology as "unknots." They always undo, come apart, unravel, to return to where you began—ready to begin again—with the simple loop of string. They are process and performance. Their ontological identity is in the transformation of the string through manipulation and movement. Even once the final figure is reached string figures are rarely still. At the very least the hands need to move (even slightly) to keep the figure tensioned; and they are often animated by the maker with actions appropriate to the subject being represented.

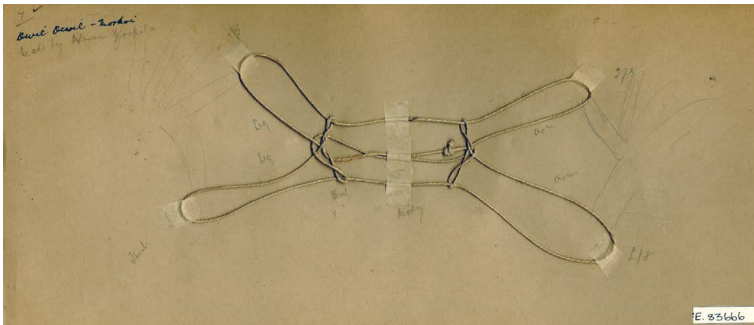


Fig. 1: *Devil Devil/Morkoi* made by Ngarrawu Mununggurr, Yirrkala, 1948.

The mounted figures collected at Yirrkala are all made from industrially manufactured string, which—like the card on which they are mounted—McCarthy took with him for the purpose. Once the figure was made, slipped off the maker's hands and affixed to card, the support was annotated with the name of the maker, the name of the subject in English, and its Yolngu *matha* name (Yolngu language name). Relevant finger positions were marked in, and sometimes the general position of the hands was sketched. In many of the mounted figures, especially those relat-

4 Frederick D. McCarthy, "String figures of Australia," *The Australian Museum Magazine* 12, no. 9 (1958), pp. 279–283, here p. 279.

ing to animals, parts of the design are identified as representing specific features, such as head, tail, belly, and so on. Each figure was numbered in the field and is now annotated with the Museum's accession number. At the same time the loopings, crossings and twists of the string inscribe movement, inferring the process of their physical making. The scale of the figures and their common bilateral symmetry imply the presence of the body that made them. The collection is in this way melancholic, perhaps mournful. The variety of designs catalogued refer to a body of Indigenous knowledge, here mute and stilled.

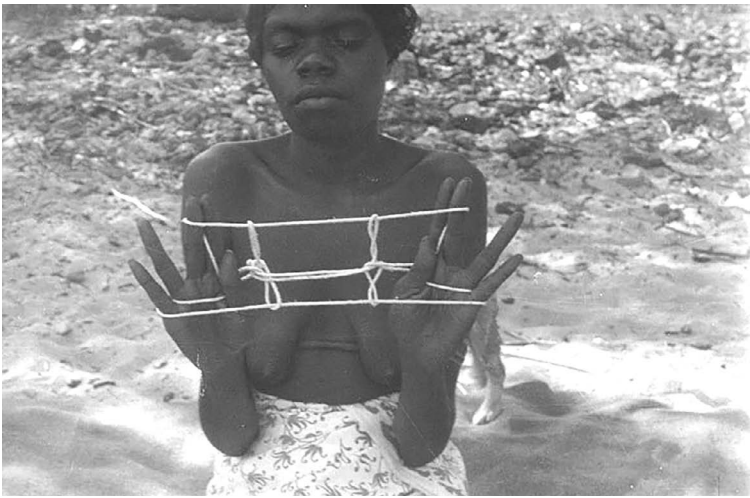


Fig. 2: Ngarrawu Mununggurr making *Devil Devil/Morkoi*, Fred McCarthy Field Trip Photographs, September 1948.

Between 2008 and 2012 I visited Yirrkala on a regular if intermittent basis, as part of my doctoral research exploring the story of this collection, why and how it was made, and, on the other side of the equation, wanting to find out more about the practice of string figure making and its role and meaning in Yolngu culture. The Buku-Larrnggay Mulka Art Centre at Yirrkala was my first point of contact with the community, and continued to play an important role in the research project. The town of Yirrkala is situated on the mainland coast of the Gove Peninsula: looking at a map of Australia, tracking to the right of Darwin, it is the most easterly outcrop of land facing Cape York on the other side of the Gulf of Carpentaria. It is one of four main population centers in North-East Ar-

hem Land, the homeland of Yolngu speaking clans. Yirrkala was established as a Methodist mission in 1934. Now, as a “protected” Aboriginal community, outsiders require permission to visit (a permit). Yirrkala, at the time I was working there, had a seasonally variable population of between 600 and 1000 people.

## A Comparative Study

As anthropology was emerging as a discipline in the later nineteenth century, one of its founding fathers, E.B. Tylor, in a lecture of 1879, suggested that the comparative study of string figure designs—as they were complex enough to preclude “independent invention”—could be a valuable tool for tracking cultural transmission.<sup>5</sup> Anthropological interest in string figures grew with the dominance of diffusionist theory and reached a peak in the 1920s and 1930s. Through the comparative analysis of culture traits or complexes diffusionists attempted to map the development and spread of culture (origins, influences, migration, change) through time and across geographic area. If the same string figure design was found to occur in different places, the presumption was that there had to have been contact between the populations in these places. As more repertoires were documented it became apparent, however, that the same design could be made in different ways. For making comparative analyses therefore, a record of the method of making figures came to be deemed essential.

Alfred C. Haddon collected eight mounted specimens from Torres Strait Islanders (between mainland Australia and what is now Papua New Guinea) in 1888. On his return home he deposited them with the British Museum.<sup>6</sup> That same year Franz Boas pub-

5 Edward B. Tylor, “Remarks on the Geographical Distribution of Games” (Paper Delivered at the Royal Institution, March 14, 1879), *Journal of the Anthropological Institute of Great Britain and Ireland* 9 (1880), pp. 23–30, here p. 26.

6 See Martin Probert, “The Torres Strait String Figures in the British Museum A. C. Haddon Collection,” *Journal of Museum Ethnography* 16 (2004), pp. 140–156; Dinah Eastop, “Playing with Haddon’s String Figures,” *Textile* 5, no. 2 (2007), pp. 190–205; Robyn McKenzie, “Strange and complicated feats with string,” in *Ancestors, artefacts, empire: Indigenous Australia in British and Irish museums*, ed. Gaye Sculthorpe, Maria Nugent and Howard Morphy (London: The British Museum, 2021), pp. 216–223.

lished instructions for making two designs he had collected from Inuit in Cumberland Sound, Baffinland, in the Arctic north of the American continent, in 1883–1884.<sup>7</sup> When Haddon returned to the Torres Strait in 1898 (on the Cambridge Anthropological Expedition to the Torres Strait), he and his colleague W.H.R. Rivers devised a standard form of language for recording string figure techniques. They designated terms to specify fingers, different loops on the same finger (upper and lower, near or far strings), different starting positions or openings and final forms of extension, and common manipulations or movements—making it possible to “describe any operation in comparatively few words.” Rivers and Haddon published “A Method of Recording String Figures and Tricks” in the Royal Anthropological Institute’s journal *Man* in 1902 (accompanied by instructions for twelve designs collected on the Expedition).<sup>8</sup> A simplified version of their descriptive system and terminology remains in use today.

To record the method of making a design it was necessary for researchers to learn how to make the designs themselves. Writing the instructions for making—clearly and precisely, without leaving anything open to being misconstrued—is no easy task. Being able to make the figure allowed the collector to test and refine their observations of method recorded in the field. The publication of Rivers and Haddon’s article encouraged the study and collection of repertoire. Graduates from the first university courses in anthropology, established in the early years of the twentieth century, commonly collected string figures when undertaking fieldwork placements: “knowledge of a few types and the ability to record others” became a standard part of the anthropologists’ tool kit.<sup>9</sup>

7 Franz Boas, “The Game of Cat’s Cradle,” *Internationales Archiv für Ethnographie* I (1888), pp. 229–230.

8 W. H. R. Rivers and A. C. Haddon, “A Method of Recording String Figures and Tricks,” *Man* 2 (1902), pp. 146–153, here pp. 146–147.

9 A. Hingston, “‘String Figures: A Study of Cat’s-Cradle in Many Lands.’ By Caroline Furness Jayne. With an Ethnological Introduction by A.C. Haddon. New York: Scribners, 1906,” (Review) *Man* 6 (1906), pp. 155–156, here p. 156. See Robyn McKenzie, “‘Such intimate relations’: on the process of collecting string figures and the paradigm of participant observation fieldwork,” Royal Anthropological Institute, *Art and Anthropology* online pamphlet series, March 2022, <https://therai.org.uk/publications/anthropology-art/anthropology-art-volume-4/>

Thought to have been common to most cultures at some point in their history, the prevalence of string figures makes them a near universal trait. This universality feeds the impulse to find in them shared ground. This was certainly the focus of diffusionist studies, on a technical level at least. There are parallels between cultures in the relationship of string figures to storytelling, as a form of mathematics, a pedagogical tool, a memory practice, and in their use in socio-magical regulation. These parallels are less compelling, however, than the way in which each group instantiates these relationships: developing them differently in line with their overall cultural style.

From early in the study of string figures collectors began to identify characteristic regional and local traits. Differences in style, not just of finished designs, but of characteristic openings, movements and extensions of figures were noted, some identified through the specific names given to them by local communities themselves. In the early 1930s, ethnomusicologist Erich von Hornbostel elaborated the relationship between string figure method and styles of kinaesthetic movement:

Even more than by statistics, experts will be convinced when they themselves making Kwakiutl string figures will *feel* their characteristic Eskimoan style. For style in string figure making, as in dancing and singing, is deeply rooted in motor behaviour. (For the same reason tribes, or individuals, chiefly differ not in *what* they make but in *how* they make it.)<sup>10</sup>

## Making the Collection in 1948

The Arnhem Land Expedition was the first opportunity McCarthy (then in his early forties) had to undertake research with living peoples, and it was the first and only time he collected string figures. In a letter to the Expedition's leader C.P. Mountford written in February 1948 (a month before departure), McCarthy reported that he had been "reading up the string figures" but found "the

10 Erich M. von Hornbostel and Mark Sherman, "Kwakiutl String Figures: A Preface," *Bulletin of String Figures Association* 16 (1989), pp. 25–48, here pp. 32–35 (italics in the original).

technique extremely difficult to follow.”<sup>11</sup> Mountford reassured McCarthy: “If you have not time to learn the string games, we could collect the completed examples and mount them on sheets of cardboard. Even if the techniques are not recorded, it will be some sort of a record.”<sup>12</sup>

At Yirrkala, McCarthy’s diaries and notebooks recording what he did when, where and with whom, reveal that indeed he started by collecting mounted figures alone. It was only after he met and started working with Ngarrawu Mununggurr that McCarthy began to collect the instructions for making the figures. Ngarrawu was a young Djapu clan woman in her twenties (married with one child at the time). Ngarrawu had a wide knowledge of designs, but it was her skill in making that became indispensable to McCarthy. Ngarrawu had a remarkable ability to execute the figures “in slow motion,” “step by step,” allowing McCarthy time to write down the instructions for one movement before she continued on with the next.<sup>13</sup> This allowed McCarthy to record the methods of making from observation. Regardless of who made the mounted figure that had been collected, Ngarrawu provided the instructions for all, with few exceptions.

McCarthy’s activities on the Expedition included excavating archaeological sites, documenting rock art, and collecting ethnographic artefacts including bark paintings. With competing demands for his attention, he had limited time to spend on collecting the string figures. Yirrkala was the second of three base camps where the Expedition party set up for an extended period. During their stay, with others in the party McCarthy spent three weeks at Milingimbi, a small island further along the coast. On his return he learnt that they had less than two weeks before the Expedition was due to depart for their third base camp at Gunbulanya (Oenpelli). After a spate of concentrated work with

11 Frederick D. McCarthy to C.P. Mountford, 4 February 1947 (sic). Papers of Frederick D. McCarthy: MS3513/14/8. AIATSIS.

12 C.P. Mountford to Frederick D. McCarthy, 4 February 1948. Papers of Frederick D. McCarthy: MS3513/14/8. AIATSIS.

13 F. D. McCarthy, “The String Figures of Yirrkalla,” in *Records of the American-Australian Scientific Expedition to Arnhem Land*, vol. 2: *Anthropology and Nutrition*, ed. C. P. Mountford (Parkville, Vic.: Melbourne University Press, 1960), pp. 415–511, here p. 415.

Ngarrawu, McCarthy had recorded the instructions for sixty five of the ninety mounted figures he had collected. When the party was advised that the boat coming to transport their gear to Oenpelli was delayed, the three activities of collecting, recording and writing up were combined. After recording instructions for the backlog of mounted figures already collected, McCarthy and Ngarrawu collected new designs and recorded their methods of making. Having exhausted those “voluntarily performed” for him McCarthy would suggest subjects.<sup>14</sup> As the new departure date approached, McCarthy’s diary tells the story:

4 September: I continued working with Narau & got the total of string figures to 173.

5 September: In the evening I worked with Narau & took the total to 183 string figures.

7 September: The total now is 190...There are probably more to be got here & I shall try to get ten more to make the 200 should time permit.<sup>15</sup>

McCarthy never attempted to observe string figure making in a social context. His motivation for making the collection was diffusionist in origin, and the diffusionist project saw string figure designs as valuable data in and of themselves. On his last day in Yirrkala McCarthy took photographs of Ngarrawu making the figures. In the three hours between nine in the morning and noon, Ngarrawu made 149 figures for him to photograph. In the hour after the lunch break, she made another forty figures.

While I was writing down the name and number of one that I had photographed Narau would have completed the next one, her long slim fingers moving rapidly, gracefully, and surely through the complex series of manipulations. She did the figures in the order I requested and not at random as a subject came into her mind.<sup>16</sup>

McCarthy recorded string figures for most things encountered in the Yolngu world: animals and plants, aspects of the natural

14 Frederick D. McCarthy, “Arnhem Land Expedition. Report on Scientific Work,” (n.d.), pp. 1–11; p. 7. Typescript. Correspondence Files, Arnhem Land Expedition. AMS10/22/1948. Australian Museum Archives.

15 Frederick D. McCarthy, “Diary 5. Yirkalla Diary No. 2 and Oenpelli,” 4–7 September 1948. Papers of Frederick D. McCarthy: MS3513/14/5. AIATSIS.

16 McCarthy, “The String Figures of Yirrkalla,” p. 417.

environment (ripples on a pool, a running creek, lightning, sun, rain, clouds), human and animal behavior and items of material culture all providing subjects. He identified a “comparatively large” series of introduced Indonesian and European subjects. Some of these appeared to be new figures, others were evidently repurposed, i.e. “old figures given a new name,” such as “Two Armbands also serving as Two Pannikins.”<sup>17</sup>

While a prodigious effort, particularly on the part of Ngarawu, McCarthy’s record of the Yirrkala repertoire was not without problems. McCarthy’s lack of hands-on proficiency in making the figures meant he could not test his instructions, which were found to be riddled with errors. Honor Maude, recognized as the world expert on Pacific string figures, found that she could recreate less than ten per cent of the Yirrkala designs following McCarthy’s instructions. This inspired a “major revision” of his methods by Maude and Mark Sherman (Director of the International String Figure Association), published in 1995.<sup>18</sup>

## Making the Prints in 2010

But the Ethnographer has not only to spread his nets in the right place, and wait for what will fall into them. He must be an active huntsman, and drive his quarry into them and follow it up to its most inaccessible lairs. And that leads us to the more active methods of pursuing ethnographic evidence.<sup>19</sup>

In preparation for my fieldwork, I thought I would learn a few of the simpler figures from the repertoire. Having had no experience in making string figures, I was at the beginning of this process quite simply inept—with no feel for the string and its behavior, or for the characteristic movements of the fingers and hands involved. I remember trying to make this one figure with numer-

17 Ibid., pp. 419–421.

18 Honor C. Maude and Mark A. Sherman, “The String Figures of Yirrkala: A Major Revision,” *Bulletin of the International String Figure Association* 2 (1995), pp. 87–187.

19 Bronisław Malinowski, *Argonauts of the Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea* (London: Routledge and Kegan Paul, 1922), p. 8.

ous identities in the Yirrkala repertoire (Bandicoot, Rat, Water Goanna). For a long time, over repeated attempts I could not get it “out.” I could not “see” (or understand) how to achieve the final extension of the figure. I would reread the instructions, looking for what I had missed, and try it again. The best way to learn to make string figure designs is through copying from another person—learning to make them from written instructions is difficult. And in my own defense, while this was indeed a simple figure it ended with a movement called the “Caroline Extension.” This movement—the movement I was having trouble with—is acknowledged as a “sophisticated technique” difficult to learn “except by those who have already acquired a dexterity in string figure making.”<sup>20</sup> One day, however, the particular coordination of movements of fingers and hands required clicked—I got it. My own passage from “not knowing” to “knowing” made me aware of the bodily sense or “know-how” that can only be gained through the practice itself.

Before I went to Yirrkala, I was told by a senior member of the community that “they don’t do it anymore.” While string figure-making was no longer an everyday activity in Yirrkala, many of the people I met, of all ages and both genders, had a small repertoire of figures and tricks they could perform. These demonstrations often occurred in casual encounters: with children outside the shop at Yirrkala for example. I concluded there was a residual string figure repertoire that was still being passed on. After my first prolonged stay in Yirrkala over the Christmas wet-season of 2008–2009, I defined a small core repertoire of commonly known figures and tricks. Furthermore, it was evident from an impromptu session with a group of women on the porch of Djakala Mununggurr’s house that some, in particular the older women, had a greater fluency in handling the string and knew how to make a greater range of figures.

While my interest in string figures would provoke the making of a figure or display of a trick, I found it difficult to move beyond this level of engagement. Responses to the topic of string figures

20 Honor Maude, *Solomon Islands String Figures* (Canberra: The Homa Press, 1978), p. x.

in Yolngu culture accompanied by the historical material on the collection that I presented were mixed. For some, like Djalinda Yunupingu, they were just “not that interesting”: a children’s game.<sup>21</sup> For others, they were associated with a past time—mission days. And for some my enquiries were a reminder of the loss of cultural knowledge, provoking feelings from sadness, to anger, to exasperation. As Rarriywuy Marika remarked: “Why didn’t the anthropologists bring them before all the old people gone?”<sup>22</sup>

Djarpirr Mununggurr remembered being taught how to make string figures at the Yirrkala school by visiting women elders. She recalled, as a teenager in the 1960s, sitting with her group of girlfriends outside the “fruit shop,” “getting *ngarali* (cigarettes), learning how to smoke, used to talk about the boys, (and playing with strings).”<sup>23</sup> For her, they were associated with a time that ended with the coming of the mining town in the 1970s. The advent of the Nabalco bauxite mine on the Gove Peninsula and establishment of the mining town of Nhulunbuy (some 20km from Yirrkala) brought immediate and far-reaching disruption to the social and economic life of Yolngu people. As she explained: “Too more excitement they have at Nhulunbuy. So we forget about the Mission days. Too excited for the future. Never again we have that past onto the present onto the future.”<sup>24</sup> Dundiwy Mununggurr, like Djarpirr, associated string figures with the “old mission days.”

People used to sit and play with strings to show other people they make them—and teach other people. Sit and make them after work. After hunting, come home, bored, make string figures. Fifties, sixties and seventies, beginning eighties—people still did it. Don’t know if they still do it in the Homelands.<sup>25</sup>

She explained to me that while some traditional activities were continuing, that string for example was still made for ceremonial purposes, and for making dilly bags for sale, string figures were

21 Djalinda Yunupingu, interview with the author, Yirrkala NT, January 10, 2009.

22 Rarriywuy Marika, interview with the author, Trinity College, Melbourne, January 16, 2008.

23 Djarpirr Mununggurr, interview with the author, Yirrkala NT, January 17, 2009.

24 Djarpirr Mununggurr, 2009.

25 Dundiwy Mununggurr, interview with the author, Yirrkala NT, January 12, 2009.

“not interesting” because they were not something “that can buy and sell.”<sup>26</sup> What she was saying more broadly was that they had no place or currency in the contemporary value economy.

McCarthy had noted that his interest in string figures stimulated enthusiasm for “the making of them” within the community, and that because of their work together, Ngarrawu was “now regarded at Yirrkalla (sic.) by her people as the most skilful individual with *maitka-uma*.”<sup>27</sup> In subsequent exchanges between Yolngu and *Balanda* (people of European extraction), string figure making was not highly valued as a cultural expression. After McCarthy, no one wanted string figures from Yolngu. Other forms of traditional culture meanwhile have been leveraged into highly desirable art objects: bark paintings and *larrakitj* (memorial poles), but also including fiber arts.

On subsequent trips to Yirrkala, I worked with a number of the older women, who in a series of interview/workshop sessions engaged in a process of remembering the string figures they had once known. These women, children around the time of McCarthy’s visit in 1948, formed a direct link with the historical culture documented by the collection. But they had not made string figures before my enquiries, in most instances as they recalled, since they were young women (some forty to fifty years ago): “When we got older we stopped making it.” These sessions, while generally light-hearted, were nevertheless often hard work for both parties. Remembering required the women to start from a position of “not knowing” something they had formerly been expert at, to engage in a process of trial and error, to risk failure, and to deal with what this remembering might entail—or bring with it. Some of the women I approached did not pick up the string.

String figure making was not a part of the ongoing culture that people were engaged in—an activity that I could observe or interact with and ask questions about, just in the natural “course of things.” It did not have any status in the contemporary value economy in Yirrkala. The rationale and impetus for string figure activity came from my research project alone—the significance

26 Dundiwuy Mununggurr, 2009.

27 McCarthy, “Diary 5”, 7 September 1948.

of which, for these women, was abstract, distant, and if anything situated in the past. I tried to think of activities that would engage people in ways that had contemporary relevance to them, and in which they had agency. The suggestion that the women make prints using the string figures had some measure of success in this regard, and gained an independent momentum.

Museum collections such as the Yirrkala string figures are a legacy of the colonialist project. In the field, in my interactions with the community, as a white person pursuing a university-based research project on an Indigenous cultural collection, I felt—more at some times than others—conspicuously and uncomfortably that I was continuing that colonialist project. This was my problem—an entanglement that, if I wanted to pursue this engagement, I could not extricate myself from. This is something that I had to sit with. This was the problem figure I never worked “out.”

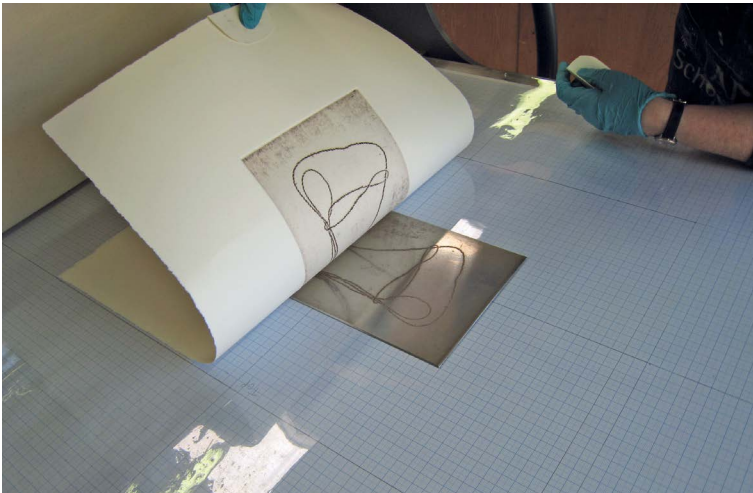


Fig. 3: Heather Burness pulling the prototype print in her studio in Canberra, May 2010.

I had workshopped different printmaking techniques with Canberra-based printmaker Heather Burness. We made a prototype print using a soft-ground etching process (fig. 3), which I took with me to Yirrkala in June 2010, to see what the Art Centre and the ladies thought. Getting the go ahead from the women, and with the Art Centre supporting the project financially, the

plan was to exhibit the prints at the Garma Festival in August.<sup>28</sup> The print studio at the Art Centre was booked up until then, so Heather Burness was contracted to print the edition. On that trip I collected five string figures. Made with “bush” string, which was first dampened, they were rolled through the press between two pieces of cardboard, and then left to dry, so that when transferred to the plate they would hold their shape (fig. 4 and 5). Back in Canberra they were laid down on the soft wax ground of the prepared plates and passed through the press again. The string figure itself was removed, leaving an imprint in the wax. The plate was then placed in an acid bath and the design permanently etched into the metal—notably capturing the detail of the plied string. The prints were then editioned.



Fig. 4: Dundiwuy Mununggurr making the figure *Bonba/Butterfly*. Printspace, Buku-Larrnggay Mulka Art Centre, Yirrkala, June 2010.

28 The Garma Festival held in late July/early August each year was designed with the aim of sharing Yolngu culture with mainstream Australia. It is both a cultural festival celebrating Yolngu art, song and dance traditions and a forum that attracts politicians, business leaders, journalists and academics to discuss the most pressing issues facing Indigenous Australia.

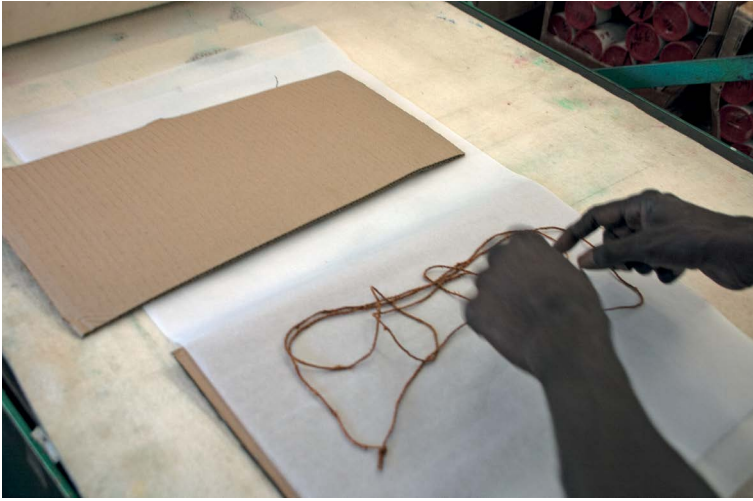


Fig. 5: Dundiwuy Mununggurr adjusting her figure *Bonba/Butterfly* before it is pressed. Printspace, Buku-Larrnggay Mulka Art Centre, Yirrkala, June 2010.

On the day that the string figures were collected the women spent the afternoon at the Art Centre, deciding on the figure they would use, practicing how to make it, and then waiting in turn to use the press. This created an occasion on which other things could and did occur. With time to concentrate on the activity without distractions some of the women remembered new figures. There was sharing of information. Observations of what others were making might provoke a memory. Discussions of how to make this one or that ensued. Gundimulk Wanambi brought her grandson with her: sitting, waiting, she taught him how to make the simple figure that she chose for her print, known in Yirrkala as *Lipalipa/Canoe*. In this way the print-making project generated activity around string figure making that I could observe as part of my study.

The series of five etchings were exhibited at the outdoor Gapan Gallery at the Garma Festival that August, 2010. String figure-making workshops led by the women were held as part of the Festival program. Dipililnga Bukulatjpi's print was featured on the Art Centre's t-shirt sold at the Festival, and seen around the Festival ground (fig. 6). The public visibility of string figures at the Festival, and the appreciation of them shown by others, raised their status and interest value among the women I was working with. At once a reprise of and homage to the historical collection of mounted figures, the etchings turned string figures into

something with recognizable commodity value—the contemporary fine art print. By “becoming art” string figures were able to enter a cross-cultural value economy. Since the historic bark petitions sent to Parliament in the 1960s, Yolngu have used art as a medium through which to assert their rights to land and sea, and to self-determination. They are used to communicating their culture through the mechanism of this cross-cultural space.



Fig. 6: Dipilinga Bukulatjpi's print *Damala Yalu/Sea Eagle Nest* on t-shirt worn by Gumatj clan performer Ritjilili Ganambarr at the Garma Festival, August 2010.



Fig. 7: Mulkun Wirrpanda (with the author) practicing making the figure *Minhala/Long-necked Tortoise* at Buku-Larrnggay Mulka Art Centre, Yirrkala, September 2012, see the print of the figure in this volume p. 23, fig. 3.

Another series of string figure prints was produced in 2012/2013 (fig. 7). They were editioned by printmaker Basil Hall using a rolover technique, the ink covering the plate leaving the string figure as negative white space on a black ground. This series of prints, together with the earlier series, were exhibited in “String Theory: Focus on Contemporary Australian Art” at the Museum of Contemporary Art in Sydney. Two of the makers, Dipililnga Buku-latjpi and Djerrk’ngu Yunupingu, visited Sydney to present to an audience in the gallery. After seeing the prints in this exhibition, Judith Ryan, curator of Indigenous Collections at the National Gallery of Victoria, bought an edition of the 2013 series, which was displayed in the Indigenous Galleries at Federation Square in 2014. In early 2015, to accompany a solo exhibition of her paintings at 200 Gertrude, a space supporting emerging contemporary artists in Melbourne, Marnyula Mununggurr ran a string figure-making workshop. In 2017, again both series of prints were included in “Entwined,” a satellite exhibition of “Tarnanthi, Festival of Aboriginal and Torres Strait Islander Art,” at the Art Gallery of South Australia in Adelaide.<sup>29</sup> As exhibited here in this exhibition, a further series of prints some by younger generation artists was made in 2019 (fig. 8). Mulkun Wirrpanda reprised her 2013 print of *Minhala/Long-necked Tortoise*.

29 Tarnanthi is an annual event initiated in 2015.

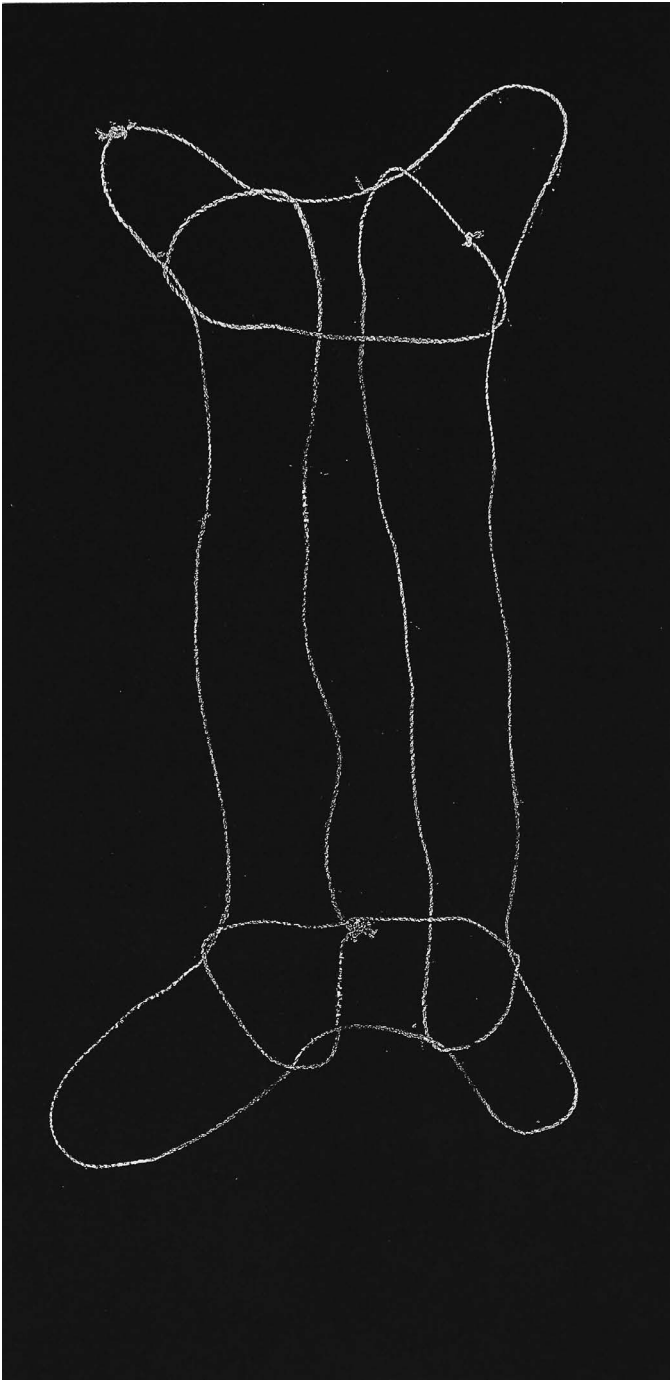


Fig. 8: Siena Milkila Stubbs, *Turtle-String Figure*, 2013. Soft ground etching, 49 x 49 cm.

## Conclusion

Reconnecting the present-day community with the collection initiated a complex and multi-faceted remembering of the string figures of Yirrkala, prompting the re-learning of forgotten knowledge and skills, and triggering the collections' latent potential for new kinds of value creation. In the course of my research project, the women's understanding of their relationship to string figures shifted from "not knowing" to "knowing." This was due to their personal regaining of practical skill through the memory work we did. Of parallel importance was the public visibility and appreciation they received through the print project: their "knowing" about string figures reflected back to them through the gaze of others. The print-making project as a way of reconnecting with the legacy of the 1948 collection fostered the "recollection" of string figures as part of Yolngu cultural identity by the larger Yirrkala community, as well as by the women that were directly involved. This is expressed for example in the use of Dipililnga Bukulatjpi's *Damala Yalu/Sea Eagle Nest* image as a logo to brand the 2015 redesign of the Yirrkala Art Centre's website. Beyond the community, this inspired a broader cultural recollection. The mounted figures had been found in 1988 abandoned in two boxes among a miscellany of unregistered items underneath a set of stairs in the Museum's stores.<sup>30</sup> In 2017 the Yirrkala string figures were selected as one of the Australian Museum's 100 greatest treasures and installed in a new permanent display in the Long Gallery.

30 Stan Florek, "F. D. McCarthy's String Figures from Yirrkala: A Museum Perspective," *Records of the Australian Museum*, Supplement 17 (1993), pp. 117–124.



## Exhibiting Colonial Entanglements

### String Figures and Material Metaphors

*On comprend enfin que les espèces naturelles ne sont pas choisies parce que “bonnes à manger” mais parce que “bonnes à penser.”*

Claude Lévi-Strauss, *Le totémisme aujourd’hui*

It matters what ideas we think other ideas with [...]

Marilyn Strathern, *Reproducing the Future*

It matters what matter we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots [...] what ties tie ties.

Donna Haraway, *Staying with the Trouble*

In the early 1960s, discussing totemism, that most anthropological of subjects, Claude Lévi-Strauss made the observation that certain animal species came to be totemic for Indigenous groups, not because they were “good to eat,” but because they were “good to think.”<sup>1</sup> The analogical way in which people understand and are able to reflect upon abstract concepts such as relatedness through aspects of “the sensible world” rendered in “sensible terms”—what Lévi-Strauss termed “the science of the concrete”<sup>2</sup>—might otherwise be described as the operation of “material metaphor.”<sup>3</sup> The means by which we live, think and act are fundamentally metaphorical in nature, and metaphors drawn from the tangible, material world around us—our bodies, architecture, environments,

1 Claude Lévi-Strauss, *Totemism*, trans. Rodney Needham (London: Merlin Press, 1964), p. 89.

2 Claude Lévi-Strauss, *The Savage Mind*, trans. George Weidenfeld (Chicago: University of Chicago Press, 1966).

3 Christopher Tilley, *Metaphor and Material Culture* (Oxford: Blackwell, 1999).

technologies and, indeed, animal species —structure our perception, understanding and action.<sup>4</sup>

Material things, then, are good to think with. But it is important to recognize that these things are not inert matter. They have agency. They shape our thoughts and actions, and our thoughts and actions act back upon the world, giving shape to the world in turn. The material things we think with are consequential, they are implicated in our actions. As Donna Haraway argues in *Staying with the Trouble*: “It matters what matter we use to think other matters with.”<sup>5</sup>

In this essay, I explore the motif of the string figure as a material metaphor for thinking about how differently-positioned actors are differently entangled in histories of colonialism and its legacies. I draw upon a research and exhibition project—*[Re:]Entanglements: Colonial Collections in Decolonial Times*—in which my colleagues and I explored the affordances of the colonial anthropological archive to interrogate the coloniality of the archive itself, and considered whether such archives also afford the possibility of “thinking decoloniality” – thinking, that is, “other ideas,” and telling “other stories” than those for which the archive was assembled and which it was intended to serve.<sup>6</sup> Over the past few years, *[Re:]Entanglements* has pursued a sustained re-engagement with the archival legacies of a series of anthropological surveys that were conducted, between 1909 and 1915, in what were then the British protectorates of Southern Nigeria

4 George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980).

5 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, N.C.: Duke University Press, 2016), p. 12.

6 *[Re:]Entanglements* is the public-facing name of the project “Museum Affordances: Activating West African Ethnographic Archives and Collections through Experimental Museology.” The project was initially based at SOAS University of London and the University of Cambridge Museum of Archaeology and Anthropology, and involved multiple collaborations with individuals and organizations in the UK, Nigeria and Sierra Leone. It was funded between 2018 and 2021 by the UK Arts and Humanities Research Council (AH/P014615/1). Our participation in the *String Figures / Fadenspiele* exhibition at Museum Tinguely resulted from an invitation to contribute to the interdisciplinary workshop on string figures organized by Sarine Waltenspül, Mario Schulze and Mareile Flitsch at the Ethnographic Museum of the University of Zurich in June 2023. For further details about *[Re:]Entanglements*, please see the project website <https://re-entanglements.net> (accessed November 19, 2024).

and Sierra Leone. These historical anthropological materials comprise large collections of artefacts, sound recordings, botanical specimens, field notes, publications, as well as thousands of images, including fifteen photographs of string figures taken in the Nigerian towns of Agukwu Nri and Ebenebe (fig. 1).

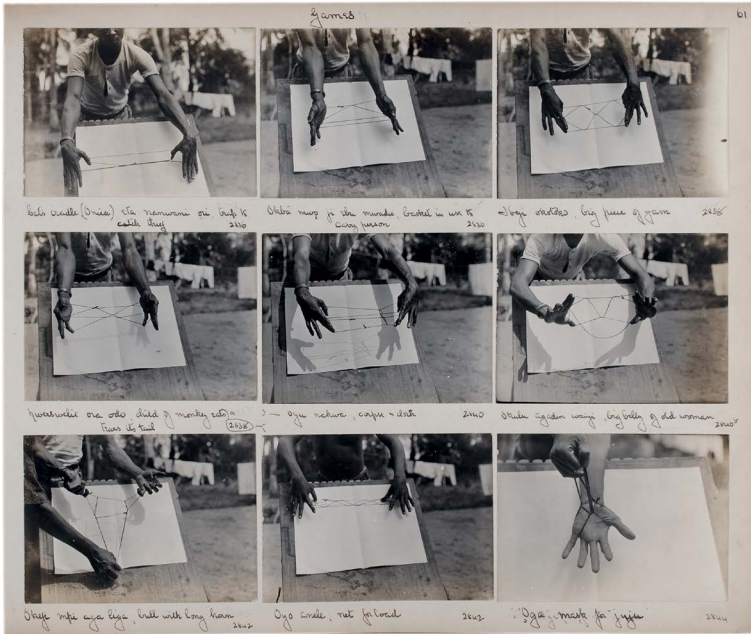


Fig. 1: A page from one of the official photograph albums of N. W. Thomas's anthropological surveys of the Igbo-speaking peoples of Southern Nigeria, 1910-1913. Thomas's photographs of string figures are mounted in a section on games, together with captions providing the Igbo name for each figure and English translation.

## Anthropology and the Comparative Study of String Figures

In the late nineteenth and early twentieth century, anthropology emerged as a science dedicated to the holistic study of humankind, with the notion of cross-cultural comparison at its heart. As such, anthropologists were interested in local manifestations and understandings of seemingly universal practices. While their main focus was on social organization, and on customs and rites relating to the human life course (birth, puberty, marriage, death, etc.), anthropologists of the era were also fascinated by what might appear to be more trivial matters, including the apparently ubiquitous popular pastime of string games—the making

of string figures or cat's cradles. As the pioneering British anthropologist Alfred Cort Haddon wrote in 1906:

In Ethnology, as in other sciences, nothing is too insignificant to receive attention [...] To the casual observer few amusements offer, at first sight, a less promising field for research than does the simple cat's cradle of our childhood; and, indeed, it is only when the comparative method is applied to it that we begin to discover that it, too, has a place in the culture history of man.<sup>7</sup>

Haddon encountered the game during his 1888 visit to the islands of the Torres Strait (the channel between northern Australia and New Guinea). He observed that the Torres Strait string figures were much more elaborate than those he recalled from his own childhood in England. He also noted that they were more often made by a single "player," rather than two, and that the game was by no means only played by children. He collected examples of completed figures, which he mounted on boards and subsequently donated to the British Museum.<sup>8</sup>

Haddon continued to document string games when he returned to the Torres Strait in 1898 as leader of the Cambridge Anthropological Expedition. With William H. R. Rivers, he formalized a "method for recording string figures" and published this in the anthropological journal *Man* in 1902.<sup>9</sup> Rivers and Haddon stressed the need to document the various stages of making each figure, rather than merely photographing, drawing or even collecting the completed figures. They proposed a nomenclature for describing the various steps and actions involved in each string figure, and their system has been adopted by many subsequent researchers, including Caroline Furness Jayne in her 1906 book *String Figures: A Study of Cat's Cradle in Many Lands*.

7 Alfred C. Haddon, "Introduction," in Caroline Furness Jayne, *String Games: A Study of Cat's-Cradle in Many Lands* (New York: Charles Scribner's Sons, 1906), p. xi.

8 Dinah Eastop, "Playing with Haddon's String Figures," *Textile* 5 (2007), pp. 190–205.

9 W. H. R. Rivers and A. C. Haddon, "A Method of Recording String Figures and Tricks," *Man* 2 (1902), pp. 146–153.

## Anthropology's Colonial Entanglements

With such seemingly innocuous interests as comparing string games in different regions, one might be forgiven for concluding that anthropology was the benign pursuit of antiquarians and folklorists. We know, however, that the discipline has been thoroughly entangled in colonialism throughout much of its history. Its efforts, as Talal Asad notes, “were devoted to a description and analysis—carried out by Europeans, for a European audience—of non-European societies dominated by European power.”<sup>10</sup> This entanglement in colonialism had both ideological and practical dimensions. Ideologically, anthropological theories of racialized social hierarchies justified the subjugation of so-called “primitive” peoples, perceived to be at earlier stages of cultural evolution, in the name of civilization and Christianity. The collection of material culture from far-flung outposts of empire, and its display in ethnographic museums in metropolitan centers, served to illustrate such evolutionary schema and reinforce white European senses of supremacy at the apex of the “culture history of man” invoked by Haddon. The legacies of these evolutionary ways of understanding and narrating difference are evident in contemporary discourses of “modernity” and “development,” and in the persistence of racialized social injustices in which it is evident that some lives are considered to matter more than others.

There were other, more practical, ways in which anthropology was enmeshed in the colonial project. The gathering of intelligence and production of knowledge about colonized peoples became an important task supporting different modes of indirect rule or “native administration” in colonial governance. In many cases, it was anthropologists themselves who lobbied government, arguing for the value of their nascent discipline in fulfilling this task. In Britain, this was the impetus that led to the establishment of anthropological training at universities, such as at Oxford and Cambridge, which were already recruiting grounds for the colonial services. The posited “practical value” of the disci-

10 Talal Asad, “Introduction,” in *Anthropology and the Colonial Encounter*, ed. Talal Asad (New York: Humanity Books, 1973), p. 15.

pline also resulted in the creation of the role of the “Government Anthropologist”—trained anthropologists employed by colonial authorities for the express purpose of investigating the “customs and laws” of colonial subjects so that they might be more effectively governed.

The first such government anthropologist to be appointed by the British Colonial Office was Northcote Whitridge Thomas (1868–1936), and it was in this official capacity that Thomas led the anthropological surveys in Southern Nigeria and Sierra Leone that have been the focus of the *[Re:]Entanglements* project. Whether Thomas’s services helped or hindered British colonial governance in West Africa is a moot point and an issue I have discussed at length elsewhere.<sup>11</sup> A close examination of Thomas’s short career as a government anthropologist lends credence to Asad’s argument that it is a gross simplification to condemn anthropology as “being merely the handmaiden of colonialism.”<sup>12</sup> But it would also be misleading to suggest that anthropologists were necessarily vociferous critics of the colonial order. The nature of the discipline’s implicatedness was, rather, one of profound contradiction and ambiguity.<sup>13</sup>

Such tensions are apparent in correspondence between Thomas and his employers in colonial government. Continual doubt is expressed concerning the value of Thomas’s anthropological work, and, on more than one occasion, he had to be reminded to prioritize work of a practical nature, rather than pursue purely scientific research. Some of what strike us today as the most “colonial” forms of anthropological objectification—for instance, the production of hundreds of physical type photographs—were quite irrelevant to colonial administrators, who were more interested in understanding local political structures. Similarly, Thomas’s documentation of other aspects of everyday life, including the fifteen photographs of string figures taken during his 1910–1911 tour in what was then Awka District (today Anambra State), Nigeria, were considered to be of purely scien-

11 Paul Basu, “N. W. Thomas and Colonial Anthropology in British West Africa,” *Journal of the Royal Anthropological Institute* 22 (2015), pp. 84–107.

12 Asad, “Introduction,” p. 16.

13 *Ibid.*, p. 18.

tific interest, confirming the opinion of Thomas's critics in the colonial service that these anthropological surveys were a waste of money.

## Re-Engaging with the Anthropological Archive

The financially straitened conditions and changed priorities imposed by the First World War provided the excuse to bring Thomas's anthropological survey work to an end. Indicative of the colonial authorities' lack of interest in them, the assembled materials were dispersed to different institutions where they were effectively "shelved" and, for decades, largely forgotten.<sup>14</sup> It is only in recent years that the value of this remarkably comprehensive anthropological archive has been recognized and, with the *[Re:]Entanglements* project, has become the focus of a major research and exhibition project. Given the unequivocality of its entanglement with colonial governmentality in West Africa, it provides an especially apposite body of material through which to consider the possible "decolonial affordances" of colonial collections.<sup>15</sup> Through experimenting with multiple approaches to re-engaging with these collections, the project has attempted to better understand the "coloniality" of the materials, but also to consider whether (and, if so, how) they can transcend the colonial contexts in which they were collected and contribute to the making of "decolonial" futures for different stakeholders, for example through the recovery of marginalized histories and knowledges, or as inspiration for creative practice.<sup>16</sup>

14 Today, the archive is mainly housed in the following institutions: Cambridge University Museum of Archaeology and Anthropology (artefact collections, photograph albums, photographic prints; documents); Cambridge University (field notes, manuscripts); Royal Anthropological Institute (photographic negatives, photograph registers); British Library (sound recordings); Pitt Rivers Museum, University of Oxford (sound recordings, artefact collections); UK National Archives (official correspondence, photograph albums); SOAS University of London (linguistic fieldnotes); National Museum, Lagos (photograph albums).

15 Paul Basu and Ferdinand de Jong, "Utopian Archives, Decolonial Affordances," *Social Anthropology* 24 (2016), pp. 5–19.

16 Paul Basu, "Remobilising Colonial Collections in Decolonial Times: Exploring the Latent Possibilities of N. W. Thomas's West African Collections," in *Mobile*

Having “rearticulated” the different parts of the archive held at different institutions, bringing sound, image, objects, field-notes and published texts back into relation with each other, an important part of *[Re:]Entanglements* was to reconstruct and then retrace the itineraries of the anthropological surveys, returning copies of photographs, sound recordings and pictures of artefacts to the locations in Nigeria and Sierra Leone where they were made or collected. It has been a great privilege to be able to give copies of Thomas’s photographic portraits to the descendants of those photographed and to share 110-year old sound recordings of their ancestors’ voices. Recognizing the different meanings and significance these materials possess for different stakeholders depending on their positionalities, we have also engaged with diasporic Nigerian and Sierra Leonean communities in the UK and elsewhere, as well as with those who have affective connections to the materials in other ways. Through workshops and commissions, we collaborated with West African artists, musicians and storytellers, exploring more creative and speculative methods for “telling other stories” through the archival materials.<sup>17</sup>

## Exhibiting Entanglements

Exhibition-making was central to the *[Re:]Entanglements* project. This included setting up simple displays of archival photographs in public spaces in the towns and villages in Nigeria and Sierra Leone where the photographs had been originally taken, as well as collaboratively curating a series of exhibitions juxtaposing the creative responses of artists in Benin City, Nsukka and Lagos with the (largely photographic) archival materials they were respond-

*Museums: Collections in Circulation*, ed. Felix Driver, Mark Nesbitt and Caroline Cornish (London: UCL Press, 2021), pp. 44–70.

<sup>17</sup> See, for example, *[Re:]Entanglements*, “Creative Engagements with the Archive,” May 30, 2019, <https://re-entanglements.net/creative-engagements>; Paul Basu, “Benin City: Colonial Archives, Creative Collaborations,” July 23, 2019, <https://re-entanglements.net/benin-creative-collaborations>; Paul Basu, “Colonial Indexicality,” October 8, 2019, <https://re-entanglements.net/colonial-indexicality>; Paul Basu, “[Re:]Entangled Traditions Exhibition, Nsukka,” March 25, 2020, <https://re-entanglements.net/nsukka-exhibition>; *[Re:]Entanglements*, “Mourning Clothes,” February 2, 2021, <https://re-entanglements.net/mourning-clothes> (all accessed June 21, 2024).

ing to.<sup>18</sup> In 2021/2022, the project culminated in a year-long exhibition at the University of Cambridge Museum of Archaeology and Anthropology, where the bulk of Thomas’s material culture collections are housed. This exhibition, also entitled *[Re:]Entanglements: Colonial Collections in Decolonial Times*, brought together a selection of the new works produced and previously displayed in West Africa, material selected from the historical collections, and a series of audio-visual installations, which had again resulted from different creative collaborations (fig. 2).<sup>19</sup>



Fig. 2: Installation views of the *[Re:]Entanglements: Colonial Collections in Decolonial Times* exhibition, University of Cambridge Museum of Archaeology and Anthropology, 2021/2022. Note the red and grey vinyl designs covering the walls, derived from the string figures documented by N. W. Thomas.

The exhibition was not, however, primarily conceived as a means of disseminating the findings of the *[Re:]Entanglements* research project, nor merely as an opportunity to display the historical collections alongside contemporary creative responses. Rather, the exhibition was intended as a platform for extending our critical conversations around the legacies of colonial research and collecting practices to a more diverse range of stakeholders in the public forum of the museum. While contextual information was, of course, provided, the exhibition intentionally posed many

18 See <https://re-entanglements.net/exhibition> (accessed June 21, 2024)

19 Jean Borgatti, “[Re:]Entanglements: Colonial Collections in Decolonial Times,” *Exhibition Review, African Arts* 56 (2023), pp. 82–83.

more questions than it answered, and, through its installations, audiences were invited to reflect, respond and participate in an ongoing discussion about the contemporary status and possibilities of these colonial histories and collections, and indeed reflect on the status of the ethnographic museum itself as an institution born of the colonial-anthropological nexus.

This was an enactment of a concept of exhibition as a site for the generation rather than reproduction of knowledge; exhibition as a “laboratory” for assembling objects, images, artworks, sounds, voices, texts, but also—crucially—people, with their different positionalities and perspectives, to explore together a difficult history and a challenging problem.<sup>20</sup> To reprise the propositions of Lévi-Strauss, Strathern and Haraway that I invoked at the start of this essay, the materials that we brought together in this exhibition experiment were precisely the ideas, the matter, the stories through which we hoped to elicit new ideas, new matters and new stories concerning the legacies of colonialism in the present. Our strategy was to construct the exhibition exclusively from materials drawn from, or created in response to, the archive of Northcote Thomas’s anthropological surveys; to “mine” this particular anthropological archive for “matter [...] to think other matters with.”<sup>21</sup>

## Material Metaphors in a Colonial Collection

Metaphors are carriers of meaning and affect from one domain to another. While I have argued that the relationship between Thomas and the colonial power structures that supported his work was one of ambiguity, there is no denying that his anthropological surveys were conducted in the wake of the so-called “pacification” of the territories in which they took place. In Southern Nigeria,

20 See Paul Basu and Sharon Macdonald, “Introduction: Experiments in Exhibition, Ethnography, Art, and Science,” in *Exhibition Experiments*, ed. Sharon Macdonald and Paul Basu (Oxford: Blackwell, 2007), pp. 1–24.

21 Haraway, *Staying with the Trouble*, p. 12. I consciously invoke Fred Wilson’s seminal 1992 exhibition, “Mining the Museum,” at the Maryland Historical Society as a strategy for unsettling the conventions of museum display *through* the medium of museum display. See Lisa G. Corrin, “Mining the Museum: An Installation Confronting History,” *Curator* 36 (1993), pp. 302–313.

the period from 1890 to 1920 saw almost continual deployment of British colonial military force—euphemized as “patrols,” “operations,” and “expeditions”—against local polities in order to subdue them and bring them under British colonial “protection.”<sup>22</sup> We might note, for example, that Thomas spent several months based in Benin City during his first tour (1909–1910), just twelve years after the infamous Punitive Expedition of 1897 in which large parts of the city were destroyed, artworks looted, and the Oba sent into exile. Thomas conducted research in other locations that had been directly targeted in military campaigns, such as Somorika, which British forces had attacked and forced into submission in 1904, and areas of Esanland, which resisted British domination until 1906. In his third tour (1912–1913), Thomas’s work focused on many Western Igbo towns that had been deeply involved in the anti-colonial Ekumeku insurgency, including at Ogwashi-Ukwu, where an uprising had been quashed as late as 1910.<sup>23</sup> Thomas’s investigation of “native customs and laws,” his making of physical type photographs, recording of “specimens of language,” and even his documentation of string games cannot therefore be disentangled from the use of Maxim gun and rocket fire that preceded his surveys and made them possible.<sup>24</sup> Indeed, there is bitter irony in the fact that the shrines, rituals and other aspects of traditional customs that so piqued anthropologists’ interests, were themselves targets of colonial military attack.<sup>25</sup> In this sense, Thomas embodied the paradigm of “salvage anthro-

22 Robert D. Jackson, “The Twenty Years War: Invasion and Resistance in South-eastern Nigeria, 1900–1919” (Ph.D. diss., Harvard University, 1975).

23 On the colonial conquest of Southern Nigeria, see Philip Aigbona Igbafe, *Benin under British Administration: The Impact of Colonial Rule on an African Kingdom, 1897–1938* (London: Longman, 1979); Philip Atsu Afeadie, “The Semolika Expedition of 1904: A Participant Account,” *History in Africa* 31 (2004), p. 1–18; Joseph Inegbenebho Osagie, “Colonial Conquest and Resistance: The Case of Esan People of Benin Province of Nigeria,” *Canadian Social Science* 10 (2014), pp. 82–89; Don C. Ohadike, *The Ekumeku Movement: Western Igbo Resistance to the British Conquest of Nigeria, 1883–1914* (Athens, OH: Ohio University Press, 1991).

24 Hicks observes that ethnographic display “was surely as significant a technology in the history of Victorian colonialism as the Maxim machine gun.” Dan Hicks, *The British Museums: The Benin Bronzes, Colonial Violence and Cultural Restitution* (London: Pluto Press, 2020), p. 11.

25 Z. S. Strother, “‘Breaking Juju,’ Breaking Trade: Museums and the Culture of Iconoclasm in Southern Nigeria,” *Res: Anthropology and Aesthetics* 67–68 (2016/17), pp. 21–41.

pology,” picking over the ruins of a way of life in the aftermath of its violent dissolution.

In the *[Re:]Entanglements* project and exhibition, it was important to acknowledge the associations between the epistemic violences of colonial anthropological research, collecting and knowledge production on the one hand and the physical violences of colonial conquest on the other. The trace of violence was not, however, easy to read in the anthropological archive, though many of our diasporic interlocutors saw it plainly in the faces of many of those Thomas photographed.<sup>26</sup> It was, however, expressed metaphorically in the damage evident in certain objects. As material manifestations of anthropological objectification and prejudicial “race science,” Thomas’s physical type photographs were (and are) certainly “damaging,” and a sense of this damage was conveyed powerfully when we encountered broken glass plate negatives of such images. While the negatives are fragile and were most likely damaged in transit or through being dropped, metaphorically the splintered sherds of glass expressed something of the fracturing violence of the colonial encounter.



Fig. 3: “Empty Frames, Fractured Images” installation in the *[Re:]Entanglements* exhibition. Left: installation view of the case displaying a selection of decorative carved mirror frames collected by N. W. Thomas in Southern Nigeria in 1909–1911. (Photo: Paul Basu.) Center: colorized scan of a broken glass plate negative of Chief Obaseki, photographed by N. W. Thomas in 1909. One of two enlarged images of broken glass plate negatives used as case backs. (Royal Anthropological Institute 400.16548.) Right: shattered Edwardian mirror glass bearing the photographic portrait of N. W. Thomas.

26 See, for instance, *[Re:]Entanglements*, “Faces|Voices: Confronting the Photographic Archive,” March 7, 2019, <https://re-entanglements.net/faces-voices/> (accessed June 21, 2024)

In the *[Re:]Entanglements* exhibition, we deployed large scans of such fragmented images in an installation of glassless wooden mirror frames collected by Thomas during the surveys (fig. 3). At the bottom of the display case, as if it had fallen from the Nigerian mirror frames, we placed a shattered Edwardian mirror on which Thomas's own photographic portrait had been printed. This installation was juxtaposed with a display of a selection of Thomas's physical type portraits, which were arranged to frame a video installation, *Faces|Voices*, in which interviewees discuss what they perceive in the faces of the photographic subjects (fig. 4). A text panel adjacent to the mirror installation seeks to draw out the questions posed by the material metaphors:

### *Empty frames, fractured images*

*The colonial anthropologist's photographs were exposed on glass plate negatives. Fragile, like mirror glass, their fractured images cause us to reflect.*

*Objects and materials travel. European mirror glass was imported into West Africa and was widely traded. Installed in locally carved wooden frames, mirrors became status symbols. They were sometimes used in ceremonies; windows into the world of the spirits.*

*Ethnographic "specimens," such as these decorative mirror frames collected by Northcote Thomas in Southern Nigeria, were brought to Europe. Displayed in museums, they provided windows into the worlds of other cultures and other ways of life.*

*How distorting were these views?<sup>27</sup>*

27 *[Re:]Entanglements* exhibition panel text, authored by Paul Basu.



Fig. 4: “Beyond the Colonial Gaze?” installation in the *[Re:]Entanglements* exhibition. A selection of physical type portraits photographed by N. W. Thomas during his anthropological surveys frame the *Faces/Voices* video, in which interviewees describe what they “see” in these highly contested images. Note the red vinyl designs in the background derived from the string figures documented by N. W. Thomas.

This theme of damage and fracture was reflected in other materials displayed in the exhibition, including in a pile of clay pot sherds—the pots had been collected whole by Thomas during the surveys, but had been broken while being shipped to Britain. A particularly remarkable pot, bearing the figure of the Edo deity Olokun and which had experienced a similar fate, was included in this display. In this case, however, we worked with a conservator to reconstruct the pot from its fragments, and used it to pose questions about the possibility of repair in the wake of colonial violence. In the process of reconstruction, it was important to make the repair visible to acknowledge the impossibility of “undoing” the damage that had been done, of repairing the irreparable.<sup>28</sup> In the wake of colonialism, there can be no return to a pristine, pre-colonial world, but perhaps there are ways of taking care and attending to the consequences of these traumatic histories—ways of “staying with the trouble.”<sup>29</sup>

28 Noémie Etienne, “Who Cares? Museum Conservation between Colonial Violence and Symbolic Repair,” *Museums and Social Issues* 15 (2021), pp. 61–71.

29 Haraway, *Staying with the Trouble*.

## String Figures: Knots, Ties and Troubles

Matters of fact, matters of concern, and matters of care are knotted in string figures.<sup>30</sup>

Alongside motifs of damage and repair, the primary metaphor through which we “thought” the *[Re:]Entanglements* project and exhibition was entanglement itself. And here, the “[Re:]” of our title signified both the preposition “re,” meaning “with reference to,” “concerning,” or “in the matter of,” and the prefix “re-,” meaning “again” or “back.” On the one hand, we wanted to signal that the project and exhibition were concerned with exploring the nature of the entanglements between archives and museum collections, knowledge-producing disciplines such as anthropology, and colonialism. On the other hand, we asserted a need to re-entangle ourselves—to concern ourselves again—in these matters: to reflect together on how our personal or family histories are entwined in these colonial histories in different ways. In an age of polarizing identity politics, in which complexity is often vilified, one argument of the project/exhibition was that we cannot take the relationships between archives, knowledge production and colonialism for granted, nor can we take for granted the singularity of our own positionality with regard to these histories.

Entanglement, then, has become a powerful metaphor through which to “think” complexity, uncertainty and indeterminacy. One way or another (or, more often than not, in many different ways), we are entangled in these histories; we are differently implicated in them and consequently have different perspectives and affective responses to them. Entanglement helps us to engage with the messiness of multiple conjunctions of multiple forces—histories, identities, ideologies, technologies, contingencies, etc.—such that one could take any single thing from the archive (a mirrorless mirror frame, for example) as a point of departure to reflect on the knots and ties of these temporal, spatial, material and political trajectories. As individuals, we are also knotted into these matters of fact, of concern and care.

<sup>30</sup> Ibid., p. 41.

Mining the archive of Thomas's anthropological surveys, it was his photographs of string figures that spoke most eloquently to the metaphor of entanglement. While we did not consciously engage with Haraway's use of string figures as "a theoretical trope" in the project, reflecting back now, we find consonance with the poetics of her arguments, and particularly with the associative threads she ties between string games and storytelling. They are above all about processes and provisionality; of making connections, perceiving patterns momentarily, then allowing them to dissolve again. They are about tangling and then untangling, "weav[ing] paths and consequences but not determinisms."<sup>31</sup> Our work with the archives and collections of Thomas's surveys enacts materially, it might be said, ideas that Haraway expresses in figures of speech (that is, in language). Indeed, this translation back and forth between the material and the ideational is precisely the work of metaphor, and, in this respect, exhibition becomes a powerful medium not only for thinking through things, but also for constituting things through thought.

As noted above, in 1911, Thomas photographed just fifteen examples of string figures: eleven in the town of Agukwu Nri and four in the town of Ebenebe, both in the vicinity of Awka, which had become the district-level seat of colonial governance for this Igbo-speaking area. These are among the earliest photographs of string figures taken on the African continent. Thomas did not discuss string games in his published reports, and no fieldnotes survive from his Awka District tour (1910–1911), so we do not know whether he documented the games in greater detail, for instance using the methodology proposed by Rivers and Haddon. What does survive in the archive is a set of glass plate negatives, held by the Royal Anthropological Institute (figs. 5 and 6), corresponding loose prints, held by the University of Cambridge Museum of Archaeology and Anthropology, and further prints of the same photographs mounted in albums, copies of which are held at the University of Cambridge Museum of Archaeology and Anthropology and the UK's National Archives (fig. 1).

31 Ibid., p. 31.

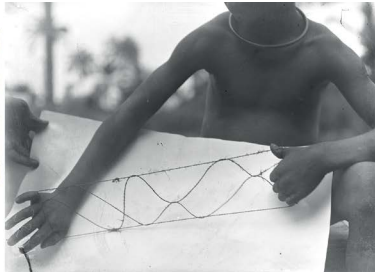
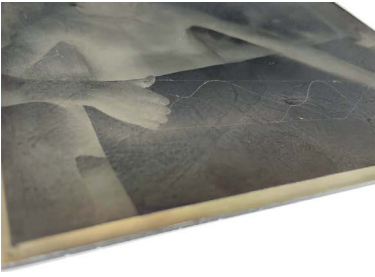


Fig. 5: Scan from glass plate negative of a boy demonstrating a string game, photographed by N. W. Thomas in the town of Ebenebe in 1911. This is one of four string figures for which Thomas recorded the Igbo name *Ibudu*, translated simply as “Trap.” Left: photograph of the original glass plate negative; right: an inverted scan of the same plate.

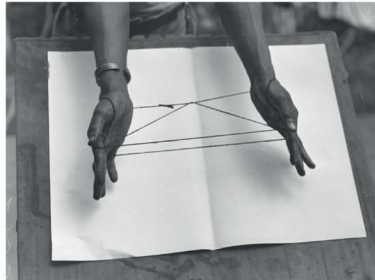
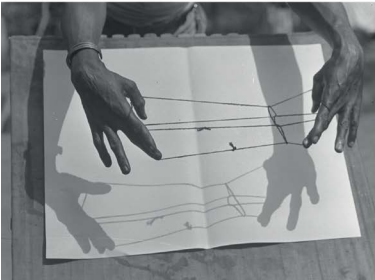
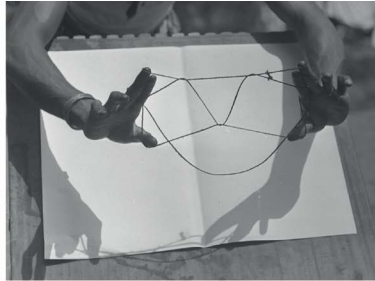
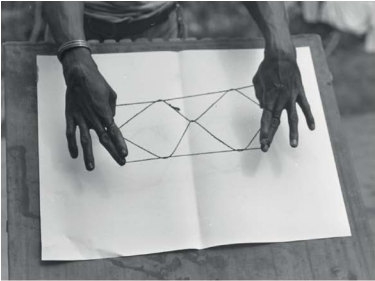


Fig. 6: Detail of four string figures photographed by N. W. Thomas in the town of Agukwu Nri in 1911. Clockwise from top left: *Ibeji okotoko* (“Big piece of yam”); *Okulu agadin waiyi* (“Big belly of old woman”); *Okba mwo ji ebu mwadu* (“Basket spirits use to carry person”); *Ozu nakwa* (“Corpse and cloth”).

Thomas recorded the Igbo word for string games generically as *okpukpa*, which simply means “to make or create something by hand.”<sup>32</sup> Thomas also documented the names of the particular figures he photographed in his somewhat idiosyncratic phonetic transcription of the local Igbo dialects, alongside English translations, as follows:

<sup>32</sup> N. W. Thomas, *Anthropological Report on the Ibo-speaking Peoples of Nigeria, Part II: English-Ibo and Ibo-English Dictionary* (London: Harrison & Sons, 1913), p. 16. Thomas transcribes the term as *akpukba*.

- *Eta nanwani ori*; Trap to catch thief (photographed in Agukwu Nri)
- *Okba mwoji ebu mwadu*; Basket spirits use to carry person (photographed in Agukwu Nri)
- *Ibeji okotoko*; Big piece of yam (photographed in Agukwu Nri)
- *Ozu nakwa*; Corpse and cloth (photographed in Agukwu Nri)
- *Nwenwelie ora odo*; Child of monkey eats and tears its tail (photographed in Agukwu Nri)
- *Okulu agadin waiyi*; Big belly of old woman (photographed in Agukwu Nri)
- *Okefi mpi agi liga*; Bull with long horn (photographed in Agukwu Nri)
- *Oyo anele*; Net for load (photographed in Agukwu Nri)
- *Ubwadiye*; Fowl's anus (photographed in Agukwu Nri)
- *Oga*; Mask for "juju" (photographed in Agukwu Nri)
- *Bokulei*; Rope on back (photographed in Agukwu Nri)
- *Ibudu*; Trap (photographed in Ebenebe)
- *Ibudu*; Trap (photographed in Ebenebe)
- *Ibudu*; Trap (photographed in Ebenebe)
- *Ibudu*; Trap (photographed in Ebenebe)

Prior to our own work with them, the string figure expert Philip Noble had published an article on Thomas's photographs, providing step-by-step instructions for recreating the figures. He notes that most of the figures photographed by Thomas have been recorded elsewhere in Africa, though with different names.<sup>33</sup> Noble kindly created a series of videos for the *[Re:]Entanglements* project demonstrating each of the string games.<sup>34</sup>

To presence these material metaphors in the *[Re:]Entanglements* exhibition, we reproduced Thomas's photographs of string figures in a section near the exhibition entrance, alongside two text panels: one introducing the broader themes of the exhibition (including the themes of entanglement and re-entanglement), and another more specifically introducing string figures as both a subject of anthropological inquiry and a metaphor of entanglement.

33 Philip D. Noble, "Some Nigerian String Figures," *Bulletin of the International String Figure Association* 20 (2013), pp. 39–63.

34 Paul Basu, "Nigerian String Games," September 4, 2019, <https://re-entanglements.net/nigerian-string-games/> (accessed June 21, 2024).

## String games

*String games have been played across the world for millennia, including in Britain and West Africa. From tangled strings, patterns emerge. Each of us may, however, perceive different things in the shapes they form.*

*Entanglement provides a metaphor for this exhibition. Into these displays are knotted damaged images and images that damage, fragmented pots and dislocated voices. But you will also find creative re-appropriations, transformations and attempts at repair.*

*These collections are implicated in the violences of colonialism. Might they also help bring about a more hopeful future?<sup>35</sup>*

The question of perspective and positionality introduced in the panel was an important affordance of the string figure as material metaphor, reflected in the fact that the same patterns of loops and knots may be perceived to represent different things.

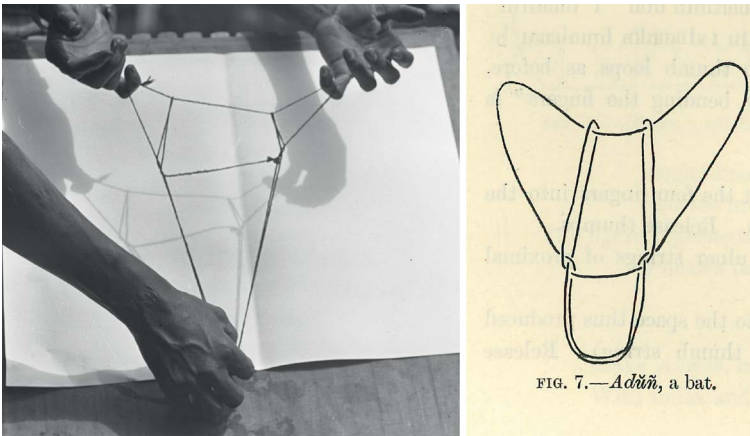


Fig. 7: The same figure, but perceived as representing different things. Left: detail of N. W. Thomas's photograph of *Okefi mpi agi lila* ("Bull with long horn") taken in Agukwu Nri in 1911. Right: the same figure documented by the colonial geologist John Parkinson in south-west Nigeria, recorded in Yoruba as *Adun* ("Bat"), published in the *Journal of the Anthropological Institute* 36 (1906).

35 [Re:]Entanglements exhibition panel text, authored by Paul Basu.

As Noble notes in his discussion of Thomas's photographs, the figure "Basket spirits use to carry person" elsewhere represents a palanquin used to transport chiefs; "Child of monkey eats and tears its tail" has also been recorded as "A Pair of scissors" and "Aeroplane"; "Bull with long horn" is elsewhere "Bat"; and, in Ghana, "Big belly of old woman" tells the story of "When this animal went to fetch water, the sun came down" (fig. 7).<sup>36</sup> As our text panel sought to communicate, within the complex configurations of colonial histories and their legacies in the present, we derive different understandings and perceive different realities depending on the contingencies of our own pluralistic and dynamic positionalities. This is again reflected in the responses of visitors when encountering the faces of individuals captured in Thomas's physical type portraits: where one person perceives abjection and victimhood, another sees resilience and strength. Echoing Haraway, the "truths" we perceive and tell have consequences, but we should be cautious of over-determining any as a singular "truth."

## From Material Metaphor to Exhibition Design

The *[Re:]Entanglements* exhibition was conceived as a space of reflection and debate, which would allow for the making and unmaking of connections, the perception then dissolution of meaningful patterns, knots and ties. Most importantly, we wanted to create an environment that activated the material metaphors that we mined from the archives of Thomas's anthropological surveys. A key part of this was to encourage visitors to reflect on how they, too, were entangled in these histories of colonialism and colonial modes of representation. The string figures provided a powerful motif here.

36 Noble, "Some Nigerian String Figures."

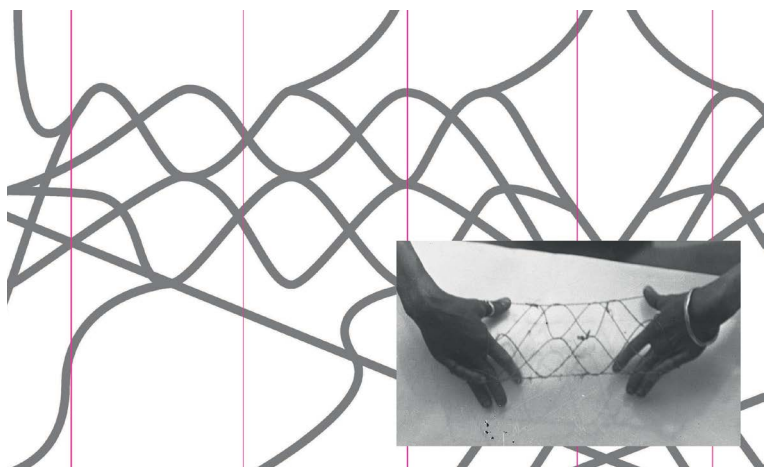


Fig. 8: A section of Alafuro Sikoki-Coleman's designs for the [Re:] *Entanglements* exhibition vinyl wall coverings. Inset is a detail from N. W. Thomas's photograph of a string figure called *Ibudu* ("Trap") taken in Ebenebe in 1911, one of the figures from which Sikoki-Coleman's designs were derived.

We worked with the Nigerian artist and designer Alafuro Sikoki-Coleman to enlarge and extend the patterns of the string figures in Thomas's photographs so that they covered the "white cube" space in which we had created the exhibition (fig. 8). These were created in red and grey vinyl and applied to the white walls, and extending over the tops of the display cases (see figs. 2 and 4). Our intention was to transform the passive space of the gallery into an active, immersive material metaphor itself.<sup>37</sup> Visitors entering the gallery had the impression of entering into a huge string game. Becoming entangled in the string figure of the exhibition provoked an affective response in visitors, shaping their experience of the displays and installations, and inviting them to engage actively in the conversation about the legacies of colonialism that we hoped to stage (fig. 9). As one visitor commented: "That is the re-entanglement for me [...] to see it in this particular way, that we are all entangled *together* in this history."<sup>38</sup>

37 See Paul Basu, "The Labyrinthine Aesthetic in Contemporary Museum Design," in Macdonald and Basu, *Exhibition Experiments*, pp. 47–70.

38 Visitor interview: Nadia Maddy, June 28, 2021.



Fig. 9: Entangling visitors in the conversation. Installation view of the *[Re:]Entanglements: Colonial Collections in Decolonial Times* exhibition, University of Cambridge Museum of Archaeology and Anthropology, 2021/2022.

In an interview for the *African Object Lessons* podcast series, Sikoki-Coleman reflected on her understanding, as a three-dimensional designer, of artefacts and objects as “language in solid form.”<sup>39</sup> She explains how objects need to be able to converse, both with us as humans who interact with them, but also with each other. Just as language is dynamic and changeable according to context and over time, so we must avoid fixing the meaning of things—including the objects, images, sounds and texts in the colonial anthropological archive.

The space of the exhibition should also be “unfixed,” and resist determining the “message” that it intends to convey. The objective, then, was to use the design of the exhibition to foster conversation and dialogue, and allow “enough breathing space between the works on display and the audience, so they could meet in the middle and create their own story, [...] build their own understanding, rather than dictating ‘this is what it is, only this.’”<sup>40</sup>

39 “Alafuro Sikoki-Coleman on Exhibition Design,” *African Object Lessons* podcast, December 8, 2021, <https://redcircle.com/shows/056e7308-6f79-409c-ad04-ca8283c04def/ep/9582c135-9a70-413c-9dda-fd234b481bc4> (accessed June 21, 2024).

40 Ibid.

Encountering the photographs of string figures in the anthropological archive reminded Sikoki-Coleman of her own childhood in Bayelsa State, not far from where Thomas conducted his surveys at the beginning of the twentieth century. She recalls playing cat's cradle with her friends and sister. "But imagine," she explained in the podcast, "imagine this giant, giant string game [...] That's what ended up running around the walls of the exhibition, weaving times and cultures and people together. [...] Because we are all in this string game. We're suspended in it."<sup>41</sup>

41 Ibid.



Sarine Waltenspül

## Who Owns the Films?

## Who Shows the Films?

A Film of String Figures in a Web of Relationships



Fig. 1: Ailima at the string trick *te noti o Kulu* (the knot of Kulu), depending on tradition the goddess or ruler of Niutao.

In the film, a young woman sits on the floor and performs string figures—*tā* in her language (fig. 1). Her name is Ailima and when she was filmed she was living on the oceanic island of Niutao, then part of the British colony of the Ellice Islands, now Tuvalu. The film is silent, but during the string trick *te noti o Kulu* (the knot of Kulu) we see that she speaks words. According to the German ethnologist Gerd Koch, who made the recordings, she says:

*O marnai, o marnai* [Come together, come together]  
*te vaivai aitu!* [Gods in great numbers!]  
*O tatala te noti o Kulu,* [To open the knot of the Kulu,]  
*se matala.* [did not succeed.]  
*Kae sau Kevekeve* [But Kevekeve came]  
*o tatala te noti o Kulu.* [to untie the knot of the Kulu.]  
*Kae matala!* [But he succeeded!]<sup>1</sup>

The story is that Kulu—sometimes goddess of Niutao, sometimes regent, sometimes “half spirit and half human”<sup>2</sup>—posed a puzzle with a coconut leaf that was almost impossible to solve. According to Niutao-born Pulekai Alofa Sogivalu, “a puzzle to be solved not only by the knowledge but also by the hands of a person.”<sup>3</sup> The gods or spirits Kulu summons cannot untie the knot, but Kevekeve, a young man from Samoa, can. As a reward, he is given either the island of Niutao or Kulu as his wife, depending on tradition. Ailima, who presents Kulu’s story in the film as a string trick, skillfully untangles the knot. What did Ailima get in return for solving the knot?

## The (Digital) Presence of Historical Ethnological Films

Made in the 1960s, the film was included in the large-scale film project *Encyclopaedia Cinematographica* (EC). The EC was a project of the Institute for the Scientific Film (IWF) in Göttingen, Germany, founded by the engineer Gotthard Wolf in the 1950s. It was arguably the most ambitious endeavor ever undertaken to manage the distribution, production, and archiving of research films. The EC was set up as a world-spanning project to compile

1 Gerd Koch in Honor Maude, “E 885/1965 *Polynesier (Ellice-Inseln, Niutao) Fadenspiele*,” with general remarks by Gerd Koch, in *Encyclopaedia Cinematographica* (Göttingen: Institut für den wissenschaftlichen Film, 1969), p. 16. (All translations from German sources are by Sarine Waltenspül).

2 Nalu Nia, “Niutao,” in *TUVALU: A History*, ed. Hugh Laracy (Vaiaku: Institute of Pacific Studies, 1983), pp. 58–65, here p. 58; for Koch’s description, see Gerd Koch, “Kulu Götting von Niutao, Tuvalu, West-Polynesien,” *Baessler Archiv. Beiträge zur Völkerkunde Berlin* 33 (1985), pp. 221–237.

3 Pulekai Alofa Sogivalu, *A Brief History of Niutao* (Vaiaku: Institute of Pacific Studies and the Tuvalu Centre, University of the South Pacific, 1992), pp. 6–7.

“the scientifically significant movement processes and behaviors of animals, plants, materials, and ultimately also of human beings.”<sup>4</sup> The EC holds a number of string figure films that were archived in Göttingen and other full and partial archives around the world at the time. They were filmed in Basel, Switzerland; near São Paulo, Brazil; in Qaanaaq, Kalaallit Nunaat/Thule, Greenland, and on the islands of Onotoa, Tabiteuea and Niutao, then part of the Gilbert and Ellice Islands Colony (GEIC), now Kiribati and Tuvalu. The list of places already reveals differences: some place names have a “then” and a “now.” Others are constant and exist (seemingly) independently of colonialism. This applies to Basel, the city in Switzerland where I was born and grew up; the city in which the 2024–2025 exhibition *String Figures / Fadenspiele: A Research Exhibition*, which this publication accompanies, took place.<sup>5</sup> Differences are also evident in the historical titles of the films: the film from Niutao is entitled *Polynesians (Ellice Islands, Niutao)*—*String Figures*, whereas the title of the film from Basel dispenses with (apparently) ethnic or ethnolinguistic classifications.<sup>6</sup> In contrast, the geographical designation alone serves as the title of *Central Europe, Basel-Land*—*String Figures*. Under the title “Polynesians,” I can access the catalogue entries for the films on the AV portal of the German National Library of Science and Technology (TIB) in Hanover—but not the films themselves, even though the TIB digitized them in high resolution after it took over the collection following the dissolution of the IWF. The distinction between “European” and “non-European” is not only reproduced in the digital archive, but also has an effect at the level of access: as a user, I can view the films from European ethnology

4 Gotthard Wolf, *Der Wissenschaftliche Dokumentationsfilm und die Encyclopaedia Cinematographica* (Berlin and Heidelberg, Springer Verlag, 1967), p. 23.

5 This text is based in part on research carried out in collaboration with Mario Schulze for this exhibition.

6 The classification of the people living in Oceania into “Melanesians,” “Micronesians” and “Polynesians” goes back to the eighteenth century, to the naval officer and naturalist Jules Dumont d’Urville, and is still used to some extent today. The classification as well as the terms have been criticized in various ways, sometimes because of the racism implicit in the term Melanesian, which refers to skin color, or because of the arbitrariness of the classification. See Götz Aly, *Das Prachtboot. Wie Deutsche die Kunstschätze der Südsee raubten* (Frankfurt am Main: Fischer Verlag, 2021), pp. 149–150.

(formerly “Volkskunde”) online (fig. 2.1), while those from non-European ethnology (formerly “Völkerkunde”) are subject to undefined “licensing restrictions” (fig. 2.2).

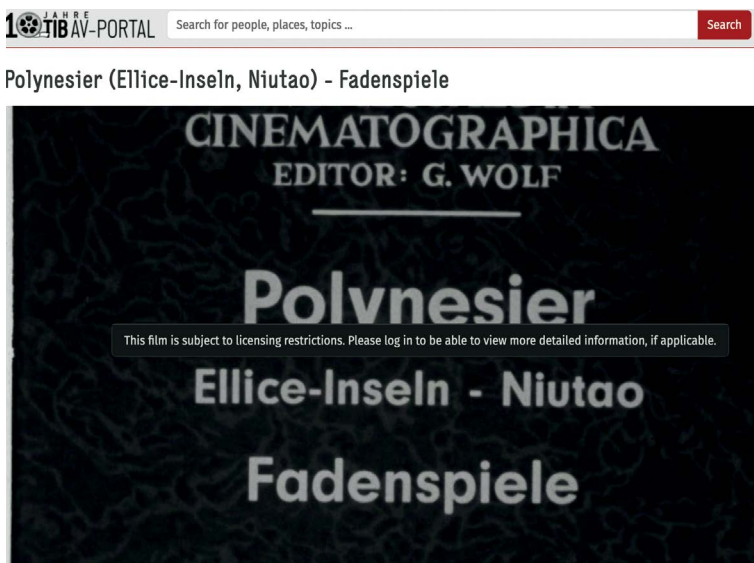


Fig. 2.1 and 2.2: Screenshots of the films *Mittleuropa, Basel-Land-Fadenspiele* and *Polynesier (Ellice-Inseln, Niutao)-Fadenspiele* on the AV portal. Differences can be found both in the title structure and the access (“This film is subject to licensing restrictions”).

The questions of access and of showing or not showing ethnological films—and therefore also thousands of films from the EC—is complex. The TIB avoids a differentiated debate by restricting access according to blanket criteria. As curators, Mario Schulze and I were also preoccupied with the question of screening during the preparations for the exhibition. Can we show these films in public? And if so, what would that require—a disclaimer, contextualization, contact with the source community or communities of origin? And what do these terms often used in these contexts actually mean? Who belongs to these communities? Who can speak for them? In any case, the people filmed had no way of knowing what was going to happen to their recordings. What is it like for them to have them shown as part of an art exhibition in wealthy Switzerland? What is it like for their descendants, for their community? Are they proud? Is it alienating for them? What is the gaze of the camera in the film and to what extent is it colonial? What about other power relations on set, in general? And above all, we also asked ourselves: What responsibility do we bear as researchers and curators when we show these films? Who else decides whether they may be shown—and above all, according to what criteria, according to what law?

## Who Owns the Films?

Demands for social and ethical justice, which have occupied museums in relation to objects from colonial contexts not only—but very prominently—since the 2018 report by Felwine Sarr and Bénédicte Savoy,<sup>7</sup> have also recently occupied film archives and archival studies. In addition to the questions of rightful ownership and restitution, in the case of images and films created in colonial and non-colonial contexts, there is also the question of use and re-use—and thus also of visual justice.<sup>8</sup> The question posed by Sylvie Lindeperg and Ania Szczepanska, “Who owns

7 Felwine Sarr and Bénédicte Savoy, *Zurückgeben. Über die Restitution afrikanischer Kulturgüter*, trans. Daniel Fastner (Berlin: Matthes & Seitz, 2019 [2018]).

8 See Christopher A. Nixon, ed., “Visuelle Gerechtigkeit,” *kritische berichte. Zeitschrift für Kunst- und Kulturwissenschaften* 52, no. 2 (2024), pp. 2–6.

the images?,"<sup>9</sup> is relevant not least because ownership structures define the use of images and films, and these in turn influence the financial return. This use of images and films is negotiated through licenses, which in turn are deeply rooted in Western concepts of ownership.

The ethical aspects did not play a significant role in the legal clarification of the use of the string figure films within the exhibition. In a contract with the owner, TIB, we received confirmation that no third-party rights such as copyrights,<sup>10</sup> the rights of performers or personal rights would be infringed. For a fee of 450 euros (75 euros per film), we received a so-called sub-license and thus the right to show the films for the duration of the exhibition.<sup>11</sup> The fact that a Swiss museum pays remuneration to a German library, but the people filmed do not receive any money for their work, not only highlights the link between the legal and the economic, but above all reproduces existing imbalances in this world, regardless of whether one compares "the West and the rest," Global North and South or high- and low-income countries. Even if the clarified rights of use certainly made things easier for us (and took away our fear of being sued), this did not make the ethical questions any less important for us—on the contrary. Our unease was heightened by the fact that the legal process seemed to take little or no account of social, historical and ethical justice.

In the following text, I will trace the history of the Niutao string figure film and embed it in a local-global framework, focusing on the central actors and institutions. In doing so, I will also be following the proposal of two archival scholars, Michelle Caswell and Marika Cifor, who suggest a shift from a Western model based on individual rights to a model based on a feminist "ethics of care"

9 Sylvie Lindeperg and Ania Szczepanska, eds., *Who Owns the Images? The Paradox of Archives, between Commercialization, Free Circulation and Respect* (Lüneburg: meson press, 2021).

10 The author of the film is Gerd Koch. Licenses (as part of the copyright) were granted by the IWF, and then by the TIB after the dissolution. Koch obtained a 50% share of the IWF's license income and also insisted on this agreement during the 1996 negotiations regarding digital re-use. See German National Library for Science and Technology IWF 12053 V 983.

11 On the condition that the authors of the films are named and reference is made to the provision of the film by the TIB, see "Lizenzvertrag über die öffentliche Vorführung von Filmen der TIB," April 2024.

in the face of existing injustices in the use of archival images: “[A] feminist ethics of care approach places the archivist in a web of relationships with each of the concerned parties [record subjects, record creators, users und communities]<sup>12</sup> and posits that the archivist has an affective responsibility to responsibly empathize with each of the stakeholders.”<sup>13</sup> Even though Mario Schulze and I are not archivists, but rather users of the archival material, in the context of the exhibition we not only transfer the material from one or two GLAM areas (Galleries, Libraries, Archives, Museums) to another—from the archive or library to the museum—but also make it available to the public. We have a responsibility towards the actors involved, since in our work we are not simply individual, isolated actors within a Western legal system, but are integrated into a larger, ethically and historically informed, global network of relationships. The following explanations serve to reconstruct these relationships as densely as possible in order to be able to (differently) answer the question of whether the film can be shown in the exhibition. It is an attempt, an approximation.

A first challenge in the case of the string figure films was to identify the actors, as not all actors were named in the texts accompanying the films. The authors of the films and texts are known, as is the collection, but the people shown often, if not always, remain unnamed, which Fatimah Tobing Rony calls “The Language of Racialization.”<sup>14</sup> The names never appear in the films themselves, but in some of the accompanying publications—short texts about the content and production of the films, which were published together with them—the names of some of the performers can be found, as in the case of the recordings from Basel, Qaanaaq/Thule

12 Communities are, according to Caswell and Cifor, “those who are not direct users of records, but for whom the use of records has lasting consequences.” Michelle Caswell and Marika Cifor, “From Human Rights to Feminist Ethics: Radical Empathy in the Archives,” *Archivaria* 81 (2016), pp. 23–43, pp. 38–39.

13 *Ibid.*, p. 41. For more on the question of an ethics of care, see also Temi Odu-mosu, “The Crying Child. On Colonial Archives, Digitization, and Ethics of Care in the Cultural Commons,” *Current Anthropology* 61, no. 22 (2020), pp. 289–302.

14 The lack of names and stories reinforces a racialization of bodies: “Individuals are read as metonyms for an entire category of people, whether it be ethnic group, race or Savage/Primitive/Third World.” Fatimah Tobing Rony, *The Third Eye: Race, Cinema, and Ethnographic Spectacle* (Durham, N.C. and London: Duke University Press, 1996), p. 71.

and São Paulo. They are called, respectively, Ruth and Gertrud, Kajutak, Aleratsiaq and Ukujaq, and Valério, Kakrò and Pòkròk.<sup>15</sup> In contrast, no names are given in the publications accompanying the string figure films from Kiribati and Tuvalu.

## **Ailima Saipele, Niutao, Ellice Islands, now Tuvalu**

We were able to identify Ailima, daughter of the house builder Saipele, in the genealogical name called Ailima Saipele, on the basis of further texts and archive material from the film author Gerd Koch.<sup>16</sup> As far as we know, there are no texts written by Ailima herself, only what Koch wrote about her. The most direct source we have of Ailima is the film of her performing string figures and a few photos in the Ethnological Museum of Berlin.

Ailima Saipele was filmed on Niutao, an atoll with a diameter of 2.6 by 1.2 kilometers and a height of just a few meters, located in the Pacific Ocean between Australia and Hawaii. When the film was made, Niutao was part of the British colony of the Ellice Islands. Upon independence in 1978, the Ellice Islands became Tuvalu or Tuvalu. Ailima Saipele was twenty years old when she was filmed by Gerd Koch making string figures. Before that, she had already seen 16mm footage of Niutao's culture and people—including footage of herself. She appears in a fifty-minute film that Koch had made two years earlier and which entered the Encyclopaedia Cinematographica as E 409. In this film, about

15 Vilma Chiara Schulz lists the names in the publication accompanying the film E 2213 *Krahô (Brazil, Tocantins Region)—String Figures* by her and Harald Schulz (film: 1975, text: 1977); Christian Adler in the publication accompanying E 2314 *Polar-Eskimo (Nordgrönland, Thule-Distrikt)—Fadenspiele* (1979); Irenäus Eibl-Eibesfeldt, Barbara Senft and Gunter Senft (whose film we are not showing in the exhibition) in E 2958 *Trobriander (Ost-Neuguinea, Trobriand-Inseln, Kaile'una) Fadenspiele "nini-kula"* (1987), as well as Hans-Rudolf Haefelfinger. Giving names did not necessarily make it easier to identify or contact the people. For example, the two girls in the string figure film from Basel were mentioned by name in the accompanying publication, but could no longer be traced due to marriage and other name changes. It took several phone calls before we were finally able to contact them personally.

16 In the following I will choose a compromise and write "Ailima Saipele," which on the one hand follows her name (Ailima), but on the other hand adapts it to the context of its use in this article, written according to Western standards, by which, after a name's first appearance, usually only the surname is mentioned.



Fig. 3.1: In the film *Polynesians (Ellice Islands, Niutao)—Building a Sleeping House*, which Koch made during his first visit to Niutao, Ailima Saipele stands to the left of the men and looks into the camera.



Fig. 3.2: She decorates the men with flowers and oils them.

the construction of a sleeping house under the direction of her father Saipele, the section “On the first day of work” shows Ailima Saipele making the traditional flower decorations and putting them on the men (fig. 3.1 and 3.2). She is mentioned by name in

the publication accompanying the film,<sup>17</sup> but not in the string figure film made later, in which she is far more present as its protagonist. It is unclear why Koch later refrained from mentioning her.

On his second visit, Gerd Koch brought a Siemens projector, white sheets for the projection screen and the 16mm films he had made on his first visit to Niutao. In a *maneapa*, a community house, the films were shown in front of 600 people—the entire community of inhabitants of the island.<sup>18</sup> So when twenty-year-old Ailima Saipele presents string figures to the camera, it is not just the second encounter between her and Gerd Koch, but an encounter based on her experience with film as both a recording and a screening medium.

Since I know that Ailima Saipele had seen films from Niutao and recordings of herself before she was filmed making string figures, I believe I can see in her gaze and in her behavior in front of the camera that she is aware of my gaze—the gaze of the later viewers. I also know from other photos that Ailima only wears her traditional apron skirt made of leaves for the filming. Otherwise, like the other people on Niutao in the early 1960s, she wears textile clothing, which can be seen under the skirt in the color photos. It was Koch who always endeavored to avoid visible “modern” influences in his recordings. The ethnologist Barbara Lüem, who brought Koch’s films to Niutao on VHS cassettes in 1997, writes about Koch’s films: “In this context, the obvious fact that most of the films are staged and that all the protagonists are clearly aware of their role takes on a special weight.”<sup>19</sup>

The string figure film begins with *tangutu* (no translation given): Ailima Saipele skillfully and quickly creates the pattern (the “final” stage of a figure) that she holds up to the camera at the end (fig. 4.1). She is visibly—and in vain—trying to be serious and avoids looking at the camera. Before she begins the second

17 See E 409 *Polynesians (Ellice Islands, Niutao)—Building a Sleeping House*.

18 Gerd Koch, *Man wusste nicht viel voneinander. ein ethnologe unterwegs im pazifik* (self-published Edition failima, 2003), p. 30. Koch had already been asked about the films when he arrived.

19 Barbara Lüem, “Zeugen der Erinnerung in Tuvalu: Auf den Spuren der Filme und Publikationen von Gerd Koch,” *Baessler-Archiv, Neue Folge*, vol. XLV (1997), pp. 103–114, here p. 111.



Fig. 4.1: Ailima Saipele presents the string figure *tangutu* and tries not to laugh too much.



Fig. 4.2: She looks into the camera before she starts with *tafa*.

figure, *tafa*, she looks into the camera and seems to be waiting for a sign invisible and inaudible to us (4.2).

When Ailima Saipele makes the figures and especially when she presents them, she says brief words—presumably the names of the figures—that were not recorded on the silent film.<sup>20</sup> The

20 Even if, in my opinion, there is no connection between the movements of her lips and the names of the patterns.

more figures she makes throughout the film, the harder it seems to be for her to remain serious. When she is not concentrating on making string figures, she laughs a lot, tries to control herself, or looks evasively down laughing. The atmosphere on the set, improvised with black sheets in the community house, seems relaxed, even cheerful.

Ailima Saipele consented to be filmed voluntarily, but probably received no (financial) remuneration for her work. Gerd Koch justifies this indirectly in one of his later writings: On Niutao, the “fakamolemole system” would have prevailed, according to which a request for something was to be complied with without anything in return. What would have worked within the island community was “something miserable” when used unilaterally, as Koch writes.<sup>21</sup> Although Koch had helped out on the island with kerosene,<sup>22</sup> for example, he was unable to reciprocate the many “gifts,” which he asked for for his museum, with anything in return.<sup>23</sup>

The question of payment is also relevant to the question of screening the film in Europe. According to German (and also Swiss) law, images “may only be distributed or publicly displayed with the consent of the person depicted.” And: “In case of doubt, consent shall be regarded as having been given if the person depicted received remuneration/payment [Entlohnung] for allowing his or her image to be taken.”<sup>24</sup> This was not the case, as

21 Koch writes: “I have to document my research into material culture with objects. ‘Each of its kind’ is to become museum property in Berlin for all time to come. But in such a traditionally trade-averse society, it is infinitely difficult to obtain objects for payment or in exchange for other items [...]. If I ask for something, I spontaneously receive it as a ‘gift’. It’s the fakamolemole system.” Koch, *Man wusste nicht viel voneinander*, pp. 21–22.

22 Which he did get in return, *ibid.*, p. 19.

23 As expected, the acquisition lists in the Ethnological Museum of Berlin do not show any remuneration for the performances. The objects brought to the museum are recorded in detail—sometimes with details of their makers and with the notes “acquired on [date] [by name]” or, more rarely, “found” or “made for me” (for example, EM MDA 0004). There is also a list “Compilation of acquisitions” with the note “The values given are converted from the local currency into DM.” (EM MDA 0003). The costs recorded in this list (which presumably served to invoice the museum) and what Koch wrote in his later writings on the exchange system are fundamentally contradictory.

24 See “Deutsches Gesetz betreffend Urheberrecht an Werken der bildenden Künste und der Photographie §22,” Bundesministerium für Justiz, [https://www.gesetze-im-internet.de/kunsturhg/\\_22.html](https://www.gesetze-im-internet.de/kunsturhg/_22.html) (accessed September 14, 2024). After the death of the person, the consent of the next of kin is required, which may be

far as I can reconstruct, with the string figure film. In addition, Ailima Saipele could not have been aware of the later screening contexts of the film. Accordingly, it remains doubtful whether we can speak of Ailima Saipele's "consent" in the sense of German law and whether we were rightly granted the license to screen the film in the exhibition. In the course of the research for this exhibition, Mario Schulze and I tried to find and contact Ailima Saipele. Shortly before the opening of the exhibition, Marion Melk-Koch informed me that she had passed away—probably years ago. Otherwise we could have asked her permission to show the film, or asked her if she still does string figures, what they mean or meant to her, and what she thinks of the film.

In the case of other EC films, however, we have sometimes succeeded in reaching the people from the films—as in the case of Ruth Altenbach and Gertrud (now Dunia) Lingner from Switzerland—or people from the communities, as in the case of the Kiribati Cultural Center Te Umanibong. We added their current perspectives to the historical films.<sup>25</sup> Other contact attempts are still ongoing, such as those with the families of Valério, Kakrò and Pòkròk.<sup>26</sup> The fact that it was easier to reach the two Swiss performers is hardly surprising, given our geographical and cultural proximity and the younger age of the players. However, the European naming tradition according to which women discard their so-called maiden names upon marriage, also made the search much more difficult in this case.<sup>27</sup>

the spouse or partner or the children. In Switzerland, the right to one's own image is part of the right of personality and expires with the death of the person. See [https://www.edoeb.admin.ch/edoeb/de/home/datenschutz/internet\\_technologie/umgang-fotos.html](https://www.edoeb.admin.ch/edoeb/de/home/datenschutz/internet_technologie/umgang-fotos.html) (accessed September 14, 2024).

25 See the vitrines on the provenance of the string figure films from Kiribati and Switzerland, as documented in the exhibition views, pp. 288–293.

26 We would like to thank Maria Julia Fernandes Vicentin for all the efforts she has made to get in touch with the Krahô—even though this has remained to date unsuccessful.

27 Ruth and Dunia's father, who is now ninety-nine years old, could be found in the telephone directory and was able to help us with the telephone numbers and current names of his daughters.

## Gerd Koch, “Keti,” Berlin, Federal Republic of Germany

Ailima Saipele was filmed by the German ethnologist Gerd Koch, who was called “Keti” on Niutao<sup>28</sup> and who had curated the so-called *Südseeabteilung* of the Ethnological Museum of Berlin. On behalf of the museum and with funding from the German Research Foundation (DFG), Koch traveled to the Ellice Islands in 1960/1961, and in 1963/1964 to the Gilbert Islands and other places in Oceania together with his first wife Sigrid Koch.

Koch’s mission was to create a—in his words—complete and systematic collection; a “comprehensive documentation of all cultures of Oceania” “from pre-European times,” “which also contained unimpressive objects in order to give a true picture of the cultures of Oceanic peoples.” He goes on to describe the ethnographica as “scientific evidence” for the unspecified “future body of knowledge [künftige Wissensgebäude].”<sup>29</sup> The museum’s mission and Koch’s descriptions are based on the concept of the museum’s founding director, Adolf Bastian: rescuing, collecting, systematizing. Bastian is regarded as the founder of “salvage anthropology,” which was popular from the nineteenth century onwards. Rebekka Habermas summarizes the rescue paradigm as follows:

This [rescue paradigm] refers to the idea, very popular around 1900, that non-European objects had to be saved because the people who produced these things were doomed to extinction (keyword: doomed races). By collecting things—so the contemporary logic—the last traces of these doomed races could then be saved for posterity. One consequence of the rescue paradigm was that people began to collect artifacts en masse.<sup>30</sup>

The rescue paradigm has not only been criticized in recent years. Koch seemed to be aware of the criticism of Bastian’s slogan “save

28 Koch, *Man wusste nicht viel voneinander*, p. 19.

29 Gerd Koch, “Hundert Jahre Museum für Völkerkunde Berlin. ABTEILUNG SÜDSEE,” *Baessler-Archiv, Neue Folge*, vol. XXI (1973), pp. 141–174, here pp. 143–144, p. 149, pp. 155–156, p. 165.

30 Rebekka Habermas, “Rettungsparadigma und Bewahrungsfetischismus: Oder was die Restitutionsdebatte mit der europäischen Moderne zu tun hat,” in *Geschichtskultur durch Restitution? Ein Kunst-Historikerstreit*, ed. Thomas Sandkühler, Angelika Epple and Jürgen Zimmerer (Vienna, Cologne, Weimar: Böhlau Verlag, 2021), pp. 79–99, here p. 79.

as much as possible before it's too late" back in 1970, but at the same time defended it with the words:

As critical as one may be of the accumulation of large collections—in that phase of general European influence (mission, trade, administration) in the Pacific, the result was the dissolution of traditional cultures everywhere, and most of what had not been collected would soon have rotted on site and been forgotten. This is why huge collections were archived in Berlin as “cultural documents” [...].<sup>31</sup>

What remains unclear—or rather flexible—in Koch's texts and correspondence is for whom he wanted to save the material and immaterial culture: for posterity, the museum, himself, the people on Niutao? In a published text, he writes that due to “Europeanization” in the Pacific, “the task is to serve the historiography for those peoples who still lack a distinct sense of their own cultural history and whose traditional cultural asset is saved from final doom in the museum,”<sup>32</sup> meaning, of course, the museum in Berlin. Koch's statements must be seen against the historical background of the anti-colonial liberation movements and the formation of new African nation states, in the course of which the restitution of their cultural assets was claimed. These claims, in turn, have been delayed, undermined and ignored by Western and especially German museums.<sup>33</sup> Accordingly, Koch justifies his activities and those of the museum in the text. He did this by devaluing the people on Niutao in evolutionist rhetoric (“so far still [...] missing”) and at the same time arrogating to himself the right to write the history of the Pacific from Berlin on the basis of his collection. Further revealing is his speech about “ultimate doom,” by which he presumably referred specifically to the increasing contact with Europeans and Australians who recruited the islanders for the phosphate mines on Banaba and Nauru. Simultaneously, he himself benefited from these structures, for example by transporting his collection on the phosphate ship *Triaster*.

31 Koch, “Hundert Jahre Museum,” p. 146. Koch goes on to refer to the *Luf-Boot*, “whose population later died out.” On the history of the boat and the deconstruction of what is implied in Koch's passive wording and in the euphemism of “rescuing,” see Aly, *Das Prachtboot*.

32 Koch, “Hundert Jahre Museum,” pp. 173–174.

33 See Bénédicte Savoy, *Afrikas Kampf um seine Kunst. Geschichte einer Postkolonialen Niederlage* (Munich: C.H. Beck, 2021).

The project of salvaging is also of considerable importance with regard to the films. Koch has published fifteen films about life on Niutao via the IWF, fourteen of them in the Encyclopaedia Cinematographica.<sup>34</sup> With the exception of one film, he recorded all the others during his first expedition to Niutao in 1960/1961.<sup>35</sup> However, he only published one film from his second six-week stay in 1963: the one showing Ailima Saipele making the string figures. He then traveled on to the Gilbert Islands, now Kiribati, and created various recordings for the EC, many of which were oriented towards the films from Niutao. Why was the string figure film not shot until 1963, released in 1965 and accompanied by a publication in 1969?<sup>36</sup> Koch had already written about string figures on Niutao, Nanumanga and Nukufetau in his book *Die materielle Kultur der Ellice-Inseln*, published in 1961. In it, he describes string figures as an activity for girls aged ten to seventeen, but adds that boys would also appreciate making string figures. Shortly afterwards, he mentions the competitive aspect of the string figures, which is about knowledge of figures.<sup>37</sup> Even though Koch did not film Ailima Saipele playing the string figures on his first visit, he photographed her doing so (fig. 5.1). From these photographs, he had drawings made for the publication (fig. 5.2). The reason why Koch only made the string figure film on his second expedition can be found in another protagonist, Honor Maude.

34 One film was not released in the EC because it contained secret fighting techniques that Koch did not want to publish out of respect for the people of Niutao and their trust in him. The film entered the IWF as D 841 *Secret Methods of Self-Defence [failima] in Niutao, Ellice Islands*. The D-films received less attention than the E-films in the Encyclopaedia Cinematographica. In his texts, Koch also refers to not revealing clan secrets that were given to him personally in confidence. See Koch, "Kulu Göttin von Niutao," p. 237.

35 According to Barabara Lüem, he had filmed exclusively on Niutao on his first expedition. See Lüem, "Zeugen der Erinnerung," p. 103. For more on Koch's film work, see Gerd Koch, *Probleme und Erfahrungen. Expeditionen in die Südsee* (self-published Edition failima, 2005), esp. pp. 109–127.

36 Goldsmith also points this out without going into it in detail. See Michael Goldsmith, "Historicising Gerd Koch's Ethnographic Films on Tuvalu," *The Journal of Pacific History* vol. 45, no. 1 (2010), pp. 57–70.

37 Gerd Koch, *Die materielle Kultur der Ellice-Inseln* (Berlin: Museum für Völkerkunde, 1961), pp. 169–170.

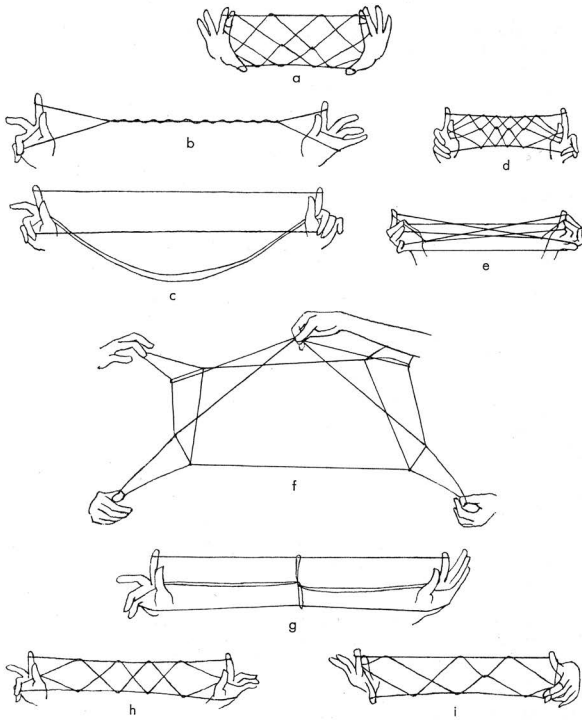


Abb. 109 Fadenspiele (*tā*). Niutao

- |   |                                 |
|---|---------------------------------|
| a <i>fakamatakupeti</i> (Netzwerk)        | f <i>jale o Tuli ma Kotai</i>   |
| b <i>tai fanaifo</i> (ablaufendes Wasser) | (Haus von Tuli und Kotai)       |
| c <i>tai fanake</i> (kommende Flut)       | g <i>anufe</i> (Raupe)          |
| d <i>mataliki</i> (eine Sternengruppe)    | h <i>tangutu</i> (Baumstümpfe?) |
| e <i>tauavanga</i> (Ehepaar)              | i <i>tafa</i> (?)               |

(Die Darstellung der einzelnen Phasen muß in diesem Zusammenhang unterbleiben.)



Abb. 8. Fadenfigur *anufe*

Fig. 5.1 and 5.2: Drawings by E. Armgardt after photographs by Koch of Ailima Saipele playing *tā*, 1960. The drawn figures and hands correspond to Ailima Saipele's figures and hands in the later published photographs.

## Honor Maude, Canberra, Australia

In the history of Ailima Saipele's string figure film, Honor Maude (1905–2001) plays the role of both the initiator of the film's creation and the expert and author of the accompanying publication. Alongside Caroline Furness Jayne (1873–1909) and Kathleen Haddon (1888–1961), Maude was one of the world's most important string figure experts.<sup>38</sup> All three were interested in recording and analyzing not only the final patterns, but also the way in which the string figures were made. Maude had already published on string figures from the Gilbert Islands in the 1930s and published a monograph on them in 1958, followed by many other articles and monographs.<sup>39</sup> But how did Honor Maude find Gerd Koch? Significantly for gender relations in the sciences (and beyond), it was not Honor Maude herself who corresponded with Koch, but her husband Henry Evans Maude (1906–2006).

In 1962, between his two expeditions to Niutao, Gerd Koch was contacted by Henry Evans Maude, former British Resident Commissioner of the Gilbert and Ellice Islands and professor at the Australian National University. In addition to Henry Maude's wish to persuade Koch to publish an English translation of his book on the material culture of the Ellice Islands, other common denominators were quickly found: Henry Maude wrote of "helping the Ellice Peoples to regain a proper pride in their cultural achievements,"<sup>40</sup> and Koch of "[giving] them a little more confidence in their own way of life."<sup>41</sup> Statements such as these hint at another aspect of salvage anthropology: It is not only the cultural achievements—be they practices, narratives or objects—that are "rescued," preserved and exhibited in the West. In the course of this, (Western) ideas about traditional cultures are also produced,

38 See Mario Schulze and Sarine Waltenspül, "Introduction" in this volume.

39 H. C. and H. E. Maude, "String-Figures from the Gilbert Islands," *The Journal of the Polynesian Society*, vol. 45, no. 2 (178) (1936), pp. 1–16; H. C. and H. E. Maude, *String-Figures from the Gilbert Islands* (Wellington: The Polynesian Society, 1958); Honor Maude, *The String Figures of Nauru Island* (Adelaide: Libraries Board of South Australia 1971).

40 Henry Maude to Koch, October 27, 1962, Ethnological Museum Berlin, hereinafter referred to as EM Berlin.

41 Koch to Henry Maude, September 20, 1992, EM Berlin.

which often block out everything new and hybrid, all forms of appropriation and transition in the cultures being researched—as indicated, for example, in Koch’s approach to concealing modern influences. In most cases, it is this produced, seemingly pure original culture that is to be reinforced or even restituted. Nevertheless, in the person of Honor Maude and the string figures, the hybrid is given a chance.<sup>42</sup>

In his letters, Henry Maude swiftly moves on to asking Koch, on behalf of his wife, for detailed information about the string figures in his book.<sup>43</sup> Koch hadn’t paid much attention to the string figures on his first visit and had hardly taken any notes due to a lack of time—just a few Leica photos of the various stages of the figures, fifty five of which he sent to Honor Maude (fig. 6.1). To make up for his earlier omissions, Koch promised on his next trip “to include the constructions of their string figures in my 16 mm movie-films,”<sup>44</sup> which met with great interest from the Maudes: “From such films she [Honor Maude] (or any other string figure specialist) should have no difficulty in copying the construction and recording it in correct terminology for publication.”<sup>45</sup> The plan to film Ailima Saipele on the next trip was thus decided—and furthermore, the Maudes and Kochs were also to meet in person.

A few years later, Honor Maude wrote the accompanying publication for the Encyclopaedia Cinematographica on this and other string figure films by Koch. Koch wrote the “General Preliminary Remarks.”<sup>46</sup> If one compares the drawings that Maude had newly made with those published a few years earlier in Koch’s *Die materielle Kultur der Ellice-Inseln*, there is a remarkable difference in perspective: the former are made from the point of view or gaze of the ethnologist; that is, from the front onto the pattern. Ailima Saipele has been removed and thus made invisible (fig. 6.2). Maude’s drawings, on the other hand, are made from a first-person perspective (fig. 6.3). This style of depiction goes back

42 See Schulze and Waltenspül, “Introduction.”

43 He also asks whether Koch would like to publish a paper with his wife on Togan String Figures. See Henry Maude to Koch, October 27, 1962, EM Berlin.

44 Koch to Henry Maude, November 6, 1962, EM Berlin.

45 Henry Maude to Koch, March 15, 1963, EM Berlin.

46 Honor Maude, “E 885/1965 *Polynesier*”; see also the publications accompanying films E 883 and E 884.



Abb. 2. Fadenfigur *tangutu*

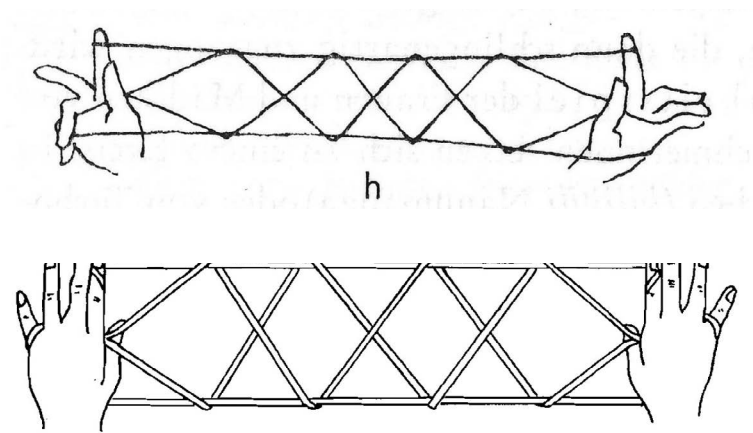


Abb. 1. *tangutu*

Fig. 6.1: Photograph of Ailima playing string figures around 1960. The photo served as the basis for the drawing published in 1961. However, the photo was only published in Honor Maude's accompanying publication from 1969. Fig. 6.2: Drawing by E. Armgardt after Koch's photographs of Ailima's hands. Fig. 6.3: Drawing of the same figure by Honor Maude from a first-person perspective, also published in the accompanying publication.

to Caroline Furness Jayne, who drew the figures “as they are seen by the person making the figure.”<sup>47</sup> As the viewer of the drawing, I become Ailima Saipele or Honor Maude and hold *tangutu* in my

<sup>47</sup> Caroline Furness Jayne, quoted in Robyn McKenzie, “One continuous loop: making and meaning in the string figures of Yirrkala” (Ph.D. diss., The Australian National University, 2016), p. 99.

hands. The hands (which are also cut off in this picture) are not simply objects of an (ethnological) gaze, but extend towards my body. This circumstance can be interpreted as a moment of connection, as a continuously renewing bridge into the present, as— as suggested by film phenomenology—an act of embodied vision. It may be no coincidence that it was female ethnologists who brought about this shift in perspective towards an embodied gaze.

But Honor Maude’s representations in text and image are by no means limited to inviting viewers to virtual embodiment or being instructions for participation. Her collected string figures and their methods of making are something else: data. Maude systematized the string figures she knew from Oceania and beyond into tables in which she arranged the different figures on a horizontal plane and the locations on a vertical plane (fig. 7). In such a “diffusionist project”, as Robyn McKenzie writes, the “‘ethnological value’ or ‘significance’ of the study of string figures” is seen as “providing ‘data for determining past cultural relationships’.”<sup>48</sup> Maude’s tables lead us away from an embodied vision and back to an already mentioned central aspect of ethnological work in the nineteenth and twentieth centuries: systematization.

Gilbert Is.	Caroline Is.	Ellice Is.	Tikopia	Fiji	Tonga	Marque- sas	New Zealand	New Cale- donia	Papua New Guinea	Australia
<i>Na Ubwebwe</i>	dia- monds	<i>tangutu</i> (different opening)	<i>manini</i> (3)					bracelets	<i>mua'mo</i>	fresh- water shrimp
<i>Na Umake</i>			<i>tofa i a marama</i>							bandi- coot
<i>kanukia (ba ni mai)</i>	ten men		<i>raukape</i>	<i>imbi</i>	<i>loukabe</i>	<i>koukape</i>		nameless	<i>na'ba</i>	crocodile, parrot and other names
<i>tangan Teihu ma Tekaeke</i>	circles and triangles		<i>kaunga tete maori</i>				<i>koura papatea</i>			
<i>kuba or kani ukia</i>			<i>rau a kera</i>	<i>mataka lai-lai</i>		<i>Tukii Kea</i>				
<i>taningan nakimoa</i>							<i>mouti</i>			
<i>beeka (kani beka)</i>									<i>silau</i>	

Fig. 7: Honor Maude’s table with string figure patterns (horizontal) and geographical occurrence (vertical).

48 McKenzie, “One continuous loop,” p. 113, see also pp. 128–129.

# The Encyclopaedia Cinematographica, Göttingen, Federal Republic of Germany

The string figure film with Ailima Saipele—filmed by Gerd Koch with a later accompanying publication by Honor Maude—appeared in the Encyclopaedia Cinematographica in 1965. The EC and the institutions that administer it in the past and today—the Institute for the Scientific Film and the German National Library of Science and Technology—are central stakeholders in the web of relationships surrounding the film, as they have integrated it into scientific, legal and economic processes and had a decisive influence on its reception and use, an influence which continues today. What happened to Ailima Saipele’s film the moment it was included in the Encyclopaedia Cinematographica, and thus in a project that was steeped in the ordering (modern) sciences? In the following, I will take a closer look at the film against the background of the EC concepts.

## 1. Making Visible, Comparing, Preserving, Saving, Fixing, etc.

The aim of the EC was to establish scientific film as a research and publication medium. The EC was intended to make the movement processes of the animate and inanimate world researchable with the help of the specific possibilities of cinematography. The EC was subdivided into three disciplinary sections: Biology (zoology, botany, microbiology), Technical Sciences, and Ethnology (ethnology and folklore studies). Movements that corresponded to the following categories were considered suitable subjects for EC films: processes too fast or slow for the human eye to perceive; processes that should be compared with others; and processes “that will soon no longer be recordable”—including “ethnological movement sequences”—which should be filmed and made accessible before they disappeared entirely, as founder of the EC and director of the Institute for the Scientific Film Gotthard Wolf writes.<sup>49</sup>

In the logic of the EC, the string figure film fulfilled the last two inclusion criteria in particular: It served the purpose of cul-

49 See Wolf, *Der Wissenschaftliche Dokumentationsfilm*, p. 23.

tural comparison and “fixed” the practice and culture that was regarded as vanishing.<sup>50</sup>

## 2. Systematizing, Inventorying, Modularizing

In order to include the films in the EC, they were cut up into so-called “smallest thematic units,” representing the “inventory of movements” of—for example—an animal species or an entire culture. The systematization was based on an “encyclopedia scheme” in the “modular principle,” which arranges the types of movement on a vertical level and the objects or subjects on a horizontal level.<sup>51</sup> Wolf writes with regard to Koch’s films from Kiribati: “The 40 units compiled in Table I are part of about 70 units which, according to G. Koch, represent practically the complete movement documentation of the Gilbert Islands.”<sup>52</sup>

The fundamentally salvage anthropological assumption of the ethnological section of the EC goes hand in hand with the idea of a complete cultural documentation. This presumptuous idea of completely capturing “one” culture or its “inventory” on seventy films considerably undermines the liveliness, complexity and changeability of the lives of the people on Niutao, Onotoa or Tabiteuea. The term “inventory” is further interesting in relation to the question of who owns the films: it refers to the entirety of the possessions owned by an institution or similar. In this logic, the string figures as a practice belong to the movement inventory of the people on Niutao, they are their “property,” which is personally shared and passed on. However, the IWF (and later the TIB) appropriated the knowledge by making it accessible to the world on film. Through filming, “knowing” is separated from “owning,”<sup>53</sup> whereby a transfer of ownership takes place: The

50 The string figure film from Basel contains slow-motion sequences, which means that it also fulfills the first criterion.

51 Wolf’s description of the vertical and horizontal arrangement of types of movement and objects or subjects of movement bears strong similarities to Honor Maude’s table of string figures, which she had already published in a similar way in *String-Figures from the Gilbert Islands* in 1958. Gerd Koch’s photographs of Ailima Saipele merged into both a diffusionist (Maude) and an encyclopaedic (Wolf) project.

52 Wolf, *Der Wissenschaftliche Dokumentationsfilm*, p. 122.

53 Dagmar Schäfer, Annapurna Mamidipudi and Marius Buning, eds., *Ownership of Knowledge: Beyond Intellectual Property* (Cambridge, Mass. and London: The MIT Press, 2023).

string figure knowledge is detached from Ailima Saipele, who practices it. It is reproduced, expropriated in its cinematic form and transferred to the inventory and ownership of the Encyclopaedia Cinematographica.

### 3. Objectifying

The EC was deeply rooted in the German post-war era of the 1950s and shaped by Gotthard Wolf's efforts to ensure the objectivity and accuracy of scientific films. During the Second World War, Wolf headed the secret department for technical research films and was responsible for investigating projects important to the war effort for Nazi Germany. Virtues such as accuracy and objectivity guided the engineer's work for years and were incorporated into his later conception of the EC.<sup>54</sup> This can be clearly seen in Wolf's judgment of Koch's earlier films from the Tonga and Fiji Islands made in 1951/1952, which "already largely show the beginnings of the very detailed coverage of a limited subject later preferred by the Encyclopaedia Cinematographica." He goes on to point out that "other films from this period also tend to emphasize the objective mode of representation later demanded by the Encyclopaedia."<sup>55</sup>

The ethnologist Koch adopts Wolf's rhetoric in regard to scientific film when he writes that film is the only way to "exactly" capture the process taking place.<sup>56</sup> At the same time, Koch criticized the isolation of the movements into artificial units, as well as the isolation of the movements from their surroundings, the people, their behavior and their reactions. He uses a girl's smile as an example, which "should by no means be omitted from the editing process because it is not directly 'part of the subject'."<sup>57</sup> It is likely that Koch had Ailima Saipele in mind here. In 1972, Koch went so far as to criticize the EC system in general by calling for a form of film "that deals less with the subjects according to our

54 See Sarine Waltenspül, "Geschichtsvergessene Digitalisierung. Nationalsozialistische Provenienzen wissenschaftlich-technischer Filme aus der Sammlung des IWF," *Technikgeschichte* 91, no. 2 (2024), pp. 139–174.

55 Wolf, *Der Wissenschaftliche Dokumentationsfilm*, p. 147.

56 Gerd Koch, "Möglichkeiten und Begrenzungen ethnographischer Filmarbeit," *Research Film, Le Film de Recherche, Forschungsfilm* (December 1972), pp. 578–585, here p. 580.

57 *Ibid.*, p. 583.

concepts and classifications” and “would capture the events more through the eyes of the natives [Einheimischen]”—but still filmed by the ethnologist.<sup>58</sup> In the course of recording the film in the EC, the subjectivity of those making the film (Gerd Koch) and those being filmed (Ailima Saipele) is abstracted and the people objectified accordingly, which goes hand in hand with the next point.

#### 4. Naming

Koch's ethnological films were inserted into the EC's naming scheme. The labeling of the filmed people differs fundamentally in European and non-European ethnology. In the former, a geographical designation was chosen (e.g. Basel-Land), whereas Wolf explicitly equates the latter with the biological classification scheme: “The classification criteria thus correspond to a certain extent to those used in the biology section. The animal names are replaced by the tribal names [Stammesnamen].”<sup>59</sup> This different naming structure of European and non-European people, in which the latter are equated with animals, can be described as nothing other than racist. The racist structure of the EC's classification not only determined the titles of Koch's films, but also those of thousands of others that were produced over decades and are still accessible online with the same titles today. The racist structure is thus reproduced without comment or context on the AV portal of the TIB. Ailima Saipele not only loses her name, but is made into a “Polynesian type.”

### **Barbara Lüem, “Barbara Keti,” Basel, Switzerland**

If we take seriously the call for a change in thinking from an approach based on individual rights to an ethics of care, another actor added an aspect to the question of showing/not showing the films: the Swiss ethnologist Barbara Lüem.

Barbara Lüem traveled to Niutao several times. After being asked by the Niutao community about Gerd Koch's films on her

58 Ibid., p. 585.

59 Wolf, *Der Wissenschaftliche Dokumentationsfilm*, p. 118.

first trip, she not only brought a letter from him for Ailima Saipele to Niutao in 1991, but also his films on VHS. Lüem showed the films—including Ailima Saipele's—in the assembly hall of the Niutao community.<sup>60</sup> This was the first time that the string figure film was restituted, and the second time that the other Niutao films were restituted: in the 1960s as 16mm films by Gerd Koch himself, and in the 1990s by Barbara Lüem as VHS cassettes.

When she left, Barbara Lüem wanted to give the films to the National Archive of Tuvalu, but the archive did not want them. The president of the Niutao community subsequently took them, but the VHS tapes disappeared and later reappeared in family boxes.<sup>61</sup> There were no more screenings. Lüem was also unable to find the 16mm films that Koch had brought to Niutao and left there. In her text on local, traditional forms of knowledge, and the transmission of knowledge and memory on Niutao, she concludes that “publications that mix different categories of knowledge or whose presentation makes it impossible to fix them in a genealogical tradition” would fall outside the Niutao concept of knowledge and become correspondingly inaccessible to those affected. She explains the disappearance of the films with the fact that—as of 1997—there was no institution “which, according to Tuvaluan ideas, has the authorization to pass on the knowledge contained in them.” Even among the members of the Niutao community, there was no one “who could legitimize an authorization to pass on the knowledge contained in individual films beyond their personal relationships to the content.” Only Gerd Koch—called “Keti” on Niutao—would have been allowed to continue the story, to show the films, as the producer and thanks to his special position and genealogical connection within the Niutao community. According to Lüem, this right would have been transferred to her “thanks to a plausible classificatory relationship” between her and Koch.<sup>62</sup> It was, as Lüem writes, Ailima Saipele who made the connection between Koch and Lüem by adding the name “Keti”—

60 For more on the reactions to this screening, see Barbara Lüem, “Where is the Cassette?,” *IWF-aktuell* 19 (1991), pp. 3–4.

61 Lüem, “Zeugen der Erinnerung,” p. 106.

62 *Ibid.*, esp. pp. 110–113.

in reference to Gerd “Keti” Koch—after “Barbara.”<sup>63</sup> It was therefore Ailima Saipele herself who had authorized Barbara Keti to screen the films.

If we follow Lüem’s depiction from the 1990s of how Indigenous knowledge was conceptualized on Niutao—thus, it should be noted, from a time before the omnipresence of digital images and videos—then Lüem, as Barbara Keti, is likely to present the films. But we, Mario and I, would not be allowed to do so without the corresponding genealogical relationship to Koch or Lüem. We would have liked to invite Barbara Keti Lüem to the screening of Ailima Saipele’s film. Unfortunately, she passed away in Basel in 2008. Accordingly, this Indigenous screening right can be regarded as expired.

## **Marion Melk-Koch, Leipzig, Germany**

Or perhaps not? After I had completed this text, Marion Melk-Koch, Gerd Koch’s second wife, widow and legal successor, contacted me. In a long telephone conversation, she told me two remarkable things about the question of who owns the films: Firstly, that she had inherited 50% of the copyrights to the films<sup>64</sup> and that the TIB had neither informed her of the license granted to us nor involved her financially (until then). Her late husband Koch had always sent the income from the films he had received from the IWF to the Pacific and had personally added something to it (money, watches, other gifts). Secondly, she told me that Ailima Saipele had adopted her in Tuvalu in 1996 to strengthen the family ties. So Ailima Saipele was Melk-Koch’s adoptive mother. When I asked Melk-Koch if she thought Ailima Saipele would have consented to us showing the film, she replied without hesitation, “Of course!”<sup>65</sup>

63 Ibid., p. 106.

64 Which corresponds with the information in archival sources, see footnote 10 about the 1996 negotiations regarding digital re-use of Koch’s films.

65 Phone conversation between the author and Marion Melk-Koch, October 21, 2024.

## Who Shows the Films?

So to return to the question of whether or not we should show the film in the exhibition. Despite many points that would argue against it (no direct consent from Ailima Saipele or the Niutao community, dubious screening rights under German law due to lack of payment to the protagonist, no clear transfer of the Indigenous screening rights), we nevertheless came to the not-so-easy answer of “yes.” Yes, but.

Yes, because Ailima Saipele proudly (if sometimes somewhat shyly) performs the string figures, because she is visibly amused, aware of her presence in front of the camera and aware of the gaze of the ethnologist Gerd Koch behind the camera, which will manifest itself in the recordings of her. She has an idea of how she will look and act in the film. And yes, because the film was shown on and restituted to Niutao. But what Ailima did not know—could not know—was what would happen to the film. That she would enter an encyclopedia without a name; that she would be classified according to an essentially discriminating principle; that the film would be made into a testimony to her culture, which was seen as doomed. Hence the but: in Ailima Saipele’s case, the film is not necessarily—or even at all—problematic. It can be shown accordingly—even without a disclaimer. However, the ethnological guiding principles of research into the culture and people of Niutao, the practices of collecting, the knowledge formats of the *Encyclopaedia Cinematographica*, are problematic. These need disclaimers and context.<sup>66</sup>

We did not find a general solution for dealing with the films from the *Encyclopaedia Cinematographica* in the course of the exhibition. Concrete ways of dealing with other films in the case of successful contact with the societies of origin or the protagonists were: firstly, the payment of the equivalent of the TIB license fees to the memory institution of the societies by the Museum Tinguely (quasi the appropriation and rearrangement of European legal concepts), because an appropriate payment is proba-

66 See for example Kate Holterhoff, “From Disclaimer to Critique: Race and the Digital Image Archivist,” *Digital Humanities Quarterly*, vol. 11, no. 3 (2017), pp. 1–15.

bly in many cases a form of appreciation. Secondly, the exchange with those filmed or their community and the addition of their present-day perspective to the historical recordings.

If contact was unsuccessful, Mario and I were left with our own limited resources: researching, considering, writing. In the case of Ailima, this text was all that remained.

## **Epilog: “Save Tuvalu. Save the World.”<sup>67</sup>**

In recent years, Tuvalu has gained tragic global prominence as a state that will literally drown in the floodwaters of the climate crisis due to its low altitude. In 2021, the then Minister for Justice, Communication & Foreign Affairs, Simon Kofe, gave a video speech for COP26, the United Nations Climate Change Conference. At the end of his speech, the camera zooms back to show Simon Kofe standing thigh-deep in the Tuvaluan Sea.<sup>68</sup> In his video for COP27—“standing” on the beach of the digital twin of Tuvalu’s Te Afualiku atolls—he announced that Tuvalu will be the first digital nation.<sup>69</sup> In the *Update on the Progress of the First Digital Nation* for COP28, he stands in front of a black void and speaks:

If you were about to lose everything, what is the one thing you would save? We’re asking that same question to the Tuvaluan people. Their answers, be it artefacts of sentimental value, the sound of language from our children, the wisdom in our grandfathers’ stories, or the vibrant dances at our festivals, will all be digitized and will become part of our digital ark: a vessel built for crisis, designed to carry the very soul of Tuvalu, preserving the essence of our nation for whatever future challenges we may encounter. [...] The fate of our homeland is in your hands, but the fate of our country is in ours.<sup>70</sup>

67 See website “The First Digital Nation,” <https://www.tuvalu.tv/#> (accessed September 8, 2024).

68 “Minister Kofe’s video statement: COP26”: <https://www.youtube.com/watch?v=hpPTFGwFExg> (accessed September 8, 2024).

69 Simon Kofe, “Rising sea levels force Tuvalu to move to the Metaverse: COP27 speech,” <https://www.youtube.com/watch?v=IXpeO5BgAOM> (accessed September 8, 2024); website “The First Digital Nation.”

70 Simon Kofe, “The First Digital Nation COP28 Update,” <https://www.youtube.com/watch?v=m0K0YarX3E&t=2s> (accessed September 8, 2024).

Tuvalu is to be saved with the “digital ark.”<sup>71</sup> This time, however, on their own initiative and according to the wishes and ideas of the Tuvaluan people. It remains open whether anyone in Tuvalu will answer Simon Kofe’s question about what they want to save with “string figures.”

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71 Website, “The First Digital Nation.”

## Ajarorpoq and TseLtse'no

### On the Trail of Franz Boas' Cross-Cultural Fascination with Cat's Cradle

In the general perception, Franz Boas (1858–1942), the “Father of American Cultural Anthropology,” inscribed himself into the history of string game scholarship in 1888 with a contribution barely a page long.<sup>1</sup> In that brief text, this multifaceted scholar, who propagated the so-called four-field approach, linking physical anthropology, linguistics, archaeology, and ethnology,<sup>2</sup> published a side result of his one-year field research on Baffinland in 1883–1884: namely some of his findings on the string game, a game reportedly popular at that time among the Indigenous population. The novelty of this contribution was—as later emphasized by Rivers and Haddon (1902), who were the first to develop a scientific nomenclature for recording the production of string figures—that Boas not only depicted five Eskimo/Inuit string figures, but also included a description of how two of these were made. However, as the following contribution will show, Boas' impact cannot and should not be limited to this deed. This is alluded to in the title of this paper, where Ajarorpoq, the name of the string game among the “Eskimo,” i.e., the Inuit of Baffinland, is joined by TseLtse'no, the title of that game among the Kwakiutl: the Kwakwaka'wakw in British Columbia. Among the latter, Boas actually invested much more time and effort in the exploration of

1 Franz Boas, “The Game of Cat's Cradle,” *Internationales Archiv für Ethnographie* I (1888), pp. 229–230.

2 Rainer Hatoum, “Franz Boas' four-field-approach: theoretische Verknüpfungen und Feldforschungspraxis,” in *Ethnologie als Ethnographie: Interdisziplinarität, Transnationalität und Netzwerke der Disziplin in der DDR*, ed. Ingrid Kreide-Damani, Sabine Imeri, Karolin Noack and Leonore Scholze-Irrlitz (Munster: Waxmann, 2024), pp. 336–372.

the game, and, as I argue, actually made a much greater contribution, albeit an indirect one.

Born in Minden in Germany, Boas first studied mathematics and physics in Heidelberg, Bonn and Kiel. Through his passion, geography, to which he subsequently devoted himself, he finally found his way to ethnology, the modern science of man as propagated by Adolf Bastian at the Royal Museum of Ethnology in Berlin, where Boas worked from 1885 to 1886. Bastian's emphasis on empiricism, skepticism towards theories of cultural evolutionism, and an interest in the subject of cultural diffusion are all traits also found in the sort of anthropology that Franz Boas came to be known for. It was this occupation with issues of cultural diffusion that triggered Boas' interest in the string game and kept it alive to the end of his life.

In German anthropological circles, the string game attracted scholarly interest around 1888. That year, geographer Richard Andree, editor of the influential popular scientific journal *Globus* and founder of the anthropological collection at the Brunswick Municipal Museum, published a number of statements that brought the subject of string games in German-speaking countries to public attention. In one of these, he reviewed the 1888 South Sea collection catalog published by Otto Finsch, who would become Richard Andree's direct successor at the Brunswick Museum in 1904. In it, Andree states:

Of interest is [...] that Finsch found the "string game" in New Ireland. [...] With it, it seems to me that a new intermediary link is found for that game, which probably arrived through migration to that island. I can prove the [existence of that] same [game] in Australia [...], on Borneo [...], in eastern New Guinea [...], on the Fiji Islands [... and] in New Zealand. So, New Ireland lies right in the middle. [Apart from Europe], its presence among the Eskimos is completely isolated. Here, it may have been introduced by Europeans.<sup>3</sup>

So much uninformed speculation was too much for Boas, who in the same year had just published his insights on Eskimo "Cat's

3 Richard Andree, "Finsch, Dr. O., Ethnologische Erfahrungen und Belegstücke aus Südsee. Beschreibender Katalog einer Sammlung im k. k. naturhistorischen Hofmuseum in Wien," *Anthropologische Mitteilungen Wien* VIII (1888), pp. 213–214.

cradle.”<sup>4</sup> In response to Andree’s speculations, again that year, he wrote the following under the heading *Das Fadenspiel* (The String Game):

In his review of Dr. O. Finsch’s “Ethnologische Erfahrungen und Belegstücke aus der Südsee” [...] Richard Andree gives some information about the distribution of the string game and mentions that its occurrence among the Eskimos is quite isolated and that the game might have been introduced by Europeans. This view should not be correct, since the game is known to all eastern Eskimo tribes [...].<sup>5</sup>

In a statement in the same source that anticipated the focus of his later research, Boas added not only that the string game was “played all along the coast of Arctic America” but asserted that it was played in the same manner as among all those groups all the way down to the “Comox on Vancouver Island [...], the Selish tribes of the upper Fraser River and Thompson River.”<sup>6</sup>

## Picking up Boas’ Cat’s Cradle Tracks

As is evident from Boas’ reply to Richard Andree’s speculations, he was already amid a shift in regional focus away from Baffinland to his new region of interest, the American Northwest Coast. This shift began in 1886. With regard to the Northwest Coast, two periods of field research activities may be discerned: those conducted between 1886 and 1900 and those that he did between 1922 and 1931.<sup>7</sup> None of his Northwest Coast publications, not

4 Franz Boas, “The Central Eskimo,” *Sixth Annual Report of the Bureau of American Ethnology for the Years 1884–1885* (1888), pp. 399–669.

5 Franz Boas, “Das Fadenspiel,” *Anthropologische Mitteilungen Wien* VIII (1888), p. 85.

6 See also Franz Boas, “The Game of Cat’s Cradle,” *Internationales Archiv für Ethnographie* II (1889), p. 52.

7 Rainer Hatoum, “‘The first real Indians that I have seen’. Franz Boas and the disentanglement of the entangled,” *Journal of Indigenous Studies and First Nations and First People’s Cultures* 2, no. 2, Special Issue: The Entangled Gaze (2018), pp. 157–184; Rainer Hatoum, “‘The XY Tribe is interested in these journals’ – Impressionen persönlicher indianischer Begegnungen mit dem wissenschaftlichen Vermächtnis von Franz Boas,” in *Franz Boas – Die Haltung eines Wissenschaftlers in Zeiten politischer Umbrüche. Erweiterte Neuauflage*, ed. Erich Kasten (Fürstenberg and Havel: Verlag der Kulturstiftung Sibirien GmbH, 2022), pp. 101–122.

even on his favored Kwakiutl, featured the string game as a focus subject—or so it seems at first glance.

While the string game seemingly disappeared from Boas' writings, it actually remained on his list of interests. This becomes apparent in multiple ways: from what Boas recorded in his fieldnotes, from his recordings of native music, and from his exchanges with and his influence on other scholars and his students.

*Cat's cradle descriptions:* Given Boas' assertive response to Richard Andree's speculations in 1888, one wonders where his conviction came from, especially as he had only been twice to the Northwest Coast then, and that only for short periods of time. His first 1886 trip took him no further north than the Kwakwaka'wakw village of Nuwittee off the north tip of Vancouver Island, and his second trip in 1888 only included a visit to the cannery station of Port Essington in Tsimshian territory. Still, one has to consider that all of Boas' Northwest Coast research trips began and ended in the city of Victoria, the multi-ethnic capital and center of the region. Furthermore, Boas would have had ample opportunities to observe native people during the many long hours aboard the vessels that took him to his chosen destinations, as these typically also carried Indigenous passengers from all over the coast. While all this could explain how Boas might have gotten the confidence to answer Richard Andree the way he did, only very few notes on the subject have survived in his field notes or his letters home. But then, obviously, both sources are far from complete.

A particular challenge to mining Boas' fieldnotes is that they were mostly written in an idiosyncratic version of a historic shorthand system long out of use.<sup>8</sup> In addition, his references to the game come in different forms: Sometimes, he would use the English term "Cat's Cradle" (in regular longhand script). In other cases, he used the German term "Fadenspiel" (exclusively written

8 Rainer Hatoum, "I wrote all my notes in shorthand. I hope that I will be able to read them." A first glance into the treasure chest of Franz Boas' shorthand writings," in *Local Knowledge, Global Stage: Histories of Anthropology Annual*, vol. 10., ed. Frederick W. Gleach and Regna Darnell (Lincoln, Neb.: University of Nebraska Press, 2016), pp. 221–272.

in shorthand). Then, he would only mention a German translation of a figure's title, and in yet other cases, there is no indication at all. Here, one has to infer from the notes' content that they are about that game.

Sifting through the surviving Northwest Coast fieldnotes, one finds entries on the subject of cat's cradle in both of Boas' fieldwork periods. Among these, the notes of the first period are of the descriptive type, while those from the second focus on the realm of song connected to that game. I'll start with the first type. For that period (1886 to 1900), I have only been able to identify three entries:

The first one is in his 1888 notes.<sup>9</sup> They contain the description of two versions of a figure called *Eule* (i.e., owl), of which only one is attributed to a particular location, an island near Metlakatla, one of the seven main Tsimshian villages. A second set of notes is part of Boas' 1890 Nuxalk fieldnotes.<sup>10</sup> This description neither bears a title of the string figure whose creation is being described, nor does it include any reference from which such could be derived. The third description may be found in Boas' 1894 field notes from the Kwakiutl or Kwakwaka'wakw village of Fort Rupert.<sup>11</sup> It describes the making of a string figure, which I was able to identify as "The 'Two Brothers, One Hiding from the Other' Series," among others, based on fragments of the song lyrics, which Boas had fortunately recorded.<sup>12</sup>

*Cat's cradle songs:* While others (e.g., Adolf Bastian, Otto Finsch) had also noted the existence of songs going with the game of cat's cradle, Boas went beyond noting that fact and actually recorded such songs. He did so when he first came upon the subject in Baffinland and came back to the subject of cat's cradle songs in the final years of his life, beginning in 1930. His interest in native music was not confined to transcribing song lyrics and tunes. He also became known for being one of the first anthropologists to

9 Franz Boas, fieldnotes, APS *Franz Boas Papers* 1888, 5 (Mss.B.B61), p. 323.

10 Franz Boas, fieldnotes, APS, *ACLS* (Pn4.5) 1890, p. 83.

11 Franz Boas, fieldnotes, APS, *ACLS* (W1a10.6) 1894, p. 496.

12 Julia Averkieva and Mark A. Sherman, *Kwakiutl String Figures* (Vancouver: UBC Press, 1992).

use the phonograph when it came on the market. Today, Boas' name is connected to four large collections of songs recorded in 1893, 1897, 1930, and 1938.<sup>13</sup> Concerning our subject, it should be noted that both Boas' 1930 and 1938 Kwakwaka'wakw collections contain cat's cradle songs. Actually, they both begin with the recordings of such songs.

Looking at the available Boas data on cat's cradle, it becomes apparent that his 1930 fieldnotes dealing with that subject exclusively focus on the songs and, here primarily, the lyrics. No longer does one encounter descriptions of how string figures are made.

*Boas' impact on other scholars*, particularly on the work of some of his students, seems to have been the reason for that change. As this aspect has produced the most long-lasting results, I would like to highlight this point in particular. Among the individuals influenced by Boas in this regard, I would like to first mention James Teit, who conducted research for Boas among the Thompson River Salish (Nlaka'pamux) in British Columbia, among others, on the subject of cat's cradle, as part of the Boas-initiated Jessup expedition, which aimed at exploring cultural relations on both sides of the Bering Strait;<sup>14</sup> second, Alfred Kroeber, who initiated the only major research project aimed at documenting the occurrences of the string game among North American Indians, with a focus on the tribes west of the Rocky Mountains;<sup>15</sup> and third and last, Julia Averkieva, who had come to North America as a Russian exchange student to obtain specialized training by Boas at Columbia University in New York. Later in life, she would become one of the leading Russian anthropologists specialized in native North America.<sup>16</sup> Her work on the string game among the Kwakiutl turned out to be most relevant for the future study of this game, as the following paragraph will show.

13 Rainer Hatoum, *Franz Boas and George Herzog Recording of Kwakwaka'wakw Chief Dan Cranmer (1938)* (National Recording Registry, Library of Congress, 2013).

14 James Teit, "The Thompson Indians of British Columbia," *Memoirs of the American Museum of Natural History: Anthropology* 2 (New York: G. E. Stechert, 1900), pp. 281–282.

15 Alfred Kroeber, "Culture Element Distributions XI; Tribes Surveyed," *University of California, Anthropological Records* 1(7) (1939), pp. 435–440.

16 Averkieva and Sherman, *Kwakiutl String Figures*.

## “Kwakiutl String Figures”: The Prolonged History of a Manuscript

While Julia Averkieva’s name is closely associated with the study of cat’s cradle today, since she is regarded as the principal author of the impressive monograph *Kwakiutl String Figures*, Boas’ role in the choice of that research subject and the resulting book is generally not recognized. This is a big mistake, as Averkieva’s research and publication seem to exist in a vacuum. Averkieva herself was the first to acknowledge Boas’ role in the project: “The following collection of string figures was made at the suggestion and with the constant help of Franz Boas during a four-month long field trip among the Kwakiutl Indians of Fort Rupert in the winter of 1930.”<sup>17</sup> While one has to consider Averkieva’s dependence on Boas when these lines were written, one has to likewise credit Boas, who invited her to come over from Russia, accompany him on what came to be his last field trip to the Kwakwaka’wakw village of Fort Rupert, and to work on that subject. This is not to belittle Averkieva or her work, but to highlight Boas’ so far neglected role in connection with her research project and publication. All in all, I consider Averkieva’s work on the string game to be a direct extension and materialization of Boas’ long-standing interest in that subject. In the end, it resulted in the most comprehensive collection of Kwakwaka’wakw string figure patterns and actually the most extensive collection from any North American Indian—that is, non-Eskimo/Inuit—tribal community, to this day.

With this background information in mind, it shows that Boas’ 1930 focus on cat’s cradle songs was in reality the result of a joint venture, with Averkieva doing the collecting of string figures and their methods of construction (fig. 1), and Boas exploring and documenting the realm of cat’s cradle songs (fig. 2).

<sup>17</sup> Ibid., p. 3.

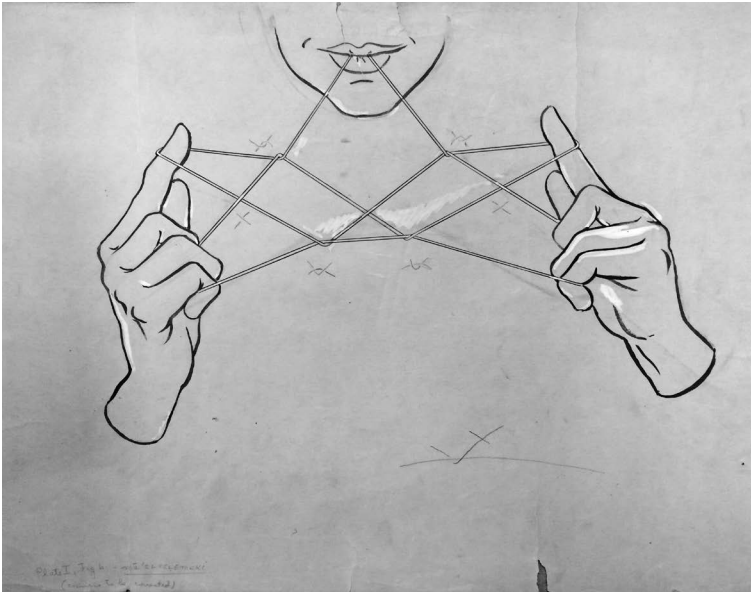


Fig. 1: String figure *ma'sLasEmeki*, by Julia Averkieva.

The result of this collaboration is a record of 102 string figures along with the description of their making and almost twenty Kwakwaka'wakw cat's cradle songs collected by Boas. Of these, he recorded only five or six mechanically (wax-cylinder and aluminum disc), of which, in turn, only three recordings have survived to this day (song 1–3).



Cat's cradle song, the "Two Brothers' Jealousy Series," possibly sung by George Hunt, 1930.



Cat's cradle song, the "Two Brothers' Jealousy Series," sung by Dan Cranmer, 1938.



Cat's cradle song, the "Sitting on the Roof Series," sung by Dan Cranmer, 1938.

Aside from what the two had recorded on the Kwakwaka'wakw string game, one also has to note that both left only very few insights on the context of the performance of the string game—other than a few cursory remarks that there would be, at times, string game competitions with certain figures being considered private and that in other cases string tricks would be used as a sort of special pass signaling the right of entry to certain secret

Cyl 1. ai ai ai ai ai ki'wiyo'xwe ai wa'entōs dās'idos ki'wiyo'xwe ai ai.  
 Ducks go on down ducks!

---

g'!k'ljexstāla (grace) running down the mouth

Cyl 1. 'nēx'džā's 'nēx'džā's qen wiyaxalēsē' dex'waxalēsē'  
 You say yurrog that I cannot go down jump down  
 Fig. 5. L'āb'ida'w' wāā  
 little bear.

---

a'mō- 'māsas - g'!k'ljexstālag'ilaōs. t'ēt'ti'at'den'ax  
 (Pindoll. What has you grace running down from I ate the soaked salmon  
 t'ē'tas l'el'iwānē'. sō'mēl' hāi' i'dex'EN t'āt'ti'etaxa  
 soaked salmon of me you on who did it to my cat; soaked salmon  
 g'!lō'ax'EN t'āt'ti'etaxa dā gā's 'w'iw'ig'it'ē'lsē'  
 stealing my soaked salmon and you have it on the ground.  
 'mā'mē'as adā' p'ā'plā'ly'el'EN'w'isē'. l'ā'lax'ō'sEN l'ē'g'ayōz  
 when an you go my dear - I am going to get more - let me go and follow you  
 adā'. q'wē'dala ā'ias ō'yag'ē'lx'z'ē'ax'wāē. w'itē' w'ā'le'  
 my dear - go any else you might follow to sleep. So on! go on!  
 dā'x'wānē' h'isē t'ē'tā'yatā'ē'ls 'mō'lā'bi'gō's w'isē dā'x'wā-  
 he jumped past the little old butler of the boy. jumped  
 q'ē'ka hō't'ē'yatā'ē'ls. w'ā'ka.  
 past the old butler. He says, wa!

---

'mā'mē'as adā' - p'ā'plā'ly'el'EN w'isē'gā. l'ā'lax'ō'sEN  
 when an you go my dear - I am getting more little me. let me go  
 w'isē'gā. q'wē'ka la q'wē'ka la ā'ias ō'yag'ē'lx'z'ē'ax'ō-  
 little me. get any! get any, do you might follow behind  
 w'isē'gā. w'itē' hāi' w'itē' hāi'. dā'x'wā'g'ē'lsayax 'mō'lā'bi'gō's  
 little me. go on! go on! he jumps past the little old butler

Fig. 2: Cat's cradle song notes, by Franz Boas.

societies.<sup>18</sup> However, all these research results on cat's cradle were not published in either Boas' or Averkieva's lifetime. It would take another sixty years before that collection gathered in 1930/1931 would finally be accessible to the public.

Although Averkieva and Boas corresponded regularly over the next several years after their joint field trip, Averkieva, who had returned to Russia to write her doctoral dissertation on slavery on the Northwest Coast, doesn't seem to have been involved in

18 Ibid., p. 254.

any way in the future fate of the string figure manuscript that she had written up upon their return to New York. While it was further enhanced in the following years under the direction of Boas, for example, by inviting Berlin ethnomusicologist and string figure scholar Erich von Hornbostel to revise the text and to add an introduction, different circumstances prevented the book's publication before Boas' passing in 1942.

In 1960, the Boas family gave the entire lot to the Department of Anthropology at the American Museum of Natural History, where it rested for another two decades. Here, it was rediscovered in 1982 by Mark A. Sherman, a Californian biochemist, string figure enthusiast, and founder of the *Bulletin of the International String Figure Association*. Sherman spent yet another decade improving the manuscript, before the book finally appeared in 1992 under the title *Kwakiutl String Figures*.<sup>19</sup>

## **Mark Sherman: Taking Boas' and Averkieva's Legacy to New Levels**

Aside from the fact that Sherman rewrote all of Averkieva's string figure descriptions into the generally-accepted scientific string figure nomenclature developed by Rivers and Haddon, which in itself is a major contribution, he also added three fundamentally important appendices.<sup>20</sup> In the first two of these, he reflects on the question of how Kwakiutl culture is represented in the string figures collection assembled by Averkieva and delivers his analysis on the question of origin, affinities, and age of the string game, using Averkieva's work as a starting point.

To answer the first question, Sherman begins with some remarks on the basic issue of what is known about how the string game is transmitted. As this kind of information is completely missing from the original Averkieva/Boas manuscript, Sherman turns to the rich Eskimo/Inuit literature on the subject, which benefits from long-term observations by string game-interested

19 Ibid., pp. xx-xxii.

20 Ibid., pp. 137-185.

missionaries. Against this backdrop, he concludes that the string game is a game basically transmitted from grandparent to grandchild. Inter-marriage played a certain role in transmitting figures to adjacent villages, but only on a modest level, as new patterns seem to have had difficulties in getting permanently adopted into existing string figure repertoires. Furthermore, observers noted that generally speaking, no single community member knew more than about thirty percent of a given total repertoire and that knowledge, on a personal level, changed over time, including the loss of knowledge of how to make certain figures even within a couple of years. This demonstrated to Sherman, particularly in the absence of written records, that the maintenance of a local repertoire relied heavily on collective memory and on the constant circulation of and re-exposure to the game.

Assessing the question of how Kwakiutl material culture and belief are reflected in the string game, Sherman introduces six major categories. On that basis, he concludes that while many of the listed aspects are represented, many other important ones are missing from the string game, such as potlatch-coppers, which are of great cultural and material value, and otherwise ubiquitous supernatural beings such as thunderbird or *sisiutl*, a double-headed serpent. This shows him that Kwakiutl culture as a whole is only selectively reflected in the realm of string games. Similar remarks can be made regarding the associated myths and songs.

However, the lack of representation of the aforementioned fundamental cultural elements in the Kwakiutl string game repertoire may be connected to the second question detailed by Sherman in the appendix section: the old question that got anthropologists interested in the string game in the first place, the question of the origin, affinities, and age of the string game. Here, he states that his research had shown that a large percentage of the Kwakiutl string figures are directly or indirectly related to figures of the Eskimo repertoire and that few, if any, Kwakiutl figures are related to figures widely known in Oceania. Therefore, he directs his focus to detailing the specifics of the relation between the Kwakiutl and the Eskimo repertoires, including the question of the source of their relation; that is, whether it is a result of diffusion or a common origin.

Adapting an approach first introduced by Thomas Patterson in 1949<sup>21</sup> for dealing with different Eskimo repertoires, Sherman begins identifying core figures in the Kwakiutl repertoire. Generally speaking, these core figures are patterns present in both Kwakiutl and Eskimo repertoires which share not only the same final appearance but also the same mode of production.

His analysis reveals that both repertoires share a high percentage of core figures that may be associated, due to their geographic distribution patterns, primarily with two historical periods (“proto-Thule,” when the “classic” Eskimo culture had not yet completely developed, and the “pre-extension Thule” period, when it had developed but not yet spread eastward beyond Alaska).<sup>22</sup> Sherman therefore concludes that the roots of commonality between the Kwakwaka’wakw and Eskimo repertoires had to be at least as old as 100 to 1000 CE.

## Conclusion

As has been shown, Boas’ impact on string game research goes far beyond his one-page contribution of 1888. Rather, one must also consider his influence on the work of Julia Averkieva, which, on closer examination, proves to be the product of a joint research effort with Boas. Not only did he choose the subject and the location of her research, but he also did all in his power, albeit in vain, to publish the book manuscript that resulted from that work, long after Averkieva had returned to Russia. Furthermore, their collaboration had an effect they could not have foreseen: the inspirational aspect of the resulting book manuscript, which obviously profoundly influenced the work of Mark Sherman, one of the most prolific current scholars of the game.

As Sherman supplanted most of Averkieva’s and Hornbostel’s—and thereby also Boas’—take on these issues, I cannot remark on the differences, as I have not yet seen the original intro-

21 T. T. Paterson, “Eskimo String Figures and Their Origin,” *Acta Arctica* 3 (1949), pp. 1–98.

22 Averkieva and Sherman, *Kwakiutl String Figures*, pp. 151–180.

duction. Still, and given what Sherman remarked on the character of the parts that he had dropped, there can be no doubt that these had basically dealt with the same issues that he came to dwell on in his appendices. And so, I am quite positive that Boas would have been deeply interested in Sherman's update and reflections on the origin and distribution of the string game, especially as he had worked among both the Eskimo/Inuit and Kwakwaka'wakw on that subject and as he had been openly engaged in some of the same debates concerning the relationship of different string game repertoires.

Given all that, it is easy to see where Boas' cross-cultural fascination with cat's cradle came from, the game that was respectively known among the communities he had worked with as Ajarporpoq and TseLtse'no.



## Ethnomathematics of String Figure-Making Practices

String figure-making has been a longstanding practice in numerous societies, especially in those where oral tradition prevails.<sup>1</sup> It consists in applying a succession of operations to a string (knotted into a loop), mostly using the fingers and sometimes the feet, the wrists or the mouth. This succession of operations, generally performed by an individual (sometimes by two individuals working together), is intended to generate a final figure,<sup>2</sup> as shown in fig. 1.

Since the late nineteenth century, string figure-making practices have interested anthropologists and a number of mathematicians. Anthropologists initially viewed the study of string figure corpora as a method of collecting clues about cultural diffusion, migratory routes or intergroup contacts in ancient times.<sup>3</sup>

1 Diamond Jenness, "Papuan Cat's Cradles," *Journal of the Royal Anthropological Institute* 50 (1920), pp. 299–326; James Hornell, *String figures from Fiji and Western Polynesia*, reprint edition (Germantown, N.Y.: Periodicals Service Co ed., 39, Bishop Museum, 1971); Guy Mary-Rousselière, *Les Jeux de Ficelle des Arviligjuarmiut* (Ottawa: Musées Nationaux du Canada, 1969); Edward E. Evans-Prichard, "Zande String figures," *Folklore* 83 (1972), pp. 225–239; Honor Maude, *Solomon Island String Figures* (Canberra: Homa Press, 1978); José Braunstein, "Figuras juegos de hilo de los Indios Maka," *Hacia una Nueva Carta Etnica del Gran Chaco* III (1992), pp. 24–81.

2 See the scientific documentary *Kaninikula, Mathematics in the Trobriand Island* (2012, Eric Vandendriessche), <https://images.cnrs.fr/en/video/4149> (accessed September 2, 2024); see also the web documentary *Savoir(s) sur le bout des doigts. Récits et figures de ficelle* (upcoming 2025, Eric Vandendriessche and Céline Petit), hosted by Huma-Num at <https://jeuxdeficelle.huma-num.fr/>.

3 Daniel S. Davidson, "Aboriginal Australian string figures," *Proceedings of the American Philosophical Society* 84 (1941), pp. 763–901; Thomas T. Paterson, *Eskimo String Figures and their Origin* (Copenhagen: Acta Arctica, 1949).



String figure-making all over the world.

Fig. 1.1: Mata Koran displaying the string figure *mel* (fruit of the dragon plum tree, *Dracontomelon vitiense*), village of Fona, North Ambrym, Vanuatu.

Fig. 1.2: Jaikopi Atami displaying the string figure *killigvagjuk* (mammoth), Iqaluit, Nunavut.

Fig. 1.3: Paulina Pérez displaying the string figure that represents the head of the *tashinsha* (red brocket deer, *Mazama americana*), Nivacle group, village of Samaria, Chaco, Paraguay.

The first significant study on string figure-making was carried out by Cambridge anthropologists Alfred Haddon and William Rivers in Melanesia, in 1898. They collected the methods of construction of some string figures of the Torres Strait Islanders, which led them to elaborate a specific nomenclature.<sup>4</sup> Their goal was to induce other anthropologists to collect string figures in different societies. The various collections of string figures published during the twentieth century, using Haddon and Rivers' nomenclature or other similar ones, show that this actually happened.<sup>5</sup>

Since the early twentieth century, a few mathematicians have also regarded string figure-making as a worthy topic within their discipline. In particular, Cambridge mathematician Walter William Rouse Ball (1850–1925), a practitioner well acquainted with string figures, perceived the mathematical aspects of this activity and attempted to demonstrate it in a chapter of his book *Mathematical Recreations and Essays* (1911). This may be the first ever attempt by a mathematician to demonstrate the connection between mathematics and procedural activities such as string figure-making, even though the epistemological stakes of such a connection are not explicitly addressed by Ball.<sup>6</sup>

Indeed, Ball's approach to string figures foreshadows the development of the fledgling ethnomathematics research field, which aims to study cultural variations in the uses of mathematical ideas and knowledge, beyond the field of scholarly and institutional activity, in oral tradition societies in particular.<sup>7</sup>

4 William H. R. Rivers and Alfred C. Haddon, "A Method of Recording String Figures and Tricks," *Man* 2 (1902), pp. 146–153.

5 Caroline F. Jayne, *String Figures and How to Make Them: a Study of Cat's Cradle in Many Lands* (New York: Dover Editions, 1962 [1906]); W. A. Cunnington, "String Figures and Tricks from Central Africa," *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 36 (1906), pp. 121–131; Gunnar Landtman, "Cat's Cradles of the Kivai Papuans, British New-Guinea," *Anthropos* 9 (1914), pp. 221–232; Diamond Jenness, *Eskimo String Figures*. Report of the Canadian Arctic Expedition 1913–1918 (F.A. Acland, Vol. XIII, Part B, 1924).

6 See Eric Vandendriessche, "W. W. Rouse Ball and the Mathematics of String Figures," *Historia Mathematica* 41 (2014), pp. 438–462.

7 See Eric Vandendriessche and Céline Petit, "Des prémices d'une anthropologie des pratiques mathématiques à la constitution d'un nouveau champ disciplinaire : l'ethnomathématique," *Revue d'histoire des sciences humaines* 31 (2017), pp. 189–219.

For about a decade, I have coordinated collaborative interdisciplinary projects<sup>8</sup>—through a dual ethnomathematical and anthropological approach—aiming to understand further the mathematical dimension of string figure-making in its relationships with culturally specific practices and logics, and in its links with other particular expressions of symbolic and religious systems.

The *Encoding and Transmitting Knowledge with a String: a comparative study of the cultural uses of mathematical practices in string figure-making (Oceania, North & South America)* (ETKnoS) project (2016–2021), aimed more particularly to investigate the relationships between the sequences of operations and the oral texts associated with their implementation. The objective was to reach a better understanding of the extent to which, in these societies, the practice of string figure-making constituted (or constitutes) a method for the organization and transmission of knowledge (mythological, cosmological, sociological, geographical, etc.), involving the use of mathematical concepts.<sup>9</sup>

In the following, we will first concentrate on this project's outcomes regarding the mathematical dimension of string figure-making practices. We will then turn to methodological issues, while presenting some of the modeling tools that have been developed for investigating string figure procedures.

8 *Le jeu de ficelle: Aspects culturels et cognitifs d'une pratique à caractère mathématique* project (2011–2015) <http://www.sphere.univ-paris-diderot.fr/spip.php?rubrique84> (accessed September 2, 2024); *Encoding and Transmitting Knowledge with a String: a comparative study of the cultural uses of mathematical practices in string figure-making (Oceania, North & South America)* (ETKnoS) project (2016–2021) <http://www.sphere.univ-paris-diderot.fr/spip.php?rubrique153&lang=en> (accessed September 2, 2024).

9 Darja Hoenigman, "Talking about strings: The language of string figure-making in a Sepik society in Papua New Guinea," *Language Documentation & Conversation* 14 (2020), pp. 598–641; Agnès Henri and Eric Vandendriessche, "Les jeux de ficelle en Nouvelle-Calédonie: une recherche de terrain inédite de Françoise Ozanne-Rivierre (1941–2007)," *Journal de la Société des Océanistes* 151 (2020), pp. 177–196; Eric Vandendriessche, "Sand Drawing versus String Figure Making: Geometric and Algorithmic Practices in Northern Ambrym, Vanuatu," in *Indigenous Knowledge and Ethnomathematics*, ed. Eric Vandendriessche and Rik Pinxten (Cham: Springer, 2022), pp. 85–118; Céline Petit, "'Au-delà d'un simple divertissement': principes d'action et effets symboliques de la pratique des jeux de ficelle (*ayaqhaaq, ajaraaq*) chez les Inuit," *Journal de la société des américanistes* 109, no. 2 (2023), pp. 81–142; David Jabin, "D'infimes différences. Pratique et circulation des jeux de ficelle chez les femmes du Chaco paraguayen," *Journal de la société des américanistes* 109, no. 2 (2023), pp. 143–190.

# String Figure-Making Practices as a Mathematical Activity

The ethnomathematical analysis of string figure-making processes collected during fieldwork in Melanesia (Papua New Guinea and Vanuatu), and in the Americas (Paraguayan Chaco and Nunavut), shows that such practices imply a mathematical rationality.<sup>10</sup> A string figure-making process can be analyzed as a series of “simple movements” or “elementary operations” in the sense that the making of any string figure of a given corpus can be described by referring to a certain number of these operations. A string figure can thus be seen as the result of a procedure consisting of a succession of elementary operations, as shown in fig. 2.

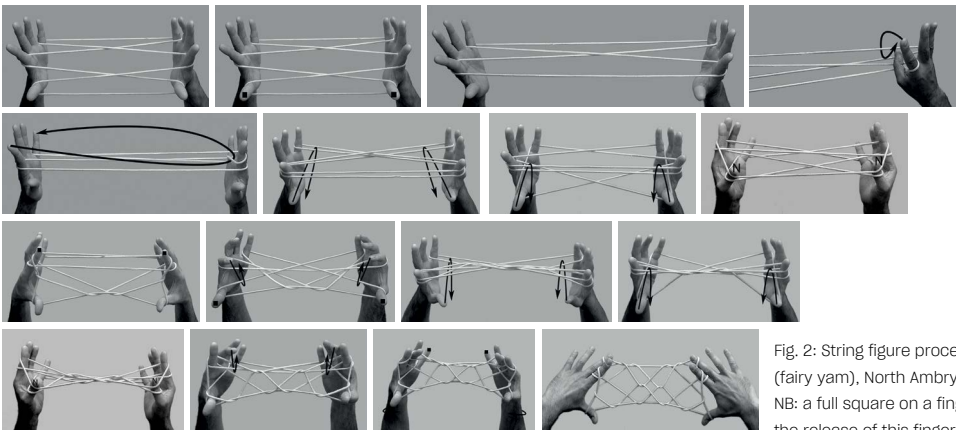


Fig. 2: String figure procedure wayu (fairy yam), North Ambrym, Vanuatu. NB: a full square on a finger indicates the release of this finger's loop. A “N” on a finger indicates the implementation of the operation called “Navaho” in anthropological literature on string figures.

A “sub-procedure” can then be defined as any succession of elementary operations either shared, that is, used in the same way in several string figure procedures, or iterated in the same one (iterative sub-procedures) (fig. 3). Many sub-procedures—which have a noticeable impact on certain configurations of the string—have been clearly identified, memorized and sometimes named by string figure creators/practitioners.

10 Eric Vandendriessche, *String Figures as Mathematics? An Anthropological Approach to String Figure-making in Oral Tradition Societies* (Cham: Springer, 2015); Eric Vandendriessche, “Ethnomathématique des jeux de ficelle trobriandais,” *ethnographiques.org* 29 (2015), <https://www.ethnographiques.org/ethnomathematique-des-jeux-de-ficelle-trobriandais> (accessed September 2, 2024).

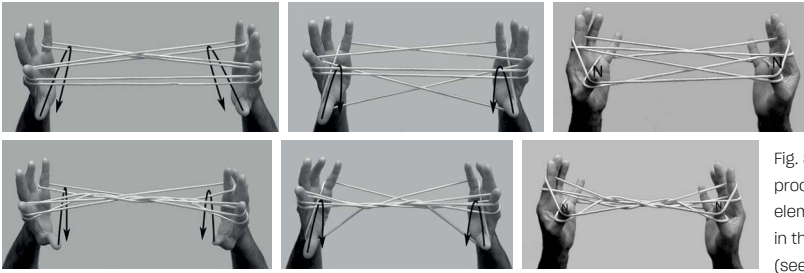
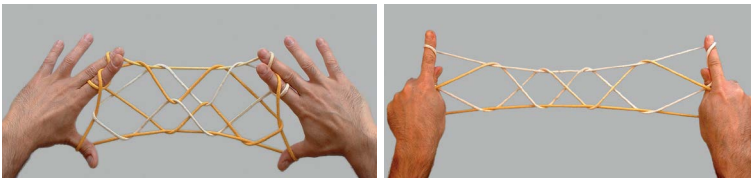


Fig. 3: Illustration of a “sub-procedure”: the same sequence of elementary operations used twice in the wayu string figure procedure (see fig. 2).

Indeed, the concepts of “elementary operation” and “sub-procedure” have been introduced as an observer’s conceptual tools for analytical purposes. However, these concepts often echo through Indigenous peoples’ use of a few vernacular terms referring to movements in string figure-making, suggesting a local perception of the notions of elementary operations and sub-procedures.<sup>11</sup>

The concept of “transformation” is at work on different levels within all the string figure corpora that I have studied so far. On the one hand, this concept is omnipresent since a string figure is the result of the continuous transformation of a loop of string. On the other, the sources suggest that the practitioners worked out how to transform one figure into another (fig. 4).

Fig. 4: Illustration of a “transformation” of a string figure into another. The string figure wayu (fig. 2) is known in the Trobriand Islands as salibu (mirror). There, this figure is transformed—as part of a string figure procedure called mwaya tomdawaya (Tomdawaya crosses the river)—in a string figure made with four “lozenges” in a row. The latter is also the final figure (modulo a reversal) of the Trobriander procedure kalatu gebi navalulu (linen for young mother).



The activity of creating new string figure procedures has thus required an intellectual task of selecting the elementary operations and organizing them in procedures. There is no doubt that this work has consisted in identifying ordered sets of elementary operations—the sub-procedures—having a noticeable impact on different substrata (configurations of the string).

See the webpages



(both accessed September 2, 2024).

11 Eric Vandendriessche, “Cultural and Cognitive Aspects of String Figure-Making in the Trobriand Islands,” *Journal de la Société des Océanistes* 138–139 (2014), pp. 209–224.

String figures thus appear as the result of genuine algorithms (in the sense of ordered sequences of operations). Based on an algorithmic practice, the production of string figure algorithms is also of a “geometrical” and “topological” order, insofar as it is based on investigations into complex spatial configurations, aiming at displaying either a 2-dimensional or a 3-dimensional figure. The transformations of a figure into another, and the iteration of sub-procedures, previously mentioned, confirm this point.

These results raise many other questions. How do the “elementary operation” and “sub-procedure” actually operate on the string? Do they allow us to get a complete picture of a string figure procedure in time and space? Can we predict the consequences of the implementation of an elementary operation on the rest of the procedure? How are the elementary operations and sub-procedures involved in the form of a given corpus of string figures?

In order to tackle these issues, mathematical tools have been developed, which enable the modeling of string figure procedures, and, concomitantly, the formation of hypotheses on how practitioners from different societies have explored these procedures.

## Modeling Tools for Investigating String Figure Procedures

In the specialized literature, one can identify three main lines of research regarding the mathematical modeling of string figure procedures. First, the encoding of the elementary operations involved in these procedures, which allows any string figure algorithm to be rewritten as a mathematical formula. From this perspective, different “symbolic approaches” to string figures have been introduced by a few mathematicians over the course of the twentieth century.<sup>12</sup> Recently, as part of the ETKnoS project, we have refined the latter contributions and developed a new symbolic writing for encoding string figure procedures.<sup>13</sup> With the

12 Ali Reza Amir-Moez, *Mathematics and String Figures* (Ann Arbor, Mich.: Edwards Brothers, 1965); Thomas Storer, “String Figures,” *Bulletin of String Figures Association* 16, part I (1988), pp. 1–212.

13 Eric Vandendriessche, “A New Symbolic Writing for Encoding String Figure Procedures,” *Bulletin of the International String Figure Association* 26 (2019), pp. 182–208.

goal of carrying out a comparative and statistical analysis of the occurrence of the elementary operations involved in different string figure corpora, we have been led by the idea of creating a symbolic system which allows us to easily isolate (within the whole process) each of these elementary operations.

The second line of research has consisted in developing tools for describing unambiguously the different string configurations reached during the process, and the final figure in particular. For that purpose, concepts have been borrowed from the mathematical Knot Theory.<sup>14</sup>

Finally, modeling tools have been created to capture the movement(s) of the string(s) during the process, without taking into account the way the fingers operate on them. For example, the “heart-sequence” mathematical tool introduced by mathematician Thomas Storer.<sup>15</sup> The string running around a finger forms a “loop.” Storer pointed out that many string figures all over the world can be seen as the result of sequences of operations implemented on the “loops,” such as the insertion of a loop into another, the transfer of a loop from one finger to another and the rotation of a loop.

## Overview of the Heart-Sequence Modeling Tool

The following pictures show the making of the string figure *Niu* (Sun) from the Solomon Islands.<sup>16</sup> The procedure begins by the “Opening A” (fig. 5),<sup>17</sup> that Storer suggested to encode  $\underline{O} . A$

See also: <https://stringfigures.huma-num.fr/symbolic-writing> (accessed September 2, 2024).

14 Storer, “String Figures”; Ron Read, “An abbreviated notation for recording string figures,” *Bulletin of String Figures Association* 9 (1983), pp. 13–20; Yamada Masahi, Rahmat Budiarto, Hidomori Itoh and Hirohisa Seki, “Topology of cat’s cradle diagrams and its characterization using knots polynomials,” *Transactions of Information Processing Society of Japan* 38, no. 8 (1997), pp. 1573–1582 (in Japanese); Martin Probert, “The Testing and Correcting of String Figure Diagrams,” *Bulletin of the International String Figure Association* 20 (2013), pp. 18–38.

15 Storer, “String Figures”; see also Vandendriessche, *String Figures as Mathematics?*, pp. 111–148.

16 Maude, *Solomon Island String Figures*.

17 An “Opening” is a sequence of operations by which a string figure procedure starts to create some loops on the fingers. The expression “Opening A” is due to

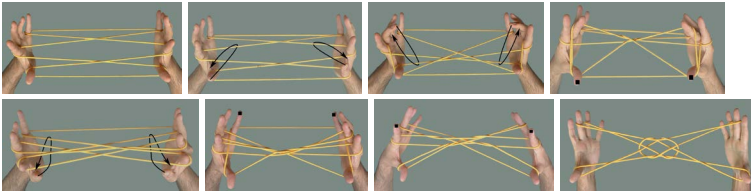


Fig. 5: Making of the string figure *Niu* (Sun), Solomon Islands, South Pacific.

Looking at the first four steps of *Niu*, and focusing on the motion of loops, one can see that this series of operations aims at inserting the thumb loops (the yellow ones) from above into the index loops (the black ones), as shown in fig. 6.

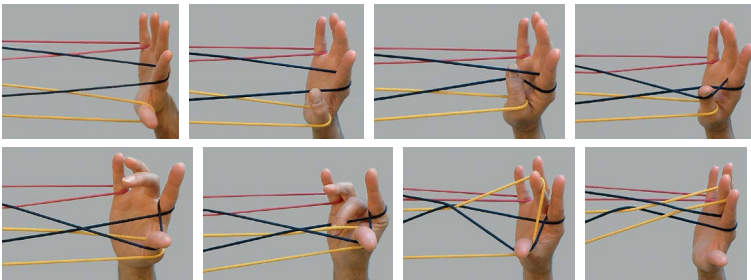


Fig. 6: Heart-sequence of *Niu*: the first four steps (see fig. 5).

Formally, this insertion is encoded

$$\vec{1} \downarrow_{\infty} (2 \infty)$$

the horizontal and vertical arrows indicate the motion of the thumb loops and their insertion into the index loops.

The square will be used to encode the releasing of a finger. Finally, right horizontal arrows symbolize the transfer of a loop to another finger and the symbols “greater than” and “lesser than” are used for encoding rotations of loops. The following table gives some examples of such coding:

Rivers and Haddon; see Rivers and Haddon, “A Method of Recording String Figures and Tricks.” Opening A has a high occurrence in numerous corpora from many different geographical areas.

<b>Releasing</b>	$\square 2$	Release 2 ( <i>i.e.</i> the index fingers) and consequently the loops carried on the indices are removed
<b>Transferring</b>	$\xrightarrow{1\infty} 3$  $\xleftarrow{5\infty} 1$	<p>1 (thumb) loops move away from the practitioner and under all intermediate strings (if any), then is transferred to 3 (middle finger)</p> <p>5 (little finger) loops move towards the practitioner and over all intermediate strings (if any), then are transferred to 1 (thumb)</p>
<b>Rotating</b>	$>2\infty$  $<2\infty$	<p>Rotate 2 loops 180° anticlockwise</p> <p>Rotate 2 loops 180° clockwise</p> <p>In both cases, for an observer located on the left side of the practitioner</p>

Consequently, the heart-sequence of the four first steps of *Niu* is given by

$$O.A:1\infty \downarrow (2\infty):1\infty \rightarrow 3$$

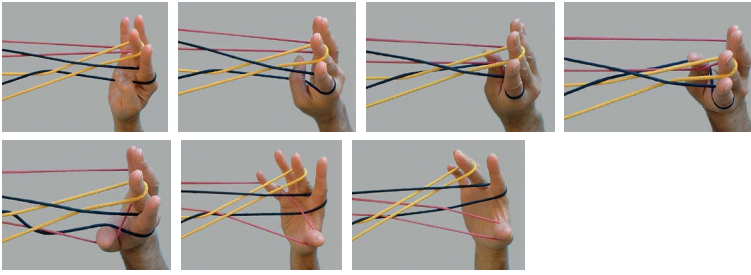


Fig. 7: Heart-sequence of *Niu*: steps 5 and 6 (see fig. 5).

As for the heart-sequence of the next two steps (5 and 6, shown in fig. 5 above), one can see that the latter aims at inserting from below the little finger loops (the red ones) into the index loops (the black ones); then the little finger loops are transferred to the thumbs (see fig. 7). This sequence can then be coded

$$5^{\infty} \uparrow (2^{\infty}) : 5^{\infty} \rightarrow 1$$

The last step consists in displaying the figure, in releasing the index fingers and extending the string (encoded as a vertical bar). The final sequence is thus coded as

$$\square 2 |$$

*Niu*'s heart-sequence formula is then given by

$$O.A: \left\{ \begin{array}{l} \overrightarrow{1^{\infty}} \downarrow (2^{\infty}) : \overrightarrow{1^{\infty}} \rightarrow 3 \\ \overleftarrow{5^{\infty}} \uparrow (2^{\infty}) : \overleftarrow{5^{\infty}} \rightarrow 1 \end{array} \right\} : \square 2 |$$

Although not possible in practice, the two sequences  $\overrightarrow{1^{\infty}} \downarrow (2^{\infty}) : \overrightarrow{1^{\infty}} \rightarrow 3$  and  $\overleftarrow{5^{\infty}} \uparrow (2^{\infty}) : \overleftarrow{5^{\infty}} \rightarrow 1$  can theoretically be performed simultaneously. In Storer's heart-sequence symbolic system, this phenomenon is encoded by writing down the two sequences in the column into brackets.

By focusing on these loop movements during a string figure process, and by converting them into a mathematical formula, the heart-sequence gives what I have suggested calling a "topological" view of a string figure algorithm.<sup>18</sup> Finally, by analogy with the practice of a musical instrument, a heart-sequence can be seen as a

18 See Vandendriessche, *String Figures as Mathematics*, p. 126.

musical score. The reconstruction of a corresponding string figure procedure would thus be analogous to the search for an accurate “fingering” to “play the music” with the instrument, i.e. to implement a given heart-sequence with our body. Several fingerings are then possible.<sup>19</sup>

Using and developing further this modeling tool enable us to shed new light on certain phenomena which frequently occur in the string figure corpora, such as the transformation of one figure into another, the occurrence of different paths to obtain the same final figure and the making of particular patterns.

Furthermore, this mathematical approach to string figures affords a new reading of string figure procedures which allows them to be classified. For instance, although various different methods to form a “double sided lozenge” figure (such as *Niu*) can be found in geographically and culturally distant societies, only two classes of heart-sequences have been identified (see fig. 8).

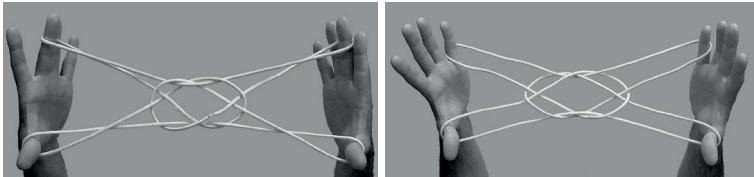


Fig. 8: The two classes (Group I and Group II) of heart-sequences leading to a “double sided lozenge” string figure.

Fig. 8.1: String figure *Niu* belongs to Group I: starting with Opening A, followed by the movement of two pairs of loops (generally 1∞ and 5∞), both passing through a third pair of loops (generally 2∞), one from above and the other from below.

Fig. 8.2: String figure *Jasytata* (Star), Chaco Paraguay, belongs to Group II: starting with Opening A, followed by the movement of one pair of loops (generally 1∞ or 5∞), passing around a second (generally and respectively 5∞ or 1∞) and through a third pair of loops (generally 2∞).

More precisely, I have suggested to define the “double sided lozenge” string figure procedures belonging to the same class as “dynamically equivalent,” in the sense that their heart-sequences can be obtained from one another through symmetries, thus explaining certain symmetry relationships between final figures.<sup>20</sup>

$$O.A: \left\{ \begin{array}{l} \overrightarrow{1\infty} \downarrow (2\infty): \overrightarrow{1\infty} \rightarrow 3 \\ \overleftarrow{5\infty} \uparrow (2\infty): \overleftarrow{5\infty} \rightarrow 1 \end{array} \right\} : \square 2 |$$

$$O.A: \overrightarrow{1\infty}(5\infty): \overleftarrow{1\infty}(5\infty): << \overleftarrow{1\infty} \uparrow (2\infty): \square 2$$

19 See *ibid.*, pp. 138–139.

20 See *ibid.*, pp. 151–182.

## Concluding Remarks

Recently, I have set up a new collective project with the aim of developing further the modeling of string figures. First, a computer tool has been developed for displaying a string figure on the screen, derived from its encoding using Storer's calculus for string figures, while implementing the transformation of string configurations through elementary operations. Furthermore, this computer program will be further enhanced to automatically generate heart-sequences from the encoding of string figure procedures. Second, we are currently working at refining the heart-sequence modeling tool in an attempt to create a genuine calculus, through different operational rules, using the mathematical notion of "Groups." Such a heart-sequence calculus should enable us to bring to light similarities between string figure procedures that are very different at first sight, but lead to the same (or similar) final figures.

All of these tools will be of fundamental importance for carrying out further ethnomathematical comparative research on the various string figure corpora (collected so far), at the level of the procedures as well as the string configurations. In line with Storer's project, this should enable us "to explicate the 'structure' underlying the set of all string-figures by exploring their interrelations," while highlighting common and distinctive features in the ways string figure practices have been carried out and conceptualized from one cultural context to another.

At another level, such an ethnomathematical approach to string figures affords new conceptual tools to question the mathematical aspects of this practice, by bringing to light how different actors from various oral tradition societies around the world have explored combinatorics of spatial operations on strings or loops. More generally, such an approach could be applied to the study of other practices with geometric and algorithmic characteristics (such as basketry, mat-making, tattooing, etc.), with the goal of gaining a better understanding of the development of mathematical knowledge in an oral tradition context, which is an issue at the core of ethnomathematics.

## **Acknowledgments**

I would like to thank the editors of the present volume for their valuable comments and suggestions.

## Hesitant Hands on Similar Loops

### Some Reflections on the Embodiedness of String Figures

For several years now, every autumn, I have witnessed a touching moment. In their introductory lecture in their first semester in social anthropology, my Swiss students watch the 1974 film *Cree Hunters of Mistassini* by New Zealand activist journalist Boyce Richardson and Canadian documentary director and cinematographer Tony Ianzelo.<sup>1</sup> There comes a point in this film where Cree girls play with string figures by candlelight (fig. 1). Many female students in the lecture hall immediately react in audible astonishment and lift their hands to play along virtually. With string figures as a game embodied in their childhood, they still instantly recognize the movements. Their hands hesitate for a moment before setting off to play along with the Cree women, as they have to check if their skills of proceeding with the strings for the next person to take over are the same as those of the Cree girls.



Fig. 1: Cree girls playing string figures one evening at the hunting camp, in *Cree Hunters of Mistassini* (1974).

<sup>1</sup> *Cree Hunters of Mistassini* (Canada 1974, Boyce Richardson and Tony Ianzelo), Online: [https://www.nfb.ca/film/cree\\_hunters/](https://www.nfb.ca/film/cree_hunters/) (accessed July 29, 2024).

In Western history and philosophy of technology, as well as anthropology, understanding the embodiment of knowledge and bodily movement has come a long way.<sup>2</sup> In recent years, British anthropologist Trevor Marchand has provided major insights into “embodied cognition and communication” in crafts, which have contributed to understanding how the movement of the hands at work and at play relates to knowledge repertoires and to their preservation, development and transmission.<sup>3</sup> Furthermore, in her recent paper “More than visual,”<sup>4</sup> Leiden University anthropologist Cristina Grasseni has extended her approach to the study of skilled visions, stressing that only intersensory enskilment leads to the acquisition of perspicuity, “the resulting, learned capacity to recognize at a glance what is relevant or merits further attention in a field of vision, and which course of action this realization should lead to.”<sup>5</sup> Perspicuity is also what is necessary in the moment of forming a string figure in the particular process of its production.

Finally, string figures are learned, embodied and performed by individual actors, but they need a knowledgeable, appreciative public to be read and validated. The communities of practice approach initiated by US social anthropologist and learning theorist Jean Lave and French social learning theorist Etienne Wenger<sup>6</sup> provides us with a frame to look at the social embeddedness of string figures in formulating string figure communities of practice.

2 Brenda M. Farnell, “Moving Bodies – Acting Selves,” *Annual Review of Anthropology* 28 (1999), pp. 341–373.

3 Trevor H. J. Marchand, “Embodied cognition and communication: studies with British fine woodworkers,” *Journal of the Royal Anthropological Institute*, Special Issue: Making knowledge, 16, no. 1 (2010), pp. 100–120; Trevor H. J. Marchand, “Knowledge in Hand: Explorations of Brain, Hand and Tool,” in *The Sage Handbook in Social Anthropology*, ed. R. Fardon (Los Angeles: Sage, 2012), pp. 262–271.

4 Cristina Grasseni, “More than visual: The apprenticeship of skilled visions,” *Ethos* (2022), pp. 1–19.

5 Grasseni makes this idea more explicit in her text: “The sensory apprenticeship of skilled vision is more-than-visual. Side by side, [...] several senses need to collaborate and be purposefully calibrated to achieve perspicuity: that is, the experience of perceiving a given item (or arrangement of items) as conspicuous to perception, relevant to context, and evident to expert scrutiny. [...] This entails physically (re)aligning one’s body with that of others [...] to ‘frame the scene’ of one’s field of vision and, as a result, come to notice the same features or arrangement of features as the others, in a relevant way.” *Ibid.*, pp. 2–3.

6 Jean Lave and Etienne Wenger, *Situated Learning: Legitimate Peripheral Participation* (Cambridge: Cambridge University Press, 1991).

Against this theoretical framework string figures are thus understood for this contribution first of all as a socially situated practice of embodied skilled visions and movement, of embodied cognition and communication, and as embodied knowledge and enskilment of the hands, creating moments of perspicuity for action, which can range from basic literacy to highly complex manipulations of hands, bodies and strings. In order to approach this complex topic, a particular moment, when the hands hesitate, is used for the following first reflections.<sup>7</sup>

## On Basic String Figure Literacy

The Swiss students and the Cree girls in the film mentioned at the beginning of this article share some common string figures which seem to be globally widespread. It seems to me that the embodied knowledge of these string figures may be understood as a kind of basic string figure literacy. These enable us to initially grasp what the art is about and to recognize each other in it.

Let me start with a short autoethnographic note, on myself as a woman socialized through play in mid-1960s Germany, and as a sinologist by training. If I watch a Chinese language tutorial like “翻花绳教学 *Fanhuasheng jiaoxue* How to play cat’s cradle” by Felicia Irawan,<sup>8</sup> I do not need to listen to the spoken words, as I follow along physically. Some simple basic string figures have been inscribed into my own body in my childhood, which make my hands feel the movement just by watching. My hands would hesitate on seeing an unfamiliar complex string figure, at least to understand the movement before eventually trying to proceed. And of course, watching people from other parts of the world, like

7 For preliminary explorations of the hesitant hand, see Mareile Flitsch, “Hesitant Hands on Changing Tables: Negotiating Dining Patterns in Diaspora Food Culture Transfer,” *Asiatische Studien / Études Asiatiques* 65, no. 4 (2011), pp. 969–984; Mareile Flitsch, “Zögernde Hände an zierlichen Schuhen. Handlungsmacht und Körperwissen chinesischer Frauen im 20. Jahrhundert,” in *UnBinding Bodies: zur Geschichte des Fußgebändens in China*, ed. Jasmin Mersmann and Evke Rulfes (Bielefeld: transcript Verlag, 2023), pp. 189–196.

8 Felicia Irawan, “How to play Cat’s cradle,” <https://www.youtube.com/watch?v=f1zZyX-kjWk> (accessed August 25, 2024).

Ju-Ann Broyles from Inner Mongolia in the People's Republic of China and her Chinese cabbage flower string figure,<sup>9</sup> watching Inuit, Trobriand, Australian, Native American and many other places' Indigenous people casually form string figures, ultimately connected in the rhythm of twisting the strings with storytelling, I clearly feel physically and mentally the benchmarks I would have to reach to join in.

Thus, an initial question to clarify seems to be: At which moment in a global history of string figure making did the basics of this art of "transient constructions" become widespread,<sup>10</sup> so deeply embodied and with such simple string figure forms, that the hands automatically start taking over, or that my hands at least hesitate to proceed? Where are the limits of such basic string figure literacy? These questions cannot of course be answered within the scope of these reflections, but a closer look at string figure research in social anthropology shows that these questions may not yet be an issue for scholars in the field.

## String Figures in Anthropology and Ethnography<sup>11</sup>

Reading through ethnographic literature on string figures in different parts of the world points to parallel string figure practices, some of which are highly complex.<sup>12</sup> Can we speak of string figure cultures? However we designate cultural particularities and how-

9 See "Chinese Bok Choi (Cabbage Flower) by Ju-Ann Broyles" <https://youtu.be/FxlkyRL3Kqw?si=sOE8mdPb7uHxd2g3> (accessed August 25, 2024).

10 Martin Probert, "The Torres Strait String Figures in the British Museum A. C. Haddon Collection," *Journal of Museum Ethnography*, no. 16 (2004), Papers Originating from MEG Conference 2003: Developing Audiences—Developing Collections, University of Leicester, pp. 140–156.

11 For a brief history of string figures in anthropology, see also Mario Schulze and Sarine Waltenspül, "Introduction," in this volume.

12 For example James Hornell, "String Figures from Sierra Leone, Liberia and Zanzibar," *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 60 (1930), pp. 81–114; Charles G. Moore, "The Implication of String Figures for American Indian Mathematics Education," *Journal of American Indian Education* 28, no. 1 (1988), pp. 16–26; Wendy S. Arbeit, *Links to the Past: The Work of Early Hawaiian Artisans* (Honolulu: University of Hawai'i Press, 2011), pp. 302–308; José Braunstein, "Tirando del hilo desde el Gran Chaco: significación y alcance del estudio de las figuras de hilo tradicionales," *Journal de La Société Des Américanistes* 109, no. 2 (2023), pp. 191–232.

ever we define communities of practice cultivating these, it seems that anthropology starts to grasp the pluriverse of potential socio-material meanings of string figures; of emic knowledge and perspectives concerning them; of the pluriverse of algorithmic strategies. Museums and collections frequently contain string figure samples from different parts of the world—often strings fixed in one pattern sewn onto cardboard—and they should certainly keep an eye on this research field. Exploring it seems to allow us in a very special way to rewrite past Western notions of “the other”: as soon as string figures become algorithmically complex I, as a person socialized in the West, cannot keep up.

A number of early Western anthropologists were interested in string figures as a still active art which they presumed was dying out, so needed to be saved. They were initially either interested in meanings, or in probable lines of the human evolution of string figures; or they were trying to understand diffusion paths of types of string figures across the globe. Scholars were interested in gaining overviews of possible types of string figures and their potential evolutions, to understand rationales of movement and form, to develop ways of documenting, if not notating or reenacting, string figures, or casting them into formulas.<sup>13</sup>

Furthermore, the spread of string figures worldwide has inspired the field. Early Western anthropologists have, as mentioned in the introduction to this volume, used string figures in field research to provide entrances into the field and access to the people. Today we know that this is much more complex, and that hesitating to play string figures may also be an issue in fieldwork, or, as Paul Sillitoe remarked in 1976: “When I arrived at a Wola [in the southern highlands of Papua New Guinea] settlement, if I had sat down and started to make string figures the people, I am sure, would have looked at me askance.”<sup>14</sup>

13 W. H. R. Rivers and A. C. Haddon, “A Method of Recording String Figures and Tricks,” *Man* 2 (1902), pp. 146–153; Caroline Furness Jayne, *String Figures: A Study of Cat's-Cradle in Many Lands* (New York: Charles Scribner's Sons, 1906); D. Jenness, “Eskimo String Figures,” *The Journal of American Folklore* 36, no. 141 (Jul.–Sep. 1923), pp. 281–294; Thomas. T. Paterson, *Eskimo String Figures and their Origin* (Copenhagen: Ejnar Munksgaard, 1949).

14 Paul Sillitoe, “Why String Figures?,” *The Cambridge Journal of Anthropology* 3, no. 1 (1976), pp. 13–26.

In recent years, a new generation of string figure anthropologists has generated highly inspiring approaches against the background of new research agendas. Two of them have particularly inspired the reflections presented here. One is Robyn McKenzie, a researcher from the Australian National University (ANU) in Canberra, who, during her research project from 2010 to 2012, investigated Yolngu string figure playing in Yirrkala. McKenzie collaborated with the Yolngu of Yirrkala and reconnected them in particular to the string figures collected by Frederick McCarthy in the course of the American-Australian Expedition to Arnhem Land in 1948, mounted on cards and held as such in the Australian Museum, Sydney.<sup>15</sup> The second scholar is French ethnomathematician and former mathematics teacher Eric Vandendriessche, a researcher at France's *Centre National de la Recherche Scientifique* (CNRS), who, as we will see, took up the thread of string figures as vernacular mathematics used mostly in societies of oral knowledge transmission. The idea of considering string figures as mathematics is not new, but Vandendriessche developed from this his own fascinating approach, through case studies from Oceania, the Arctic and South America.<sup>16</sup>

## The *Chaîne Opératoire* of String Figures

To understand string figures and their particularities in emic and etic perspectives, we first of all need insight into the sequences of making. French anthropology has provided us with an interest-

15 Robyn McKenzie, "The String Figures of Yirrkala: Examination of a Legacy," in *Exploring the Legacy of the 1948 Arnhem Land Expedition*, ed. Martin Thomas and Margo Neale (Canberra: ANU Press, 2011), pp. 191–212; Robyn McKenzie, "From the Contested Zone: String Figures in the Museum," *Museological Review* 15 (2011), pp. 48–62; Robyn McKenzie, "One continuous loop: making and meaning in the string figures of Yirrkala" (Ph.D. diss., The Australian National University, 2016). Robyn McKenzie, "Recollections of the String Figures of Yirrkala," in this volume.

16 See Eric Vandendriessche, *String Figures as Mathematics? An Anthropological Approach to String Figure-making in Oral Tradition Societies*, *Studies in History and Philosophy of Science* 36 (New York: Springer, 2015); Eric Vandendriessche, "Jeux de ficelle. Comparaison et questions de méthode," *Techniques et culture* 62 (2017), pp. 92–127; Eric Vandendriessche, "Anthropologie des nombres et ethnomathématique," *L'Homme* 225 (2018), pp. 185–198. Eric Vandendriessche, "Ethnomathematics of String Figure-Making Practices," in this volume.

ing method to initially investigate techniques and technologies as goal-directed, intelligent, meaningful action: the *chaîne opératoire*, the operational sequence.<sup>17</sup> Today, this is not only a device for documenting, for example by using formulas. It has also become a method and analytical tool for anthropologists to collaboratively communicate about a technique, a technology, a technological complex, through the formula as its representation in a kind of third language, with originator communities and their practitioners.<sup>18</sup> Thus a double question here is: How do we trace a sequence, and how do practitioners represent it when communicating about string figures, for example when teaching their children?

Generally, all string figures can technically be summarized under one single general formula: there is always a simple loop at the beginning, the process is always straight, bodily and directionally entangled, and the end goal is always an ephemeral figure intended to be created and then dissolved. As “transient constructions”<sup>19</sup> string figures are repeatable, while their paths and lineages are stable. Maybe here lies one of the particularities of any string figure: its clear basic *chaîne opératoire* is easy to embody through constant repetition at the beginning of string figure enskilment, through logical reenactment for the fully skilled. Playing along this *chaîne opératoire* is so deeply and enduringly embodied that, after many years of not playing, the hands still take over, or as the above-mentioned Ju-Ann Broyles formulated it when displaying her Chinese cabbage flower, this is about “muscle knowledge.”<sup>20</sup>

The rest is a matter of the complexity to be included in the *chaîne opératoire*, of ever new but still at some point comparable movements of fingers or other parts of the body, eventually the body of a team-mate or several team-mates, and the loop. Beyond this clear linear process may lie social, ritual, spiritual, and economic complexities which are invisible at first sight. This invis-

17 François Sigaut, “Technology,” in *Companion Encyclopedia of Anthropology*, ed. Tim Ingold (London: Routledge, 1994), pp. 420–444.

18 See Ludovic Coupaye, “Making ‘Technology’ Visible: Technical Activities and the *Chaîne Opératoire*,” in *The Palgrave Handbook of the Anthropology of Technology*, ed. M. H. Bruun et al. (New York: Palgrave Macmillan, 2022), pp. 35–60.

19 Probert, “The Torres Strait String Figures,” p. 140.

20 “Chinese Bok Choi (Cabbage Flower) by Ju-Ann Broyles.”

ible and cultural dimension in string figures is not necessarily made explicit, but has to be rendered visible or intelligible. Language may equally be deeply inscribed into string figures but, as Vandendriessche has shown, this is very difficult to disentangle historically and linguistically.<sup>21</sup>

The method of the *chaîne opératoire* can construct string figures as an academic object and a rational activity, as a calculable technique. As Vandendriessche has shown, its mathematical qualities and capacities lie in the concrete process of making. Furthermore, as has been mentioned, the *chaîne opératoire* can also be a very calculable medium of representation and have a moment of dialogue about it, of exchanging positionalities which materialize in string figures. It may be a challenge, though, for the researcher as well as the collaborating co-discussing actor to understand, to formulate and to include the invisible in string figures into a *chaîne opératoire*. It is this invisible which helps explain moments of hands hesitating.

## Hesitant Hands

Hesitation or reluctance is a cognitive technique which serves to recall embodied knowledge. The moment of hesitating can decide on gain or loss. It is a moment of tension. Hesitant hands can also be an expression of mutual recognition, of players as learners, experts, game enthusiasts, forgetful former players, distant knowers, distinguished by gender norms. In a moment of string figure transcultural encounter, hesitant hands are hands challenged to compare and adjust their own practice and form in view of other figures—or to temporarily or initially fail when faced with the task.

There may be very simple reasons why people hesitate to play string figures.<sup>22</sup> Western children would hesitate to play at certain social occasions—can you imagine playing string figures at a funeral? In societies where string figures are socially bound to

21 Vandendriessche, *String Figures as Mathematics?*

22 I take the following enlisting from my cross-reading through the literature in preparation for the oral presentation and I apologize for not having had the time to carefully biographically note all the incidents I came across.

honor and pride, social status, gender, ritual, agricultural cycles, etc., the actor may not yet be capable, or may be momentarily reluctant to execute the process and afraid of making a mistake. Hesitation may be a personal or a collective moment, it may also be a moment of briefly reflecting on the right time in the ritual or agricultural calendar, the presence of certain people or a certain status, but also a momentary feeling of loss when faced with a concrete complexity unfamiliar to the person watching. He or she may incidentally decide to try and follow another path, to alter the process, to reinterpret the figure, or to abruptly abandon the attempt. Hesitation may be due to particular socially negotiated meanings, to ritual taboos, humor, conventions of abstinence, or taboos related to sexuality and the like.

The hesitant hands are thus an integral part of string figure playing itself: we soon recall from our bodily memory, in this moment of hesitation, how to proceed further. As Vandendriessche remarked from his field research: this hesitation can sometimes occur in the mind. In 2005, he observed Marquesan elders closing their eyes while trying to remember the making of a string figure that they had not performed for a long time.<sup>23</sup>

This cognitive technique of hesitation is socially formable. I have learned to hesitate socially. At the other extreme, hesitating can be purposefully unlearned. A master string gamer may profess her excellency by taking care not to hesitate throughout the entire process. Some craftspeople may be trained to unlearn hesitation, at the moment of a tricky process in the production. A hunter or a soldier may be trained to unlearn hesitation in order to be able to kill. Hence, hesitating can be socially constructed. I thus suggest that we look at the social constructedness of string figures through moments of hesitation during play. The literature on string figures seems full of related observations from field research. Let me briefly turn to just three conditions where hands might hesitate on similar loops: the conditions of learning to play string figures; moments of cultural reluctance to play string figures; and the colonial degradation of the art of string figure playing.

23 Personal note to the author from Eric Vandendriessche.

## Vernacular String Figure Apprenticeship

As is well known in youth development studies, children from the age of roughly five to six have a particular bodily and cognitive disposition for learning games like string figures. Their learning hesitant hands are caught in the moment of linking bodies and minds, of refining their motor, cognitive and memory abilities, their dexterity, their bodily trust. A child's hesitation in the flow of forming string figures means they are still learning how to correctly move the strings, alone or with team-mates. This is about motoric capacities and hand-eye coordination, about balancing, about learning mutual trust and collaboration, about anticipating the other's action, about concentrating and learning how to take responsibilities, about experiencing stability of patterns and repetition, about mastering communication, creativity and rules, and so on and on.<sup>24</sup>

The more one dives into the topic of the manifold capacities connected to string figure skills the more it becomes clear that, through the process of learning to link string, hands and brain, a capacity is built up which can be infinitely refined. As Europeans, we apparently build this capacity but leave it in an initial state, excluding it from adulthood—yet the long-lasting inscription into the body leaves its traces on former players. I myself recently tested playing string figures in a care home for elderly people with dementia. Many elderly women only hesitated for a moment, then immediately knew how to play basic figures, taking this for granted, yet also thoroughly enjoying playing.

In some societies in the world string figure playing is not restricted to childhood but stays an art of joint and often competitive playing and a source of community enjoyment and recreation, a source of self-assurance far into adulthood and aging. These social string figure settings and the games practiced are much more complex than is the case with the European childhood-bound cat's cradle. Research on how capacities of playing string

24 I am grateful to my colleague Moritz Daum, Chair in Developmental Psychology: Infancy and Childhood at the University of Zurich, for insights into the state of this research field.

figures are embodied and developed throughout the lifetime of Australian Aboriginal or Trobriand women, and what these skills may entail beyond string figures, is a truly fascinating field.

To just give one example, Vandendriessche describes a Trobriand woman, Bowelogusa, who could see an unfamiliar string figure, even from afar, and produce it the next day without hesitation. He writes: “one may think that the ability of Bowelogusa to capture and memorize a procedure from a distance is due to many years of practical experience that has given her a high perception of the operations involved and their usual organisation in ‘sub-procedures’.”<sup>25</sup>

In other words: what grows in a person through practice, what the learning process may lead to, is reading and reproducing unknown string figures on the basis of one’s own experience. Did Bowelogusa practice the night before she demonstrated this to Eric Vandendriessche? And did she hesitate? Vandendriessche, in a personal communication, provided this answer:

Maybe she hesitated a little bit. However, I think that this woman’s ability to capture this sophisticated procedure very quickly—comes from the fact that the procedure in question relates to the same (local) system as all the string figures she knew. Years after, I showed Inuit string figures to Ni-Vanuatu experts. And, actually, they found them very complicated to learn; through many hesitating gestures.

The field of vernacular apprenticeship and paths to enskilment and embodiment of string figure making, hitherto poorly explored, seems promising. Maybe it is not only about knowing more about how people learn, practice, develop and preserve complex string figure playing, or—as Vandendriessche’s remark suggests—about questions of systems of string figures. It is also about how people use the art for self-assurance in the speedy transformations of the global world.

25 Eric Vandendriessche, “W.W. Rouse Ball and the mathematics of string figures,” *Historia Mathematica* 41, no. 4 (2014), pp. 438–462, annotation 11.

## Remarks on Cultural Reluctance to Play String Figures

In his contribution “Cultural and cognitive aspects of string figure-making in the Trobriand Islands,” Vandendriessche reconstructs the social side of string figure skilled practice through people’s reluctance to play due to time, circumstances, season, gender or marital status.<sup>26</sup> Anybody can, while playing string figures, also relate to the performance of meanings. This includes local symbolism and semiotics, aesthetics and forms, everyday settings, material artifacts and the materiality of the string, animals, hunting game, territory, morality and ethics, religion and spiritual practice, ritual, magic and ceremony, kinship and marriage, extramarital sexual intercourse, storytelling, riddles, rhymes, metaphors or joking, gestures, memory recalling, counting, climate phenomena, stars and cosmology, or healing.

What then emerges from reading through the literature in search of the social embeddedness of string figures points to parallel string figure culture spheres—a pluriverse of different ways of string figure playing. Robyn McKenzie, who I mentioned above, provides an excellent example:

From fieldwork done in Yirrkala, [...] I have observed that a string figure is never still. Even when the final stage in a design is reached and it is held up for display, the hands still move even if just slightly, to hold the figure tensioned in shape. The oddness of the mounted figures is their frozen de-natured quality: not their stillness as such but the absences that register and are implied in their material form that suggest an “aliveness” stilled. The loopings, crossings and twists of the string inscribe movement, inferring the process of their physical making. They connect with and activate in the viewer a somatic kinaesthetic sense logic. The scale of the figures and their common bilateral symmetry, make the body that made these, and specifically the person of Ngarrawu,<sup>27</sup> an absent presence in the work.<sup>28</sup>

26 Eric Vandendriessche, “Cultural and cognitive aspects of string figure-making in the Trobriand Islands,” *Journal de la Société des Océanistes* 138–139 (2014), pp. 209–224.

27 Ngarrawu Mununggurr was the principal informant and collaborator of anthropologist Frederick McCarthy during his string figures collection in 1948.

28 McKenzie, “From the Contested Zone,” p. 60.

As McKenzie observes so astutely, we incidentally encounter another aspect of the hesitating hands, a social moment of holding a figure up for display, reluctant to dissolve it immediately — to keep it alive for a moment at least. How many more such details have been overlooked as yet?

## **The Colonial Degradation of String Figures as an Art Expected to Die Out**

A recurring topic in the literature is that of string figure collections being established in anticipation of the danger of the art dying out. Researchers report though that this assumed vanishing was in most instances simply not the case at all: “[in Yirrkala] contrary to the expectations of McCarthy’s era string figure making continues,” writes Robyn McKenzie.<sup>29</sup> While this colonial diagnosis of cultures on the verge of extinction which needed to be collected may be questioned as following an evolutionary paradigm, what seems clear is that the colonial project as well as modernization in general may eventually have led to alterations in the local appreciation or role of string figures.

The collecting of string figures led to different reactions on the side of Indigenous people—initially it may even have spurred local interest in the figures. Regarding string figures in Yirrkala in 2008/2009, McKenzie remarks:

While still practiced, [...] string-figure making has not been highly valued as a cultural expression. Wherever it sat in the order of things within the semi-traditional society of 1948, its fate was tied to the community’s increasing interaction with the values of a dominant mainstream Australian society. Just as the string figures were not objects that McCarthy could collect as such, it was explained to me that string figures are not something that you can buy and sell—unlike string bags or bark paintings. [...] After McCarthy, no-one wanted string figures from the Yolngu. Unlike other cultural activities, they have no commodity value in the contemporary economy.<sup>30</sup>

29 McKenzie, “The String Figures of Yirrkala,” p. 212.

30 Ibid.

Thus, according to McKenzie, there was a reluctance to appreciate string figures in a new economic setting and under the commodification of Aboriginal art. In a way—in view of the deep cultural embeddedness of string figures among the Yolngu described by McKenzie—this economic devaluation reflects a time when mainstream Australian society was reluctant to acknowledge Australian Aboriginal societies and their arts. In the end it seems that a basic knowledge of string figures remained among the Yirrkala Yolngu, “a basic ‘literacy’ in handling and manipulating the string.”<sup>31</sup> Elderly women apparently retained the art through their string figure skilled bodies, as they were able to read and recast string figures from the 1948 McCarthy collection.

A particular encounter in the postcolonial era, provoked through the restitution of knowledge from a museum collection, seems telling. The Yirrkala Yolngu had hitherto been unaware of the collections, which—one could say—the museum had hitherto been reluctant to inform them about. The encounter with this historic collection:

has provoked a resurgence of interest in string figures. A number of Yirrkala women participated in workshops at the GARMA Festival, teaching visitors how to make string figures. In response to the collection itself, a series of etchings of figures made with bush string (hand-made from natural fibres) were displayed at the Gapan Gallery in Yirrkala in 2010. In August–October 2013 these prints were displayed in the exhibition “String Theory” at the Museum of Contemporary Art.<sup>32</sup>

In other words: a new art appeared, the art of etchings of string figures. The question is: Do these etchings finally realize the commodification of string figures which the market had hitherto been reluctant to be interested in? One wonders if this is not also a strong Indigenous statement, and Indigenous critique, on collecting string figures by freezing forms without movement through mounting them on cardboard. A double move seems to be at stake here: both reviving a craft which had been banished to immobility in the museum, now as art and commodity, and

31 <https://www.monash.edu/muma/collection/100-works-of-the-monash-university-collection/100-works/yirrkala-string-prints> (accessed October 21, 2024).

32 <https://australian.museum/learn/cultures/atsi-collection/cultural-objects/survival-and-revival-of-the-string-figures-of-yirrkala/> (accessed October 21, 2024).

refreezing it for the art market, while hesitating for whatever reasons to socially re-entangle string figures, rediscovered in and reevaluated from the museum collection, to develop today's remaining basic string figure literacy among the public to new horizons. Or is there a hidden continuity or even revival, which this time is kept within the community and disclosed to strangers only as art to buy and to contemplate without skill extraction?<sup>33</sup>

## Hesitant Hands on Similar Loops? Some Conclusions

The idea of this short essay was to reflect, starting from the moment of hesitation in string figure playing, on where research on string figures could lead us in rewriting—and in fact, as we have seen, decolonizing—past imaginations of human societies and the skills of string figure making.

It seems to me in view of current research that, after more than 150 years of collecting, anthropology and other disciplines are only now starting to understand what string figures may entail in different cultural contexts. Our own basic string figure literacy may act as a bridge by which to approach this field.

Early anthropologists did this, but they were reluctant to see more than skillful ancient playing and typologies left from “early man” in the art. The seemingly simple *chaîne opératoire* intrigued them to concentrate on path and form and to collect, as if this was a system of types. Reenacting string figures, knowing along which path they came into being, is an important step of course—a fascinating experimental field.

Our hesitant hands when watching faraway communities play should lead to a new awareness of the cultural embeddedness and embodiedness of such string figures, for example, as vernacular mathematics—as Vandendriessche has shown. From an anthropology of skilled practice perspective, we know that human societies objectify themselves in their material culture and everyday technologies. We know that establishing, validating, transform-

33 <https://www.mca.com.au/artists-works/exhibitions/string-theory-focus-on-contemporary-australian-art/> (accessed October 21, 2024).

ing and deciphering its shifting meanings is what living together is about. What lies invisibly beyond string figures are concepts of skilled playing, of cultural embeddedness, of meaning and symbol, of language and gesture, of recognition and hesitation in particular moments.

We should not hesitate to look at string figures in terms of communities of practice or skill producing groups with their own interpretations of form and strategy; at embodied cognition and communication, at concepts of perspicuity and Indigenous theories of learning to produce string figures; at skilled visions. It is to be expected that there are Indigenous string (figure) theories mediated under whatever concepts of the string figure as some sort of focusing medium.<sup>34</sup> We should look at the intelligent hands and at how string figure knowledge translates into the upbringing of children, into the social, into creativity and inventiveness, into resilience and reconnecting, into solution finding, into visual skills formation—and we should be aware that string figures are also, of course, related to questions of aging. A closer look at the hesitant hands in all this can, it seems to me, be promising, in taking us further in our understanding of human resourcefulness.

This brings me back to the female students starting their studies in social anthropology in Zurich, watching the string figure sequence in the film *Cree Hunters of Mistassini*. The reason why this “Introduction to Anthropology” lecture is so special is because, at this moment of discovering young Cree women embodying the same string figures their hands have been enskilled to in their childhood, the Swiss students seem to physically and personally connect with a community, a setting, the daily lives of people which they have hitherto imagined as being far distant in time and space. This basic string figure literacy is a common bodily and dexterous language to start with, a chance to understand that, in a pluriverse of string figure playing, in order to follow unfamiliar algorithmic strategies I need to make efforts, no longer disregarding them as relics from the past, but under-

34 Cristina Grasseni and Thorsten Gieser, “Introduction: Skilled Mediations,” *Social Anthropology* 27, issue 1 (2019), pp. 6–16.

standing them as embodied and culturally embedded forms of vernacular mathematics and intellectual challenge.

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# Art and Theory



# Shall We Rather Do String Figures Than Think in Networks?

## Donna Haraway's SF Method

In the last twenty years, Donna Haraway has become a larger-than-life character. She/they<sup>1</sup> belongs to the genre that is commonly abbreviated as theory (alongside Foucault, Deleuze, Butler, etc.). Haraway has become the kind of reference that does not need to be named when quoted. Her influence extends far beyond academics into the art world. In the notorious so-called power rankings of the art world, she has repeatedly ranked high or even top. This is due in large part to the fact that her writings are not only theoretically sophisticated, but also extremely visual and sometimes witty and poetic. Above all, her prominence is inextricably linked to the characters who populate her writings, figures that repeatedly hit the nerve of the intellectual zeitgeist: most prominently the cyborg, which she framed as a human-machine hybrid that circumvents the powerful bipolarities between nature and culture as well as between man and woman. Another famous figure is the companion species, a kind of peace treaty in the border war between animal and human. Others less well-known include the coyote, the trickster, the OncoMouse<sup>TM</sup> or the modest witness (fig. 1.1 and 1.2).

<sup>1</sup> According to the email signature, Haraway uses both pronouns. I will use the female pronouns in the following text because it is much more common to refer to Haraway in this way.

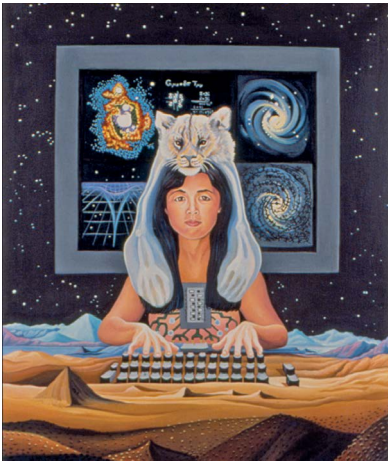


Fig. 1.1 and 1.2: Haraway has developed a wealth of figures. She repeatedly used paintings by Lynn Randolph, with whom she developed a collaboration, to visualize these figures. From left to right, these are *Cyborg* (oil on masonite, 1994), *The Laboratory, or The Passion of OncoMouse* (oil on masonite, 1994)

How do Haraway's string figures fit into this line-up? According to one of her main German interpreters, Katharina Hoppe, hardly any other motif of her work has become as important as string figures.<sup>2</sup> Haraway's string figures have been taken up in numerous contexts, again not only in academia but even more so in the arts and in design.

String figures are, to say the least, a many-faceted, multi-layered category for Haraway. As this quote from the first chapter of her most recent book, *Staying with the Trouble*, can show:

String figures are like stories; they propose and enact patterns for participants to inhabit, somehow, on a vulnerable and wounded earth. [...] SF is a sign for science fiction, speculative feminism, science fantasy, speculative fabulation, science fact, and also, string figures. Playing games of string figures is about giving and receiving patterns, dropping threads and failing but sometimes finding something that works, something consequential and maybe even beautiful, that wasn't there before, of relaying connections that matter, of telling stories in hand upon hand, digit upon digit, attachment site upon attachment site, to craft conditions for finite flourishing on terra, on earth. String figures can be played by many, on all sorts of limbs, as long as the rhythm of accepting and giving is sustained. Scholarship and politics are like that too—passing on in twists and skeins that require passion and action, holding still and moving, anchoring and launching.<sup>3</sup>

2 Katharina Hoppe, *Haraway zur Einführung* (Hamburg: Junius, 2022), p. 83.

3 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, N.C.: Duke University Press, 2016), p. 10.

This quote contains not only (at least to my mind) a beautiful description of the practice and experience of creating figures with strings, it also tells us something about the importance that SF has for Haraway as an acronym. SF is a way of storytelling, of fabulation, of feminism and of crafting scientific facts. Haraway sees her work as a scholar, her theoretical work, as such a fabulation on and with facts. SF also stands for more-than-human worlds where multiple species and critters are becoming-together on a damaged planet. Haraway conceptualizes the practice of string figure making as an intra-action of thinking, making, worlding and patterning between many different players/critters. Next to the cyborgs, dogs and onco-mice, string figures and SF take on the role of a meta-figure that brings together her different figures.

There is a lot to unpack in this quote and in the SF acronym. However, I do not wish to engage in theoretical exegesis in this contribution to an exhibition catalogue that treats string figures as a broad cultural practice extending far beyond their usage in theory writing. Nor is my aim to question or judge Haraway's writing, to trace rights or wrongs. Instead, I will tell a story of how she came to use string figures as a material-semiotic metaphor for thinking and doing together, and trace the subsequent process of how string figures became central to her method. With this brief history of Haraway's theory writing I hope to stimulate our reflection about the terms we use for the relationships we study and about how these terms influence how we position ourselves in relation to the relationships we study. I would argue that much of cultural, media or science studies discourse in the last thirty years can be defined as an attempt to establish, reveal, analyze or change relations between techniques, people, artifacts, animals, substances, etc. But how do we want to talk about these relationships, deal with these relationships, behave towards these relationships or intervene in these relationships? By approaching these questions, this text also adds a footnote to the now extensive literature that has attempted an archaeology and genealogy of the network as a metaphor, as iconography, or as a cultural technique—particularly in media studies, but also

in philosophy, sociology and art<sup>4</sup>—a literature in which I have so far searched for string figures largely in vain or found only cursory mentions. Haraway’s use of SF comprises a conceptual intervention that can also help us reflect on the term network.

## 1987: Ball of Yarn—Semiotics of Fate?

As early as the mid 1980s, Haraway experimented with textile metaphors to outline her method. An example of this is the ball of yarn that she uses to visualize and materialize her approach in a guerrilla TV show produced for Paper Tiger TV in 1987 (fig. 2). As part of a series in which public intellectuals (alongside Haraway, for example, Noam Chomsky and Martha Rosler) deconstruct a popular medium “mythsmashingly,” she devotes herself to an issue of *The National Geographic* that deals with primatology.<sup>5</sup> At the beginning, while pulling the threads out of a big ball of wool, she explains:

First I’d like to explain the principle I use in looking at the production of modern culture. Seems to me that the cultural critic is faced by a world that looks very much like tangled balls of yarn. And that one way to approach the situation is to pull on a thread and begin to untangle the ball of meanings. And begin to trace through one thread, and then another, what gets to count as nature, for whom, and when. And how much it costs to produce nature at a particular moment in history, for a particular group of people.<sup>6</sup>

Haraway’s wording and her performance echo various movements of thought. Firstly, the “webs of significance” that Clifford

4 See, among many others, Jürgen Barkhoff, Hartmut Böhme and Jeanne Riou, eds., *Netzwerke: eine Kulturtechnik der Moderne* (Cologne: Böhlau, 2004); Sebastian Giessmann, *Die Verbundenheit der Dinge: eine Kulturgeschichte der Netze und Netzwerke* (Berlin: Kulturverlag Kadmos, 2014); Alexander Friedrich, *Metaphorologie der Vernetzung: Zur Theorie kultureller Leitmetaphern* (Paderborn: Brill, 2015); Marie-Ange Brayer and Olivier Zeitoun, *Réseaux - Mondes* (Paris: Éditions du Centre Pompidou avec les Éditions Hyx, 2022).

5 Anonymous, *Paper Tiger Television Catalog* (New York, 1991).

6 Nathalie Magnan and Sarah Williams, *Donna Haraway Reads “The National Geographic” on Primates* (New York: Paper Tiger Television Tape 126, 29 min, 1987). See also Ron Eglash, “Haraway, Donna,” in *SAGE Research Methods – Foundations*, ed. Paul Atkinson et al. (London: Sage, 2019).



Fig. 2. Haraway explains her principle of analyzing culture with a ball of yarn in the tv program *Donna Haraway Reads "The National Geographic" on Primates*. Paper Tiger Television, 1987.

Geertz wrote about in his seminal book *The Interpretation of Culture*.<sup>7</sup> According to Geertz's semiotic approach, it is these webs that the human animal spins itself and that the cultural anthropologist has to analyze. Secondly, the yarn alludes to the associative field of textile production, to the activities of spinning, weaving and braiding, which are often associated with female deities: the Sumerian Uttu, the Egyptian Neith, the Greek Athena.<sup>8</sup> In tales and myths, it is the spinning and weaving goddesses who, as powers of fate, determine the thread of life. Thirdly, Haraway herself will later draw a line from this thread-based image of a cultural studies methodology to the famous catchphrase of the actor-network theory (ANT): "Well, I see the 'pulling-out-the-threads' on the video and the 'follow-the-actors' approach as closely related."<sup>9</sup>

7 Clifford Geertz, *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973), p. 5.

8 See Friedrich, *Metaphorologie des Netzwerks*, p. 268

9 Donna Haraway, "Cyborgs, Coyotes and Dogs: A Kinship of Feminist Figurations and There Are Always More Things Going on Than You Thought!: Methodologies as Thinking Technologies. An Interview with Nina Lykke, Randi Markussen and Finn Olesen," in *The Haraway Reader* (New York: Routledge, 2004), pp. 321–342, here p. 338.

Despite the apparent proximity of the ball of yarn to string figures, string figures lead into a different realm of meaning and imply a different research methodology. The semiotic, the entangled and the divine, as well as the non-involved of the “follow the actors” approach, are pushed into the background in the string figure thinking. The pulling of yarn does not create a figure, handling the ball of meaning is less performative, less demonstrative; the researcher intervenes, but the result is the untangled thread on which we can follow the course of meanings. The string game, on the other hand, always implies an active intervention in an existing structure of connections; moreover, it is not a solitary practice like the interpretation of individual strands of meaning.

## 1994: Cat’s Cradle—Embodied and Interdisciplinary Action

Haraway first employed cat’s cradle, which is often used synonymously with string figures in Anglo-Saxon countries but actually refers specifically to a series of string figures which is performed by two or more players, in a text published in 1994: “A Game of Cat’s Cradle: Science Studies, Feminist Theory, Cultural Studies.” There, she proposes an interlocking of cultural studies, including feminist, multicultural and anti-racist theory, with science studies, because all of these fields are indispensable sources when it comes to dealing with “heterogeneous complexity, and complex objects.”<sup>10</sup> This combination of fields reflected Haraway’s academic environment at that time, in the History of Consciousness Department at the University of California, Santa Cruz (and beyond), where she was constantly exchanging ideas, words and figures with thinkers such as the Chicana feminist Gloria Anzaldúa or the filmmaker Trinh T. Minh-ha among many others.

Cat’s cradle is where I think the action is in science studies, feminist studies, antiracism, and cultural studies—not in the mindnumbing militarized games of endless agonistic encounters and trials of strength passing as critical theory and as technoscience. [...] Tracing networks and

10 Donna Haraway, “A Game of Cat’s Cradle: Science Studies, Feminist Theory, Cultural Studies,” *Configurations* 2, no. 1 (1994), pp. 59–71, here p. 63.

configuring agencies/actors/actants in antiracist feminist multicultural studies of technoscience might lead us to places different from those reached by tracing actors and actants through networks in yet another war game. I prefer cat's cradle as an actor-network theory. The issues here are not "mere" metaphors and stories; the issues are about the semiosis of embodiment, or, in Judith Butler's nicely punning phrase, about "bodies that matter."<sup>11</sup>

Haraway's proposal of cat's cradle was mainly an intervention into a very specific academic field within science studies: cat's cradle instead of actor-network. Haraway addressed the descriptive vocabulary of ANT itself. With the substitution of the network metaphor, she not only intervened in the theory but in a dominant mode of speech during this time. Haraway's other famous figures work in a similar way. They intervene in the current way of speaking, they make you rethink the moment, they make you aware that there are always alternatives to the historical conjunctures which we inhabit: the cyborg is not a terminator, critter is a word she used instead of creature, tentacular thinker instead of monadic thinker; also well known is her suggestion to speak of the Chthulucene or the Plantationocene instead of the Anthropocene, and cat's cradle instead of networks.

It was around 1970 that the network metaphor became omnipresent in everyday language and popular culture, in military tactics, in management and theory.<sup>12</sup> The network went from being a diagrammatic, mathematical and conceptual tool for describing technical infrastructures, biological and neurological processes and micro-sociological groups to a metaphor with an epistemic and cultural guiding function, oscillating between diagnosis of the present, description of phenomena as well as imperative and poetic exaggeration. Elements of network thinking can be detected in many influential cultural and social theories from the 1970s to the 2000s: by no means only in the obvious domain of cybernetics, but also among post-Marxists.<sup>13</sup>

11 Ibid., pp. 70–71.

12 Peter Fritz, "Netz, Netzwerk, Vernetzung," *Forum Interdisziplinäre Begriffsgeschichte* 8, no. 1 (2019), pp. 49–55, here p. 51. See also Friedrich, *Metaphorologie des Netzwerks*, and Giessmann, *Verbundenheit*.

13 For a reconstruction of these elements, from Laclau and Mouffe's concept of articulation to Deleuze and Guattari's rhizome, and Serre's network of determina-

Haraway's critique of the network deals specifically with ANT, which has the network term in its title and formed one of the most prominent strands of network thinking in the 1980s and 1990s. Like other network theories, ANT used the notion of the network to criticize a central strand of Western thought: methodological individualism, which claims that social phenomena can be described as a consequence of the actions of voluntarist human subjects. ANT uses the network to develop a different idea of action that includes non-human beings, like technologies and processes, microbes and others. However, the focus is not on the connection of people and things in networks, but on the fact that every action is always already shared with others. To act, it takes many. Typical ANT studies describe how entities are shaped in networked relations and how they acquire agency in constantly changing relationships with each other.

Theories cannot be separated from their descriptive vocabulary. Haraway's replacement of the network concept with cat's cradle struck at the heart of ANT, because the semantic field of the network metaphor permeates the content of numerous ANT works. In ANT, network often implied an analysis of the tactics of winning (as in the cybernetic systems of the military), network was associated with ideas of the best coverage of phenomena (as in the networked systems of surveillance and policing), and with competition and success (as in network-inspired market strategies). Time and again, ANT scholars have described social situations as a problem of winning and losing, of competition and authority. In a nutshell, according to ANT, the more actants involved in an action, the more authoritative the action. Bruno Latour's famous history of the *Pasteurization of France*, for example, is not only (and not coincidentally) subtitled *War and Peace*, but is peppered with descriptions of the exploitative and competitive relationships between the various actants: Latour describes how Pasteur "recruited" the microbes to carry out his experiments, and how Pasteur used strategic publications to gain a privileged posi-

tion to Foucault's dispositive, see Urs Stäheli, *Soziologie der Entnetzung* (Frankfurt am Main: Suhrkamp, 2021). Many of these theories also contain network critiques.

tion that maximized his influence.<sup>14</sup> Haraway repeatedly accused Latour and other ANT scholars of describing science as a “trial of strength”—and the strongest hybrid wins.

In criticizing ANT, Haraway joined a line of feminist science and technology studies scholars like Cynthia Cockburn and Susan Leigh Star, who accused actor-network theorists of an unreflective preference for the success stories of powerful men and a disregard for the powerful architectures of difference that divide our society according to gender, race and class.<sup>15</sup> The critique of its “Machiavellian” tendencies—as Michael Lynch first put it, followed by John Law as well as Latour adopting the term—and its “managerialist ideas” directed towards “Nietzschean Mastery,” was recognized at about the same time as Haraway’s article also by scholars who identified with ANT.<sup>16</sup> Perhaps there was a war-weariness and a hope for reconciliation in the air at that particular time—after the first Gulf War, but before the genocide in Rwanda, and when the Oslo 1 Accord brought peace between Israel and Palestine within reach. In 1993, Vicky Singleton and

14 Bruno Latour, *The Pasteurization of France* (Cambridge, Mass.: Harvard University Press, 1988). In 1996, Latour harshly criticized a reading of his book as a “Madison Avenue version of science.” To read a story of “an individual human—usually male—who wishes to grab power” through “a network of allies” would be “the bottom of misunderstanding.” Bruno Latour, “On Actor-Network Theory: A Few Clarifications,” *Soziale Welt* 47, no. 4 (1996), pp. 369–381, here pp. 372–373.

15 Haraway herself criticized ANT in 1992; other prominent critiques include: Susan Leigh Star, “Power, Technology and the Phenomenology of Conventions: On Being Allergic to Onions,” in *A Sociology of Monsters: Essays on Power, Technology and Domination*, ed. John Law (London and New York: Routledge, 1991); Cynthia Cockburn, “The Circuit of Technology: Gender, Identity and Power,” in *Consuming Technologies: Media and Information in Domestic Spaces*, ed. Eric Hirsch and Roger Silverstone (New York: Routledge, 1992), pp. 32–47, here pp. 35–39; Marilyn Strathern, “Cutting the Network,” *The Journal of the Royal Anthropological Institute* 2, no. 3 (1996), pp. 517–535; Judy Wajcman, “Reflections on Gender and Technology Studies: In What State is the Art?,” *Social Studies of Science* 30, no. 3 (2000), pp. 447–464.

16 See Michael Lynch, “Building a Global Infrastructure,” *Studies in History and Philosophy of Science* 26, no. 1 (1995), pp. 167–172, here p. 168. While in 1996 Latour only listed the misunderstandings that the term network had caused, but tried to defend it, in 1999 he withdrew the term and acknowledged: “The managerial, engineering, Machiavellian, demiurgic character of ANT has been criticised many times.” Latour, “On Actor-Network Theory”; Bruno Latour, “On Recalling ANT,” in *Actor-Network Theory and After*, ed. John Law and John Hassard (Oxford: Blackwell Publishers, 1999), pp. 15–25, here p. 19. See also John Law, “Traduction/trahison – Notes on ANT,” *CSTT Home Page* (Centre for Social Theory and Technology, University of Keele, 1997). <https://www.lancaster.ac.uk/fass/resources/sociology-online-papers/papers/law-traduction-trahison.pdf> (accessed December 27, 2024).

Mike Michael labeled ANT stories as “structured by magnificent victories and disastrous defeats.”<sup>17</sup> Alternative terms for the relational ontology and topology of ANT have also been proposed: Annemarie Mol and John Law suggested—again at the same time and presumably independently of Haraway—the terms “fluid spaces” on the one hand and “patchwork” on the other, the latter also a textile term.<sup>18</sup> Michael Lynch accused ANT of mislabeling and spoke of “actant-rhizome ontology” with ironic-critical intent.<sup>19</sup> Some years later, Charis Cussins wrote of “ontological choreography” and Star, in a text written with Geoffrey Bowker, of “filiation,” again a thread metaphor.<sup>20</sup>

Most of these notions tried to convey that there are many more ambivalences, gaps and uncertainties in worldly endeavors of knowledge production than are implied by the network; they added things that are not drawn together in the network, brought in the idea that the knots do not add up. But an explicit discussion of the relationship between these different concepts and terms for relational ontologies barely took place, at least at that time. I will not attempt such a comparison, even if it would be worthwhile, but will ask to what extent cat’s cradle criticized, expanded and transformed the network topology within relational methodologies. Three interrelated aspects appear important:

17 Vicky Singleton and Mike Michael, “Actor-Networks and Ambivalence: General Practitioners in the UK Cervical Screening Programme,” *Social Studies of Science* 23, no. 2 (1993), pp. 227–264, here p. 232.

18 Annemarie Mol and John Law, “Regions, Networks and Fluids: Anaemia and Social Topology,” *Social Studies of Science* 24, no. 4 (1994), pp. 641–671; John Law and Annemarie Mol, “Notes on Materiality and Sociality,” *The Sociological Review* 43, no. 2, pp. 274–294.

19 Lynch, “Building a Global Infrastructure,” p. 169. See also Casper Jensen, “Is Actant-Rhizome Ontology a More Appropriate Term for ANT?,” in *The Routledge Companion to Actor-Network Theory*, ed. Anders Blok, Ignacio Farias and Celia Roberts (London: Routledge, 2019), p. 76–86.

20 Charis Cussins, “Ontological Choreography: Agency for Women Patients in an Infertility Clinic,” in *Differences in Medicine: Unraveling Practices, Techniques and Bodies*, ed. Marc Berg and Annemarie Mol (Durham, N.C.: Duke University Press, 1998), pp. 166–201. Geoffrey Bowker and Susan Leigh Star, *Sorting Things out: Classification and Its Consequences* (Cambridge, Mass: MIT Press, 1999), p. 317.

## 1. Feminist Cooperation

While nets as hunting and fishing tools have for a long time and in many cultures been metaphors of power and symbols of male domination,<sup>21</sup> strings retain the association with textile work, which is often linked to women and which Haraway already implied with the ball of yarn. Not only is cat's cradle less lethal than the net(work), but it is also associated with ideas of entanglement, togetherness, and cooperation. The divine metaphor of fate that permeated the ball of meaning is relegated to the background; instead, cat's cradle is inventive, suggestive and invites us to play along and to form alliances "with a lively array of others."<sup>22</sup> The feminist and anti-militarist collaborations of cat's cradle are mirrored in the source that presumably served as Haraway's inspiration. In the novel *The Female Man* by Joanna Russ, the character Janet Evason accidentally lands on Earth at the conference table of a group of Soviet military officers.<sup>23</sup> Janet comes from Whileaway, a utopian planet where only women live. As a bid to make contact and a sign of peace, she offers them the first position of cat's cradle—implicitly referring to those ethnologists who always had a string in their pockets to make contact without language. However, the generals do not pick up the string, interpreting it instead as a weapon.

## 2. Embodied and Embedded Positionality

Related to its specific feminism is the positionality that cat's cradle implies in contrast to networks. Networks imply a description from a distance, a God's eye view—a perspective that can only be taken by those who can afford self-invisibility, but not by those

21 Friedrich, *Metaphorologie des Netzwerks*, p. 263.

22 Donna Haraway, *Modest\_Witness@Second\_Millennium. FemaleMan@\_Meets\_OncoMouse™: Feminism and Technoscience* (New York: Routledge, 1998), p. 269. Whether Haraway was already aware in 1994 that string figures are by no means associated with women in all cultures is difficult to decide, but is probably of little consequence.

23 Joanna Russ, *The Female Man* (New York: Bantam Books, 1975), p. 22. Haraway already mentioned the novel *The Female Man* as a central inspiration in her "Manifesto for Cyborgs." However, it was not until 2011 that Haraway made explicit the connection between Russ's novel and her cat's cradle approach.

who are marked by the categories of race and gender.<sup>24</sup> Cat's cradle, by contrast, involves the researchers. Research is thus conceptualized as an embedded and embodied material practice and performative force. The researcher and her/his body become part of the material-semiotic research process in which she/he interacts and performs with people, signs, things, other bipeds and quadrupeds. Cat's cradle remains very local and distributes the responsibility for reshaping the relationships among all the current players.

### 3. Responsive Temporality

Cat's cradle implies a critique of the rigid structuralism of the network that has repeatedly disturbed many other network theorists such as Latour, Michel Serres, and Gilles Deleuze. While network diagrams seem to represent fixed laws and rigid relations, cat's cradle is made by constant processes of transformation. Although formal descriptions of string figures exist (there is a mathematics of string figures and various attempts to develop notation systems), string figures can hold surprises and can be further developed (if you have great skill). The cat's cradle series of figures, in particular, evokes a successive process in which the entanglement of the previous operation becomes the new basis to operate. Although Haraway would only later develop the concept of response-ability (with a deliberate hyphen between response and ability) to describe the responsibility and temporality of research, her cat's cradle text of 1994 already contained the core of this idea.

In sum, Haraway's cat's cradle trope gained its power by maintaining its connection to ANT's use of the network metaphor (a social topology that includes humans and non-humans and that takes shape in active encounters), but at the same time introducing differences that transform our ideas of networks. It added a sense of embodiment (because we do cat's cradle with our hands and limbs), a sense of cooperation (we can do it together and we

24 See Haraway's seminal essay on the positionality of knowledge: Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (1988), pp. 575–599.

certainly can't do all the patterns ourselves, and besides, there's often no winning), a sense of mutability (new forms emerge) and responsiveness (we can create patterns that can be adopted). In cat's cradle, there is no neutral standpoint from which to read and analyze the webs of social production; the string game forces us to intervene and to take a role in reshaping them.

## Constant Revisions and a Kinship System of Figures

In order to better understand the further development of her string figure method, it is important to note that Haraway's critique of the militarized wording involved in network theory was already a self-critique. This suggests the second footnote in her 1994 article, dedicated to the science historian Peter Galison. Galison had criticized her at a 1993 Berlin conference for her confidence in the figure of the cyborg.<sup>25</sup> He traced the invention of the cyborg back to the Second World War and more specifically to an anti-bomber raid tool developed by Norbert Wiener. Of course, Haraway never ignored the military roots of the cyborg nor the fantasies of control and domination associated with it, but rather took these very roots—in one of her typical theoretical twists—as the starting point for a reinterpretation. In her "Manifesto for Cyborgs" she had not only positioned the cyborg but also the network in the ambivalent space of non-innocence: "'Networking' is both a feminist practice and a multinational corporate strategy—weaving is for oppositional cyborgs."<sup>26</sup> Nevertheless, Galison asked rhetorically: "Can the cybernetic vision be so easily detached from its military historical origins and present location?"<sup>27</sup> He even explicitly compared Haraway's position with that of Wiener:

25 Galison presented the paper at the Berlin Summer Academy on Large Technical Systems, July 27, 1993. The paper eventually appeared later than Haraway's article. Peter Galison, "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision," *Critical Inquiry* 21, no. 1 (1994), pp. 228–249.

26 Donna Haraway, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," *Socialist Review* 80 (1985), pp. 65–107, here p. 90.

27 Galison, "Ontology of the Enemy," p. 260.

Haraway, like Wiener, stressed the possibility that machines could be open-ended, nondedicated in their function, and able to reproduce, learn, and interconnect with the human. But Wiener, unlike Haraway, saw power and control as absolutely central to the very definition of cybernetics, for better or worse.<sup>28</sup>

And Galison writes directed to Donna Haraway: “In choosing the cyborg to lead the flight from modernism, one risks reducing the picture of human capacities to one of tactical moves and counter-moves in a metaphorical extension of automatic airwar.”<sup>29</sup>

Haraway did not banish the figure of the cyborg following this critique but she asked herself how it could “continue to do critical work.”<sup>30</sup> As one way to prevent the cyborg from losing its critical edge, Haraway chose to develop other and different figures that have the potential to imagine a different and better research and life. Haraway’s cat’s cradle can therefore certainly also be seen as a reaction to criticism of her cyborg figure, whose roots in tactical behavior might not be as easily exorcised as originally proposed. This kind of constant revision of her concepts is characteristic of Haraway’s thinking with figures.<sup>31</sup> In her words: “I’m interested in how figures help us avoid the deadly fantasy of the literal. [...] Figures help us avoid the fantasy of ‘the one true meaning.’”<sup>32</sup> It is therefore not surprising that her cat’s cradle concept also underwent a fundamental revision in the following years, to become a meta-figure that brought her figures together and summarized her method under the signifier SF. In 1999, Haraway put it this way: “It seems to me that we need a whole kinship system of

28 Ibid.

29 Ibid., p. 261.

30 Haraway, “Cyborgs, Coyotes, Dogs,” p. 327. For more on the history of the cyborg trope and Haraway’s uses of it, see Zoe Sofoulis, “Cyberquake: Haraway’s manifesto,” in *Prefiguring Cyberculture: An Intellectual History*, ed. Darren Tofts, Annemarie Jonson and Alessio Cavallaro (Cambridge, Mass.: The MIT Press, 2002), pp. 84–103.

31 For the notion of revision, see also Katharina Hoppe, *Die Kraft der Revision. Epistemologie, Politik und Ethik bei Donna Haraway* (Frankfurt and New York: Campus Verlag, 2021).

32 Donna Haraway, “Anthropocene, Capitalocene, Chthulucene [sic]: Donna Haraway in conversation with Martha Kenney,” in *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies*, ed. Heather Davis and Etienne Turpin (London: Open Humanities Press, 2014), p. 257.

figurations as critical figures.”<sup>33</sup> It is this kinship system that is expressed in the acronym SF. SF becomes the meta-figure that emphasizes an attachment and connection between her figures.

## 2011: The Acronym SF and String Figures Instead of Cat’s Cradle

In her 1994 cat’s cradle essay, Haraway made no connection to the acronym SF, although she had already cultivated the acronym before then. She integrated her long-standing preoccupation with science fiction literature into her arguments again and again, at least since the “Manifesto for Cyborgs” of 1985. The acronym SF, as something more than the common abbreviation for science fiction, embracing also speculative fabulation and scientific fact, first appeared in Haraway’s work in *Primate Visions* (1989). In the introduction, she writes against the usual opposition of fact and fiction and emphasizes that scientific practice must be seen as a story-telling practice, as a craft of narration, in which experiments, interpretation and metaphors are integrated. As a result, she also places the craft of writing histories of science in close proximity to science fiction. While Haraway traces the “proliferation of ‘sf’ phrases: speculative fiction, science fiction, science fantasy, speculative futures, speculative fabulation” back to the 1960s and attributes it to the science fiction writer Judith Merrill, she now expands the list to include scientific fact: “I am interested in the narratives of scientific fact—those potent fictions of science—within a complex field indicated by the signifier SF.”<sup>34</sup>

Haraway did not include string figures in the complex signifier SF until 2010. For inclusion in the SF list, a revision of her idea of cat’s cradle was first necessary. It is only after her 1994 text that she realized that cat’s cradle is not as innocent a metaphor as it first appears. In 1994, she wrote only: “The game is

33 Haraway, “Cyborgs, Coyotes, Dogs,” p. 327

34 Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989), p. 5. *Primate Visions* must be regarded as one of Haraway’s major works, in which she presents a material-rich feminist history of primatology in the twentieth century and in which numerous strands of her thinking which extend from the 1980s to the 2000s are bundled together.

played around the world and can have considerable cultural significance. Cat's cradle is both local and global, distributed and knotted together."<sup>35</sup> She used cat's cradle to refer to her method in her texts of the 1990s and 2000s, particularly in *Modest Witness* and *When Species Meet*. Only later did she recognize the colonial implications of her world-play. She said in her acceptance comments for the Pilgrim Award:

Like all offspring of colonizing and imperial histories, I—we—have to relearn that all string figures are not exactly the same as English and U.S. American cat's cradle. In the late 19th and early 20th centuries, United States and European ethnologists collected string figure games from all over the world; these discipline-making travelers were surprised that when they showed the string figure games that they had learned as children at home, their hosts already knew such games in greater variety. String figure games came late to Europe, probably from Asian trade routes. All of the epistemological desires and fables of this period of the history of comparative anthropology were ignited by the similarities and differences, with their undecidably independent inventions or cultural diffusions, tied together by the threads of hand and brain, making and thinking, in the relays of patterning in the "Native" and "Western" string figure games.<sup>36</sup>

From then on, she started writing about string figures instead of cat's cradle, because of its fit to the SF acronym and because SF pays respect to Indigenous knowledges.<sup>37</sup> She cites in particular the string figure-making practices of the Diné people (known also as the Navajo) and starts to include pictures of specific string figures in her talks and texts, particularly the figure of the "Two Coyotes Running Apart," alluding to her other famous figure that tries to bridge Anglo culture with Native American knowledge, the coyote (fig. 3). In 2011 she said:

35 Haraway, "A Game of Cat's Cradle," p. 70.

36 Donna Haraway, *Pilgrim Award Acceptance Comments: SF: Science Fiction, Speculative Fabulation, String Figures, So Far* (Actually in California, virtually in Lublin, Poland, July 7, 2011), p. 13. <https://vimeo.com/28892350> (accessed November 28, 2024).

37 For Haraway's own account of this revision, see Donna Haraway and Thyryza Nichols Goodeve, "Nothing Comes Without Its World. Donna Haraway in Conversation with Thyryza Nichols Goodeve. 20th Anniversary of *Modest\_Witness*," in *Modest\_Witness@Second\_Millennium*, second edition (New York: Taylor & Francis, 2018), p. xxxviii.

It matters which ideas we think other ideas with; thinking or making cat's cradle with string figures with na'atl'o' [as string figures are called in Navajo language] is not an innocent universal gesture, but a risky proposition in relentless historical relational contingency.<sup>38</sup>

And in her already cited book from 2016, she adds to these sentences: "And these contingencies include abundant histories of conquest, resistance, recuperation, and resurgence."<sup>39</sup>



Fig. 3. Screenshot from the Pilgrim Award Acceptance Comments by Donna Haraway that she gave online on July 7, 2011, showing the hands of her partner Rusten Hogness learning *Ma'ii Ats' áá' Yilwoí* (Two Coyotes Running Apart), a Diné (Navajo) string figure.

The elaboration from cat's cradle to string figures underlines that Haraway fosters her figures as tools to think with. In her words: "Figuring is a way of thinking or cogitating or meditating or hanging out with ideas."<sup>40</sup> This constant revisioning of a seemingly fixed category stresses the material work that not only the invention but also the maintenance of categories involves. Haraway's aim remains non-closure. Or to stay with the metaphor: "As soon as possession enters the game, the string figures freeze into a lying pattern."<sup>41</sup>

38 Haraway, *Pilgrim Award*, p. 14. For Haraway's stance on "middle-class, white feminist appropriation of Native American symbols," see Haraway, "Cyborgs, Coyotes, Dogs," p. 327.

39 Haraway, *Staying with the Trouble*, pp. 14–15.

40 Haraway, "Anthropocene, Capitalocene, Chthulucene," p. 257.

41 Haraway, *Modest\_Witness*, p. 268.

At the end of this brief history of a theoretical concept/metaphor/figure, the question arises as to whether string figures can maintain a critical edge, and how string figures can retain an ability to think relationality beyond tactical moves, distanced inventories, or a universalist view of the world from nowhere. More than once during the preparatory events and discussions for this volume and the exhibition, in the seminars at art colleges as well as universities, the workshops and the meetings with media or art scholars, I think I sensed a smile when we (co-curator Sarine Waltenpül and I) presented and implicitly proposed string figures as a potentially more appropriate term instead of networks, as a way to think relations in the present—not an evil smile but a slightly condescending one that seemed to say: cute idea, but ultimately not to be taken seriously. I then asked myself: Can such a concept really do justice to the harshness of the contemporary world and the growing distance in our (not very textile) relations with each other in these times of pushbacks, the resurgence of authoritarian regimes and the inflationary urge to take sides in current conflicts, many of which are likened to genocides? I think that string figures have at least a temporary and situational potential to be able to do this. A thinking in terms of relations, relationships and dependencies, which does not define these relations rigidly, but recognizes them as constantly changing, and which acknowledges one's own responsibility in caring for or dissolving these very relations, still seems to me to be without alternative. But string figures can only help us to think about and act upon these often violent relationships if we don't dismiss string figures as mere child's play, as a homely and unserious pastime, and regain an understanding of them as a proud cultural practice. Only then do we come to the questions that thinking in string figures poses to us, and by us I mean those who are entrusted with the task of creating cultural and historical narratives: How can we invent string figures that do more than bring together relatively few actants with little individual scope for action? How do we avoid "Seilschaften" —to use that German term to describe old boys' networks—in which particular interests are valued above social interests? Can we even dare to invent practices of relating in which non-bipeds, machines and those without the dexterity

can join? And who gets to decide to be part of the making of the figures?

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## From Buffalo Skin to Intertwined Snakes

### The String Figures of Harry Smith

In a 1968 interview with John Cohen in *Sing Out!* magazine, Harry Smith explained his interest in string figures:

It was some universal thing that seemed to be more widely distributed than anything else in places that didn't have so-called "civilization." It was the only thing that I could isolate off hand that was produced by all primitive societies and by no "cultured" societies. For example, string figures are found everywhere in the world except Europe and Asia, except for a few peripheral areas like the hills in the Philippines and Scotland. None of these places like France, Russia, Japan, China, Turkey have string figures, despite a great interest in games. It's a bit difficult to understand how the same thing is done in Patagonia as is done within the Arctic Circle or the Kalahari Desert without leaving some evidence in Europe or Asia. I've had various theories for that. Possibly it has to do with the parts of the brain that memorize letters (which usually seem to be around 30 or 50—the things you have to learn to write a language), because string figures don't occur in a place where writing is done. It's a way of tying together a lot of diffuse areas [...]. As far as I know, the string figures are the only universal thing other than singing [...]. I'm writing a book on the subject. Thousands of pages of it are written, but it has to have the references corrected, et cetera.<sup>1</sup>

Harry Smith was a painter, filmmaker, anthropologist and occultist who spent his life searching for connections and cultural patterns across many disciplines. Particularly taken with string figures, he was intrigued by the fact that they were a creative and artistic expression used by many cultures around the world to communicate stories and myths in ways that spoken languages couldn't, while revealing salient information about the environment in which they were created. Noted for his abstract animated

1 Harry Smith, "A Rare Interview with Harry Smith, Interview by John Cohen, December 1968," *Sing Out!* 19, no. 1 (April–May 1969), Expanded version published in *Think of the Self Speaking: Harry Smith—Selected Interviews* (Seattle: Elbow/ Cityful Press, 1999), p. 90.

films, Smith thought of string figures as an early form of animation, approaching them as symbols and glyphs. So began a life-long engagement with string figures. Showing his mounted string specimens to a friend, he stated “Long yarns were told in these figures of speech.”<sup>2</sup>

The “book” Smith references above survives in Special Collections at the Getty Research Institute in Los Angeles as an unpublished manuscript consisting of index cards, notes on stationery from various hotels Smith lived at over the years, stained Chinese takeout menus, string samples, correspondence, bibliographic material citing the essential string figure texts and over 1,000 pages of comparative notes. Although Smith worked on the manuscript for over ten years it was never published, which was not unusual considering Smith regularly engaged with a project only to set it aside as soon as the next initiative presented itself. A finished book was not the endgame for Smith: the process was the journey—the hunt for the obscure citation, collecting books and journals of all known scholarship, and his meticulous depictions of the steps needed to create a string figure while contrasting it to another figure from halfway around the world. That was the satisfaction. It was the gathering of information of a performative language used by various cultures to convey nature, religion, mythology and even magical occurrences that related to his other cross-cultural comparisons, whether they be folk songs, Seminole patchwork fabrics, Ukrainian Easter eggs, or tarot cards, that held much of the appeal for Harry Smith.

Born in 1923 in the heart of the Pacific Northwest Coast Indian territory, Harry Smith’s world view was shaped by his childhood experiences. His parents were theosophists who exposed him to a variety of pantheistic ideas, which led to an ongoing fascination with unorthodox spirituality, comparative religions, metaphysics and philosophy. A precocious anthropologist from an early age, Smith spent time on the Lummi, Swinomish and other Coast Salish Indian reservations recording songs and rituals, collecting sacred religious objects and compiling a dictionary of sev-

2 Scott Ferro, *Guide for the Perplexed: Harry E. Smith* (unpublished, 2024).

eral Puget Sound dialects.<sup>3</sup> Smith’s ethnographic research was advanced for a high school boy (fig. 1). “I took photographs and made recordings, collected string figures—anything I’d seen in the standard anthropology books about what was liable to be the culture elements in that area.”<sup>4</sup> With a particular interest in the linguistics of native peoples, he understood that language conveyed information in many forms, whether it be spoken language, song, or string figures.



Fig. 1: Harry Smith with Julius Charles, August Martin and Ann Jones in the Lummi Smokehouse. Julius Charles was Smith’s main contact on the Lummi Reservation. He and others referred to Smith as “Wey7qe7”—meaning “boy” in Straits Salish, circa 1942–43, photographer K.S. Brown.

On a visit to his extended family in southern California, Smith encountered Kathleen Haddon’s 1934 children’s book *String Games for Beginners*. “Some cousins of mine had a book on string figures, and in learning them I realized this is happening north of Seattle, Washington—and children from the reservation, of course went to school with me—I would ride out on the school

3 Some materials reside in the Whatcom Museum, Bellingham, Washington and the Burke Museum of Natural History and Culture, Seattle, Washington.

4 Cohen, *Sing Out!*, p. 76.

bus with them to see if they or their parents knew any string figures.”<sup>5</sup> Haddon explains the near-universal nature of string figures and their performative qualities, and how they distinctly reflect “what he [man] sees, the things he lives amongst and the things he makes.” She compares string figures to “an early form of movies” stating that “these games have a distinct scientific value for the study of social habits of primitive man and of his ways of thought.”<sup>6</sup> Smith’s interest was piqued. He began learning and documenting string figures from the area, an interest that continued throughout his life.

While still in high school, Smith connected with anthropology professors Melville Jacobs and Erna Gunther at the University of Washington, both students of Franz Boas, the preeminent anthropologist of the time. Boas, the foremost authority on Native American languages, and author of “The Game of Cat’s Cradle” (1888), was one of Smith’s main anthropological influences. Professors Gunther and Jacobs invited Smith to join the graduate student group on trips to observe the nearby Coast Salish ceremonies, activities that were the focus of interest for Boas and his peers. It was with this group that Smith met Bill Holm (1925–2020) at a Winter Dance on the Swinomish Reservation. Both had been studying the cultures of the Coastal Salish peoples and they became friends.

Holm and Smith continued their explorations in the area, sometimes taking a ten-mile trek by bus to the Lummi Smokehouse to record and document the songs, dances and rituals of the Winter Spirit Dances. The smokehouse, a long building with fires set to light the interior and holes in the roof for ventilation, proved a challenging location to photograph and record the dances. Even more cumbersome was the fifty-pound recording device devised by Smith, powered by a car battery and transformer, that they had to bring to make recordings of the dancers when the “spirits” took possession. As Holm and Smith entered college their life paths diverged, yet these early years would prove

5 Harry Smith, *Cosmographies: The Naropa Lectures 1988–1990* (New York: Karma Books, 2023).

6 Kathleen Haddon, *String Games for Beginners* (Cambridge: W Heffer and Sons Ltd., 1934), p. 6.

to be formative: Bill Holm went on to become internationally recognized as one of the most knowledgeable experts in the field of Northwest Coast native art history.<sup>7</sup>

Smith was an inveterate collector his entire life; as a boy he would find so-called “treasures” washed up on the shore of Anacortes, Washington such as driftwood, shells, and skeletons of birds and small animals. As an adult he amassed Native American Indigenous objects, 78 rpm records, and later in life Seminole textiles, paper airplanes, tarot cards, Ukrainian Easter eggs, and more. Seemingly divergent, there was a grand scheme behind his eclectic practices. As in many of his artistic forays, Smith delved into disparate forms in search of what he considered universal patterns. In his cosmological worldview everything was connected across cultural lines. Much like the alchemists’ ambition for their Great Work, he was deeply interested in making connections in order to attain an understanding of the universe and the divine. Living a peripatetic life on the margins with no ongoing means of support, it was a burden to safely store his growing boxes and collections. It’s astounding that so many of his collections survive intact to this day.

Smith regularly amassed a collection of objects to study their patterns and correspondences. He took such an approach in his *Anthology of American Folk Music*, a six-LP collection released on Folkways Records in 1952. Tapping into his vast collection of 78 rpm records, he carefully sequenced the tracks into three volumes: “Ballads,” “Social Music,” and “Songs,” and presented them alongside his carefully detailed notes. The compilation was a direct inspiration to the emergent folk revival movement in the 1960s. His vision of “the old, weird America” revealed how songs can hold haunting collective memories connecting stories across different generations and cultures. It’s possible that Smith found similar affinities in string figures that featured commonalities from disparate parts of the world. The *Anthology* continues to be Smith’s best-known contribution to America’s cultural heritage,

7 Holm was author of the seminal *Northwest Coast Indian Art, An Analysis of Form* (Seattle: University of Washington Press, 1965). In conversations with Bill Holm, he confirmed that Smith had corresponded with Franz Boas, but there is no record of this in the Franz Boas papers housed at the American Philosophical Society.

and its musical influence continues to this day. Despite Smith being widely acknowledged in the fields of American folk music and experimental cinema, his anthropological studies are among his least-known accomplishments.

The 1960s brought renewed scholarship and interest from various disciplines in the study of string figures, which corresponded with Smith's focus on his string figure manuscript. They were now seen as living relics of long-lost cultures, with linguists, musicologists, mathematicians and psychologists investigating string figures from their respective fields.<sup>8</sup> In 1964 Andy Warhol's 16mm film *Screen Tests* captured Smith performing a series of string figures. That same year he appeared on the cover of *Film Culture* holding a string figure prominently in front of his face (fig. 2). As with many of his projects, Smith obsessively devoured all known scholarship and source material on the subject. A near photographic memory combined with his obsessive collecting gave him a deep well of material to draw upon. By familiarizing himself with all previously published research on string figures and adding his own observations, his manuscript developed.

Smith considered himself an authority on string figures. Singer-songwriter and poet Patti Smith recounts that "he would pull a loop of string several feet long from his pocket and weave a star, a female spirit, or a one-man cat's cradle. We all sat at his feet in the lobby [of the Chelsea Hotel] like amazed children watching as his deft fingers produced evocative patterns by twisting and knotting the loop."<sup>9</sup> Friends recall him routinely asking if they knew any string figures and if so, could they demonstrate. His small room at the Chelsea was a world unto itself—books and records meticulously organized on industrial open shelving, various projects at work on folding card tables, a small bed right next to an animation film stand so that he could work-sleep-work with ease, and usually one of his much-loved parakeets flying around the room. Visitors would come and go depending on Smith's mood although only a select few were allowed to touch.

8 Julia Averkieva and Mark A. Sherman, *Kwakiutl String Figures* (Seattle: University of Washington Press, 1992).

9 Patti Smith, *Just Kids* (New York: HarperCollins, 2010), p 115.



Fig. 2: Cover of *Film Culture* No. 37, 1965, photograph by John Palmer.

In the introduction to his manuscript, Smith writes:

Of all of the strange things primitive peoples do the only one that can be quickly and easily learned by us is the art of string figures. For unlike literature, music or painting, there is a sort of automatic, mathematic[al] check on perfection of performance in string figures, unless such and such a move is made at precisely the correct speed, rhythm, and tension in relation to all of the other preceding and succeeding similarly accurate moves, a tangled or at least an obvious mutilated figure results. How useful it would be if we could learn Hawaiian poetry, Arnheim painting or Congolese counterpoint with the same inner principle that assumes that unless each word, brush-

stroke or note was exactly correct, the final word, brush stroke or note would be not only ugly but impossible.<sup>10</sup>

The exacting nature of executing a string figure perfectly, its performative nature and the ability to identify its geographical location captivated Smith's attention. His use of the term "primitive" represents the nomenclature used in the publications he was citing and more specifically to delineate the way pre-literate, non-European cultures used string figures to communicate. Smith was greatly influenced by many of the classic texts including *String Figures: A Study of Cat's-Cradle in Many Lands* (1906) by Caroline Furness Jayne, Kathleen Haddon's *Artists in String: String Figures, Their Regional Distribution and Social Significance* (1930), and the works of British anthropologist Alfred Cort Haddon (father of Kathleen Haddon) who, with W.H.R. Rivers, developed the system of standardized notation for recording the actions that go into making string figures, since they are not static but unfold through many permutations. In his writings Smith began with the system used by both K. Haddon and Jayne in their books, but then added Diamond Jenness' system of classification of openings<sup>11</sup> to his own specially developed indexing system.

Smith's goal was to create an index that would classify and link thousands of string figures from around the world. The manuscript at the Getty is housed alongside his papers, drawings, films, audio tapes, tarot cards, realia, etc. Five archival boxes of various shapes and sizes house the components of Smith's string figure study. An initial organizational strategy seems to be names of figures stored on index cards. An alphabetical index of figures organized by geographic location with classification of openings is included, along with drawn examples and directions for performing the string figures (fig. 3.1–3.6). There are comprehensive lists of moving figures, three-dimensional figures, notes on the characteristics of geographical figures, and hand-drawn diagrams. Smith outlines a "key to the symbols" used, noting which

10 Harry Smith Papers, Getty Research Institute, Los Angeles, Gift of the Harry Smith Archives, 2013.M.4.

11 Ferro, *Guide for the Perplexed*.

Atlantic Towers  
HOTEL POOL  
Miami Beach  
MOUNTAIN ANA CLUB

ESKIMO (cont.)

- DL Ptarmigan Nest
- C 2 man Chewing
- M 3 Ewale
- M 2 Men Dancing
- R Female Genitals
- 2 Fish
- L Shaqun and Bear
- Two Bears II
- Two Bears
- Bear and Cave
- Two Caves
- Two Falcons
- E Tug of war
- L Polar Bear
- L Hanging Bear
- 2 Swan
- 2 Two Hips
- 3 Sealer I
- R 4 Sealer II
- 2 Kayaker and Mt
- 3 Little old Man
- RD 1 Male Genitals
- D 3 Angry man
- L 4 Sleeper
- He is Tired

L 5 Mountains I  
 L 5 Mountains II  
 L 5 Brown Bears Cub  
 L Little Finger I  
 L Little Finger II  
 L Little Finger III  
 L Little Finger IV  
 R 2 Bow I  
 R 2 Bow II  
 R Child  
 RDM Kayak  
 R 2 R 2 Raven  
 R 2 Bobcat  
 M 2 Caribou in willow  
 H 2 House  
 D 2 man  
 Dog  
 M 2 Cl. Iden and Bear  
 C 3 Walrus  
 C 2 Sliding on Ice  
 Breastbone  
 2 Snow Shovel  
 Dog ordure

HAWAIIAN

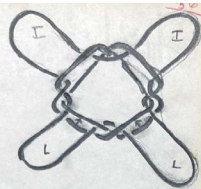
- LARGE EYE PAPIO
- L 2 Pleiades I
- Snare of Maui
- 1 Breasts
- 3 Kini Kuapuu
- D 2 Naito Tree
- 3 Child
- 3 Three houses
- Kuhui Scarched
- D 2 Great waiwa on Lanai
- M 4 Kauki
- Star
- MD 7 UP rose the sun
- 2 House
- Navel
- water gourd
- Lonomuku
- 2 Small Eye Papio
- C Salt Cave
- MD 2 Lumahai Path
- Wewewo Fish
- chiers House
- D 2 Palila
- L Strangled
- Hawaii
- 2 Pleiades II
- SOCIETY ISLANDS

MARQUISAS ④

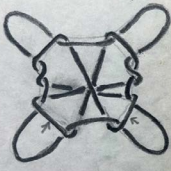
- C Bad Man
- Uahuka Island
- wave
- 2 Paddling Canoe
- NEW ZEALAND
- D Leaping Place
- 4 Carved house
- Canoe of Tama Reret
- M 1 Star
- Fiji
- MD 2 Parakeets, Playgroup
- Cannibals Victing
- 2 Sunrise
- GILBERTESE
- House
- 2 Sun
- L Moon
- Two Wells
- Three Itai Fruits
- D Canoe Shed
- Dying Man
- walling over Dead
- Grave
- String of Cowrie
- Mr. Umake

(Eskimo)

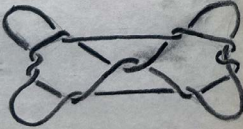
Rack Bears Before Katiliuk



Two Butterflies Before Katiliuk



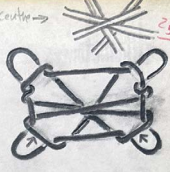
Fish



(Note: A + R are points picked up for Katiliuk)


(Eskimo) Detail of center →

Tug of war Before Katiliuk

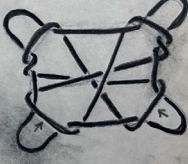


Polar Bear Before Katiliuk

(thumbs are brought up through point x to produce "hanging" and "swan")



Little Old Man Before Katiliuk



(Note A + R are points picked up for Katiliuk)

Fig. 3.1-3.4: String figure illustrations and notes from unpublished manuscript, Harry Smith, ca 1960s, ink on paper.

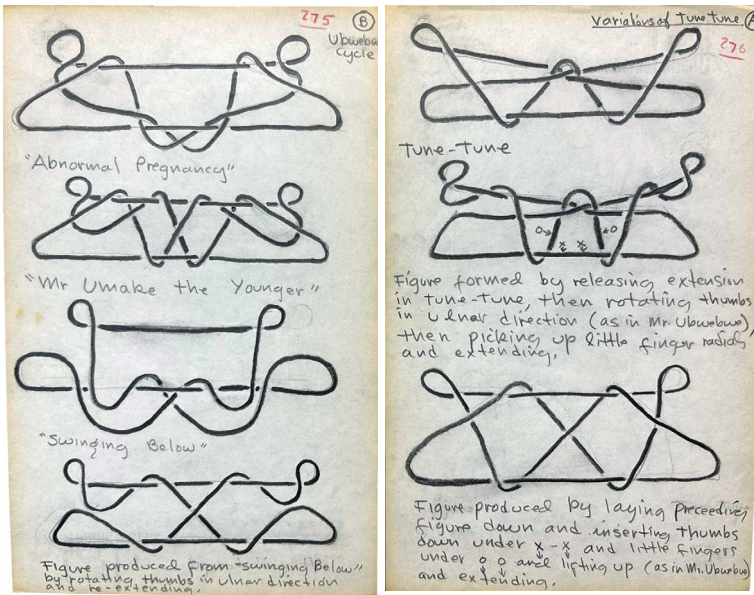


Fig. 3.5-3.6: String figure illustrations and notes from unpublished manuscript, Harry Smith, ca 1960s, ink on paper.

figures have multiple stages. He also notes the characteristics of certain regional figures and cross references subject indices, as well as recording "identically worked figures in widely separated places," thereby attempting to reveal similarities and connections across types and designs. Smith notes that some sections were being stored at Mr. Asch's Folkways office at 165 West 46th St., New York City. It's not clear why he separated the manuscript, perhaps for safekeeping or collateral. The pages, along with a selection of his mounted string figures, remain in the Smithsonian Center for Folklife and Cultural Heritage in Washington D.C.

The manuscript also includes several pages of bibliographic sources along with a list of questions, ideas and people he needed to track down or follow up. Relying heavily on Honor C. Maude's Gilbert Islands collections when he made his mounted figures—Maude (1905–2001) being the world's foremost authority on Pacific Island figures—Smith tried to contact her to see if she had any unpublished string figures.

His firsthand experience with string figures was limited to his contact with the Pacific Northwest Coast Indians as a boy, and later with the Kiowa and Seminole peoples, but much of his eru-

dition on string figures seems to have been acquired in the main branch of the New York Public Library. His close friend and self-declared “spiritual wife” Rosebud Feliu-Pettet would assist him by copying pages directly from the books and making small drawings of the string figures. Her handwriting is clearly identifiable in the Getty manuscript.

Included in the collections are letters and reports from Kathy Elbaum, a string figure researcher doing her postdoctoral work with the Inuit peoples at Rankin Inlet in the Northwest Territories, Canada in 1971. Elbaum, who later became Timothy Leary’s assistant, is seen in Harry Smith’s *Film #18: Mahagonny* and *Film #23* performing string figures for the camera (see fig. 6). Her notes were later published in the *Bulletin of the International String Figure Association* in 2013.<sup>12</sup> In conversation with Mark Sherman, head of the International String Figure Association, he states that in 2024 some of Smith’s conclusions are outdated and inaccurate: “It’s a product of its time.”<sup>13</sup> Although Smith was aware of particular studies and publications, he chose to include some figures while leaving out others. We don’t know why. Smith approached his project as an artist, not believing in the pretense of objectivity as some scientists would.

Following in the footsteps of Alfred C. Haddon and other string figure researchers, Smith created several string figures mounted on board while working on the manuscript. On the back side of some he described the figure, its stage, the action and the collection he sourced it from (for example Jenness collection, ca. 1915, a collection of string figures that Diamond Jenness made in 1913–1918 during an Inuit expedition). Smith produced about fifty of these works on board, subsequently giving them away to friends and colleagues (fig. 4.1–4.3). Frozen in place, they are an ideal way to study a figure in process. Akin to a still film frame, the mounted figure leaves the viewer free to anticipate the next move. It’s unclear exactly why Smith made these and for what purpose. Were they to be included as illustrations in the finished

12 Kathy Elbaum and Mark Sherman, “Some String Figures and Tricks from the Rankin Inlet,” *Bulletin of the International String Figure Association* 20 (2013), pp. 188–224.

13 Conversation with the author, June 21, 2024.

manuscript in some form? He must have been intrigued by the transformation in string figures, creation to destruction in a few simple moves. Many of these figures appear in *String Figures: The Collections of Harry Smith*,<sup>14</sup> which features images from Smith's manuscript, a comprehensive essay, and a conversation with artists John Cohen and Terry Winters.

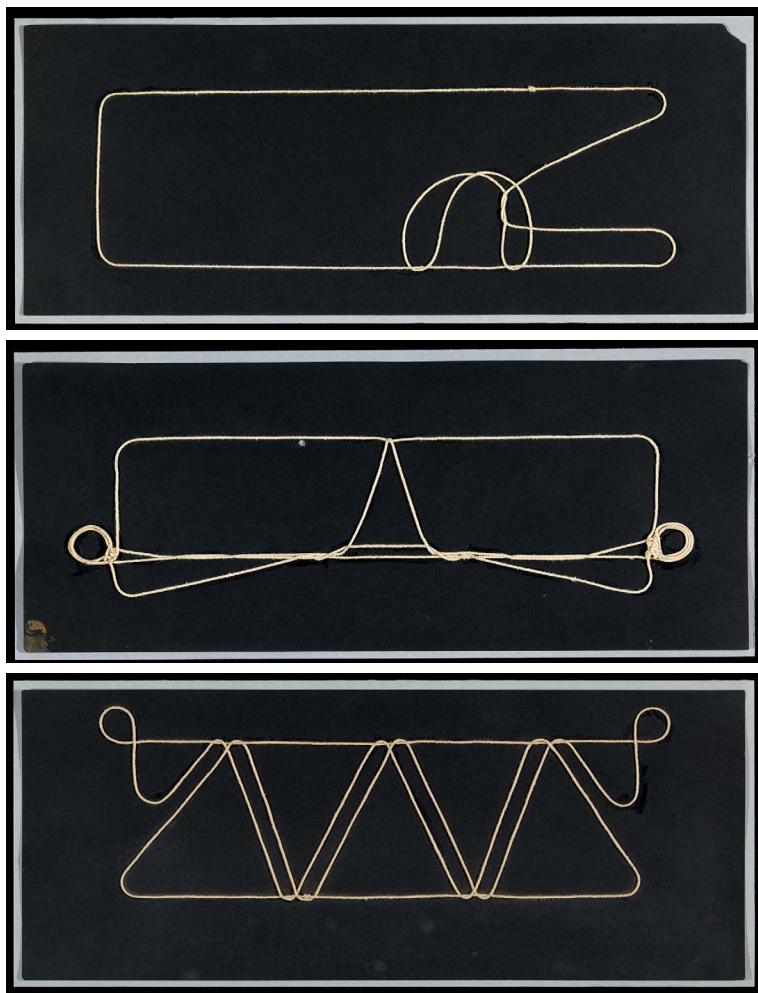


Fig. 4.1-4.3: String Figures on board, Harry Smith, ca.1960, 8" x 20", collection of Rufus Cohen, image courtesy of Harry Smith Archives

14 John Klacsmann and Andrew Lampert, eds., *String Figures: The Collections of Harry Smith, Catalogue Raisonné, Volume II* (New York: J&L Books and Anthology Film Archives, 2015).

Storytelling, performance and motion are integral to creating any string figure. As early as 1930 Kathleen Haddon suggested that string figures can be viewed as an early form of cinema, a pre-cinematic animation. Harry Smith was well known for his experimental avant-garde films, creating hand-painted batiked abstract animations and developing ingenious collage techniques. Working within abstract and non-narrative film genres, his films build in intensity and complexity. Smith's deep engagement with string figures is evident in several of his films. Just as his films can be construed to convey meaning by one frame building upon another, so too do string figures capture this same intensity in motion.

*Film #14: Late Superimpositions* is Smith's most autobiographical film, in which many of his lifelong interests are captured. Much of it takes place during a trip to Oklahoma where he recorded the peyote rituals of the Kiowa Indians. It features a string figure in progress superimposed over Smith's familiar New York haunts and footage of the Kiowa around Anadarko, Oklahoma (fig. 5).

*Film #18: Mahagonny*, Smith's four-screen magnum opus from the 1970s (synchronized to the Bertolt Brecht opera of the same name) was organized to form a palindrome using the categories: portrait (P), animation (A), symbol (S), and nature (N). It incorporates footage of his surroundings, neighbors from the Chelsea Hotel, Central Park, and images of Kathy Elbaum performing string figures for the camera (fig. 6). Smith's grand, if grandiose, basis for the production was to capture "the similarities of life and aspiration in all humans [...] so that the final film will be just as intelligible to the Zulu, the Eskimo, or the Australian Aborigine as to people of any other cultural background or age."<sup>15</sup> His last film, *Film #23* (1985), utilized footage from *Mahagonny* with Elbaum repeatedly performing string figure manipulations for the camera superimposed with colored powders, sand and scenes of trees from Central Park.

Commenting on his *Film # 15: Untitled Animation of Seminole Patchwork*, Smith stated that "the type of thinking I applied to

15 Harry Smith, "Grant Application to the Independent Filmmaker Program," American Film Institute, July 12, 1974. Getty Research Institute, Los Angeles, Gift of the Harry Smith Archives, 2013.M.4.



Fig. 5: Stills from Harry Smith, Film #14: *Late Superimpositions* (1964), 16mm film, color, sound, courtesy Harry Smith Archives.



Fig. 6: Screenshot taken from Harry Smith, Film #18: *Mahagonny* (1970 - 80), 16mm film, color, sound, courtesy of Anthology Film Archives and Harry Smith Archives

records I still apply to other things like Seminole patchwork or to Ukrainian Easter eggs. The whole purpose is to have some sort of series of things.”<sup>16</sup> This silent film uses the Seminole patchwork as a meditation on the designs, slowly examining each fabric piece and occasionally turning them over to see the stitching on the back side. Smith treats each piece as a glyph or mudra, the sacred Hindu hand gestures which guide the flow of energy in yoga and meditation. Each scene can be experienced as a visual mantra or as magical spells that relate to the execution of a string figure.

Recently Harry Smith’s life and work have seen a renewed interest, with his string figures being presented as art objects in galleries and museums. Artist Terry Winters organized two exhibitions featuring Smith’s mounted string figures. In 2013 he curated a group show *Roving Signs*<sup>17</sup> that included Smith’s string figures alongside Anni Albers’ prints of string, a Donald Judd sculpture, quilts, and photos of Peruvian weavers. Inspired by

<sup>16</sup> Cohen, *Sing Out!*, p. 82.

<sup>17</sup> See <https://matthewmarks.com/exhibitions/roving-signs-an-exhibition-organized-by-terry-winters-07-2013> (accessed June 22, 2024).

Harry Smith's string figures, Winters was particularly interested in their geometries and linear qualities, and their connections to folk traditions. In his words:

Game playing is one aspect, but they also have a connection to other patterning systems that occur in more permanent art forms like textiles or like pottery. The string figures are artifacts of very ancient traditions. They're simple and direct expressions of abstract language, but also very ephemeral. Like *Anthology*, the strings are an art form that opens up to multiple readings.<sup>18</sup>

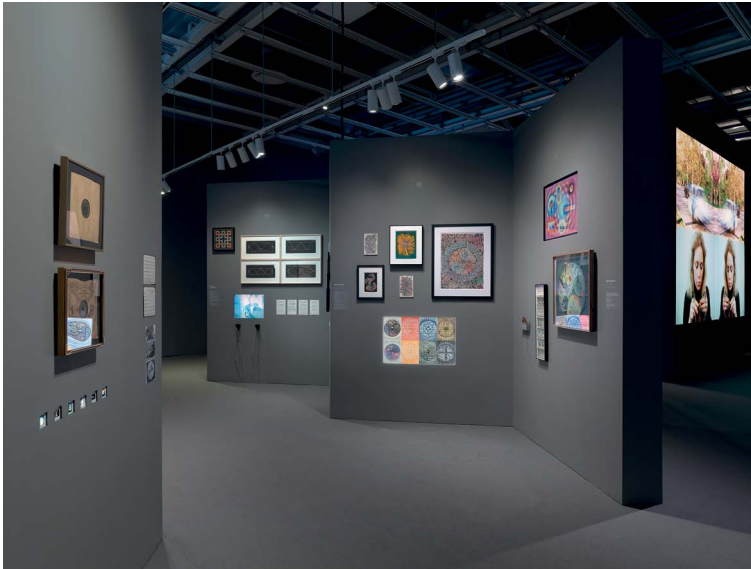


Fig. 7: Installation view of *Fragments of a Faith Forgotten: The Art of Harry Smith* (Whitney Museum of American Art, New York, 2023–2024), photograph by Ron Amstutz.

In the 2023–2024 Whitney Museum retrospective *Fragments of a Faith Forgotten: The Art of Harry Smith*, the string figures hung prominently amidst Smith's paintings, drawings, films and collections (fig. 7). As static objects frozen in time, they conveyed his long-held fascination with design, symmetry and beauty. A public program for children and their families featured James Murphy, a long-time advocate and teacher of string figures, in a lively presentation and hands-on workshop. In the 1980s Murphy sought out Harry Smith, who was living with Allen Ginsberg at the time, wanting to see some of Smith's collections of string figures and

18 Klacsmann and Lampert, *String Figures*, p. 34.

books. “He had them but he wouldn’t show them to me,” Murphy said. “He took notes on what *I* did.” They began hanging out together anyway. “I wasn’t getting anything out of him, but I like talking strings, and he liked talking strings,” Murphy said. “And he liked beer.”<sup>19</sup>

For more than forty years Smith moved deftly between disciplines, ignoring differences between high and low arts, vernacular folk art and esoterica, looking for the value and import in what might otherwise be overlooked. Searching for patterns and correspondences, in his mind he found connections between his collections of Seminole patchwork, folk songs and paper airplanes. A lifelong student and collector of string figures, one of the oldest and most widely practiced folk arts, he dedicated over a decade to creating what might be his least known project, his string figure manuscript. Although the manuscript has yet to be decoded, it is central to his lifelong search for and pursuit of the universal, ancient and infinite.

19 Sophia Hollander, “Department of Knots,” *New Yorker*, January 22, 2024, p. 14.



Henry Adam Svec

## **The Pliability of Form**

### Remediation in the String Figure Works of Jean Paul Riopelle and Vera Frenkel

Produced in 1977 by the National Film Board of Canada, Ishu Patel's animated short film *Bead Game* depicts a pulsing cascade of movement and modulation. We begin with a single quivering bead in the center of the frame, which soon begins to move and multiply, the resulting bead-assemblages consisting of squirming lines and shapes and, eventually, larger representations. Protean organisms caress and collide, and soon we see a snail and octopus engaged in a similar struggle, each entity either eating or being eaten by the other as a silent evolutionary mythology plays out, on to apes and humans and fire-breathing dragons, and finally to consciousness and warfare. In the final sequence, the animator casts his gaze upon an ancient and allegedly ubiquitous mode of communication, one that has often been evoked as a universal paradigm of sending and receiving: the string figure (fig. 1). A titanic figure stands with arms outstretched, an intricate web harnessed between, with the energy seeming to well up and oscillate in the center, where once there had only been a single bead; the strings hold for a silent moment before collapsing again to the beginning, to a bead, then cut to black. Through this enchanted narrative of communication and evolution, the art of animation itself is called to mind as an analogue of this transformational capability.

At least two impulses have characterized the history of string figure fascination since the first scholarly publications began to appear in the late nineteenth century, only the second of which we see clearly conjured by Patel's *Bead Game*. First, there is the early wave of collection and analysis, spearheaded by Franz Boas and extended by women who were also on the margins of academia, the

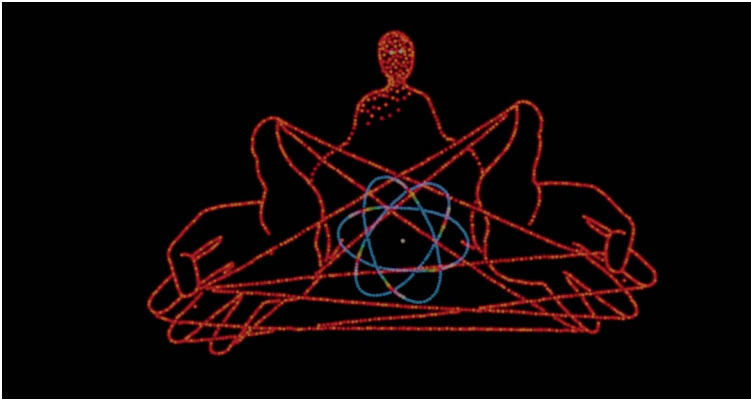


Fig. 1: Screenshot from Ishu Patel, *Historie de Perles (Bead Games)* (1977).

wives and daughters of scholars and colonial administrators, from Caroline Furness Jayne to Kathleen Haddon and Honor Maude.<sup>1</sup> Their printed publications stretch to contain the immense variety of string figures known and performed across the world, though in their nostalgic modernist mode they also lamented the fact that such cultural performances were fast dying out.

Scientific collection, cataloguing, analysis, and comprehensiveness on the one hand; on the other hand magic and enchantment, which is the second impulse. The perceived ritual function of this communicative form, in the hands of numerous artists and writers, becomes an alchemical vehicle towards intercultural awareness, aesthetic epiphany, and deep onto-political insight. The artist Harry Smith clearly perceived such a power, in his hands the potency taking on a universalist impulse, though unfortunately his massive string figure manuscript does not quite develop a theory of string media. Still, his late films continuously return to string figure performances, which, like cinema itself perhaps, Smith thought could enable non-linguistic and immediate cross-cultural understanding. Donna Haraway takes up the string figure as—if not magical per se, and if more on a metaphorical than a ref-

1 See Franz Boas, “The Game of Cat’s Cradle,” *Internationales Archiv für Ethnographie* 1 (1888), pp. 229–230; Caroline Furness Jayne, *String Figures: A Study of Cat’s Cradle in Many Lands* (New York: Charles Scribner’s Sons, 1906); Kathleen Haddon, *Artists in String* (London: Methuen & Co. Ltd, 1930); Honor Maude, *The String Figures of Nauru Island* (Adelaide: Libraries Board of South Australia, 1971).

erential level—an emblem of understanding vis-à-vis the complex tangles of contemporary techno-cultural-political-social life. Ishu Patel's film too partakes in this slowly-evolving and subterranean strand in the moment that he casts the dazzling storyteller—and the filmmaker himself—as a conjurer of string figures.

Elsewhere I have sought to deploy a media-archeological angle to the study of this tradition, looking at three case studies: the works of Harry Smith, Vera Frenkel, and David Wilson, across which the transformative, communicative power of the form of the string figure has been variously explored.<sup>2</sup> In particular, and drawing on the imaginary media research of scholars such as Siegfried Zielinski and Eric Kluitenberg, I have considered how string is deployed by these artists as a figure through which alternative historical trajectories of media development might be envisioned.<sup>3</sup> In the present text I wish to return to this problematic with a slightly alternative optic: the concept of remediation, a term initially proposed by Jay David Bolter in his study of the digitization of the book to describe “a newer medium [taking] the place of an older one, borrowing and reorganizing the characteristics [...] in the older medium and reforming its cultural space.”<sup>4</sup> In *Remediation*, with coauthor Richard Grusin, Bolter expands on the term, locating remediation as the central process of media-historical change, by which new media position themselves vis-à-vis the archive of preexisting media through both incorporation and differentiation; they consider everything from contemporary developments in VR and ubiquitous computing to computer

2 Harry Smith is the editor/folklorist behind the influential *Anthology of American Folk Music*, released by Folkways Records in 1952, but he was also a filmmaker and painter who wrote a (yet unpublished) manuscript on string figures in the 1960s. Vera Frenkel is a Canadian media and installation artist whose pioneering works have been interpreted as forecasting various issues which have emerged in the digital era. David Wilson is the filmmaker and artist behind the bewildering Museum of Jurassic Technology in Culver City, California, which among other exhibits houses a “Hall of Fame” of string figure collectors.

3 Henry Adam Svec, “‘Through the Digits, Through the Fingers’: Variations on the String Figure as Imaginary Digital Medium,” *Convergence* 29, no. 2 (2023), pp. 519–535. See also Henry Adam Svec and Zach Pearl, “Fictocritical Improv for a New Author Paradigm, or How to Render the Messiness of String Figure Research,” *TEXT* 25, no. 2 (2021): 1–25.

4 Jay David Bolter, *Writing Space: Computers, Hypertext, and the Remediation of Print*, second edition (Mahwah, N.J.: Lawrence Erlbaum, 2001), p. 23.

games and animated films.<sup>5</sup> Although Bolter and Grusin attend to the mutability of media—in other words, the means by which practices, materials, and forms of media are not static or eternal but ever-shifting within a complex ecology—they nonetheless insist on remediation’s “double logic.”<sup>6</sup> On the one hand, some new media have tended to minimize if not completely efface the processes of mediation; on the other, some have tended to multiply, expand, and revel in processes of mediation.<sup>7</sup> These two logics are respectively named immediacy and hypermediacy.<sup>8</sup> Examples for immediacy include Albertian perspective, which promises to place the viewer in nearly direct contact with the represented scene or space, as though looking straight through the window of the frame onto realistically depicted reality; meanwhile, prominent examples for hypermediacy include illuminated manuscripts or modernist collage, which both seek to draw the viewer’s attention to the thickness of the frame itself.<sup>9</sup>

Although it is an old and not a new medium, the string figure’s incorporation or “refashioning” by artists into media as diverse as painting, video, film, and installation enables critical reflection both on the processes of mediation in general and on the legitimacy or superiority of the various media summoned or incorporated into such artworks. The particular geometric forms of string figures as well as the cultural mythologies associated with these embodied performances and patterns have thus become material for a recontextualization of communication in the context of media culture. With the concept of remediation in mind, then, how have string figure artists incorporated the apparently ancient medium of string into their works—and to what aesthetic ends? What does the form of the string figure promise as an object of contemplation? The exploration here will be focused on two Cana-

5 Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, Mass: The MIT Press, 1999).

6 In this sense, their method is very much akin to that of Marshall McLuhan, who also considered media development as a process by which media are borrowed and repositioned by new media. See Marshall McLuhan, *Understanding Media: The Extensions of Man*, ed. W. Terrence Gordon (Corte Madera: Ginko Press, 2003).

7 Bolter and Grusin, *Remediation*, pp. 20–51.

8 *Ibid.*, pp. 21–44.

9 *Ibid.*, pp. 24–25, p. 34.

dian artists who came of age in Montreal—the painter Jean Paul Riopelle and the media artist Vera Frenkel—both of whose work with string figures is, interestingly, presented publicly around the same time, with Riopelle’s *Jeu de Ficelles* appearing in Paris and New York in 1972 and Frenkel’s *String Games: Improvisations for Inter-City Video* first presented at Espace 5 in Montreal in 1974.

## Jean Paul Riopelle and the Complex Immediacy of String Figure Form

The French-Canadian painter Jean Paul Riopelle’s rise to fame in the international art world was initially tied to the revaluation of expressivity and autonomy articulated by the Quebecois Automatistes in the 1940s. Inspired by Surrealist approaches to automatic writing, these artists sought to expunge from their process the constraining functions of repressive structures, such as reason and “civilized” culture.<sup>10</sup> Led by Paul-Émile Borduas—an early influence on, and teacher of, Riopelle—the group’s political and aesthetic principles were most poetically articulated by Borduas himself in the influential manifesto *Le Refus Global* (Total Refusal) from 1948. The group rejected the representational burdens of academic art and sought to liberate the impulses and subconscious desires of the artist, which Borduas at least understood in cultural-political terms.<sup>11</sup> Although Riopelle himself left the group in the early 1950s, perhaps already aware of the irony of a group for the liberation of the individual artist, his work would nonetheless continue to be understood in terms of the irrepressible authentic expressivity of the artist. A recent critical text emphasizes the entirety of Riopelle’s career in terms of the following of individual impulses and the rejection of social, cultural, and political structures: “As is the case for any really great artist, Riopelle’s work has its own logic; it may be anchored in or associated with a particular

10 See François-Marc Gagnon, *Jean Paul Riopelle and the Automatiste Movement*, trans. Donald Winkler (Montreal and Kingston: McGill-Queen’s University Press, 2020).

11 See Paul-Émile Borduas et al., *Total Refusal: The Complete Manifesto of the Montréal Automatists*, trans. Ray Ellenwood (Holstein: Exile Editions, 2009).

moment of history, but it remains independent of trends and fashion and, over the course of several decades, was injected with an authentic force of renewal and transformation.”<sup>12</sup>

Although the *Automatistes* were known primarily for their rejection of figuration in the name of authentic expressivity, Riopelle’s work takes a turn towards representation after his departure from both the Quebecois movement and Breton’s Surrealist group. Through the 1960s and into the 1970s he incorporated figurative elements into his paintings, often drawing on the natural landscape of northern Quebec, but also coming to incorporate the string figure. A recent exhibition at the Montreal Museum of Fine Arts has explored this period in Riopelle’s career, foregrounding his relationships to both the North and Indigenous art and culture.<sup>13</sup> His work in this period marks a transition away from paint and color itself as the focus, often thickly applied by Riopelle via knife in the 1940s and 1950s, and towards the inclusion of more recognizably rendered images, including Arctic landscapes, masks, and string figures.

Work on them having begun a year earlier, the string figure works were first exhibited in 1972 at the Canadian Cultural Centre and the Musée d’art moderne in Paris. As Andréanne Roy observes, Riopelle’s string figure works were inspired by a book by Canadian anthropologist Guy Mary-Rousselière, *Les jeux de ficelle des Arviligjuarmiut*, from which some of the string figure shapes in these paintings are directly taken.<sup>14</sup> However, Riopelle also departed from the fixed figures rendered in this anthropological text, setting off into improvisational territory, which Inuit anthropologist Krista Ulujuk Zawadski claims is part and parcel of string figure transmission as she experienced it in Nunavut, meaning that Riopelle not only faithfully rendered the fixed forms but

12 Stéphane Aquin, “Modernist Migrant,” in *Jean Paul Riopelle: The Artist’s Materials*, ed. Marie-Claude Corbeil, Kate Helwig and Jennifer Poulin (Los Angeles: Getty Publications, 2011), pp. 22–32.

13 Andréanne Roy, Jacques des Rochers and Yseult Riopelle, eds., *Riopelle: The Call of Northern Landscapes and Indigenous Cultures* (Montreal: The Montreal Museum of Fine Arts, 2020).

14 Andréanne Roy, “The Series,” in *Riopelle: The Call of Northern Landscapes and Indigenous Cultures*, p. 119.

also invented new ones.<sup>15</sup> In both cases, the figures themselves in many of these acrylic and lithographed works hover in the center of the massive frame, with thick and blunt brushstrokes constructing a sectioned background of color (fig. 2). The depictions perhaps recall Patel’s animated film, with which we began, in that the shapes seem emboldened by their own powers of transmogrification. As in Mary-Rousselière’s book, the figures are devoid of string artist or hands, seeming to float on a transcendent plane of aesthetic contemplation.<sup>16</sup>



Fig. 2: Jean Paul Riopelle, AVATAC (1971), 160 x 448 cm, quadriptych.

In terms of remediation, however, the apparent simplicity of these images is a deception, for there are several layers of translation at play. Riopelle seems to have been interested in the narrative content of the source material, the ways in which these geometric patterns could be mobilized in particular enunciative acts, at least judging from his scrawling of the titles onto the paintings themselves (the only instances in which this was done by the artist). Some paintings in the series seem more directly referential, such as *Feu de forêt*, *Avion à flotteurs* or *Avatac*; others, such as *Ménage à trois-Pistol* or *L’esprit de la ficelle* almost seek to push the string figure patterns beyond their representational capabilities, or at the very least to “represent” an order of reality not necessarily perceptible. In the original exhibition catalogue, the critic Pierre Schneider explores this semiotic thickness, emphasizing the magical and mythological capacities of string figures, which for

15 Krista Ulujuk Zawadski, “Riopelle and Inuit String Games,” in *Riopelle: The Call of Northern Landscapes and Indigenous Cultures*, pp. 116–133.

16 See Guy Mary-Rousselière, *Les Jeux de ficelle des Arviliguarmiut* (Ottawa: Musées nationaux du Canada, 1969).

the writer seem a primordial golden age joining of word, image, and referent together: “Elles représentent le phoque, la baleine, le caribou, la mouette, l'étoile, le harpon, la tente, la lampe et encore le chasseur qui rampe, l'homme qui a les yeux très séparés [...] Elles sont des mots. [...] Des mots qu'on dit avec les doigts.”<sup>17</sup> In the context of modernist art, and Schneider names structuralism as well—fields within which the sign has allegedly lost connection with the signifier—Riopelle's remediation of the string figure (itself a remediation of painting, perhaps, as well as storytelling) offers both a sense of transparent immediacy, for we can hold close the elegant curves and tangles of the shapes, and a reveling in the layering of distinct media forms, including string figures, their content, and their names. It's worth pointing out that these acrylic works were painted on discarded lithographs<sup>18</sup>—a further layering of (re)mediation.

## Vera Frenkel and the (Complex) Hypermediacy of the String Figure Form

The interdisciplinary works of Slovak-Canadian artist Vera Frenkel often revel in both remediation and hypermediacy. Initially both a poet and a printmaker, her installations since the 1970s have often included a variety of media, including printed text, interior design, performance, video, and online components. For instance, as Sigrid Schade describes the panoply of media incorporated into Frenkel's 1992 work *This Is Your Messiah Speaking*, “a nine-minute-and-fifty-seconds condensed history of media encompassing sign language and spoken language, the handwritten and the printed word (with elements of both the narrative

17 “They represent the seal, the whale, the caribou, the seagull, the star, the harpoon, the tent, the lamp and again the hunter who crawls, the man who has very separated eyes [...] They are words. [...] Words we speak with the fingers.” Pierre Schneider, “Parler de Corde,” in *Riopelle: Ficelles et Autres Jeux*, ed. Noël Lajoie and Pierre Schneider (Paris: Centre Culturel Canadien et Musée d'Art Moderne de la Ville de Paris, 1972), n. p.

18 Ray Ellenwood, “Masks, the North, and New Configurations,” in *Jean Paul Riopelle: Catalogue Raisonné: Tome 5, 1972–1979* (Montreal: Hibou Éditeurs, 2020), pp. 2–79.

and the poetic genres), music, sounds, and moving pictures (both with and without sound).”<sup>19</sup> This is merely scratching the surface of a long and productive career, with numerous Canadian and international exhibitions and a still-growing critical discourse, which has examined themes of loss and absence, migration and translation, commodification and communication.

Frenkel’s first major work was entitled *String Games: Improvisations for Inter-City Video*, which has by now been recognized as a pioneering work of media art in Canada. The work was first exhibited in 1974, two years after Riopelle’s string games show, though Frenkel was not aware of Riopelle’s shared fascination, despite the influence that her fellow Montrealer had on her early artistic inclinations.<sup>20</sup> Whereas Riopelle centers the string figure and examines in detail its shapes, both actually existing shapes and possible versions thereof, Frenkel borrows instead the larger paradigm or structure, which she then remediates across a series of variations.

*String Games* consists of several distinct stages of iteration, performance, and documentation. Nine collaborators were recruited to each perform, along with the artist herself, one of the ten fingers on the human hands traditionally required for the construction of string figures. They were then asked to construct or find responses to nine distinct prompts. Eventually, however, the two “hands” in Frenkel’s work were located at two distinct geographical, cultural, and political centers in Canada; one hand was in Montreal and the other in Toronto, the two sites joined by a state-of-the-art videoconferencing system lent to the artist by The Bell Corporation, a Canadian telecommunications company. Bell was not necessarily looking to promote artistic experimentation; as Frenkel has recently recalled to Dot Tuer in an interview, she was wondering how one might connect two gallery spaces when it was suggested she contact Bell, which just happened to

19 Sigrid Schade, “A Brief History of the Media in Nine Minutes and Fifty Seconds: *This Is Your Messiah Speaking*, or the Mis-Speaking of the Media,” in *Vera Frenkel*, ed. Sigrid Schade (Ostfildern: Hatje Cantz Verlag, 2013), pp. 121–130.

20 See Vera Frenkel, “A Lingering Presence,” in *Riopelle: Crossroads in Time*, ed. Sylvie Lacerte (Ottawa: The National Gallery of Canada, 2023), pp. 124–129.

be working on teleconferencing technology at the time.<sup>21</sup> There were three performative transmissions in total, video documentation of which—along with various ephemera from the work as a whole—was presented as part of the first exhibit (fig. 3). A later version (with a two- rather than four-channel—curtailed—video component) was included in a 1978 retrospective show at the Vancouver Art Gallery.



Fig. 3: Vera Frenkel's Street Rehearsal for *String Games: Improvisation for Inter-City Video (Montreal-Toronto)* (1974).

Frenkel has recalled that it was the Bell teleconferencing studio itself that suggested the incorporation of string figures, as the chairs appeared to her as fingers and the tables as knuckles.<sup>22</sup> In a catalogue text published on the second exhibit in Montreal, Frenkel considers the string figure form and her interest therein:

Cat's Cradle is a game played with a loop of string. It is found in most cultures of the world. The string loop is stretched taut across both hands. By a sequence of movements of hands, wrists and fingers, a player and a partner manipulate the string in turn into changing patterns or "figures."

21 Dot Tuer and Vera Frenkel, "Vera Frenkel in Conversation with Dot Tuer: *String Games, Then and Now*," in *Variable Conditions: Paracomputational Arts in Canada, 1965-1995*, ed. Adam Lauder (Montreal and Kingston: McGill-Queen's University Press, 2023), pp. 279-293.

22 *Ibid.*

There are eight figures in traditional Cat's Cradle. Each pattern has a name: for example, Soldier's Bed, or Diamonds, or Fish in a Dish, although these names differ from place to place, or time to time, depending on local attributions of meaning to the eight string figures. [...] As a basis for improvisation, a non-string version of Cat's Cradle that could be played between two cities, seemed to me interesting. The familiar patterns would become the basis for a choreography that permitted permutations and combinations, not as complex as the forming of sentences, for example, but in similar fashion.<sup>23</sup>

We can grasp here the palimpsestic dimension of the remediation of string via cutting-edge video-conferencing tools; the work is a subsumption—not necessarily of finished string figures but of the broader grammar of the ritual—into the cabled frames of corporate communication technologies via the collaborative play of the participants' bodies, voices, and experiences. (In the rehearsal process, the participants were instructed to bring in their own responses to nine prompts: “[A] number, a letter, a word, a name, a sentence, a fragment of a poem, a visual image, a gesture and a sound.”<sup>24</sup>) Meanwhile, the traces of these transmissions are again layered back into the venue of the art gallery, for the original exhibition featured a variety of documentary evidence of the performances, including video recordings, desiderata, and texts.

Critics have emphasized the ways in which Frenkel anticipates new media culture. Dot Tuer highlights the “aesthetics of absence” articulated in the work, a theme that Frenkel will continue to explore across several notable media art works, a reading in tune with a postmodernist critique of mass media.<sup>25</sup> In Frenkel's own words, however, the work seems to be more (intentionally) naïve, a study of the possibilities within the media ecology, in which not only are the layers of contemporary hypermedia multiplied, but also the direct transparency of communication technologies is felt to be real. As she put it in a recent interview, “At the time, I saw *String Games* as being about an enhanced presence in the McLuhanesque notion of enhancement, adding layers and

23 Vera Frenkel, *Lies & Truths* (Vancouver: The Vancouver Art Gallery, 1978), p. 12.

24 *Ibid.*, p. 13.

25 Dot Tuer, “Beyond the New Media Frame: The Poetics of Absence in Vera Frenkel's *String Games*,” in Schade, *Vera Frenkel*, pp. 39–62.

possibilities and wonderful surprises and connectivity.”<sup>26</sup> The apparent and distorting immediacy of the teleconferencing channel is repositioned by its conjunction with several other media and performance traditions, all of which come together in the artist’s remediating gesture by which the “surprises and connectivity” of communication technologies old and new are magnified. The result is not only an avant-garde advertisement for Bell’s new corporate gadgets, but also a plea for the persistence of past communication forms, such as the ancient string figure.

## Conclusion

In the hands of Riopelle (and his interpreters) the form of the string figure is a mystical talisman, the power of which Riopelle seeks to borrow, in a way, hoping to compare it to that of painting proper. Whether exact copies of specimens in the anthropological archive or playful inventions by the artist, the string figure (and painting proper) are thereby instilled with universal and cross-cultural power. Frenkel’s version, on the other hand, is much more supple and specific. Her framing of the form of the string figure is comparatively hesitant, provisional, experimental; by tying distinct locales to the hands and experiences of her collaborators, she turns the corporate teleconferencing studio, not into an art gallery, but into a laboratory of technological communication. Anticipating Donna Haraway’s own remediation of the string figure into her postmodern scholarly-literary method, Frenkel sees the string figure as both hardware and software, both of which can be subjected to collaborative reimagining.<sup>27</sup> The work asks: What if we reformatted the hardware of telecommunications using the software of the string game and/or other shared, durable paradigms? Frenkel remediates the string figure, not because it is eternal, but simply because the studio architecture called to mind this prior paradigm of communication. In

26 Tuer and Frenkel, “*String Games, Then and Now.*”

27 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, N.C.: Duke University Press, 2016).

sum, although opposite ends of remediation's double logic are emphasized in their respective works, with each bleeding into their opposite, both Riopelle and Frenkel stretch the string figure as they reach towards their own respective solutions.

We will set aside for now the question of why *Canadian* artists—and scholars of media—have seemed to be particularly interested in the retrieval of old media as cures for the ills of the contemporary technological world.<sup>28</sup> In any case, when seen through the lens of remediation, both Riopelle and Frenkel do indeed offer an opportunity for a reconfiguration of our sense of historical movement and direction. Writing in the context of the late 1990s, Bolter and Grusin's emphasis is on the new; and they inherit—perhaps despite their own intentions—a sense of media development as an evolutionary line, moving in fits and starts, but nonetheless from simpler to more complex. Incorporation of the string figure by these artists, on the other hand, forces a reversal of perspective. What if one of the “first” media was the most “advanced”? What if redemption is to be found, not in the latest offerings of Silicon Valley or Hollywood, but in the media dustbin?<sup>29</sup>

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28 Earlier examples would include Harold Adams Innis's “plea” for time and orality, or Marshall McLuhan's assessment of the “coolness” of dialogic communication. See Harold Adams Innis, *The Bias of Communication* (Toronto: University of Toronto Press, 1991); McLuhan, *Understanding Media*. For an influential study of media theory in relation to the “Canadian mind,” see Arthur Kroker, *Technology and the Canadian Mind: Innis/McLuhan/Grant* (Montreal: New World Perspectives, 1984).

29 These questions are informed by the field of media archeology. See, in particular, Jussi Parikka, *What Is Media Archeology?* (Cambridge: Polity Press, 2012), and Siegfried Zielinski, *Deep Time of the Media* (Cambridge, Mass.: The MIT Press, 2008).



## SF: String Figures as *Hexenspiele*, “Witches’ Games”

### Mattering Figurations for Relational Aesthetics

Textual rereading is never enough [...]. Reading, no matter how active, is not a powerful enough trope; we do not swerve decisively enough. [...]

My intention is that readers will pick up the patterns, remember what others have learned how to do, invent promising knots, and suggest other figures that will make us swerve from the established disorder of finished, deadly worlds.<sup>1</sup>

Taking up Donna Haraway’s threads, I would like to relate them to a selection of transdisciplinary and process-oriented artistic practices that could be called *Hexenspiele*. *Hexenspiele* literally translates as “witches’ games” and is a common German term for what in English is called “cat’s cradle,” or more generally “string figures.” It is also a crucial figuration in Haraway’s feminist epistemology. Haraway speaks of “string figures” in contexts as diverse as science and technology, literary fiction, everyday life, and co-habitation with the more-than-human—all of which are inescapable yet creatively productive relationalities and interrelationships. The *Hexenspiele* / witches’ games, with which my essay will engage Haraway’s term, are not string figures in the proper sense of the diversely-situated practices researched by so many Western ethnographers. Neither are any of the transdisciplinary artists I will relate to in the following—Maya Deren (1917–1961), Lygia Clark (1920–1988), Doris Stauffer (1934–2017), and Chantal

1 Donna Haraway, “A Game of Cat’s Cradle: Science Studies, Feminist Theory, Cultural Studies,” *Configurations* 2, no. 1 (1994), pp. 59–71, here p. 62 and 66.

Küng (\*1985)—referenced by Haraway’s writings. Nevertheless, I consider all of them helpful, each in their own way, to clarify how Haraway conceives of string figures as more than tropes or merely conceptual metaphors; how they are not just a rhetorical analogy based on similarity; how string figures may rather act performatively as material-semiotic *figurations* whose “point is to make a difference.”<sup>2</sup>

I consider the figure of the witch—as a feminist refiguration and a practice of situated aesthetics—to be interesting in this context insofar as its queering (or transfiguring) movements carry de-individualizing as well as de-institutionalizing potentials.<sup>3</sup> I suggest understanding string figures as witches’ games to strengthen the *critical*-speculative potentials as well as the intersectional feminist implications of the co-creative relationalities Haraway addresses. When cultural scholar Karin Harrasser translated Haraway’s book *Staying with the Trouble* (2016) into German,<sup>4</sup> she brought the term *Hexenspiele* to Haraway’s attention. Harrasser and Haraway decided not to use the term for translating string figures, but rather speak of *Fadenspiele* (literally “string games”). It is a pity they deemed it better not to bring witches into play. To my mind, considering witchy modes—as a feminist way of relating—is quite helpful for understanding in what ways SF figures matter.

Also, on a personal note, taking up various threads of feminist witches encourages me to engage in relational aesthetics which act less disciplinarily and more affectively than what usually seems appropriate for an academic scholar. In my writing, thinking, performing, and teaching, I seek practices of reading and speculating which are unsettled, non-linear and ever incomplete. Akin to Haraway (and many other feminists), I am quite sure that for a knowing or learning that accounts for complexities and differentiated entanglements, it is necessary not to stick to already

2 Ibid., p. 62.

3 For a more detailed discussion of this decidedly feminist notion of the witch, see Ines Kleesattel, “Witchy Wits\*\*\* situiert, widerspenstig, gewitzt,” *FKW. Zeitschrift für Geschlechterforschung und visuelle Kultur*, no. 71 (2022), pp. 6–21, <https://doi.org/10.57871/fkw7120221629> (accessed August 3, 2024).

4 Donna Haraway, *Unruhig bleiben. Die Verwandtschaft der Arten im Chthuluzän* (Frankfurt am Main: Campus, 2018).

legitimized ways of relating, “to leave some things ununderstood and dare to work with fragments of knowledge and wonder how they might come together.”<sup>5</sup> In this sense, the artistic positions that I assemble in this text are not connected by any clear art-historical systematics. Rather, they are figurations from disparate times and places, among which, with Haraway, I would like to draw a string figure proposing a relational aesthetics that cannot be enclosed within the disciplinary boundaries of art practice, art history, art education, aesthetic research, and social life, but engages in what messily matters—always provisionally, not universally, and never completely.

For Haraway, string figures is just one way of spelling out what she proposes as practices of “SF.”<sup>6</sup> As part of the documenta publication *100 notes – 100 thoughts* in 2012, a small booklet was issued entirely dedicated to SF. Here, Haraway puts it like this:

Sf is that potent material semiotic sign for the riches of speculative fabulation, speculative feminism, science fiction, science fact, science fantasy—and, I suggest, string figures. In looping threads and relays of patterning, this sf practice is a model for worlding. Sf must also mean “so far,” opening up what is yet-to-come in protean [changing] time’s pasts, presents, and futures.<sup>7</sup>

## **SF: So Far: Maya Deren’s *Witch’s Cradle*, Non-Linearly Animating the Inanimate**

The modus operandi of *So Far* is a crucial creative node for Maya Deren’s unfinished film *Witch’s Cradle* (1943). In various texts Deren has emphasized the “potent magic power”<sup>8</sup> of cinematic practice, its capacity to actually *create* a reality, to constitute counter-normal experiences, and to realize impossible temporal-

5 Donna Haraway, “Wir sind immer mittendrin,” in *Die Neuerfindung der Natur*, ed. Carmen Hammer and Immanuel Stieß (Frankfurt am Main and New York: Campus, 1995), pp. 98–122, here p. 103 (translation by Ines Kleesattel).

6 For a more detailed consideration of the acronym “SF” in Haraway’s work, see Mario Schulze, “Shall we Rather Do String Figures Than Think in Networks? Donna Haraway’s SF Method,” in this volume.

7 Donna Haraway, “SF: Speculative Fabulation and String Figures,” in *100 Notes – 100 Thoughts*, *dOCUMENTA (13)*, (2012), p. 4.

8 Maya Deren, “Magic is New,” in *Essential Deren: Collected Writings on Film*, ed. Bruce McPherson (Kingston, N.Y.: Documentext, 2005), pp. 197–206, here p. 203.

spatial relationships.<sup>9</sup> Shot at Peggy Guggenheim’s Art of This Century gallery in New York, the film creates an almost beguiling effect by constantly changing directions in the movements of its sequences. It (re-)animates the artworks and spatial arrangements of the gallery and magnifies their inherent disruptive potential. The filmic speculative fabulation of Deren’s *Witch’s Cradle* behaves in a double sense in the SF mode of *So Far*: On the one hand, it does not start from scratch but mobilizes creative forces in relation to pre-existing works and structures. On the other hand, it remains incomplete, leaving us with many loose ends and multidirectional possibilities.



Fig. 1: Deren’s mesh of strings.

The maze-like crossing of strings, in which we as viewers go astray, was not scaled up to room size by Deren first, but is a re-enactment of Marcel Duchamp’s *Sixteen Miles of String* (1942), which had been on show in a major Surrealist exhibition the year before (fig. 1 and fig. 4 in the introduction, p. 26). During its opening, children

9 Deren states “that a work of art is, first of all, creative, we actually mean that it creates a reality and itself constitutes an experience.” Maya Deren, “Cinema as an Art Form,” in *Essential Deren*, pp. 19–33, here p. 22.

playing tag were running around the installation, encouraged to do so by Duchamp.<sup>10</sup> The installation itself provoked contradictory reactions, as the threads were perceived by some as guiding or directing to the artworks, while others resented being blocked in their movements and abilities to approach them. Deren transfers this ambivalence to the *Witch's Cradle*, drawing on a "labyrinth's ambiguous energy, its simultaneous sense of passageway and imprisonment,"<sup>11</sup> by mobilizing the maze of strings as both a visual and narrative force: constantly frustrating climaxes, leading to perpetual incompleteness rather than an ending. Tom Gunning comments on Deren's film: "If the classical story follows a straight line that incorporates occasional detours, the labyrinth represents a different journey."<sup>12</sup> Sara Keller adds that this "journey is in fact the trajectory of the film: a nonlinear, even circular pathway that promises transformation even while it threatens the opposite."<sup>13</sup> That Deren's *Witch's Cradle* has remained incomplete as a film can therefore be seen not just as a coincidental fact, but also as an aesthetic-creative force in its own right. As we get to read in reverse letters forming a circle on the forehead of the film's protagonist Anne Matta Clark: The end is the beginning is the end is the...

Nonlinearity and ambivalences were already inherent in Duchamp's installation. But by animating the strings with the magic potential of the cinematic, Deren adds a further witchiness: One string becomes an agent, maliciously creeping along Duchamp's neck (fig. 2). I like to take this as a feminist joke, threatening precisely that guy who today's art history has often praised as the godfather of contemporary art.

The agency of the vicious thread is also striking because it relates to a remark by Deren that sounds quite post-humanist as

10 See David Hopkins, "Duchamp, Childhood, Work and Play: The Vernissage for *First Papers of Surrealism*, New York, 1942," *Tate Papers*, no. 22 (Autumn 2014), <https://www.tate.org.uk/research/tate-papers/22/duchamp-childhood-work-and-play-the-vernissage-for-first-papers-of-surrealism-new-york-1942> (accessed August 3, 2024).

11 Tom Gunning, lecture manuscript (2007) quoted in Sarah Keller, "Frustrated Climaxes: On Maya Deren's *Meshes of the Afternoon* and *Witch's Cradle*," *Cinema Journal* 52, no. 3 (2013), pp. 75–98, here p. 92.

12 Ibid.

13 Keller, "Frustrated Climaxes," p. 92.



Fig. 2: Thread as threat in Duchamp's neck.

early as 1945: “The external universe which we once considered, at least in our immediate locality, as the passive recipient of the manifestations of the individual will—the stage upon which the conflict of human wills was dramatically enacted—has been revealed as an active, creative force.”<sup>14</sup> Animating the seemingly inanimate, collaborating with other-than-human energies as well as conjuring up indecent latencies and unrealistic realities is exactly what witches do. Following references in the work of Isabelle Stengers, a Belgian philosopher who is friends with Haraway, I started to read Starhawk, a neopagan witch and ecofeminist activist who, in 1982, formulates the following:

“Modern physics no longer speaks of separate, discrete atoms of dead matter, but of waves of energy, probabilities, patterns that change as they are observed; it recognizes what Shamans and Witches have always known: that matter and energy are not separate forces, but different forms of the same thing.”<sup>15</sup>

14 Deren, “Cinema as an Art Form,” p. 32.

15 Starhawk, *Dreaming the Dark: Magic, Sex and Politics* (Boston, Mass.: Beacon Press, 1982), p. 10.

Starhawk's books are much more likely to be found in esoteric stores than in academic libraries. Unjustly, in my opinion. Her ethics of immanence complexly interweaves dimensions of the social, the psyche and the environmental in much the same way as Félix Guattari's relational aesthetics does. But Haraway, who otherwise cultivates a very appreciative citation politics, seems to be skeptical of the figure of the witch, and occasionally even takes a potshot at Starhawk.<sup>16</sup> Perhaps, one can speculate, this is because the witch was an all too obvious feminist figure for Haraway's generation in the 1980s, the clichéd stereotype of which was often associated more with a simple aspiration for some primal naturalness than with historically-informed critique and counter-disciplinary experimentation. Feminist witches and other ecofeminists of the 1970s and 1980s have been quite consistently labeled as naturalistic, essentialist and under-complex by many scholars from various disciplines—some of them certainly rightly, but some also very mistakenly. To my mind, there is still unacknowledged potential in relation to witches like Starhawk and the “witches' games” of other aesthetic practitioners, which is available to be activated towards materialized re-figurations whose “point is to make a difference—however modestly, however partially, however much without either narrative or scientific guarantees.”<sup>17</sup>

## **SF: String Figuring: De-individualizing Relational Aesthetics with Lygia Clark**

In a particularly intense way, Lygia Clark sought to leave behind disciplinary guarantees and the identifications associated with them. From the 1960s on, she involved herself in re-configurations of aesthetic-creative processes, increasingly challenging all kinds of identities, demarcations, and institutions. Having studied art and architecture in the 1940s and subsequently become a

16 See Joan Haran, “Bound in the Spiral Dance: Haraway, Starhawk and Writing Lives in Feminist Community,” *a/b Auto/Biography Studies* 34, no. 3 (2019), pp. 427–443.

17 Haraway, “A Game of Cat's Cradle,” p. 62.

renowned abstractionist of the Neo-Concretist movement in Brazil, Clark committed herself more to creative and bodily-sensual encounters. In the early 1960s, she created a series of around seventy *Bichos* (Portuguese for “critters”) to experiment with modulated surfaces, spatial transitions, and variations in movement. While the *Bichos* appear well designed and elegantly shaped (and are still shown in art museums around the world, where of course they are not allowed to be touched), they were never actually meant only to be gazed at. Rather, they were designed to attract the spectators, to get them to interact with the *Bichos*, and to create a physical interaction and experimental relationship between *Bicho* and human (fig. 3). Clark notes: “the conjunction of your gestures with the immediate response of the *Bicho* creates a new relationship, and this is only possible because of the movements the *Bicho* knows how to perform by itself: it is the *Bicho*’s own life.”<sup>18</sup>

Dissatisfied with the dualism between human and *Bicho*, Clark eventually went from working with *Bichos* to what she called “a new type of fusion,” that moved even further away from objectification and any artistic authorial intent. From now on, she formulated “propositions” that, in dealing with everyday materials, must be activated like musical scores or recipes. *Caminhando* (*Walking*) from 1963 is one of these propositions. According to Clark “*Caminhando* has all the possibilities connected to action itself. It allows choice, the unpredictable, and the transformation of a virtuality into a concrete event.”<sup>19</sup> The proposition, slightly abbreviated, is as follows:

Make the *Caminhando* yourself with the strip of paper [...], cut it across its width, twist it, and glue it in order to get a Möbius strip. then take a pair of scissors, [...] cut it along its length. [...] When you have gone completely around the Möbius strip, choose between cutting to the right or the left of the cut you already made. This notion of choice is decisive—within it lies the experiment’s only meaning. The work is its enactment. As the strip is cut, it gets finer and is unfolded in intertwinings. [...]

18 Lygia Clark, “The Bichos,” in *Lygia Clark: The Abandonment of Art*, ed. Cornelia Butler (New York: Museum of Modern Art, 2014), p. 160.

19 Lygia Clark, “*Caminhando*,” in *Lygia Clark: The Abandonment of Art*, p. 160.



Fig. 3: A *Bicho* in action: Lygia Clark, *Bicho de Bolso* (1966).

Initially, the *Caminhando* is only a potential. You and it will form a reality that will be unique [...]. No separation between subject-object. It is a body-to-body affair, a fusion. [...] There is only one type of duration: The act is what produces the *Caminhando*. Nothing exists before it and nothing after.<sup>20</sup>

20 Ibid.

What matters, in other words, is neither the outcome of the cutting nor Clark's articulation of the proposition as an artistic concept. All that matters is, as critic and curator Guy Brett put it, "embodied in the act, enacted in the body."<sup>21</sup>

In exile during the Brazilian military dictatorship, Clark lived in Paris from 1969 on. During 1972–1976 she gave weekly seminars on *Gestural Expressivity* at the fine arts faculty of the Sorbonne (fig. 4). Together with the students she intensified research into collective creation and worked on sets of propositions called *Fantasmática do Corpo* (*Phantasmatics of the Body*) and *Corpo Coletivo* (*Collective Body*). There, students' bodies and movements, as well as elastic bands, large plastic sheets and other materials, became entangled relational agents within figurations that were, according to Clark, "simultaneously personal and collective,"<sup>22</sup> generating deeply sensual processes of de-individualization.



Fig. 4: String figuring in one of Clark's *Gestural Expressivity* seminars (1966).

21 Guy Brett, "Lygia Clark: Six Cells," in *Lygia Clark*, exhib. cat. (Barcelona: Fundació Antoni Tàpies, 1997), pp. 17–35, here p. 17.

22 Clark quoted in André Lepecki, "Affective Geometry, Immanent Acts: Lygia Clark and Performance," in *Lygia Clark: The Abandonment of Art*, pp. 278–287, here p. 281.

Foreshadowing Guattari's suggestion, Clark strove for a relational aesthetics of inner-subjective, ecological, and generative processes of interdependences. Rather than aiming to produce artworks or stage performances, her seminars on *Gestural Expressivity* sought sensual figurations that were more than just inter-subjective communication, but rather corporeal experiments with immanent *intra-activity*, as one would call it with Karen Barad.<sup>23</sup> Unlike (and twenty-five years earlier than) Nicolas Bourriaud's famous notion of the *Esthétique Relationelle*, these co-creative practices conceived of relationality not simply as a genuinely human connectivity that would compensate, in a strangely felicitous way, for social defects caused by capitalist society.<sup>24</sup> The embodied as well as embodying research in Clark's seminars was much more nuanced and materially differentiated, yielding transversal effects that might transcend the boundaries of the art field. Instead of focusing on social gatherings in the always somewhat exclusive framework of art exhibitions, like the art projects promoted by Bourriaud, the *Gestural Expressivity* seminars engaged rather with the affective potentials of materials and movements—whilst not denying persistent power structures in academia and art institutions. Experimenting with bodily movements and material encounters, these practices of string figuring allowed for encountering (in) the world differently, i.e. in more relational, sensual, and transversal ways than an individualistic culture could imagine. However, Clark's desire for the artist to be “dissolved within the world”<sup>25</sup> was (and is) of course hardly livable within the institutions of the Western art system. She rejected any classification of her work as body art or performance art, as these still imply an authorial figure of the artist—which is precisely why Clark abandoned the art world. Also, she did not believe in

23 Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, N. C.: Duke University Press, 2007).

24 For a more detailed discussion of Bourriaud in relation to Guattari's much more complex relational aesthetics, see Ines Kleesattel and Ruth Sonderegger, “Aesthetics and Politics,” in *Introduction to Philosophy: Aesthetic Theory and Practice*, ed. Valery Vino (Montreal: Rebus Open Textbook, 2021), <https://press.rebus.community/intro-to-phil-aesthetics/> (accessed August 3, 2024).

25 Clark quoted in Cornelia Butler, “Lygia Clark: A Space Open to Time,” in *Lygia Clark: The Abandonment of Art*, pp. 12–29, here p. 15.

an Artistic Institutional Critique as pursued by Hans Haacke or Mierle Laderman Ukeles at the time. “Do not think I am so naïve as to believe that these artists will destroy the museum,” Clark once replied to a curator. “It is you who have devoured the artists and integrated them. I will not take part in this.”<sup>26</sup> And by following through with this, she lived up to what is one of the most important rules of the SF game: “As soon as possession enters the game, the string figures freeze into a lying pattern.”<sup>27</sup>

Art historian Cornelia Butler states that Clark, with her so thoroughly process-oriented propositions, made “one of the most radical proposals in twentieth-century art.”<sup>28</sup> While the superlativistic and exceptionalist implication of this formulation may not quite meet Clark’s aspirations, there is a truth to it, for taking her propositions truly seriously would mean breaking with some of the most fundamental principles of modernity: ideas like authorship, creation, work/product, or originality. In theory, the misconceptions linked to these ideas have been known for decades. But actually, drawing practical consequences from this knowledge in the fields of art and culture or academia seems almost impossible even today. Fully focused on the processual act of generating themselves, the sensory experiments of the *Gestural Expressivity* seminars pursued a radically non-proprietary and de-individualizing relational aesthetics, which continues to challenge the competitive and success-oriented logics of the institutions of art just as much as those of academic education. As Clark recalls her teaching experience:

In the first three months I would give [the students] my sensorial objects. Three months later, they started making their own activities and propositions. I have several examples of works of that period that I did not invent or create [...]. Another curious thing: at the beginning the students would always communicate to me or through me. After a month, they did not even look at me anymore, and discussed the work among themselves.<sup>29</sup>

26 Clark quoted in Lepecki, “Affective Geometry, Immanent Acts,” p. 281.

27 Haraway, “A Game of Cat’s Cradle,” p. 69.

28 Butler, “Lygia Clark: A Space Open to Time,” p. 14.

29 Clark quoted in André Lepecki, “Affective Geometry, Immanent Acts,” p. 284.

Within relational aesthetic practices, the explanatory educator who teaches learners *about* art gives way to a string figuring co-creation *within* which a processual aesthetic mediation<sup>30</sup> takes place. Multiple agents and forces are entangled in a collective sensing within interdependent, constantly moving, and never fully secure meshes. Such aesthetic mediation moves beyond the dichotomies of educator and student, artist and work, subject and object. At the same time, it enables a more complex learning which is sensitive to as well as critical of domination—as Haraway would say, “including the ability partially to translate knowledges among very different- and power-differentiated communities.”<sup>31</sup>

## **SF: Speculative Feminism: Doris Stauffer’s *Witches Courses*, Experimenting with Senses of the Possible**

In 1970s Zurich, Doris Stauffer—artist, activist witch, and art educator—engaged in a similar aesthetic mediation through string figuring while also struggling with institutions. At the Arts and Crafts School of Zurich (the predecessor of the present-day Zurich University of the Arts), Stauffer initiated courses called *Teamwork*. Stauffer argued that teaching students primarily to work individually would foster a competitive and socially damaging mentality, which is why the *Teamwork* courses were based on principles of collaboration, anti-authoritarian pedagogy, process-orientation, and an experimental group creativity (fig. 5 and 6). Although the course’s title might sound quite managerial today, back then it

30 Though it is more common in English to speak of “art education” (*Kunsterziehung* in German), whereas “art mediation” may seem more like a too-literal translation from German (of *Kunstvermittlung*), I deliberately use “mediation” here, as the term implies more transversal and multidirectional movements than the term education, which is strongly informed by a hierarchical dichotomy between educator and learner. Whether one speaks of “artistic mediation” or “aesthetic mediation” regarding the works discussed here is a question of the concept of art. To me, given the critical stance that Clark and Stauffer took towards art as an institution, it seems appropriate to speak of aesthetic mediation, since the aesthetic more clearly also includes everyday aesthetics and non-institutionalized sensuality.

31 Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (Autumn 1988), p. 575–599, here p. 580.

appeared so subversively aimless and unproductive that Stauffer was eventually fired for it. It was quite a scandal at the time, other teachers left the school as well, and together they founded a new private art college: the F+F Schule für experimentelle Gestaltung (F+F School for Experimental Design). In an article published by a major Zurich newspaper, the journalist shares his impressions of a *Teamwork* course in which he participated:

Teamwork only works when those present establish interpersonal relationships, stepping out of their egocentricity, and, with deliberately spare impulses from the teacher (Doris Stauffer), act together and spontaneously. Periods of boredom in the process are perfectly unavoidable; it would actually be dishonest to try to suppress them or cover them up. Also, there is always a need to first discuss the sense and possibilities of the course. Nevertheless, quite a lot happened during our brief presence: musical improvisation popped up, a puppet got involved in a ritual, a girl was packaged as a work of art and labeled for delivery to the Kunsthaus art museum, a mesh of strings was stretched across the room [...].<sup>32</sup>



Fig. 5: String figuring in one of Stauffer's *Teamwork* courses (1971).

32 Fritz Billeter, "Experiment F+F will be continued – with private funds," *Tages-Anzeiger* (Zurich, March 23, 1971), *Platform on the History of F+F School*, Signature CH FF1971-A B-13-04, <https://ff1971.ch/en/archive/ch-ff1971-a-b-13-04> (accessed May 30, 2024) (translation by Ines Kleesattel).



Fig. 6: String figuring in one of Stauffer's *Teamwork* courses, newspaper article, 1971.

Periods of boredom and aimlessness—which are vital for the unpredictable to emerge and which are sorely lacking in the Bologna-optimized course system of contemporary Swiss art universities—are another key ingredient for witchy SF re-figurations. As Haraway puts it:

What constitutes an apparatus of bodily production cannot be known in advance of engaging in the always messy projects of description, narration, intervention, inhabiting, conversing, exchanging, and building. The point is to get at how worlds are made and unmade, in order to participate in the processes, in order to foster some forms of life and not others.<sup>33</sup>

Aesthetic experimentation that is genuinely interested in co-creative processes capable of unfolding “senses of the possible,”<sup>34</sup> which have been disciplined, delegitimized, and made impossible, calls for an openness to failure and undirected movements of messing around. From 1977 to 1980 Doris Stauffer organized feminist *Witches' Courses* (*Hexenkurse*) for which it was a crucial

33 Haraway, “A Game of Cat’s Cradle,” p. 62.

34 See Didier Debaïse and Isabelle Stengers, “The insistence of possibles: Towards a speculative pragmatism,” *PARSE Journal*, no.7 (2017), pp. 13–19.

principle that there are no winners in playing string figure games, but that string figuring is rather an open-ended, non-competitive playing. It is “about giving and receiving patterns, dropping threads and failing but sometimes finding something that works, something consequential and maybe even beautiful, that wasn’t there before, of relaying connections that matter, of telling stories in hand upon hand [...]”<sup>35</sup> Calling themselves witches, Stauffer and the students conducted humorously playful yet at the same time sincere research into patriarchal cultures of expression and media, gendered (self-)perception, the combinatorics of children, crafts, cuisine, and collective creativity beyond the pursuit of excellence.

The Zurich *Witches’ Courses* were feminist workshops, transversal group processes and conversations of situated knowledges; transdisciplinary attempts to free art from competition, authorship, and the cults of genius and artwork. This is worth bearing in mind when the present-day “Rise of the L.A. Art Witch”<sup>36</sup> indicates that even witchcraft can sell profitably in the contemporary art field. Witches’ games in the feminist sense are neither merely the proclamatory speech act of “I am a Witch” nor self-optimizing “manifestation rituals” with crystals and incense that are well merchandized. As feminist aesthetic research, witches’ games are a collective practice that acts embodied and embodying, in encounter, resonance and difference. However, when it comes to a nurturing of maltreated senses of the possible, performative speech acts and speculative imagination are certainly important, too. Speculation, with Isabelle Stengers, is to be understood as “a mode of thought which endeavours to activate what might be possible against the safety of probability.”<sup>37</sup> Since at least the 1970s feminists have been calling themselves witches, counter-appropriating a term of denunciation which originated with the inquisitors of the early modern era. Their myths and defamations,

35 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, N.C.: Duke University Press, 2016), p. 3

36 Amanda Yates Garcia, “The Rise of the L.A. Art Witch,” *Carla*, no. 6 (2016) (accessed May 30, 2024).

37 Isabelle Stengers in conversation with Martin Savransky, “Relearning the Art of Paying Attention,” *SubStance*, no. 145 (2018), pp. 130–145, p. 134.

which once had brutal and deadly effects and then were carried on in more subtle ways, were brushed against the grain by feminists in a culture that centuries later was still misogynistic. “Giving and receiving patterns, dropping threads and failing but sometimes finding something that works,”<sup>38</sup> self-proclaimed witches like Stauffer and Starhawk fought—and still fight—for equal rights, the legalization of abortion, global justice, ecological responsibility, diversity, and queerness. Referring to long dead defamed “witches” as their kin of choice is anything but naïve. It interweaves self-empowerment with remembrance; “makes possible a resistance which was denied to historical witches”;<sup>39</sup> speculatively generates string figures of emancipatory solidarity across time.

It is against this backdrop that I propose to speak of “witches’ games”—for witches can certainly tell particular stories which unknot and rework past imposed markings, present bodies and affects, and senses of the possible yet to come.

## **SF: Situated Figurations: Embodied-Embodying Research-Mediation in Chantal Küng’s Witchy Workshops**

Witches’ games that relate transtemporally with fabulous kin of choice differ, of course, “qualitatively from the scholar in the archive.” What historian Silvia Bovenschen states about feminist actualizations of the witch figure applies to them too: Entangling with “elements of historical and social fantasy,” they are “anarchical and rebellious in [their] rejection of chronology of historical accuracy.”<sup>40</sup> Such witches’ games could be considered as a practice of fabulation that mainly acts through storytelling. Yet they do not operate solely on semiotic or historiographic levels. Thinking-with, speculating-with and imagining-with is always also an embodied as well as bodying relaying. Here, too, string figuring thus acts as more than just figurative speech. With Rosi

38 Haraway, *Staying with the Trouble*, p. 3.

39 Silvia Bovenschen, “The contemporary witch, the historical witch and the witch myth: the witch, subject of the appropriation of nature and object of the domination of nature,” *New German Critique*, no. 15 (1978), p. 82–119, here p. 87.

40 *Ibid.*, p. 84.

Braidotti and Haraway, *feminist figurations* are to be conceived as “politically informed account[s] of an alternative subjectivity”<sup>41</sup> with affective potentials. Figurations in this sense are speculative affirmations with a mattering agency; they can change “the ways in which we think about the here and now.”<sup>42</sup> In this context, it is important to bear in mind that feminism in Haraway’s sense of the term vitally refers to *situatedness*, i.e. positioned embodiment and partial perspectivity.<sup>43</sup> Furthermore, it is precisely *because* of our embodied partiality and accompanying vulnerability that we are able “to join with another” and be “curious about the webs of differential positioning.”<sup>44</sup> Along these lines, witches’ games imply neither relativism nor harmonistic unity, but rather a sensitive relating of diverse, affective, resistant, and instable bodies.

Chantal Küng takes up Stauffer’s threads in the 2010s and 2020s. In collaborative workshops, together with art education students and self-proclaimed witches of various generations, she pursues witches’ games that are artistic research-as-mediation and at the same time aesthetic mediation-as-research. In experi-

41 Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press, 1994), p. 1.

42 Donna Haraway, “The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others,” in *Cultural Studies*, ed. Lawrence Grossberg, Cary Nelson and Paula Treichler (London and New York: Routledge, 1992), pp. 295–337, here p. 295.

43 Feminism in Haraway’s sense therefore is not just a polemic against a patriarchal worldview. More importantly, it affirms (and thereby reevaluates) the experience of being constantly situated by dominant classifications. While the constraints of white, male, non-disabled bodies and their situated influence on how they relate to the world have been both denied and universalized for centuries, women, queers, crips and BIPOC have had to (and often still have to) fight hard to be recognized as subjects to be taken seriously, because their marked bodies are not considered sufficiently universal—which, of course, no body can ever be.

44 Haraway, “Situated Knowledges,” pp. 589–590. Haraway constantly stresses the necessity for differentiations within webs of relations. “Nothing is connected to everything; everything is connected to something,” she reminds us—which is why we “have to relearn how to conjugate worlds with partial connections and not universals and particulars.” *Staying with the Trouble*, p. 31. Bearing that in mind means, amongst other things, handling figurations which relate to different contexts and communities with care. In a post-colonial, capitalist world, there are hardly any innocent matters, which Haraway is quite aware of in her own theoretical figuring: “It matters which ideas we think other ideas with; my thinking or making cat’s cradle with *na’atl’o’* [Navajo string figure games] is not an innocent universal gesture, but a risky proposition in relentless historical relational contingency. And these contingencies include abundant histories of conquest, resistance, recuperation, and resurgence. Telling stories together with historically situated critters is fraught with the risks and joys of composing a more livable cosmopolitics.” *Ibid.*, pp. 14–15.

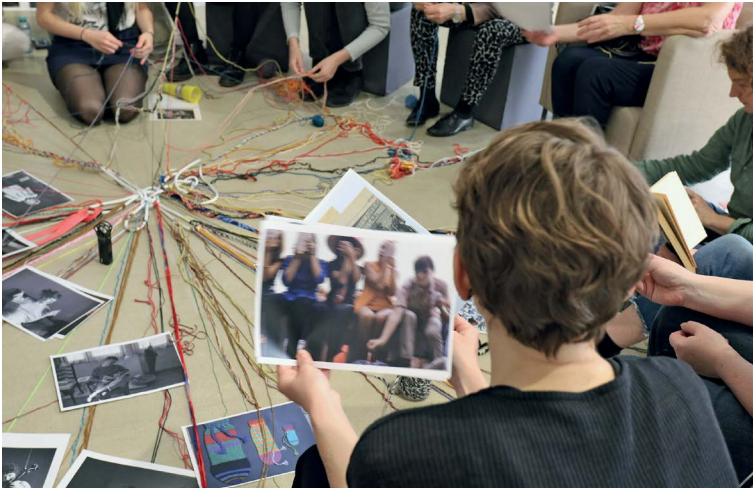


Fig. 7: Chantal Küng and Mara Züst, *Le strenghé son tornate* or *Activating the Archive* (2018), performance-workshop.

mental and performative ways, the workshops aim to (re)activate material from the archive of the late Doris Stauffer.<sup>45</sup> The material includes numerous photos and collages, assignment sheets, recipes, books, research notes and other ephemera from the 1977–1980 *Witches' Courses* (fig. 7). Rather than reconstructing the past, Küng's workshops seek to actualize former embodied knowledges in and for the present through a co-creative learning across time, counter-competitively and counter-disciplinarily. Based on Stauffer's proposals and other materials (which are often far from self-explanatory), for example, cakes with spells on them are baked or *Future Biographies* are written collaboratively. Of key interest here is "that which goes beyond following and purely imitating."<sup>46</sup> Actualization means relating situational and differentiated with regard to what might matter in each specific situation.

45 Doris Stauffer's archive is part of the Prints and Drawings Department of the Swiss National Library in Berne, <https://www.nb.admin.ch/snl/en/home/about-us/pdd/collections/art/stauffer.html>; digitalizations of some of the materials can also be found in the online archive of the F+F School of Art and Design Zurich: <https://ff1971.ch/archive> (both accessed November 27, 2024).

46 Anna Schürch, "Performance performativ vermitteln: Überlegungen zur Performance Chronik Basel," in *Floating Gaps. Performance Chronik Basel (1968–1986)*, ed. Sabine Gebhardt-Fink, Muda Mathis and Margarit von Büren (Zurich: Diaphanes, 2019), pp. 23–31, here p. 27.

By engaging sensually in the material from Stauffer's archive, Küng and the other workshop participants research improbable possibilities, anti-authoritarian transformative learning, non-competitive modes of production, and collective yet difference-sensitive co-creativity. They interlace sensual research into the senses of the possible and transformative mediation through performative repetitions with difference. They "remember what others have learned how to do, invent promising knots, and suggest other figures that will make us swerve"<sup>47</sup> from disciplinary divisions like the one between research and mediation, which deems one as primary and the other as secondary.

Küng, who knew Doris in person and to this day regards her as kin of choice, has occasionally been confronted with concerns that she could hardly adequately examine Stauffer's work from her obviously non-neutral position. Yet it is precisely from this situated and affectively involved position that she is researching the possibilities of a transtemporal collective learning as a relational, non-hierarchical and yet difference-sensitive practice of response-ability—that allows participants "to conjugate worlds with partial connections and not universals and particulars."<sup>48</sup>

Figures collect up hopes and fears and show possibilities and dangers. Both imaginary and material, figures root peoples in stories and link them to histories. Stories are always more generous, more capacious, than ideologies; in that fact is one of my strongest hopes. I want to know how to inhabit histories and stories rather than deny them. I want to know how critically to live both inherited and novel kinships, in a spirit neither of condemnation nor celebration. I want to know how to help build ongoing stories rather than histories that end. In that sense, my kinships are about keeping the lineages going, even while defamiliarizing their members and turning lines into webs [...].<sup>49</sup>

This again ties back to Maya Deren's *Witch's Cradle*: Much like the maze-like film, Küng's witches' games do not generate (his)stories of art heroes and climaxes, but rather are non-linear animations that never end, with threads running in various directions

47 Haraway, "A Game of Cat's Cradle," p. 66.

48 Haraway, *Staying with the Trouble*, p. 13.

49 Donna Haraway, "Introduction: A Kinship of Feminist Figurations," in *The Haraway Reader* (New York: Routledge, 2004), pp. 1–6, here p. 1.

to be taken up again in ever-changing constellations. Witches' games are SF: always only So Far, never concluding, ongoingly to be taken up differently, "passing on and receiving, making and unmaking, [...] becoming-with each other in surprising relays."<sup>50</sup> Self-proclaimed feminist witches like Starhawk, Doris Stauffer, and Chantal Küng transtemporally yield Situated Figurations of an emancipatory kinship of choice, which matters precisely because they do not assert their speculation as a universal, irrefutable truth. The witches' games discussed here may exemplify what it means to conceive of string figures as material-semiotic figurations, which are not mere rhetorical tropes, but collaborative embodiments that matter. Vice versa, and more importantly, bringing feminist witches into play with Haraway allows for a vivid recognition of how radically *critical* of institution and discipline Feminist Speculation can actually be.



Fig. 8: Ever unfinished: strings to be received, dropped, taken up, redirected for relaying connections that matter in the performance-workshop by Küng and Züst.

50 Haraway, *Staying with the Trouble*, p. 3.



## For an Aesthetic of Relating

Do you remember throwing the string into the corner? One day in autumn we were practicing being a performance company with pigeons at Theater Neumarkt. String games were supposed to help: the biologist accompanying our project had suggested we try out things that would allow us and the pigeons to work together without having to look each other in the eye. It wasn't long before we realized that the pigeons preferred playing with electric cables. And so, they twisted and untangled the cables and we tried our hands at. When I held the string out to you that day, you took it but then, unexpectedly, threw it away. And I fell in love with you.

*Parliament of Things, Animals, Plants and Algorithms, Theater Neumarkt Zurich, 2019*

### Context

We, Seraina and Jonas, have been working for several years as mediators and production managers in the independent performing and visual arts scenes. For the exhibition *String Figures / Fadenspiele: A Research Exhibition* at Museum Tinguely Basel (2024/2025), we were asked by the co-curators of the exhibition, Sarine Waltenspül and Mario Schulze, to contribute a mediation project. With this essay, we reflect on our ideas about what situated and relevant practices of mediating and producing might entail.

We argue in the following for recentering artistic work around modes of relationships. As an aesthetic concept, modes of relationships emphasizes the importance of the way artistic undertakings relate to the people with whom and the contexts in which they are developed and shown.

Societal conditions are reflected in the way we shape relationships. With the relationships that we enter into or dissolve, we either consolidate existing orders or contribute to questioning and changing them. Modes of relationships also reveal an aesthetic potential: the types of relationships practiced in artistic projects and cultural institutions situate them in a societal framework.

We believe that acknowledging their situatedness is a prerequisite for ensuring that artistic projects and cultural institutions do not become closed, trivial or passive; that they do not fail, in other words, to actively fulfill their roles as sites of societal negotiation. In the following, we attempt to elaborate on the artistic potential of societal situatedness, in terms of an aesthetic of relating.

Theoretically, this essay is a contribution to art education and the emerging field of creative producing. In the following, we use the terms artistic mediation and creative producing to emphasize that we hold both practices to be artistic practices. In addition, the terms represent an opposition to a traditional and persistently hegemonic understanding of art, which essentially values only the singular artwork and the artistic creativity of the individual.<sup>1</sup> In traditional understandings of mediation and production, they both serve the “actual” work of art. Carmen Mörsch writes that from this point of view, mediation is an instrument for educating and disciplining “others.”<sup>2</sup>

Mörsch contrasts the conventional understanding of mediation with artistic mediation: polyphonic, aware of its own situatedness, it initiates processes with open outcomes. Artistic mediation is about recognizing differences, taking a stance and supporting practices of “talking back.”<sup>3</sup> One attempt to put this approach into practice was made at the documenta fifteen (2022). We refer here to the November 2023 issue of the *Art Education Research Journal*, which explores the possibilities and challenges of this project, demonstrating both the potential and the complexity of such an endeavor.<sup>4</sup>

1 A characterization of this traditional understanding of art can be found in Andrea Zimmermann, “Vernetzen: Dialog als Intervention,” September 15, 2023, *The Art of Intervention*, <https://theartofintervention.blog/2023/09/15/vernetzen-dialog-als-intervention/> (accessed July 17, 2024).

2 Carmen Mörsch, “Die Bildung der Anderen durch Kunst. Eine postkoloniale Geschichte des Art-Education-Dispositivs im Spannungsfeld von Disziplinierung und gegenhegemonialer Intervention,” in *Zeichen/Momente. Vergegenwärtigungen in Kunst und Kulturanalyse*, ed. Sigrid Adorf and Kathrin Heinz (Bielefeld: transcript Verlag, 2019), pp. 203–216.

3 Ibid., p. 214.

4 Gila Kolb and Ayşe Güleç, eds., “Ver\_Anderung am Beispiel der Kunstvermittlung auf der documenta fifteen,” *Art Education Research Journal of the SFKP* (2023): <https://sfkp.ch/ausgabe/25> (accessed July 17, 2024).

In a traditional/hegemonic understanding of art, production tasks are decoupled from artistic process. Production managers take care of the organizational and administrative implementation of the artistic process without being part of it themselves. Our understanding of creative producing differs fundamentally from such an assumption. The title of a workshop by the network *Produktionsbande*—*Producing Accessibility: Between Retrofitting and Aesthetics of Access*—expresses the difference pointedly.<sup>5</sup> While “retrofitting” involves making an artistic project accessible retrospectively, in “aesthetics of access,” accessibility is considered part of the artistic process from the outset. Another example of creative producing is gender budgeting. Budgets, pay scales and material costs are examined in terms of where the money goes and what this has to do with gender relations: what is revealed by a budget which estimates material costs generously but omits allowances for retirement provisions and accident insurance? In both gender budgeting and aesthetics of access, the boundaries between the artistic process, structural conditions and organizational tasks dissolve. The areas mentioned and the tasks that fall within them are interwoven and mutually dependent.<sup>6</sup>

The way relationships are shaped in artistic mediation and creative producing is central to our understanding of the two fields. We do not, however, want to idealize modes of relationships: Relationships can be authoritative and oppressive, they can cement co-dependency, be disciplinary and competitive. But they can also be open, fluid, flexible and aware of their own positionality. Relationships reveal emotional, political and economic contexts, and they are deeply gendered. Relationships are permeated by power relations, but can also provide spaces in which it’s possible to critique and shift them.<sup>7</sup> Reflected acknowledgement

5 Lea Gockel and Olivia Hotz, “Barrierefreiheit produzieren. Zwischen Retrofitting und Aesthetics of Access,” July 8, 2024, *Produktionsbande: netzwerk performing arts producers e. v.*: <https://produktionsbande.org/de/kalender/barrierefreiheit-produzieren> (accessed July 17, 2024).

6 An understanding of production work as creative producing can be found in Katrin Dod and Patrick Wildermann, eds., *Producing Performing Arts. Eine Publikation des Bündnisses internationaler Produktionshäuser* (Berlin: Alexander Verlag, 2022).

7 See Angelika Baier, Christina Binswanger, Jana Häberlein, Yv Eveline Nay and Andrea Zimmermann, eds., *Affekt und Geschlecht. Eine einführende Anthologie* (Vienna: Zaglossus, 2014).

of one's own (powerful) positionality is a prerequisite for understanding privileges and the societal rationale that shapes relationships, as well as for acting in a way which can change them.

Jonas and Seraina have each worked in different constellations in the independent performing and visual arts in Switzerland for many years. We are part of a funding system that has allowed us to continuously realize artistic works and make a living from them. At the same time, freelance work in the arts in Switzerland also takes place in structurally precarious work constellations. For freelance artists, it is structurally challenging and in many cases impossible to receive a parental allowance and there is little to no protection in the event of illness, accident or unemployment.

Seraina is a mother of three. She learns from her children about how young people succeed in learning to belong in groups and gets to know the challenges of long division; she tries not to forget appointments and likes when her children cook for her. They live half of the time with her, and the other half with their father. Seraina lives in an urban development in Zurich, where there is a strong sense of cohesion among the residents. She is in a romantic relationship with Jonas. She has been a lecturer in the Bachelor of Art Education program at Zurich University of the Arts since 2024. Jonas has been working in a permanent position as production manager at the Gessnerallee in Zurich since 2022. He lives in Basel and is in a romantic relationship with Seraina. With her children, he fills out scholarship applications, tries to understand the risks of vaping and collects more Roblox than he would like. He has a long friendship with Jan Bachmann, who created the illustration at the end of the text (fig. 1). The fact that we focus on modes of relationships in this essay has to do with our lived experiences, with the knowledge that freelance work in the arts is only possible within networks of relationships and with the honest desire to give the historically minimized areas of mediation and production the appreciation they deserve.

The thoughts expressed in this essay are the result of many artistic collaborations, encounters and conversations. Over the past four months, we have also received explicit feedback from a number of accomplices. Some of their feedback has been incorporated

directly into this text. We would like to thank Karin Fromherz, Claudia Hummel, Andrea Zimmermann, Jan Bachmann, Sara Bernasconi, Alexandra Portmann, Sascha Willenbacher, Anja Maier, Sarine Waltenspül and Mario Schulze.

## **Modes of Relationships**

When producers take care of writing contracts, dealing with government offices and funding agencies, calculating pensions, obtaining permits, navigating visa policies and drawing up work schedules, these are administrative and organizational tasks that need to be done. At the same time, they are care tasks, by which responsibility can be taken for establishing fair working conditions. They situate an artistic process in a socio-political context.

When mediators take on the connections between institutions and the public and maintain contact with communities and stakeholder groups over long periods of time, thereby enabling participation and constant, sustainable collaboration; when they extend invitations to actors who previously had no access to art spaces and institutions become settings in which desirable forms of coexistence can be put into practice; when they come up with formats that make institutions and art spaces more attractive, inclusive places; when they create activities for children, considering their contexts; when they create spaces in which actors meet who might never have met in their everyday lives and when ideas for change arise from these encounters; when they create spaces for thinking together, conscious of differences; when they clean the toilets before the guests arrive, prepare the apéro, plan the order of events, listen to the concerns of participants on the phone, set up and dismantle festival benches, even bring an entire kitchen out to the yard to be able to cook with the residents of the neighborhood; and when mediators then get migraines because it was too much; then it's a matter of lived and traded relationships and, at times, even an excess of relationships.

In art contexts, these efforts, which are all practices of care work, are still considered separate from the *actual* artistic or curatorial process. They are gendered tasks which, despite being

necessary, are not highly valued; neither in society as a whole, nor in the arts. Coupled with the traditional understanding of art, according to which the singular work of art, with all its echoes of the eighteenth-century autonomous genius, still supersedes production aspects, it can be difficult for curators, artists or directors to even perceive the above-mentioned activities, let alone recognize them as the preconditions of their own work.

We are convinced that it is beneficial to understand such work—no matter how repetitive, dry, inconspicuous and, yes, annoying and sometimes even disgusting it can be—as part of the artistic process. These acts establish relationships and contextualize artistic projects and cultural institutions as social practices. Their re-valuation as artistic activities would lead to the cultural sector functioning fundamentally differently, and to it producing different works of art, than it does today.

The transformative potential of an understanding of art that focuses on relationships rather than the singular artwork can be illustrated by the author Bini Adamczak. In her book *Beziehungswise Revolution (Relational Revolutions, 2017)*, Adamczak describes society as the sum of all its relationships.<sup>8</sup> She thus analyzes social events by focusing on the relationships between the actors. Actors can be both humans and non-humans such as plants, animals, buildings or infrastructures, but also forms, goods or subsidies. The relationships produce both the individuals and the conditions under which they act: “A society’s parts—be they individuals, groups, institutions, ideas, feelings—become social, and thus also comprehensible, thanks to the connections between them; the context from which they emerge.”<sup>9</sup> Artistic mediation and creative producing, according to our thesis, actively shape precisely such connections. Adamczak argues that the societal structure changes when the modes of relationships change. If people in a capitalist society relate to each other through solidarity instead of competition and isolation, a process of collective transformation can be advanced. If we assume Adamczak’s focus

8 Bini Adamczak, *Beziehungswise Revolution. 1917, 1968 und kommende* (Berlin: Suhrkamp, 2017).

9 *Ibid.*, p. 240.

on relationships as the basis also for artistic work, then practicing desirable ways of relating—as is possible in art—serves to initiate societal change. Artistic and societal practices then overlap and, in the best case, reinforce each other.

The focus on modes of relationships allows us to grasp micro and macro levels at the same time.<sup>10</sup> When artistic practices of production and mediation actively shape ways of relating, they have the potential to link physical, emotional and societal processes with one another. Bini Adamczak shares a quote from Erich Fried in her book: “It is not warm. But it could be warm.”<sup>11</sup> With their spectrums of action, artistic mediation and creative producing clearly express this promise of change—which is as physical and emotional as it is social. It is the promise to all actors involved that societal contexts can be changed through concrete actions. These changes are not initiated by individuals, but develop in a collaborative and co-creative process. Joint artistic activity is called for, as well as social responsibility for one another.

Creative producing and artistic mediation operate in the gap between the current state and the promise of change. That can mean that certain relationships are intensified and ritualized, while others are dissolved and dropped. These modes of relationships are, in Bini Adamczak’s words, practices of the communal, practices of commoning, practices of re-association and of re-assembling.<sup>12</sup>

And voilà, here they are:

10 The texts by Sara Ahmed and Arlie Russell Hochschild were important for us in understanding the connection between the body, feelings and politics. This essay began with an examination of the concept of empathy bridges, which Hochschild develops in *Strangers in Their Own Land* (2016). An empathy bridge describes the feeling that you are approaching someone from another world and that this interest is received positively. This creates something unique and reciprocal. The desire to understand this reciprocity has remained a leitmotif for this essay. See Arlie Russell Hochschild, *Strangers in Their Own Land: Anger and Mourning on the American Right* (New York: The New Press, 2016), and Sara Ahmed, “Kollektive Gefühle oder die Eindrücke, die andere hinterlassen,” in Angelika Baier et al., *Affekt und Geschlecht*, pp. 183–214.

11 Adamczak, *Beziehungsweise Revolution*, p. 243.

12 Adamczak, *Beziehungsweise Revolution*, p. 243.

## Practices of Relating

- Finally starting the reading group
- Involving colleagues in the process, forming communities with them
- Taking turns writing protocols
- Regular check-ins, check-outs
- Developing a shared vision, even a very small one
- Tolerating uncertainty
- Listening, asking questions
- Not outsourcing uncertainties to others
- Finding feedback methods
- Drinking coffee with the attendants
- Negotiating wages with curators, not getting unsettled
- Paying pension fund contributions, settling AHV contributions
- Sharing the to-do list
- Convincing the board of the idea for the third time
- Organizing, reorganizing, organizing again
- Creating space to be able to think together
- Acknowledging your own feelings
- Going where it feels easy
- Unlearning assumptions that keep you small
- Helping find an apartment in Zurich
- Renting a car and driving to the thrift store
- Lugging stuff, asking for help
- Letting go of the original plan
- Listening when people involved suggest other solutions
- Making mistakes and apologizing
- Laughing together
- Visiting communities at their places of work before they come to the art space
- Charging batteries for the audio description
- Changing the direction of the project after a workshop
- Accepting a no
- Acknowledging differences
- Responding with action
- Complaining
- Discussing

- Standing up for a cause, exposing oneself
- Taking out accident insurance
- Filling out the interim earnings form for the employment office
- Not forgetting the documentation, finding a suitable form, watching your budget
- Organizing the apéro, serving it
- Transferring wages
- Picking up the translator at the train station
- Providing lunch for the technicians during set-up
- Also: arguing
- Collecting, numbering and attaching receipts
- Being generous with yourself if the cooked food is bland
- Getting approvals early, being nice on the phone
- Sending out invitations. Watching out not to forget about foundations
- Dissolving toxic relationships, the quicker the better
- Practicing setting boundaries
- Focusing on your feet, how they touch the ground
- Breathing in deeply
- Writing the sequence
- Memorizing, while lying on the sofa with your eyes closed
- Getting to know people you would never have met
- Drinking a beer together
- Seeing and celebrating successes
- Being relieved that it's over
- Not ignoring positive feedback, even when criticism comes your way
- Filling out salary declarations
- Disclosing the budget and wages
- Taking detours, things turn out differently than expected
- Letting go
- Being happy when actors make the project their own, letting go of fears
- Calculating parental benefits
- Having a change of T-shirt with you for the opening
- Toothbrush too
- Applying for a work permit from the Office for Economic Affairs
- If there is no reply, asking again

- Staying in contact, writing petty emails, just making sure the connection is there
- Structuring the day with children so that they can be alone
- Adjusting your budget
- Comparing credit card statements
- Getting the key
- Not losing the key
- Setting up the Signal chat
- Editing the credits
- Cleaning up
- Taking the rental car to the recycling center
- Taking short breaks, again and again
- Being too tired to do things carefully
- Writing down hours worked, who's going to pay for that?
- Press dossier too
- Checking the sound system
- Not losing heart
- Breathing
- Falling in love
- Everything turns out differently
- This can only emerge from these relationships in this moment
- It is unique and beautiful
- Knowing that this movement is art

## **Aesthetic of Relating**

As physical and emotional experiences, these practices carry the potential of actively shaping societal conditions, as described by Bini Adamczak. However, a specific artistic quality also emerges from these practices. Actors relate to each other in their actions; there is an openness, a promise that we have something in our hands that lies between the current state and what will come after. If the participants engage in the transformation of existing relationships, something arises that was not foreseeable. This unexpected something is unique, emerges from a specific constellation and the singular actions of the actors involved, follows

its own temporality and materializes in a specific space, which is why it cannot be reproduced.

Relationship-based work is an attitude. It creates on the basis of acknowledging difference and diversity. It requires attentiveness; being in, and acting on, the moment; recognizing interdependencies and trusting that that, in turn, will create resonant spaces in which familiar things will connect in new ways.

An attitude can be practiced and, to a certain extent, planned for. In a network of modes of relationships, however, moments of contingency arise that bring us to places and thoughts and together with people and non-humans that we had not considered beforehand. There, then, with them, moments of an aesthetic of relating can be found.

An aesthetic of relating is the promise that ...

- ... ways of relating belong to the participants and can be shaped.
- ... social and artistic practice overlap.
- ... artistic projects and cultural institutions are societally relevant.
- ... we experience ourselves as situated and belonging.
- ... all participants can respond, respectfully of differences.
- ... we have time and take our time.
- ... we encounter each other through action.
- ... we create spaces in which we unlearn and learn together.
- ... transformation emerges from a multitude of concrete actions.
- ... all participants can co-create and/or appropriate the process.
- ... something unique, unexpected, tender emerges from a joint search and that this is art.

Translated by Erin Mallon

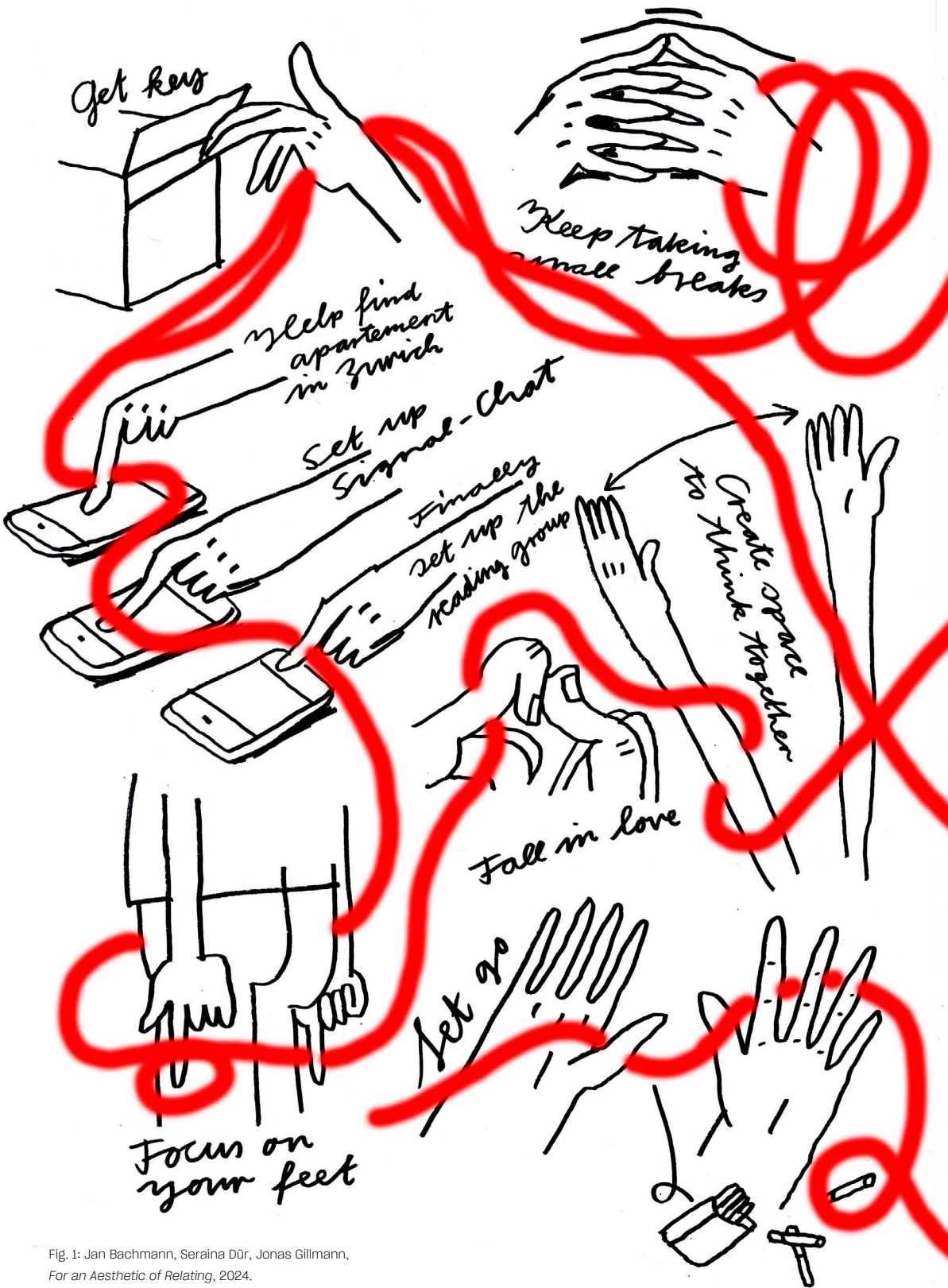


Fig. 1: Jan Bachmann, Seraina Dür, Jonas Gillmann,  
For an Aesthetic of Relating, 2024.

Write down  
hours worked

8001501  
7

Who is going  
to pay for that?

Drink coffee  
with attendants

Disclose  
budget details

Involve colleagues  
in the process

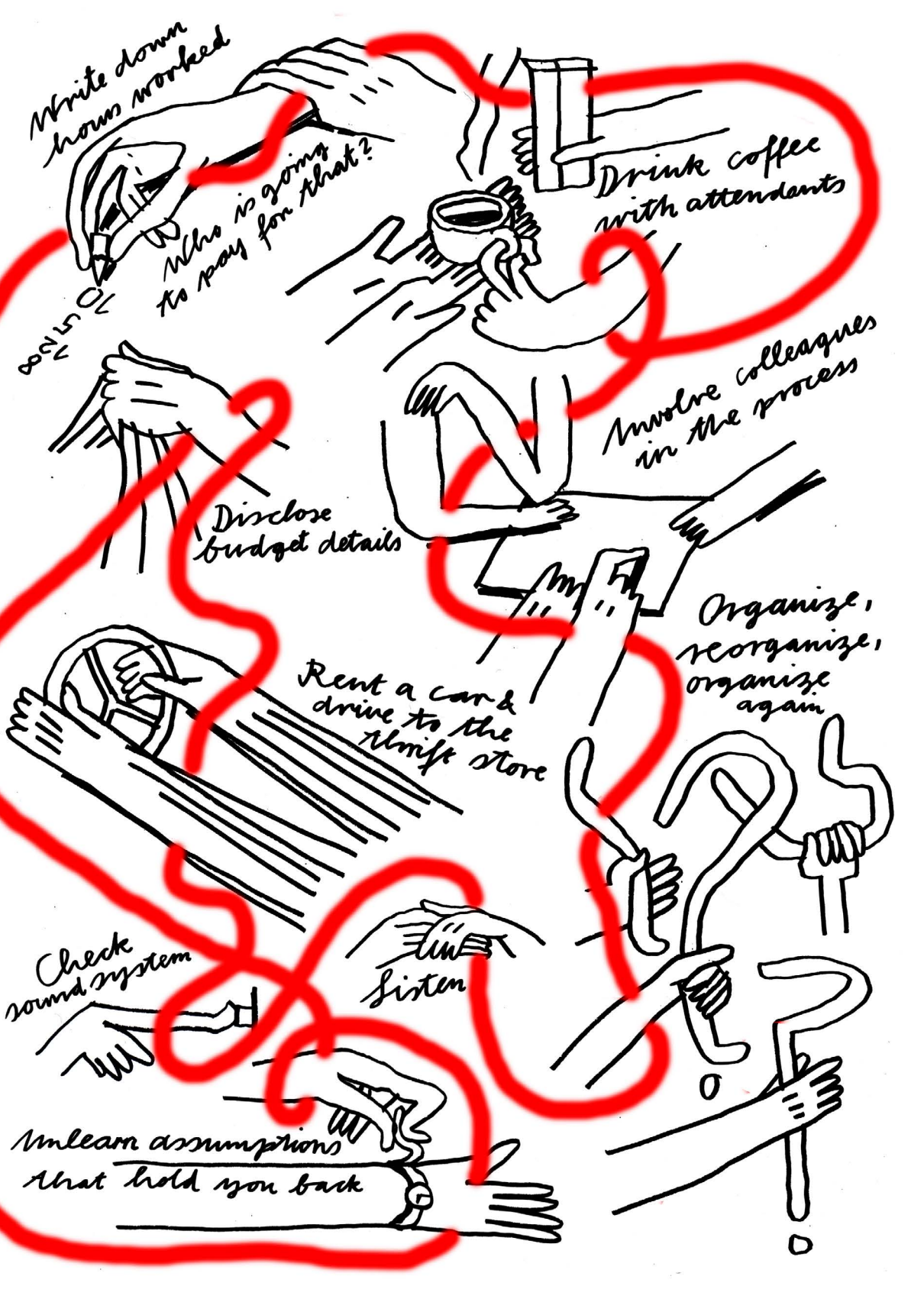
Rent a car &  
drive to the  
thrift store

Organize,  
reorganize,  
organize  
again

Check  
sound system

Listen

Unlearn assumptions  
that hold you back





## **II. Exhibition**





# String Figures

## A Research Exhibition

String figures can do many things: they tell stories, they pass the time, they make the unsayable showable, they connect people. As one of humanity's oldest cultural practices, they have inspired artists, anthropologists, and theorists. String figures have been studied as an aesthetic practice, collected as artifacts, and considered as a non-Western way of thinking and researching.

String figures are known to many as the children's game "cat's cradle." However, string figures are much more. Their functions range from storytelling to death rituals. They are known as *Hexenspiele*, *whai*, *jeux de ficelle*, *wuhpu waadari* or *na'atlo*, and they are often deeply rooted in a culture's "way of being." Some figures require a great deal of intellectual and manual skill. The looped threads are made of wool, nylon, coconut fibers, human hair, or other materials. Sometimes long, sometimes short, sometimes alone, in pairs or with many people—the setup is simple, the figures sometimes highly complex. Hands, bodies, cultures and continents come together in string games.

Artists have been fascinated by the ways in which string figures subvert traditional distinctions such as medium/form or signifier/signified, make relationalities conceivable, or are expressions of indigenous knowledges and novel aesthetics. The history of museum art dealing with string figures includes the names of canonized, male, metropolitan artists, such as Marcel Duchamp and Andy Warhol. Alongside them, however, are the names of female, fringe, or Indigenous artists, such as Maya Deren, Harry Smith, and Maureen Lander, who have worked intensively with the historical ambiguity and ephemerality of string figures.

For this exhibition, we have made various attempts to collaborate with string figure players, string figure creator societies, and heritage institutions that hold string figure collections. We also reached out to artists and researchers who have worked on string figures. The exhibition jux-

taposes historical and contemporary artworks with objects from ethnographic collections and films from the Encyclopaedia Cinematographica in order to research, resignify, and regain the past and present of string figure practices. It is a research exhibition because it reveals and traces relations, because it invites visitors to make connections, to learn and to pass on figures. Also because it brings together researchers (in the broadest sense) who have studied the works or practices on display, or the artists or players involved. By creating a string game between Basel, Yirrkala, São Paulo, Anchorage, and Tarawa, we want to provide a space to celebrate the beauty, playfulness, and complexity of a proud cultural practice.



## Room 1

# Static Figures, Ephemeral Stories

In anthropology, string figures have long been regarded as a universal game feeding fantasies of cultural comparison throughout the twentieth century. European-American ethnologists “collected” string figures, mounted them on cardboard or made drawings, photographs and films. The mounted string figures reveal the logics of ownership, uprooting and systematization within the geographical and sometimes racial categories that dominate ethnological collections. The most significant string figure studies come from the “sisters, daughters and wives” of more or less well-known anthropologists, who as women worked on the margins of their field: Honor Maude, Caroline Furness Jayne, and Kathleen Haddon. They often practiced a more embodied ethnography, guided by an interest in learning from each other.

As interest in string figures slowly began to wane in anthropology in the 1940s and 1950s, they were revived in the Western avant-garde. Inspired by anthropological studies, the avant-gardes used the complex experiential qualities of string figures between performance, object, song and narrative as a resource for their aesthetic experiments.

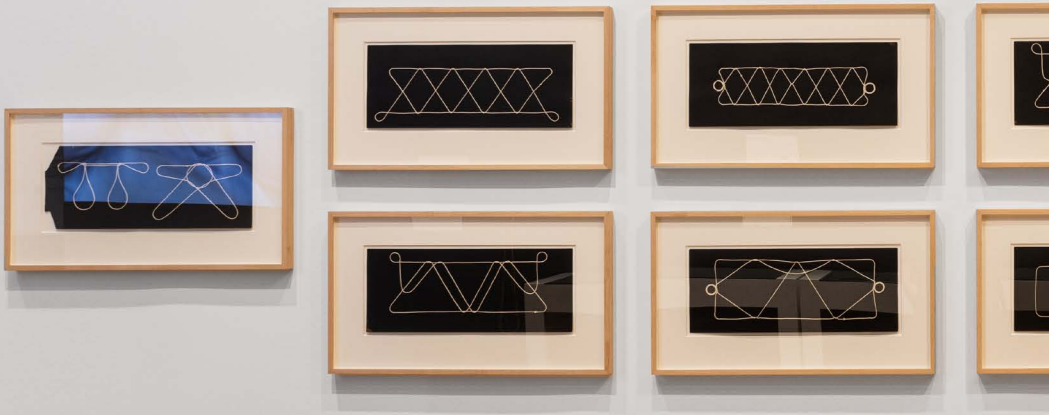
Over the past two decades, attempts have been made to reconnect collections of string figures with the creator communities, such as the collaboration between the Buku-Larrnggay Mulka Art Centre in Yirrkala and the Australian anthropologist Robyn McKenzie. During the preparations for this exhibition, the reconnection of the mounted figures from the Ethnological Museum Berlin led to the recovery of the indigenous story of Bede-riyo.

While the static figures may speak of anthropology’s entanglement with colonialism, the performed string figures can tell stories, jokes, myths and tales, and therefore be an expression of earthiness, community, and ancestry.





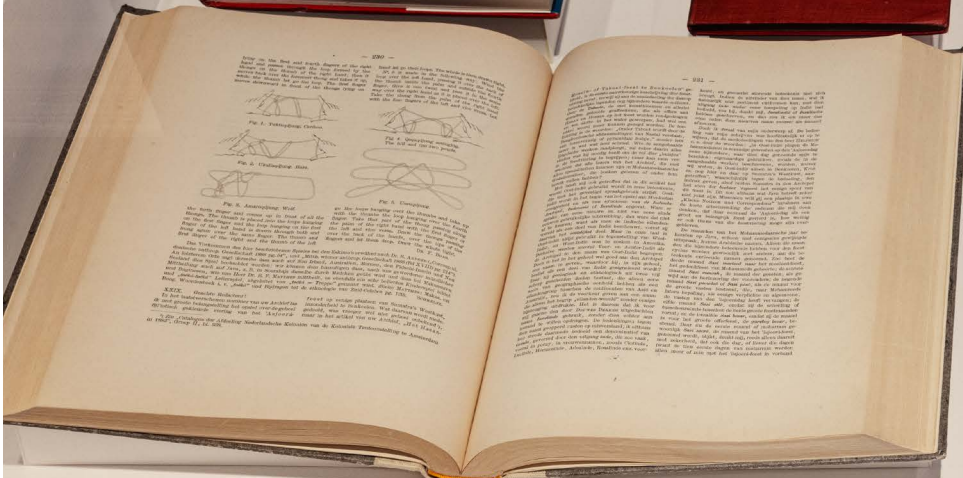
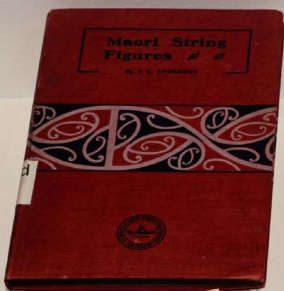
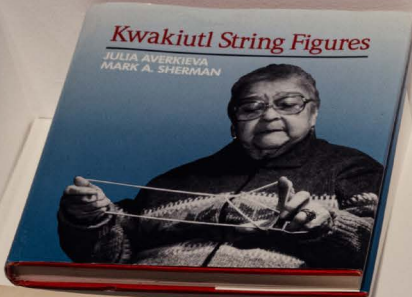
David Ket'acik Nicolai  
*String Figures*











**Franz Boas**  
**Cat's Cradle (1888)**  
**Julia Averkieva and Mark A. Sherman**  
**Kwakiutl String Figures (1992)**

In der allgemeinen Wahrnehmung hat sich Franz Boas (1859–1942), der Vater der amerikanischen Kulturanthropologie, 1888 mit seinem Beitrag vom Katzenkralle Stelle in der Geschichte der Feldforschung eingeschrieben. In diesem kurzen Text wolle ich über die wichtige Wissenskultur von Mekeongketas wie verschiedene Feldforschung auf der Ballustrasse in den Jahren 1883–1884, nämlich einige seiner Erkenntnisse über Feldforschung, ein Stück, das damals bei der indonesischen Bevölkerung...

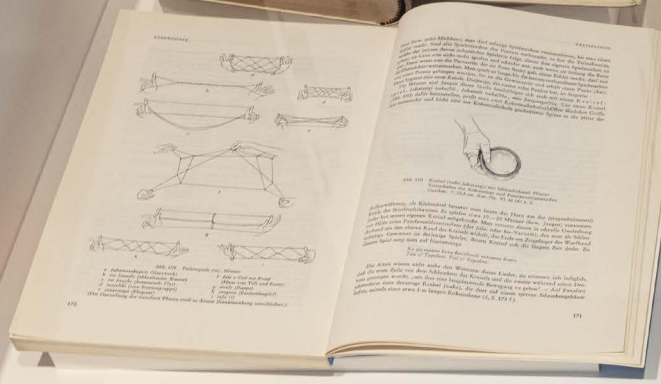
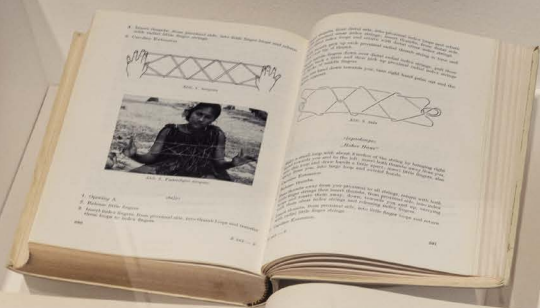
In the general perception, Franz Boas (1859–1942), the father of American Cultural Anthropology, is inscribed himself into the history of string figures. Although in 1888 with a contribution barely a page long, this multidisciplinary scholar published a role model of his one-year field research on Ballustrasse in 1883–1884, namely some of his findings on the string game, a game reportedly popular among the Indonesian population then. The results of this...

**Caroline Furness Jayne**  
**String Figures and how to make them (1906/62)**  
**Kathleen Haddon**  
**String Figures for Beginners (1976)**

Einige frühe westliche Anthropologen interessierten sich für Feldspiele als eine noch lebendige Kunst, von der sie annahm, dass sie im Aussterben begriffen war und daher gerettet werden musste. Sie interessierten sich zunächst entweder für die Bedeutungen oder für die Entwicklungsstadien der Evolution des Menschen anhand von Feldspielen, oder sie versuch-

A number of early Western anthropologists were interested in string figures as a still active art which they presumed dying out, so needed to be saved. They were initially either interested in meanings, or in probable lines of the human evolution of string figures, or they were trying to understand the diffusion paths of string figures across the globe.





**Gerd Koch**  
**Die materielle Kultur der Ellice-Inseln (1961)**

**Honor Maude**  
**Polymester (Ellice-Inseln, Niutao)**  
**Fadenspiele (1969)**

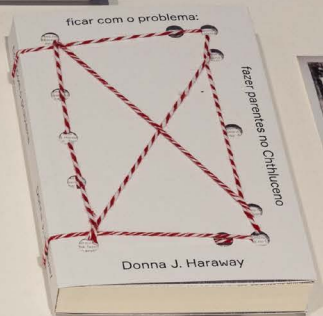
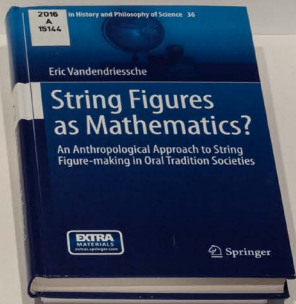
"Vergleichen man die Zeichnungen, die Maude 1969 neu angefertigt hatte, mit denen, die einige Jahre zuvor in Kochs Die materielle Kultur der Ellice-Inseln publiziert worden, findet sich ein bemerkenswertes Übereinstimmen, was die Präzision der Zeichnungen und die Sachkenntnis der Ethnologin beweist."

"If one compares the drawings that Maude had newly made in 1969 with those published a few years earlier in Koch's Die materielle Kultur der Ellice-Inseln, there is a remarkable degree of agreement in the former and Maude from the point of view or stance of the ethnologist, that is, from the front onto."

**Honor Maude**  
**The String Figures of Nauru Island (1971)**

"Die Fadenspiele der Kapitänsinsel Nauru gehören zu den komplizierten der Welt. Viele der Fadenspiele, die heute geübt werden, gehen auf die Wettbewerbe der jüngeren Männer aus der Insel zurück, die – vor allem im vorchristlichen Zeit – jährlich stattfanden, neue Figuren zu schaffen und die neue Erfindungen so schnell wie möglich zu imitieren. Das vererbte der Figuren aus der Papua-Administration. Sie wurde 1937 von Simon Chanio und Davao erworben und über den damaligen Administrator (d. h. den Kolonialgouverneur) von Nauru, Rupert Clark Davis, Bankiert von seinen Mitarbeitern."

"The string figures of the Pacific Island of Nauru are the most complex in the world. Many of the string which are called kawada, go back to the competitive young men on the island, who – especially in pre-times – competed annually in creating new figure, letting the newly invented ones as quickly as possible. The figures were inherited from the Papua Administration. It was 1937, the then-Administrator (i. e., the colonial governor) Rupert Clark Davis, Banked by members of his sta-



This figure was invented by Simon Stevin in 1637 and was recorded by me during a short visit in 1928. It divides the circumference of many lines. Commonly carried around in the centre with members of his staff the museum ethnologist is interested and we have found in a good deal of arranging to be done between each series of movements. It is absolutely essential for use a string that will slip easily; the plaited hair string used by the Burmese makes complicated figures such as this comparatively easy to manage. The illustration shows the result when worked with a nylon string.

**Eric Vandendriessche**  
**String figures as mathematics?**  
(2015)

Ein Prozess zur Erstellung von Fadenfiguren kann als eine Reihe "vielerseitiger Bewegungen" oder "vielerseitiger Operationen" in dem Sinne analysiert werden, dass die Erstellung einer beliebigen Fadenfigur eines bestimmten Komplex durchs Begegnen auf eine bestimmte Anzahl dieser Operationen heruntergebrochen werden kann. Eine Fadenfigur kann somit als das Ergebnis eines Prozesses betrachtet werden, die aus einer Abfolge von Elementaroperationen besteht (1).

"A string figure-making process can be analyzed as a series of

**Donna Haraway**  
**Ficar com o problema [Staying with the trouble]** (2016)

Als die Kulturwissenschaftlerin Karin Haraway Haraways Buch *Staying with the Trouble* (2016) ins Deutsche übersetzt wurde, sah ich mich mit dem Begriff *Homocentrismus* auseinander. Haraway und Haraway schreiben, dass Begriff nicht nur die Übersetzung von string figures zu verstehen, sondern von Fadenfiguren zu sprechen. Es ist schade, dass sie es für besser halten, wenn Haraway ins Portugiesisch, Maria Luísa Rocha da die Betrachtung von Homocentrismus – als eine feministische Art der Begegnung – sehr hilfreich, um zu verstehen, in welches Wissen ich einbezogen werde. Translated from German by [illegible]

**Museum of Archaeology & Anthropology, Cambridge**  
**[Re:]Entanglements: Colonial Collections in Decolonial Times**

(2021–22)  
Fotos aus dem Fotoalbum von H. W. Thomas' anthropologischen surveys der igbo-sprachigen Bevölkerung Südostafrikas, 1910–1913  
Installationsansicht mit View! Designs von Akhuro Iliok, Colombia, begleitet von Thomas' dokumentierten Fadenfiguren

und ihre Zusammenführung in ethnographischen Museen, durch, welche und wie diese Museen und das Objekt der Museen (nicht nur als die Spalte der Menschen) zu verstehen?

"With such seemingly innocuous string games in different regions quarrels and folktales. We know we have been thoroughly caught up in history's [...] strands of so-called social hierarchy called 'primitive groups', or cultural evolution, in the 19th





Caroline Monnet  
*Mobilize*



# Situating Universals

Film and string figures formed a connection early on. Film was the medium of choice to do justice to the processuality, performativity and embodied practice of string figures. String figure expert Kathleen Haddon went so far as to describe string figures as a cinematic form. One source for anthropological films of string figures is the historical collection *Encyclopaedia Cinematographica*, or EC for short. Managed by the Institute for Scientific Film in Göttingen, Germany, the EC was a large-scale cinematic research project aimed at collecting and preserving the movements of animals, people and materials on celluloid. In this collection of several thousand films—which was driven by a post-war claim to universalism and the presumptuous idea of salvaging cultures—there are seven films of people playing string games from Europe, North and South America and Oceania.

Many artists have explored this fascinating and intimidating collection and some of them dedicated their work specifically to string figures. They reenacted films, like Katrien Vermeire, or (playfully) reappropriated them and turned the EC's historical-ethnological gaze to the present, as in the work by Edgar Calel and Maju Vicentin.

The demands for social and ethical justice that have been addressed to museums concerning objects from colonial contexts have recently also reached film archives. In addition to the questions of provenance, rightful ownership and restitution, films raise questions of visual justice. For the exhibition, we followed two of the EC films more closely, and invited performers and heritage institutions to add their contemporary perspective to the historical material in the sense of a re-entanglement. Furthermore, we developed various interfaces to critically scrutinize and carefully activate the EC collection.











»kape«

»sele paala«  
'Schlingenfang  
der Königsmakrele'

»Na Umako«  
'Herr Umako'

»Surprise Game«

Teaeaki  
on Onotoa

te ikawai«  
e, der Alte'



»natu kiri eta«  
„aufwärts  
gerichteter Hundekopf“

Zw  
ansch

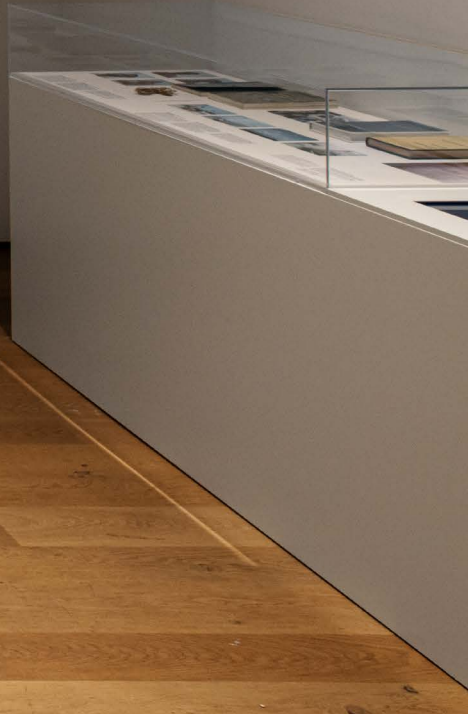


8 aufeinanderfolgende Figuren:

- Bannst
- Toppig
- Mithras
- Winge
- Toppig
- Fisch
- Kille
- Bollen













**Fadenspiele in Basel, Schweiz, Europa**  
 Im Film E 1736 aus der Encyclopaedia Cinematographica sehen wir Ruth und Gertrud Beriger, nun Ruth Altenbach und Dunia Lingner, spielen Saitenspiele auf dem Dach des Naturhistorischen Museums Basel vor dem Biologen Hans Rudolf Haefelfinger. Das Foto zeigt die beiden auf dem Dach des Naturhistorischen Museums Basel vor dem Biologen Hans Rudolf Haefelfinger. Die Szene wurde 1969 auf dem Dach des Naturhistorischen Museums Basel vor dem Biologen Hans Rudolf Haefelfinger gedreht. Wie der Brief Haefelfingers an das Institut, das die EC herausgab, verdeutlicht, war die Idee von neuen Darstellungsformen geboren. Das Fadenspielen schien ursprünglich reiner Medien wie Fernsehen oder Comics dem BetrachterInnen genehmigt. Die Anspielung zum Film deutet an, dass das Fadenspielen meist "epidemienartig" auftritt und sich rasch von Schicht zu Schicht ausbreitet. *Das Diagrammspielzeug aus Basel, das seit vorerst hundert Jahren in Kiribati geübt wird, gelangt die Lebenswelt der Kinder weltweit. (Maimachinski, in: Ethnologen der neu 'Delffonstange' wird s' Glättbrätt, eine Figur, die von Gertrud/Dunia selbst erfunden wurde.*

**String Figures in Basel, Switzerland, Europe**  
 In the film E 1736 from the Encyclopaedia Cinematographica we see Ruth and Gertrud Beriger, now Ruth Altenbach and Dunia Lingner, playing string games. The film was made in 1969 on the roof of the Natural History Museum in Basel by the biologist Hans Rudolf Haefelfinger. As Haefelfinger's letter to the institute that published the EC makes clear, the film was inspired by the idea of salvaging. The string game seemed doomed to disappear in the face of new media such as television and comics. The text accompanying the film states that string games were mostly "epidemic-like" and eventually spread from schools to entire neighborhoods. The repertoire of figures from Basel, which is far less complex than in Kiribati, for example, reflects the children's world: s' Naimaschinli (sewing machine), dr Eiffelturm (Eiffel Tower), which becomes the Delffonstange (telephone pole), and s' Glättbrätt (ironing board), a figure invented by Gertrud/Dunia herself.

**Screenshots: MittelEuropa, Basel-Land - Fadenspiele 1975, Hans Rudolf Haefelfinger**  
 Screenshots: Interview mit Dunia Lingner und Ruth Altenbach (2024, Pat Eick)  
 Archivlink: Korrespondenz Haefelfingers mit dem IWF (1970), IIF  
 Belegtext: MittelEuropa, Basel-Land Fadenspiele 1975, Hans Rudolf Haefelfinger  
 Fadenspielfiguren von Dunia Lingner

**String Figures in Basel**

In the film E 1736 from the Encyclopaedia Cinematographica, we see Ruth and Gertrud Beriger, now Ruth Altenbach and Dunia Lingner, playing string games. The film was made in 1969 on the roof of the Natural History Museum in Basel by the biologist Hans Rudolf Haefelfinger. As Haefelfinger's letter to the institute that published the EC makes clear, the film was inspired by the idea of salvaging: The string game seemed doomed to disappear in the face of new media such as television and comics. The text accompanying the film states that string games were mostly "epidemic-like" and eventually spread from schools to entire neighborhoods. The repertoire of figures from Basel, which is far less complex than in Kiribati, for example, reflects the children's world: s' Naimaschinli (sewing machine), dr Eiffelturm (Eiffel Tower), which becomes the Delffonstange (telephone pole), and s' Glättbrätt (ironing board), a figure invented by Gertrud/Dunia herself.

**One Step Only**

Haefelfinger worked at the Natural History Museum at a time when the door between this museum and the Museum of Ethnology and Folklore (now Museum of Cultures) was wide open. Visitors could cross the boundary between "nature" and "culture" with just one step. As curator of the mollusk collection, Haefelfinger specialized in snails. He collected them and produced highly aesthetic films of them for the EC. However, Haefelfinger's only scientific film focusing on human movement processes was the one he made about string figures.

**The Systematization of Humans and Animals**

The inclusion of Haefelfinger's film in the EC meant that it was incorporated into the EC's classification scheme. The labeling of the filmed people differed fundamentally in European folklore and non-European ethnology: for films from Europe, a geographical description was chosen (such as "Central Europe, Basel-Land"), whereas for non-European films, ethnic or ethnolinguistic descriptions (such as



**Ein Schritt nur**  
Haefelfinger war in seiner Zeit am Naturhistorischen Museum tätig, in der die Tür zwischen diesem und dem Museum für Vögel- und Wildtunde (heute Museum der Kultur) weit geöffnet stand. Mit einem Schritt nur konnten die Besucher across die Grenze zwischen Natur und Kultur überwinden. Als Kurator der Westtierausstellung war Haefelfinger spezialisiert auf Schreien. Diese sammelte er und fertigte hochauftatliche Filme für die EC vor ihnen an. Wissenschaftliche Filme von menschlichen Bewegungsformen fertigte Haefelfinger hingegen nur von Federreptilien an.

**One step only**  
Haefelfinger worked at the Natural History Museum at a time when the door between this museum and the Museums of Ethnology and Folklore (now Museum of Culture) was wide open. Visitors could cross the boundary between nature and culture with just one step. As curator of the wildlife collection, Haefelfinger was specialised in snails. He collected them and produced highly aesthetic films of them for the EC. However, Haefelfinger's only scientific film focussing on human movement processes was the one he made about string figures.

**Gebäude von Pellikantfüßen. Sammlung Haefelfinger. Naturhistorisches Museum Basel**  
Screenshots: *Aporrhais pespelecani (Prosobranchia) – Lokomotion* (1967; Hans Rudolf Haefelfinger)

**Die Systematisierung von Menschen und Tieren**  
Mit der Arbeit an zwei Haefelfinger-Filmen in die EC wurde deutlich, in der Chronologietheorie der EC angelegt. Die Beschäftigung mit dem geographischen Mittelmeer verknüpfte sich in der menschlichen Ethnologie und der systematischen Zoologie. In der Form des EC wurde eine geographische Beschreibung der Filme hergestellt. Basel, Land, bei dem geographischen Filmen hingegen oft nur die roten ethnologischen Zuschreibungen (wie 'Polynesien'), die sich auf die biologischen Chronologien beziehen, waren. Das Glied der Filmen ist jedoch nicht. Das Glied der Filmen ist jedoch nicht. Das Glied der Filmen ist jedoch nicht.

**The systematization of humans and animals**  
The inclusion of Haefelfinger's film in the EC was incorporated into the EC's classical labeling of the filmed people. Different geographical locations and non-European of Europe, a geographical description of 'Central Europe, Basel, Land', where films, ethnic or ethnological descriptions of 'Polynesians' were chosen, which were logical classifications schemes. 'Polynesians' were chosen, which were logical classifications schemes. 'Polynesians' were chosen, which were logical classifications schemes.

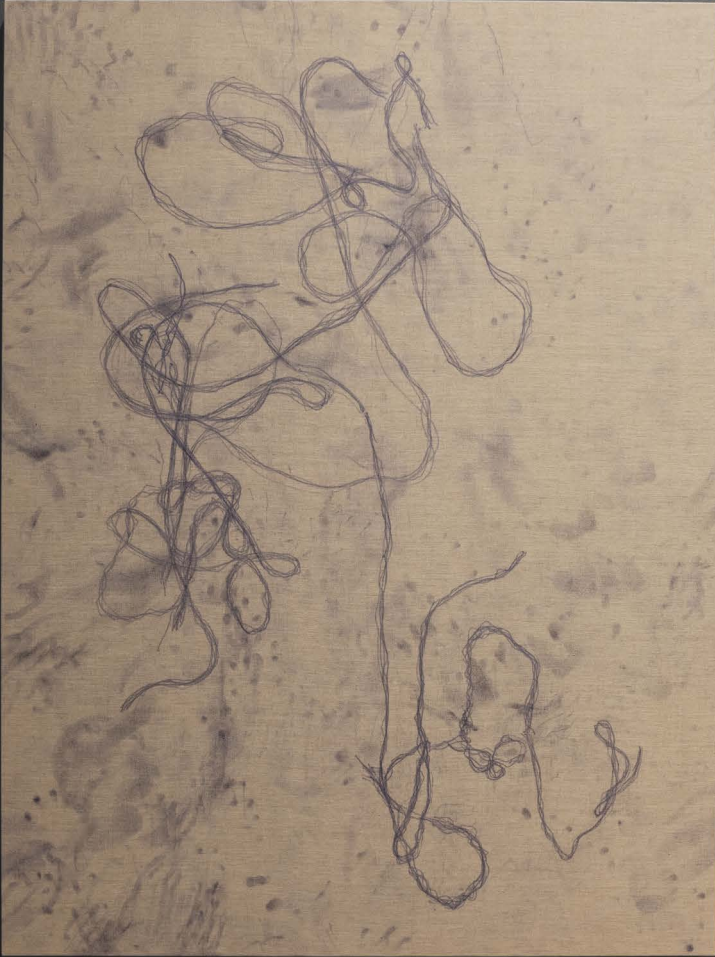
"Polynesians") were chosen, which were explicitly based on the biological classification scheme. The founder of the film encyclopedia wrote: "Tribal names take the place of animal names." This difference in the naming of films of European and non-European people, in which the latter are equated with animals, is racist. The keywording scheme was not only a model for thousands of EC films, but is still reproduced in the online catalog today.

**From left to right:**

- Screenshots: *Mitteuropa, Basel-Land-Fadenspiele* (1975, Hans Rudolf Haefelfinger)
- Screenshots: *Interview with Dunia Lingner and Ruth Altenbach* (2024, Piet Esch)
- Archive: Correspondence of Haefelfinger with the IWF (1970), TIB
- Accompanying text: *Mitteuropa, Basel-Land-Fadenspiele* (1975, Hans Rudolf Haefelfinger)
- Dunia Lingner's String
- Case of pelican feet, Haefelfinger Collection, Natural History Museum Basel
- Screenshots: *Aporrhais pespelecani (Prosobranchia) – Lokomotion* (1967, Hans Rudolf Haefelfinger)
- 16mm EC film reel, Natural History Museum Basel
- Diagram: Production figures of EC films







## Room 3

# Taking off, Passing on, Letting go

SF is a sign for science fiction, speculative feminism, science fantasy, speculative fabulation, science fact, and also, string figures. Playing games of string figures is about giving and receiving patterns, dropping threads and failing but sometimes finding something that works, something consequential and maybe even beautiful, that wasn't there before [...]. Donna Haraway, *Staying with the Trouble*

In recent years, string figures have experienced a boom in both art and theory. This is largely due to the feminist scholar Donna Haraway, who has been using cat's cradle as a metaphor for transdisciplinary collaborations since the 1990s, and who introduced string figures to the global art world with her contribution to documenta 13. Haraway's string figures—or SF—provide a playful, process-oriented, embodied, and non-Western way of thinking, emphasizing responsibility. SF served as an inspiration for artists to devise boundary-crossing connections between usually separated worlds and new relational aesthetics.

The relationality of string games was already sedimented in art history before Haraway's SF. The relationships between the works of Marcel Duchamp, Maya Deren and Maureen Lander bear witness to this. While Lander's reappropriation of Duchamp's suitcase museum encapsulates a call for the provincialization of the European avant-garde, Deren reckoned with the male-dominated New York art world by symbolically strangling a string game-playing Duchamp by cinematic means.

We also invited artists to play a part in the exhibition's cat's cradle, such as Toby Christian with his AI *Stringer*, which created a piece based on the input of names of string figures common in Basel.



Small text label on the left wall.

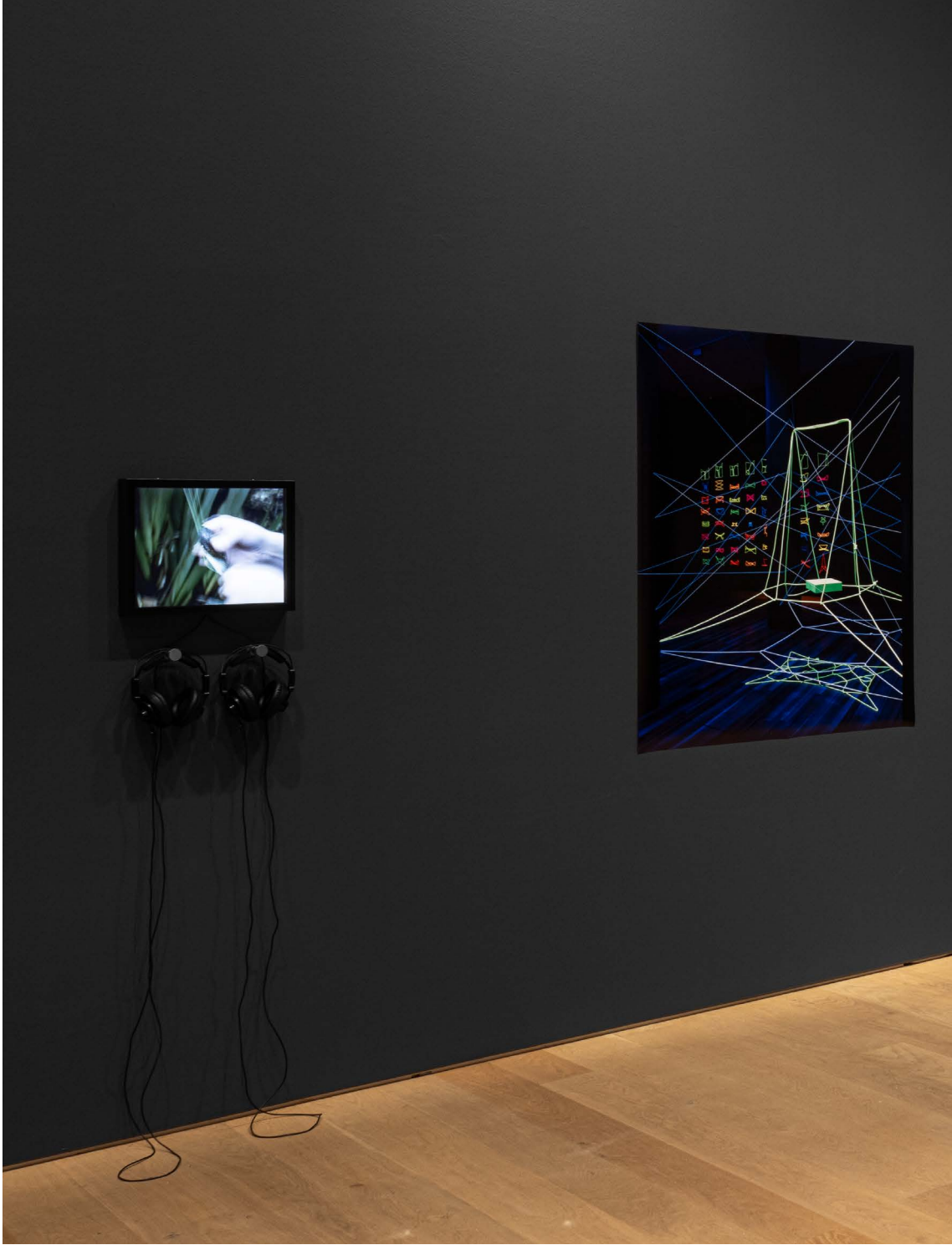
Small text label on the right wall.



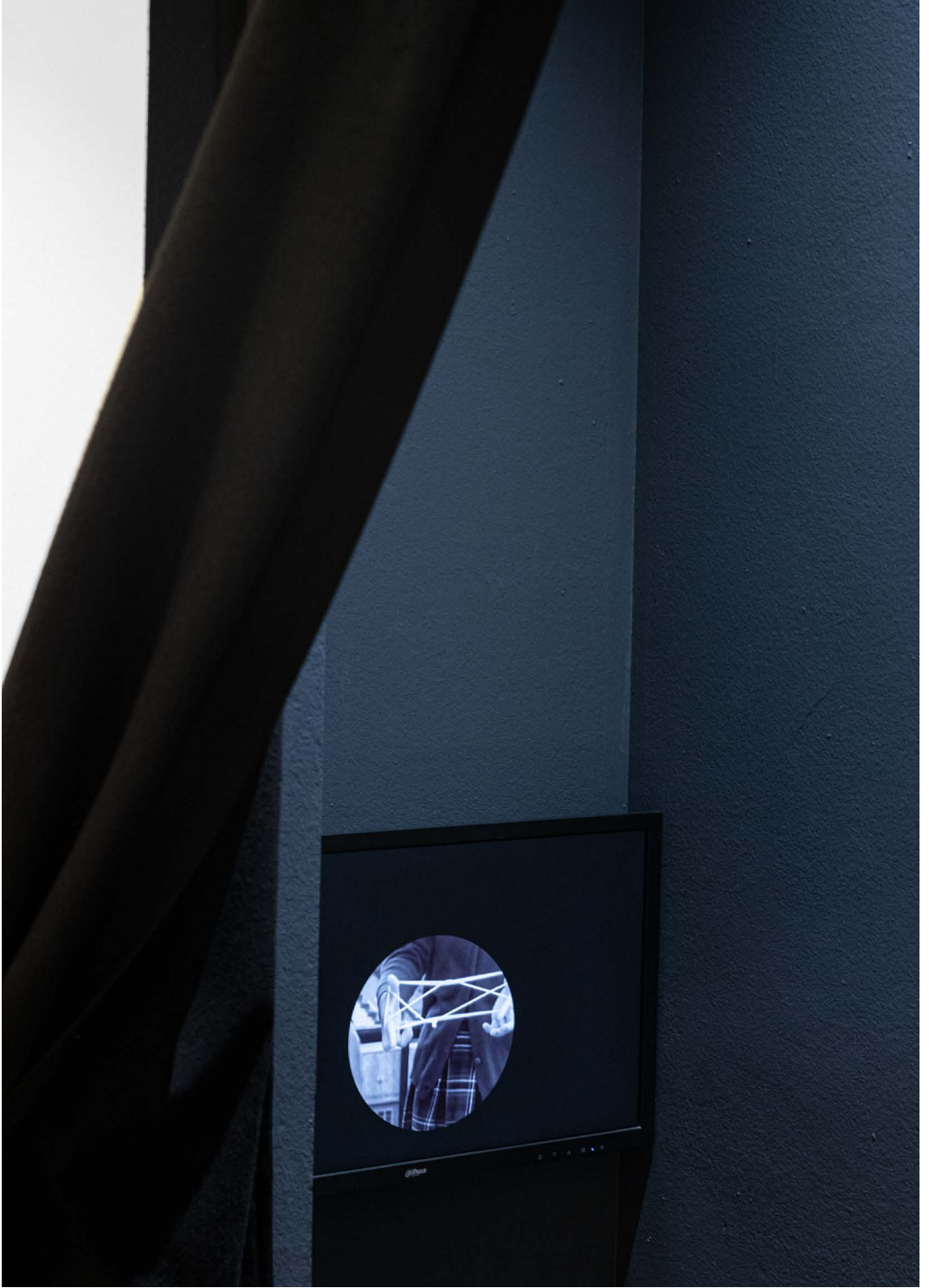
Paper Tiger Television  
Donna Haraway reads "The National Geographic"

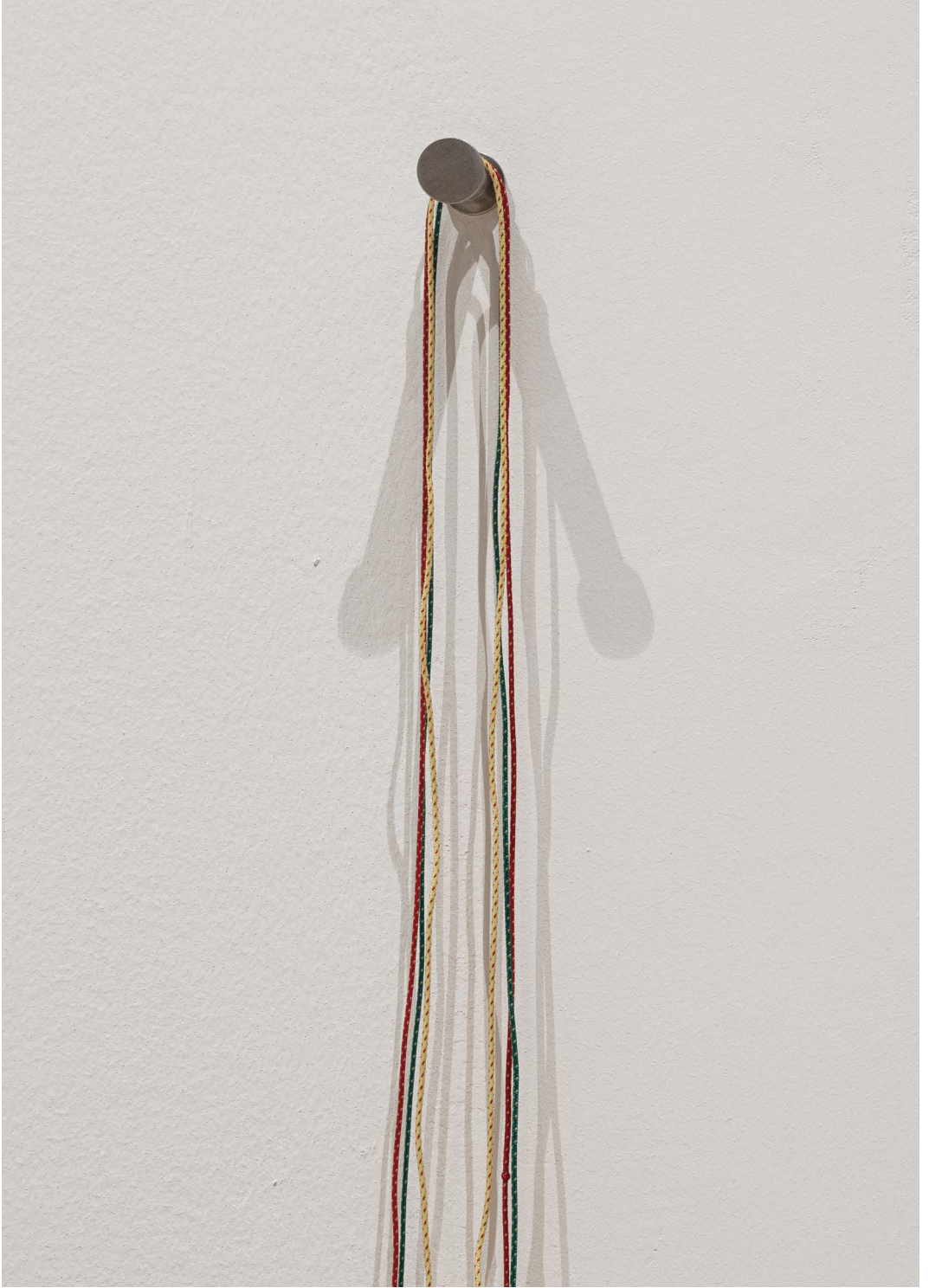


Fabrizio Terranova, Donna Haraway  
Story Telling for Earthly Survival











### **III. Exhibits in Focus**

Static Figures, Ephemeral Stories



David Ket'acik Nicolai

## **A Reflection on String Figures and That One Time They Went Viral On My TikTok Channel**

My name is David Nicolai and I was born and raised in Anchorage, Alaska, where I still currently reside. I am Yup'ik, one of Alaska's many Indigenous peoples. My traditional Yup'ik name is Keta'cik, after my paternal grandfather. My parents are Matthew and Margaret Nicolai. My dad is from Kwethluk, Alaska, on the Kuskokwim River near Bethel. My mom is from Anchorage; her mom Angelline Gamache (nee Parent) is from Crooked Creek, Alaska, and my mom's dad, Clarence Gamache, is from North Adams, Massachusetts.

When I was growing up, I learned string figures, or *airraq* from my dad and from his mom, Anna K. Nicolai. One year in the early 1990s, a traveling storyteller by the name of David Titus came by my elementary school. He was a string storyteller and travelled around the world, presenting to schools and other organizations. That day, after his presentation at my elementary school, my mom stopped him and invited him to dinner at our house. He had stumbled upon my family, at a rare time when my grandmother Anna was visiting Anchorage. For the whole weekend, we shared string figures with each other. Several years later, I coauthored a book with David Titus called *Native Alaskan String Figures*. It is available at [stringfigurestore.com](http://stringfigurestore.com).

For five summers from 1999–2004 I worked at a local museum called the Alaska Native Heritage Center, where I presented string figures four times a day, five days a week, for thirty minutes at a time to tourists and other visitors of the museum. These experiences allowed me to improve my presentation of string figures.



Fig. 1: David Nicolai playing Mountain and Sunset in his viral TikTok video from 2022.

The shows included crowds ranging from several people to packed audiences of 300 at a time. I continue to share string figures with audiences to this day, and one of my favorite things is seeing the childlike delight on faces when people watch my string figures.

As digital media has progressed, I have worked to keep sharing string figures in new ways. I have shared string figures through my YouTube channel and in short videos on my other social media accounts like Twitter and Facebook.<sup>1</sup> When TikTok and the COVID-19 pandemic came along, I created a new channel to share string figures, mainly as a way to keep myself busy in the world we were in at the time (@ketacik).

I shared bits and pieces here and there, but until one of my videos went viral, I didn't pay that much attention to the channel. One of my videos on TikTok featuring Mountains and Sunset started taking off on a random weekday evening.

It happens to be my favorite string figure, because I love the motion of the sunset in what would otherwise seem to be a static string figure. I also love how the motion of the sunset surprises people when they see it. I chuckled to myself and found it endearing that my popular video had (at bedtime) around 2,000 views. When I woke up in the morning, it was over 15,000 views and still climbing. By midafternoon, it was over 40,000 views, and I thought it was nearing the end of its run. I had so much fun watching the view count increase, and it ultimately had around 1,200,000 views after just three days. I would keep taking screenshots and sharing them with my wife, my family, and some friends. I was honored, and I continue to be honored that the internet found one of my videos amusing.

As my viral video took off, my wife encouraged me to create and upload more videos. I spent some time learning more about editing videos for TikTok and uploaded many string figure videos to capture my fifteen minutes of fame on the internet, and share more string figures with the largest audience I'd had to date.

I love sharing string figures and I am so happy that my TikTok channel allowed me to reach thousands of people. I hope

<sup>1</sup> See <https://www.youtube.com/user/DaveKitaqNicolai> (accessed January 3, 2025).

my string figures put smiles on faces, and I hope that people are encouraged to learn more about string figures after watching my content. It is an absolute pleasure to share string figures with the world.

Adam Piron

## **Powered by Indigenous Life and Grit** On Caroline Monnet's *Mobilize*



Fig. 1: Screenshot of Caroline Monnet's *Mobilize* (2015).

Like a steady pulse, Caroline Monnet's film *Mobilize* opens boldly on visual and sonic rhythm. Concurrent images of an elderly, albeit agile, Indigenous man and woman's hands weave sinew in and out of the wooden frame of a snowshoe while a metronomic ticking sound counts down. This builds to a new montage of clips somewhere in Canada's northern forests: an Indigenous man utilizing similar footwear to traverse the snow with an ax, another chops at a tree, a set of hands stringing a boat together from arboreal elements, and a canoe is steered down a river by a man at dawn. Now audible and in sync with the ticking is a drum beat, loud, proud, and near cardiovascular. A mere forty-five seconds into its breathtaking three-and-a-half minute runtime, Monnet directs viewers on how to approach this work's shape, cadence, and intent.

A multidisciplinary artist known for her work experimenting with industrial materials' processes and grappling with the impacts of colonialism, Monnet's *Mobilize* fits a unique space within her oeuvre. Across her body of work spanning sculpture, installations, and cinema, this short film keeps with the artist's methodology of reworking industrial elements in that it is composed completely from found footage and to this date Monnet's only cinematic work to be fashioned by such means. Originally a part of *Souvenir*, a 2015 quartet of short films commissioned by the National Film Board of Canada aimed to address Indigenous identity and representation through reworked material from their archives, *Mobilize* stands out as an act of cinematic reappropriation. With the other entries of the series directed by filmmakers Kent Monkman, Jeff Barnaby, and Michelle Latimer, Monnet's film differs not so much in its use of montage and intercutting but more so in the complexity of its concerns, with its formal approach acting as a direct reflection of them. In a 2016 interview with the online publication *postPerspective*, Monnet stated: "I decided to focus on a positive representation of Natives and explored the idea of moving forward. I used images with movement, people building stuff and showing off their skills. Really just Natives kicking ass on screen!"<sup>1</sup> More than just a call for a change of perception, Monnet strings together 16mm celluloid footage from NFB archival films such as *Cree Hunters of Mistassini* (1974), *César et son canot d'écorce* (1971) and *High Steel* (1965), to dismantle the anthropological gaze, with all of its urges toward salvage ethnography, and refashion it into something like a prismatic celebration of Indigeneity in its multitudes and its resilience within complex systems, both natural and man-made.

Taking off from the initial canoe and drum beat sequence, *Mobilize* begins to hit its early stride as it starts to weave a web of these structures that the Indigenous subjects of the original material find themselves navigating. It's crucial also to note that the accompanying track, *Uja* by Tanya Tagaq, also starts kicking into high gear with the swelling of Inuit throat singing now lead-

1 Kristine Pregot, "Quick Chat from Sundance: 'Mobilize' director Caroline Monnet," February 3, 2016, *postPerspective*, <https://postperspective.com/quick-chat-from-sundance-mobilize-director-caroline-monnet/> (accessed July 29, 2024).

ing the sonic pacing. From the reappropriated moving images, we see the intercutting of a number of processes: Indigenous people traversing the forests, navigating canoes over waters, building cabins in the woods, living on the icy plains, working strings in a cat's cradle, and fastening steel beams in construction sites before a quick cut to black (fig. 1 and 2). Across this series of Monnet's rapid montage, Indigeneity is seen to be not only thriving across and within interconnected ecosystems, but also moving at a velocity counter to the assumptions of the original ethnographic footage, their intent to capture seemingly dying Aboriginal cultures. The inclusion of children throughout these clips challenges the anthropological leanings of the original footage in that Monnet reconfigures this breadth of Indigeneity across generations, with a younger one creating new possibilities and finding joy in walks in the woods, boarding an airplane, or tangling the strings of a cat's cradle into new shapes and imagined potentials. Paired with this, Monnet's selection of Tagaq's song is apt, with the Inuk musician utilizing voiced and unvoiced sounds, both through heavy inhalation and exhalation, that add to the film's vibrancy of not only its subjects and their recontextualization, but also to the work itself as a very living document.



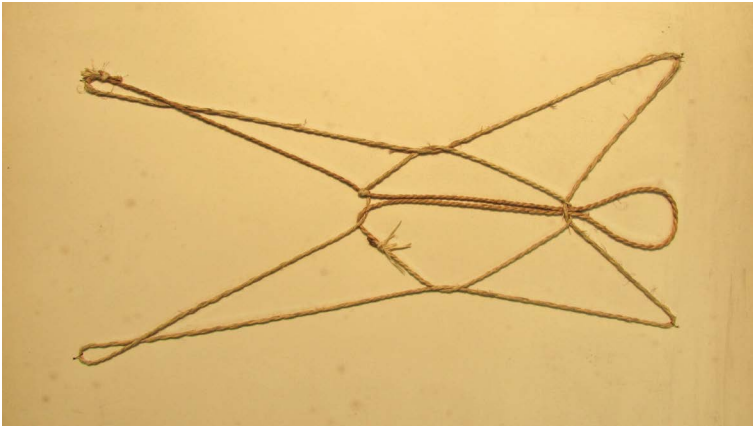
Fig. 2: Screenshot of Caroline Monnet's *Mobilize* (2015).

The coup of Monnet's approach manifests itself after the previously described cut to black. In the blink of an eye, a new progression of clips of urban life hits a fever pitch, the edits increasingly faster and Tagaq's music touching its crescendo. The landscape of the film has moved from natural ecosystems threaded together, from trees to rivers to the ocean, and on to the complexities and machinations of a city interlaced by roads, underground rail systems, and edifices constructed by Indigenous steel workers to further compartmentalize labor and lifestyles. The conventional approach to this new visual setting, especially in film as it relates to racist stereotypes of Indigenous people, would be to mark the loss of culture or the tragic alienation of the Aboriginal. Monnet's masterful turn with reconfiguring this footage adds thematically and re-envisioning an extension to the life and landscapes shown at *Mobilize's* opening. From rural nature and its communities to the concrete wilderness of urban centers, Indigeneity is woven throughout by a living mesh of sinew, lumber, and steel. Little differentiation is made between the flannelled Indigenous man in the woods felling trees to the young Indigenous woman in a bright green mini dress braving foot traffic downtown in the city. For as much as Monnet's film concerns itself with systems, processes, and the Indigenous people that sustain them, it is a work that is similarly self-revealing about its own rhythmic making in motion. Like the breadth and interconnections of the landscapes its subjects cross, *Mobilize* is its own organic machine powered by Indigenous life and grit.

## Strings, Relations, Associations

### On Figures from the Upper Rio Negro

The Ethnological Museum Berlin holds around 1,000 cultural belongings of Indigenous groups from the Upper Rio Negro (north-west Amazonia), most of them collected by ethnologist Theodor Koch-Grünberg. Amongst beautiful feather ornaments, powerful rattle lances and enigmatic masks, the string figures, which are mounted on cardboard and depict animals or celestial bodies, play a rather subordinate role. No one has paid them any particular attention so far. The collector himself documented the figures only sparsely, and only mentions them briefly in his monograph *Zwei Jahre unter den Indianern* (*Two Years among the Indians*).<sup>1</sup> Koch-Grünberg and his successors apparently believed that the cultural complexity of the rituals, the wealth of stories and origin narratives were better represented in other collection items.



1 Theodor Koch-Grünberg, *Zwei Jahre unter den Indianern* (Stuttgart: Strecker und Schröder, 1910), p. 127.

VB. 6610/

Kleiner Vogel.

Tukano: (Haupt), (Länge)

○ = (Haupt) (Länge)

∠ = (Haupt) (Länge)

∞ = (Haupt) (Länge)

∩ = (Haupt) (Länge)

Catalog No. VB. 6610.	No. der Or.-Liste II. Tuk. 1365.	Acten No.
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Kleiner Vogel.

Tukano.  
(Rio Negro).  
(Amazonien)

Röchl. Leipzig  
1991/92

Sammler: Th. Koch-Grünberg

Geber: Kauf.

19

Fig. 1-3: Front, back and collection card of the mounted figure *Kleiner Vogel* (Little Bird) in the Americas collection of the Ethnological Museum Berlin, collected by Theodor Koch-Grünberg in the Upper Rio Negro Region, Inventor from the Tukano people unknown.

A similar situation occurred with the string figures in more recent engagements with the collection. While the museum has been working closely with Indigenous representatives from the region since 2014, nobody felt the necessity to talk about string figures.

However, these cooperations began departing from the historical collection in the museum and subsequently shifted their focus to the demands of the communities. Our joint authorship of this text reflects our collaboration on these projects. One concern has been central since the beginning: the passing on of knowledge from the older to the younger generation, in the form of stories, but also in particular in the form of skilled practice. One of the first workshops held as part of the collaboration hap-

pened to be in the Kotiria community of Macucu on the lower Vaupés (Colombia). It was dedicated to the topic of plant fibers and the various artefacts (ropes, basketry, fish nets) that are made from them. The fibers *kumare* (*Astrocaryum ssp.*) and *yoo* (*Ananas comosus [L] Merr.*), in their versatility and universal use, played a very prominent role. Among many other more mundane things, they are used in the production of dance ornaments.

This first workshop in Macucu changed the way I (Andrea Scholz) think about museum practice. Diana Guzmán Mirigõ and other Indigenous visitors to the collections had previously emphasized again and again that the artefacts of their ancestors act as a kind of ambassador, materializing a relationship between the museum and the territories of their origin. From that moment on, I began to realize how complex the relationships are between “historical objects,” material practices, embodied knowledge, plants, territories and all the beings that have no names in German or English. Beings like Bede-riyo, which Diana mentions in her following text contribution. It seems anything but coincidental that she refers to the above-mentioned fibers *kumare* and *yoo*.

#### ***wahpu waadari/ spider yarns***

The strings appear in this world with the origin of *kumare* and *yoo* fibers. The special work of weaving the strings by women, who have received this art since the beginning of time, is told by the grandparents that Bede-riyo was a woman artisan; she was in charge of weaving long strings of *yoo* fiber and with it weaving the garters used by the dancers, tying the feather boxes and the feathers. As a result of a betrayal, she was tricked and sent to the top of a tree, where she remained for a long time. One day a backpacker bird she had raised saw her and she asked it to bring her the *yoo* tube from her house. She tied the strings to the top of the tree where she was and then let it fall to the ground to punish the one who had done her wrong.

From that day on the strings that are woven are made remembering Bede-riyo and her story. The figures that are formed with the strings refer to stories about some special animal or object, some recall the backpacker bird that helped Bede-riyo, others bring to mind the origin of butterflies, usually the game is accompanied by a story. The braiding with the hands was given from the visions that the men had at the time of consuming *yagé* in a dance, then they were taught to others to accompany the stories or advice given to children and young people.

Today this game is no longer practiced, and many of the stories that accompany them have been lost unfortunately. But they represent a very nice way to guide and talk from the origin of things and the life of humanity on earth.<sup>2</sup>

In the following, I will allow myself to play with Diana's words and weave a string figure of associations from the various aspects that strike me.

Firstly, she explicitly refers to the (sometimes overlapping) interplay between feminine and masculine practices and influences, a dominant motif in the stories of the Upper Rio Negro. While the strings have their origins in the sphere of women and with the grandmother Bede-riyo, it is the men whose visions in the ayahuasca (*yagé*) intoxication provide the form of the figures. In practice, this model-like interplay is overlaid by an unmistakable dominance of male perspectives. Regarding the museum, it starts with the collectors and their documentation and continues with the protagonists and their narratives in collaborative projects (that I know of) with stakeholders from the Upper Rio Negro. It may seem rather far-fetched, but I read the text as an invitation to become aware of this gender bias and to reflect more strongly on the roles and perspectives of women.

Secondly, the text addresses an important, but also frequently overlooked aspect of the relationship between the museum and Indigenous communities: The preservation of knowledge beyond the purely material presence of objects. Artefacts are the materialized result of practices, and figures in general (not only string figures) are metonyms of stories. With the loss of certain practices, not only do certain objects disappear from the communities, but also a universe of narratives that refer to the origin of the visible world.

Finally, the text ends with an appeal to pay attention to the string figures (and thus perhaps also to other elements of our cooperation that have so far received little consideration), and to be guided by them while talking about "the origin of things and the life of humanity on earth." Sometimes it is perhaps the rather inconspicuous things that help us to find out what is important.

2 Text by Diana Guzmán Mirigö, translation by Andrea Scholz.

Andres Pardey

## A Door to the Imagination

On Andy Warhol's *Screen Test: Harry Smith*



Fig. 1: Andy Warhol, *Screen Test: Harry Smith* (1964), screenshot 1:35min. Smith seems to hold the figure *Neneuri 1* into the camera. See Fig. 95a, in Honor Maude and Henry Evans Maude, *String Figures from the Gilbert Islands* (Wellington, 1958). The name of this figure was pointed out to me by Philip Noble after consulting with Stephan Claassen and Mark Sherman, all members of the International String Figure Association (ISFA).

The *Screen Tests*, a series made between 1964 and 1966 by Andy Warhol, comprises around 500 films, of which 472 have survived.<sup>1</sup> They are short films in which a single person sits in front of a static camera. The three minutes on the 16mm reels in Warhol's Bolex were used in very different ways by the individual sitters. Whereas at first Warhol instructed them not to move or even blink, he later dropped this strict approach. Some continued to stay completely still, some were overcome by their emotions and cried, some pulled silly faces, Lou Reed drank a Coke, Baby Jane

<sup>1</sup> Warhol's *Screen Tests* are very different to those used in the film industry as part of the casting process, which go much further, often requiring the performance of sequences focussing more on the acting skills and aesthetic qualities of those being tested.

Holzer brushed her teeth, Nico flirted with the camera, people read magazines and newspapers, Salvador Dalí presented his moustache, Marcel Duchamp smoked a cigar and seemed to be having a good time. The films were always silent. Interestingly, the few *Screen Tests* that can be found online mostly have music added to them: sometimes it has clearly been chosen to fit the sitter in question, but often it is bland elevator music whose sole function seems to be to break the silence.

The *Screen Tests* were inspired on the one hand by Warhol's interest in the mugshots he found in an NYC Police Department booklet entitled *The Thirteen Most Wanted* and that he used for his mural for the New York State Pavilion at the 1964 World's Fair (but that was painted over in silver before the opening due to political objections). Warhol was also inspired by photo-booth images, meaning that the *Screen Tests* draw on two extremely different forms of portrait photography: on the one hand, pictures taken under duress by the police that aim to capture the suspect's facial features and shape of head as accurately as possible and, on the other, the often playful images produced by automatic photo booths. Although often used for passports and other official documents, such pictures are just as often made for other purposes, for fun or for friends.

In the *Screen Tests*, lights and lighting play an important part. Warhol set up the lighting for each individual film, combining it with various backdrops to create very different moods. Sometimes he chose direct light for a sharply defined image (as is the case for mugshots), and sometimes the light was so dim and gloomy that the sitter's face was almost unidentifiable.

The artist, collector, filmmaker, anthropologist and musician Harry Smith underwent the process of making a *Screen Test* in 1964, in the first period when Warhol had just begun the series. The background is black, offering no details. The lighting is installed at eye-level; a lamp standing slightly to the right of the camera sheds a gentle light on the sitter. The lens's depth of focus is relatively small so that Smith's head becomes blurred when he leans forward. He is seated and his first gesture is to move his right hand, fingers spread, in a semicircular movement past his face. He speaks to a person who must be standing to the

left of the camera, his upper body slumps to the left and then, as he straightens up again, Smith balls his right hand to an open fist and looks through it with his left eye. This brief opening sequence concludes with Smith slowly standing up—for a short time, only his upper body is visible, filling the frame—and sitting back down again, moving his clenched right hand past the camera again. Now that he is sitting again, the dramatic, almost expressive mood changes, Smith's face relaxes and he turns his attention to something else that soon proves to be a string game. Fully concentrated on the string, but with a relaxed facial expression, he makes a first figure which, suddenly sitting up, he then presents to the camera. He soon holds up another, more complex figure that he comments on with a crooked mouth (fig. 1). Turning back to the strings that mostly remain hidden from view, he concentrates on the game, looking from one hand to the other, lowering his head before apparently starting from scratch without having shown the result. This unseen quality of the string game gives the film a third level, in addition to the screen and the viewer, adding a layer of speculation, something that must be guessed at, opening a door to the imagination. Towards the end of the film, he shows another figure that can be made to move along the strings by pulling the ends,<sup>2</sup> immediately unravelling it and quickly showing another with regular zigzags running between the main strings.<sup>3</sup> Then the reel of 16mm film ends and the film fades out.

As a youth, Harry Smith (born 1923 in Portland, Oregon, died 1991 in New York City) developed an interest in the life and culture of Native American peoples like the Lummi and the Salish (his mother worked as a teacher on a Lummi reservation).<sup>4</sup> In 1952, he released his *Anthology of American Folk Music*, based on the record collection he had started building as a teenager. In New York, where he lived from 1951, he completed his first abstract films, some of which were drawn, painted and stenciled directly onto the cellu-

2 Two Foxes, Fig. 253, in Caroline Furness Jayne, *String Figures and How to Make Them* (New York: Dover Publications, 1962).

3 King Fish, Fig. 87, *ibid.*

4 For information on Harry Smith's biography, see <https://harrysmitharchives.com/biography/full/> and <https://harrysmitharchives.com/curriculum-vitae/> (accessed August 20, 2024).

loid, a selection of which he grouped together in 1964 under the title *Early Abstractions*. At this time, such camera-free filmmaking was practiced by various artists who sought to generate emotions and movement by working on the film stock directly, avoiding the usual need for elaborate technical equipment. Smith defined his work as follows: “My cinematic excreta is of four varieties: batiked abstractions made directly on film between 1939 and 1946; optically printed non-objective studies composed around 1950; semi-realistic animated collages made as part of my alchemical labors of 1957 to 1962; and chronologically superimposed photographs of actualities formed since the latter year.”<sup>5</sup>

Over the years, Smith assembled various collections. In addition to the above-mentioned collection of American folk music, he gifted the largest known collection of paper airplanes to the Air Space Museum of the Smithsonian Institute.<sup>6</sup> He also collected textiles, dialects, tarot cards, Ukrainian Easter eggs, and clothes decorated with beads by Native Americans. Of his eclectic collections, which he saw as part of a comprehensive aesthetic memory of humankind, he said: “They are indexes to a great variety of thoughts. They’re like encyclopedias of designs. You can look in the Oxford English Dictionary if you want to study words, but being that the designs on the eggs are so ancient, they’re like 20 or 30 thousand years old, it’s like having something superior to a book.”<sup>7</sup>

Smith’s engagement with many forms of art and culture led him early on to the string games that he understood—like all of the objects he collected—as a universal means of communication. As a phenomenon that exists in different cultures around the world, he credited them with a connecting, (pre-)linguistic quality. Smith described himself as a leading authority in the field of string games, collecting them and using them in films, always searching for a greater whole, a search that drove his creative activity. This is also reflected in the *Screen Test*, with Smith’s presentation of the string games and the accompanying, sometimes theatrical gestures and facial expressions.

5 <https://harrysmitharchives.com/biography/full/> (accessed August 20, 2024).

6 Harry Smith papers, 1888–2010 (bulk 1987–1990), Getty Research Institute, Los Angeles, 2013.M.4.

7 <https://harrysmitharchives.com/biography/full/> (accessed August 20, 2024).

## Members on All Continents

# On the History of the International String Figure Association since 1994

String figures are designs woven on the hands with a loop of string. The designs portray a variety of subjects, both concrete and abstract, and often require a high degree of dexterity to make. Although the original purpose of making string figures remains obscure, they now serve primarily as a form of amusement. Like all games, the making of string figures dissipates surplus energy, strengthens friendships, dispels monotony, and provides mirth.

The International String Figure Association was founded in 1978 by Dr. Hiroshi Noguchi, a Japanese mathematician, and Rev. Philip Noble, an Anglican missionary stationed in Papua New Guinea. The primary goal of our organization is to gather and distribute string figure knowledge, so that future generations will continue to enjoy this ancient pastime. We also encourage the invention of new figures, and enjoy sharing them with others.



Fig. 1: Front covers of *Bulletin of the International String Figure Association*, Volumes 1-21 (1994-2014), ISFA Press, Pasadena, California.

Much of our research has already appeared in *Bulletin of String Figures Association* (Tokyo: Nippon Ayatori Kyokai), which was issued in 19 volumes (1978–1993). *Bulletin of the International String Figure Association* (1994–present, fig. 1) replaces the earlier periodical, expanding its scope and distribution.

In addition to our scholarly *Bulletin*, the International String Figure Association (ISFA) has published documents and videos that address the beginner. For example, from 1996–2007 we published *String Figure Magazine*. It was dedicated to the memory of Caroline Furness Jayne (1873–1909), author of the first book on string figures. Over the years, Jayne’s lavishly illustrated book *String Figures and How to Make Them* has introduced thousands to the fascinating world of string figures.

Like Jayne’s classic volume, *String Figure Magazine* was meant for the beginner. Each issue featured dozens of annotated illustrations that allowed even the most difficult string figure to be made with ease. *String Figure Magazine* also addressed the experienced enthusiast by providing fully revised instructions for string figures whose original descriptions were hard to follow. Elaborate new designs created by our readers were also regularly featured (fig. 2).

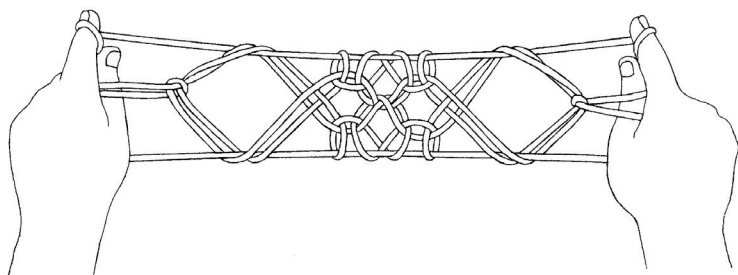


Fig. 2: Nameless string figure created by Joseph D’Antoni of Queens, New York.

From 2008–2013 we published *String Figure of the Month*. Using a series of web pages and step-by-step video clips, we featured twelve string figures and tricks per year. Unlike *String Figure Magazine*, viewers could now experience the subtle hand movements and string tensions that allow string figures to “blossom” (each figure was filmed at least thirty times, and the best “performance” was selected for posting on the web).

Currently all back issues of our *Bulletin*, *Magazine*, and *String Figure of the Month* are available free of charge in our “Members Only” area at [www.isfa.org](http://www.isfa.org). There is no membership fee (starting in 2008 we adopted an “open access” policy). Our members are quite diverse, ranging from artists, poets, storytellers, mathematicians, teachers, surgeons, tour guides, magicians, missionaries, scientists, economists, filmmakers, librarians, politicians, anthropologists—you name it. At one point our membership included a weatherman living at a station in Antarctica, thus giving us members on all seven continents!

My personal connection to string figures has always been a fascination with their “simple complexity.” By that I mean they are extraordinary simple, in that they only require a loop of string to make, but because the number of patterns you can make is virtually unlimited, they are extraordinarily complex (see, for example, some of the finished patterns from the Pacific Island of Nauru, which are illustrated in the back of Jayne’s classic book).

Collaborations have been a regular feature of the work we do. The most prominent example was our effort to rewrite and illustrate the string figures in Diamond Jenness’s classic monograph *Eskimo String Figures*, published in 1924. Our edited version involved seven authors and took ten years to complete. It was published in 2009 as Volume 16 in our *Bulletin* series.

As editor of our *Bulletin* for the past thirty years, my job has varied. Mostly I served as a funnel, a person who proofreads and corrects string figure instructions. In many cases I also served as an illustrator, creating photographs and drawings for authors who lack those skills. Occasionally I was a ghostwriter in cases where the ideas were interesting, but not well written. To safeguard the quality of the information we published, I always made sure that at least two other associate editors examined the manuscripts and verified their accuracy (I must give credit to Joseph D’Antoni of Queens, New York, and Stephan Claassen of Best, Netherlands, for proofreading literally thousands of pages of string figure instructions). But even then a few mistakes inevitably slipped through!

As *Bulletin* editor I also wrote or commissioned the writing of biographies—to me, the people who love and collect string figures

are some of the most interesting people in the world! For example, I am quite proud to be the author of Honor Maude's biography published in Volume 5 of our *Bulletin* series. Her son read it to her when she was in hospital, suffering from pneumonia, but she listened patiently and confirmed each statement ("right" or "quite right"). Our tribute to anthropologist James Hornell published in Volume 7 was also considered a "coup" because it included the first ever complete bibliography of his published works.

In summary, the ISFA exists to help string figure enthusiasts connect and to serve as a vessel for disseminating obscure information that, traditionally, has been difficult to publish elsewhere. We are looking forward to additional preservation work as new collections surface.

Ellen Spielmann

## The Disappearance of a Female Ethnographer

On Dina Dreyfus



Fig. 1: Dina Dreyfus takes notes during the expedition in 1938 to the Nambikwara in Mato Grosso.

I would like to report here on the life of a young French ethnographer about whose activities and scientific contribution very little is known to this day. She moved to Brazil in 1935 with her husband, Claude Lévi-Strauss, and carried out important field research. After 1938, she was completely forgotten. My aim here is not to reveal Dina Dreyfus as a heroine, but to tell her story and present her work.

Dina Dreyfus was born in 1911 into a cosmopolitan, democratic-socialist Jewish family in which education and university attendance were a matter of course, even for daughters. As a student, she worked at the Musée d'ethnographie du Trocadéro

in Paris, which was run by Georges Henry Rivière, and attended Marcel Mauss' lectures.<sup>1</sup> In 1935, she graduated as an anthropologist and had her "Agrégation de l'Université de Paris" in her suitcase when she traveled to São Paulo with the young philosopher Claude Lévi-Strauss, to begin her career. Contracted by the São Paulo Department of Culture, the young professor, now Dina Lévi-Strauss, introduced French ethnography to Brazil. Her inaugural lecture on May 1, 1936, dealt with the question "What is ethnography?" and provided the state of research in English-language anthropology.<sup>2</sup> She also recommended carrying out extensive field studies in Brazil, "both in the deepest hinterland and in the neighborhoods or smallest villages."<sup>3</sup> Dina Lévi-Strauss' ethnography course was conceptualized as a guide to systematic work in the field, providing the tools to carry out field studies: Drawings and sketches, which she considered less "authentic," step back in comparison to photography and film, the main instruments of research.<sup>4</sup> Sixty-three participants, twenty-six of them women, were enrolled in the course. The sessions soon had to be doubled due to the large number of participants. Dina Lévi-Strauss' ethnography course became a social event, the press reported. A further step in her successful career as an anthropologist was the publication of her first book, which presents the results of her course in the form of a handbook.<sup>5</sup> The volume is illustrated with photos of the Lévi-Strauss couple's first travels and field research on the Indigenous Bororó groups in Mato Grosso in 1935/1936.

There is no doubt that Dina Lévi-Strauss played a prominent role in Brazil as early as 1936, when she taught the first ethnography course in the country's history. In 1936, she founded the Soci-

1 See "Rapport sur le travail fourni par les étudiantes en 1932," sent by Rivière on June, 1932 to Marcel Mauss, *Marcel Mauss, Imec*. No. 1176, quoted in Emmanuelle Loyer, *Claude Lévi-Strauss* (Paris: Flammarion, 2015), p. 780.

2 Lévi-Strauss cites Marcel Mauss, *Instructions sommaires pour le collecteurs d'objets ethnographique* (Paris: Musée d'ethnographie du Trocadéro et Mission Dakar-Djibouti, 1931), as well as Robert Harry Loewie, *An Introduction to Culture Anthropology* (New York: Farrar & Rinehart, 1934).

3 Dina Lévi-Strauss, *Instruções práticas para pesquisas de Antropologia física e cultural* (São Paulo: Departamento São Paulo, 1936), p. 8.

4 See "Plan sommaire pour un cours d'ethnologie pratique," Sociedade de Etnografia e Folclore, Acervo Histórico da Discoteca (Historical Archive), Centro Cultural de São Paulo, São Paulo (SEF1, cx.1, doc.2).

5 See Lévi-Strauss, *Instruções práticas*.

ety for Ethnography and Folklore together with the Brazilian head of the Department of Culture, Mário de Andrade, and planned the foundation of an ethnographic museum in São Paulo based on the model of the Trocadéro. When she left Brazil in 1938 and World War II started a short time later, ethnographer Dina Dreyfus “disappeared” from the historical record.<sup>6</sup> There was hardly anything known about her existence as a scientist until 2000, all traces had been systematically erased. Why? Building on Foucault’s writings on the formation of genealogies, the reason can be summarized very briefly: The process of creating a scientific-intellectual genealogy is subject to the demands, restrictions and purity requirements of established paternal-paternalistic practices.<sup>7</sup>

## Dina Dreyfus’ Ethnographic “Crochet Work”

Dina Dreyfus taught her husband the basics of ethnography while working in the field. At least that’s the impression I got from my extensive archive research in São Paulo.

From November 1935 to March 1936, Dina Lévi-Strauss traveled with her husband to the Brazilian hinterland to visit Indigenous groups, to collect data, take photographs and make films. Dina Lévi-Strauss wrote a travel report entitled *Porto Esperança/Caduveu/Nalike*, the existence of which was confirmed for the first time in 2008. As a woman, she had access to the Kadiwéu’s practice of face and body painting, which is only practiced by women on other women. They paint a network of asymmetrical arabesques, volutes and geometric shapes over their faces and bodies. Dina photographed this cultural technique of the Kadiwéu women, she and her husband collected drawings. They certainly discussed the photographs and drawings and hypothesized about Indigenous make-up. Claude Lévi-Strauss later called this

6 See Ellen Spielmann, *Das Verschwinden Dina Lévi-Strauss’ und der Transvestismus Mário de Andrades: Genealogische Rätsel in der Geschichte der Sozial- und Humanwissenschaften im modernen Brasilien* (Berlin: Wissenschaftlicher Verlag, 2003); Ellen Spielmann, *Die Argonauten der letzten terra incognita. Trajekte der wissenschaftlichen Avant-garde: Fernand Braudels, Claude und Dina Lévi-Strauss’ Reisen nach Brasilien* (Berlin: Wissenschaftlicher Verlag, 2018), pp. 111–126.

7 Michel Foucault, *Histoire de la sexualité* (Paris: Gallimard, 1984).

cultural technique “Indian Cosmetics.”<sup>8</sup> Claude and Dina Lévi-Strauss produced five films about the Kadiwéu and Bororo during the journey. Dina Dreyfus prepared and labeled the collection of objects and artifacts for the exhibition *Indiens du Matto Grosso* at the Musée de l’Homme in Paris in 1937. The exhibition was showcasing the work of the “Mission ethnologique au Brésil de Claude et Dina Lévi-Strauss” and a catalog was published, with a foreword by Paul Rivet. In addition to Indigenous ceramics, baskets, weapons and religious cult objects, the exhibition also showed the string figures practiced by the Kadiwéu, which were displayed on wood, most likely prepared by Dina.<sup>9</sup> String figures were part of everyday village life for the Kadiwéu, and thus were part of the subject of everyday life, which according to Rivière was the focus of ethnographic research.

Back in Brazil, Dina and Claude Lévi-Strauss traveled to Mato Grosso to visit the Nambikwara at the beginning of June 1938. For twenty-three days they collected data on everyday life, kinship, names, family relationships, material culture, daily routines and the division of labor among the Nambikwara (fig. 1). Two photos show Dina Lévi-Strauss conducting fieldwork. One shows her observing the weaving of large baskets. In the other, she learns how the Nambikwara women sit with their legs crossed. Here she acts performatively and interactively. It was her fieldwork that provided the ethnological foundation for the Nambikwara study with which Claude Lévi-Strauss legitimized himself as an ethnographer and advanced to become the “thinker of the century,” as a recent Arte TV documentary put it.<sup>10</sup>

Dina Lévi-Strauss was forced to interrupt the expedition prematurely due to an eye disease. She returned directly to France. In 1939, the couple separated. During the German occupation, Dina

8 Claude Lévi-Strauss, “Indian Cosmetics,” *VVV* 1, no. 1 (1942), pp. 33–35.

9 See Spielmann, *Das Verschwinden*, p. 26. Of great interest is Luisa Valentini’s remark that Dina Dreyfus cited string figures as the focus of the research guidelines for the Sociedade de Etnografia e Folclore. See Luisa Valentini, “Um laboratório de antropologia: o encontro entre Mário de Andrade, Dina Dreyfus e Claude Lévi-Strauss (1935-1938),” (Master’s thesis, Universidade de São Paulo, 2013), p. 55.

10 See *Claude Lévi-Strauss par lui-même* (Arte Film, dir. Pierre-André Boutang, Annie Chevally, 2008). On Claude Lévi-Strauss’ trajectory see Spielmann, *Die Argonauten*, pp. 15–108.

Dreyfus was member of the Resistance. After the war, she made a successful career in the French education system.

Dina Dreyfus practiced ethnography as a joyful science, collecting objects, artifacts and handicrafts, learning from Nambikwara how to weave baskets and the right posture for work. She spined the strings, established social contacts with Indigenous groups, but also with Paul Rivet, the new director and co-founder of the Musée de l'Homme. She had the ability to pick up strings, to spin them further, she mastered the performative. She showed the unspeakable, told of the Indigenous people, the women, the children, to whom only she as a woman had access.

An important Bororo myth tells the story of the “girl crazy for honey.” Dina Dreyfus seemed to be high on field work, like this girl on honey. I would like to suggest this girl as a metaphor to capture Dina Dreyfus’ entanglement and occupation of the field of ethnology, her actions, her fieldwork. Her husband was obviously very resentful of this practice of field research. He considered it to be “fine crochet work” in which women, his former wife, the ethnologist Dina Dreyfus, are “successful.”<sup>11</sup>

11 See Claude Lévi-Strauss, Didier Eribon, *De près et de loin* (Paris: Jacob, 1988), p. 65.



# Situating Universals



Maria Julia Fernandes Vicentin

## **Entangling Forms of Knowledge Production**

On Vilma Chiara, Harald Schultz, and the String Figures of the Krahô People



Fig. 1: *Man*, Valerio, 1965, 16mm, Bolex.

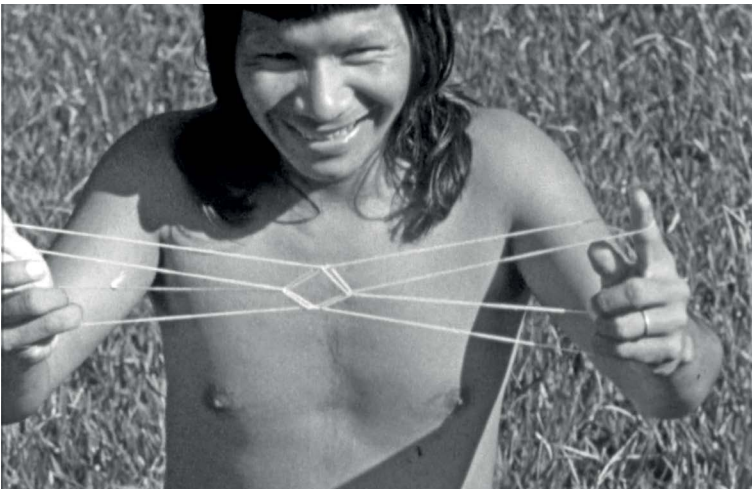


Fig. 2: *The Drying Lake*, Pôkrôk, 1964, 16mm, Bolex.



Fig. 3: *Rock Chip*, Edgar Calel and Maria Julia Fernandes Vicentin, 2022, 35mm, Fomapan



Fig. 4: *Cloud Shadow*, Maria Julia Fernandes Vicentin and Edgar Calel, 2022, 35mm, Agfaphoto Apx100.

Harald Schultz and Vilma Chiara could be considered pioneers of what later became established in Brazil in the 1990s as the field of visual anthropology. Their work in photography, film, and collecting for magazines, archives, and museums, both Brazilian and international, remained little known for decades, even within the discipline's history. However, more recently, the trajectory of this ethnologist<sup>1</sup> couple has been revisited through criticisms concerning the invisibility of Vilma Chiara's position as a co-author of this ethnographic material, as elucidated by the Brazilian anthropologist Batistella<sup>2</sup> and myself. In addition, my research has addressed the broader issue of the power relations that didn't legitimized the production of Chiara's and Schultz's images, nor do they allow this material to be returned to the Indigenous peoples.

In this text, I will outline some points of my research that led me specifically to the images of string figures filmed by Chiara and Schultz with the Krahô people (fig. 1 and 2), and I will introduce a photographic essay that seeks to imagine other ways of making images (fig. 3 and 4), relationships and knowledge in anthropology by recreating this "event of photography".<sup>3</sup>

Harald Schultz (1909–1966), son of a German father and Danish mother, was born in Brazil and lived in Germany during his youth. When he returned to Brazil he was already familiar with photography. It is unclear how he became a photographer for the government of Getúlio Vargas, but in 1939, Schultz assumed the position of head of the study section at the Serviço de Proteção ao Índio (SPI),<sup>4</sup> which promoted the first major national project

1 In the social anthropology that was established in Brazil, research related to Indigenous people is referred to as studies in ethnology. For example, although Schultz did not have a university degree in anthropology, he was trained by other ethnologists who were precursors of the anthropological discipline in Brazil, among them the German Curt Nimuendajú (1883–1945), who is considered one of the most influential Americanists and ethnologists of the twentieth century.

2 Aline Maira Batistella, "Experiências etnográficas de Harald Schultz e Vilma Chiara entre os povos indígenas" (Master's thesis, Universidade Federal de Mato Grosso, Cuiabá, 2017).

3 Ariella Azoulay, "What is a photograph? What is photography?," *Philosophy of Photography* 1, no. 1 (2010), pp. 9–13.

4 The Indian Protection Service (SPI) was a Brazilian government agency founded in 1910, dedicated to the "pacification" and protection of Indigenous groups, as well as the establishment of colonization centers based on countryside labor.

of ethnological images. During his field work for the Brazilian agency, Schultz had an accident with the Umutina, an Indigenous people of recent contact, that nearly resulted in his death. This event strained Schultz's relationship with the SPI and led to his dismissal. After that, he started to work at one of the most important museums in Brazil at the time, the Museu Paulista in São Paulo.

Beginning in 1946, Schultz was supervised at the museum by Prof. Dr. Herbert Baldus, a German ethnologist who was also instrumental in the development of the discipline in Brazil.<sup>5</sup> Schultz also attended Baldus's classes at the Fundação Escola de Sociologia e Política (FESPSP), where he met his future wife, the anthropologist Vilma Chiara. In 1950, Schultz and Chiara married, marking the beginning of a period of joint research.

Vilma Chiara (1927–2020), daughter of Italian immigrants in Brazil, began an internship at the Museu Paulista while still a student of social sciences at FESPSP. Shortly after her marriage to Schultz, she was appointed conservator of the museum's ethnographic collections. Chiara and Schultz began visiting Indigenous peoples together, contributing to the collection of objects and images. She collected ethnographic information in the field, systematized the data and revised texts written by Harald Schultz for various publications, which he only signed himself. In 1960, Chiara undertook internships at the Smithsonian Institute in Washington and the Philadelphia *Museum of Art*, where she deepened her knowledge of conservation techniques, restoration, and the organization of collections, as well as the educational and exhibition aspects of museums.

5 There is a consensus among scholars of the history of Brazilian anthropology that the precursors to the studies on Indigenous peoples in the country were mostly German naturalists and ethnologists such as Karl von den Steinen (1855–1929), Theodor Koch-Grünberg (1872–1924), Curt Nimuendajú (1883–1945), Herbert Baldus (1899–1970), and Egon Schaden (1913–1991). See Erik Petscheli, *Ascensão e declínio da etnologia alemã (1884–1950)* (Campinas: editora UNICAMP, 2022); Luís Donisete Benzi Grupioni, “Os museus etnográficos, os povos indígenas e a antropologia: reflexões sobre a trajetória de um campo de relações,” *Revista do Museu de Arqueologia e Etnologia*, Suplemento (2008), pp. 21–33; Julio Cesar Melatti, “A antropologia no Brasil: um roteiro,” *Série Antropologia*, no. 38 Brasília: DAN/UnB (1983); Han F. Vermeulen, Cláudio Costa Pinheiro and Peter Schröder, “Introduction: German Tradition in Latin American Anthropology,” *Revista de Antropologia* 62, no. 1 (2019), pp. 64–96.

Chiara and Schultz visited more than twenty Indigenous peoples throughout nearly thirty years of work, but the Krahô (Tocantins) were the group most studied by the couple, resulting in more than 3,000 photographs that became part of the ethnologists' private collection and more than twenty-five films produced for the German Institut für den Wissenschaftlichen Film (IWF).<sup>6</sup> Their dedication to studying and living with the Krahô led them to become "Krahô ambassadors," as Chiara used to say. Thus, even after Schultz's death, Chiara continued her doctorate in France about the Krahô, and also a political engagement with this people, developing projects such as the United Nations' Food and Agriculture Organization (FAO-UN) initiative to combat hunger in Krahô territory.

The more than twenty-five films that Schultz and Chiara made for the IWF on the Krahô focus on topics such as techniques for manufacturing objects like slings, baskets, and arrows, activities such as body painting, food gathering, and *coivara* (an Indigenous technique for preparing the land for planting); as well as ceremonies and rituals. While most of the films adhere to the logic of scientific objectivity, particularly delineated by the German institute that commissioned these films, it is interesting to note that string figures performed by the Krahô also appear in this set of film documentation.

Theodor Koch-Grünberg (1872–1924) filmed string figures among Indigenous peoples of the Rio Negro (Brazil) as early as 1911 and Dina Dreyfus (1911–1999) considered them a relevant topic in the research guidelines written for the Department of Culture and the Society of Ethnography and Folklore in São Paulo.<sup>7</sup> However, it seems that in Brazil, only Schultz and Chiara effec-

6 Although the private photographic collection of the couple has not yet been cataloged, it is estimated to comprise over 12,000 color slides and more than 10,000 black and white negatives, covering more than thirty Indigenous peoples in Brazil. The collection is still under the custody of their families, despite being deposited at Fundação Museu do Homem Americano (FUNDHAM – Piauí). The films about the Krahô people can be counted as one-third of the films made by the couple for the IWF, out of a total of sixty-seven also on other Indigenous peoples in Brazil.

7 For more on Theodor Koch-Grünberg's mounted string figures, see Diana Guzmán and Andrea Scholz, "Strings, Relations, Associations. On Figures from the Upper Rio Negro," in this volume. Dina Dreyfus writes in one of the documents

tively paid attention to this type of visual and ethnographic information related to games and play in the Indigenous context. They produced not only visual material showing the gestures involved in the entanglement of strings but also a technical description and drawings of how to make them.<sup>8</sup>

From a contemporary perspective a comparison of these string figure making practices seems to make less sense. However, the photographic and ethnographic encounter with the Krahô could nowadays lead researchers to other relevant issues, such as what the Indigenous people themselves might reconsider about this encounter with the anthropologists, as well as their meanings and imagination regarding their games and string figures. Thus, the more contemporary issue that runs through such a photographic and filmic archive is the Indigenous knowledge about these images and the possible restitutions that they can suggest to the current institutions that preserve them. The question of restitution and the study of Indigenous knowledge, however, does not exclude the possibility of analyzing the knowledge produced by the ethnologists. For this reason, the question arises as to the relevance of maintaining a purely scientific perspective on this ethnographic material.

Was the ethnography of Indigenous string figures exhausted in the comparative purpose forged by the ethnologists of the time, aiming for a diffusionist and thus also universalist analysis of this practice? Or could we blur some of these divisions that are inscribed in the project of modernity, such as science and art,

researched by Luisa Valentini: “Important for its widespread nature, the string game lends itself to the study of the diffusion process of cultural traits. Indeed, since the number of combinations is unlimited and it is known that the names chosen by the Indigenous people have nothing to do with the game itself, whenever we find identical string games with identical names, we can be more or less certain that it is not a mere coincidence, but a contact between cultures. (SEF, doc. 13).” Luisa Valentini, “Um laboratório de antropologia: o encontro entre Mário de Andrade, Dina Dreyfus e Claude Lévi-Strauss (1935–1938),” (Master’s thesis, Universidade de São Paulo, 2013), p. 55. For more on Dina Dreyfus, see Ellen Spielmann, “The Disappearance of a Female Ethnographer. On Dina Dreyfus,” in this volume.

8 E 2213 *String Figures, Krahô (Brazil, Tocantins Region)* (1964/1975); E 2496 *Children’s Games, Krahô (Brazil, Tocantins Region)* (1965/1982); E 2497 *Children’s Toys, Krahô (Brazil, Tocantins Region)*, (1965/1983) all directed by Harald Schulz, and Vilma Chiara Schultz and published by the *Institut für den Wissenschaftlichen Film*.

or even objectivity and subjectivity, suggesting another approach to and perspective on these images and string figures? Could reuses of these images be relevant for constructing another history related to them and, perhaps, for the anthropologists, also the remaking of these practices that pertain to the approach, assumptions, and motivation of the discipline regarding image production in anthropology? That is, could it be possible to recreate this ethnographic encounter through string figures from other bodies, positionalities, and historical times?

These were some of the questions that guided me, as an “halfie anthropologist”<sup>9</sup> and artist of the Caiçara (Brazil) people, throughout the photographic essay conducted with Edgar Calel, as an Indigenous artist of the Maya Kaqchikel (Guatemala) people. We took the photos as part of my research exchange on the IWF films and his artistic residency in Berlin in the summer of 2022. In addition to the possible considerations suggested by the photographic essay, Calel pointed out during a WhatsApp conversation about his impressions of our photographic work:

The lines we are holding with our hands can be a map that guides us towards our uncertain paths, but in some way, they are already marked in our destinies, and art is a tool that helps visualize an anthropology of time. We are constantly dealing with lines, generating ideas, making decisions; everything is very ephemeral, like the lines our hands hold in these photographs!

Thus, we invite people interested in these essays to imagine with us ways to “critically fabulate”<sup>10</sup> anthropological knowledge production through these images and string figures that, in turn, challenge not only the mentioned divisions between art and science, subjectivity and objectivity, but also the affections, and therefore, the effects that they engender in the forms, approaches, aesthetics and politics of our work.

9 Lila Abu-Lughod, “Writing against culture,” in *Recapturing Anthropology: Working in the Present*, ed. Richard G. Fox (New Mexico: School of American Research Press, 1996). pp. 137–162.

10 Saidiya Hartman, “Intimate history, radical narrative,” *The Journal of African American History* 106, no. 1 (2021), pp. 127–135.

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## **Reconfiguring the Encyclopaedia Cinematographica**

### On the E–EC Interfaces

When entering the section of the exhibition that focuses on the film collection Encyclopaedia Cinematographica, visitors are presented with a dizzying multitude of moving string figures. Roughly a hundred video clips of different people performing string figures to the camera are arranged in a rhythmic grid pattern on a large digital screen. Apparently looping, the clips fade in and out at various times, intercut with what appear to be title cards, providing some short-lived visual rest and orientation. The hypnotic visuality of the bustling video mosaic is emphasized even more by the notable absence of sound. It can take a moment to parse what you are seeing.

The clips are arranged in six visually distinct clusters, each featuring another location and cast of string figure performers. A larger grid field in each section highlights and plays back all of its corresponding clips one after the other. Short captions below indicate the names and places of the performers currently in view. The appearance of the players as well as their surroundings and apparent geographies vary widely—we see Ailima Saipele performing sitting on the floor of a house on Niutao, sisters Ruth and Gertrud Beriger on a rooftop overseeing the city of Basel, or Valério, Kakrò, Pòkròk and Apràk in a grass field near São Paolo, to name just a few. The technical quality of the films differs quite a bit too, but clearly classifies them as historic, “archival.” Despite their notable differences and scrutinized by their comparative arrangement in one view, their filmic language—rhythm, framing, camera distance—is surprisingly homogenous. The whole scene holds an ambivalent tension: the joyful, even proud display

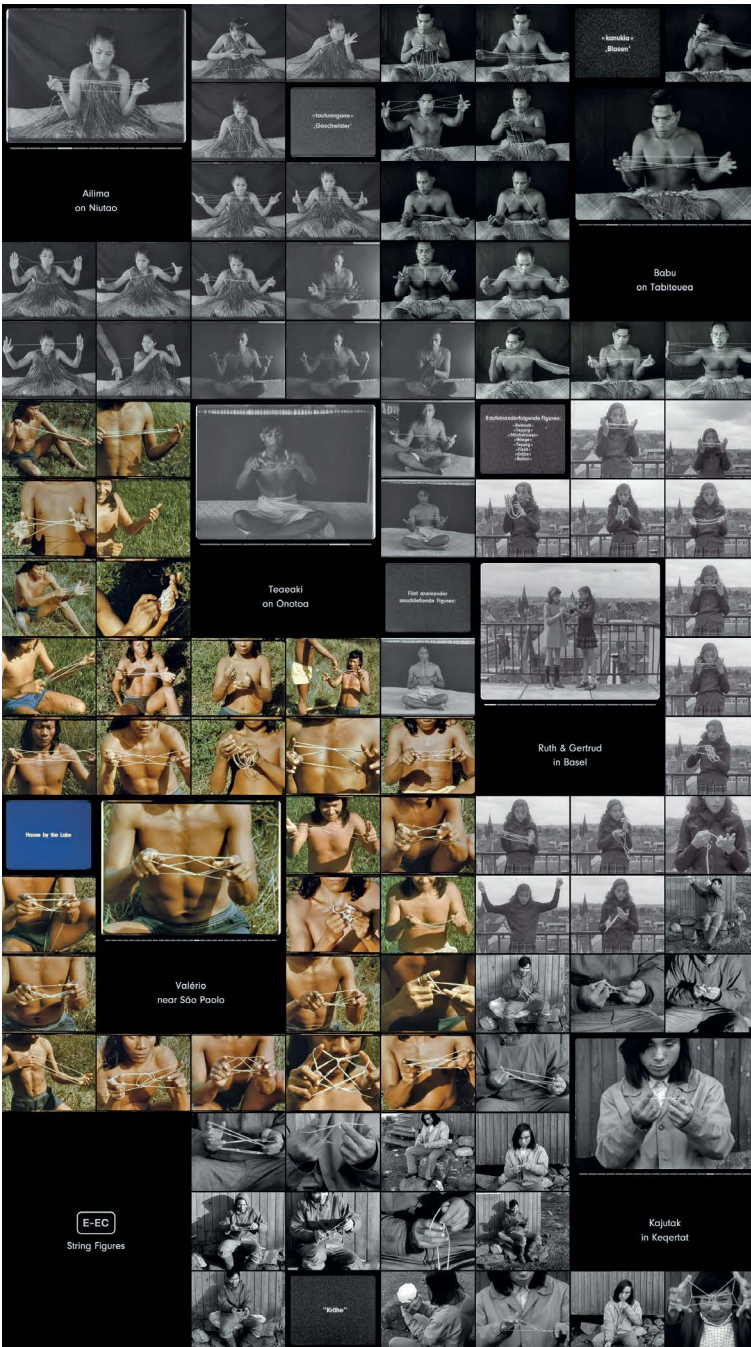


Fig. 1: Screenshot of *E-EC String Figures*, video loop of self-running browser-based display interface, 2160 × 3840 pixels, 16 minutes. Videos provided by TIB Hanover.

of a local cultural practice feels studied, observed, almost clinical at the same time.

This ambivalence between fascination and unease might be a fitting characterization for the Encyclopaedia Cinematographica as a whole—the historic film collection from which the depicted string figure clips are taken. The Encyclopaedia Cinematographica (EC) is a remarkable large-scale collection of science films, initiated in 1952 by the engineer Gotthard Wolf in his role as director of the German Institute for the Scientific Film (IWF). The EC was a historically unique endeavor, both in scope and duration—by its end in 1990 it consisted of over 3,000 films produced by hundreds of scientists. The stated ambition of the EC, as grandiose and questionable as its name suggests, was to “catalog” all scientifically significant “movement forms” across the three domains of biology, technical sciences, and ethnology through film. Movement processes most qualified to be included in the film encyclopaedia were those that could be made visible, comparable, or be conserved with the help of the medium of film. The six string figure films to be found in the ethnological section of the EC<sup>1</sup> and featured in the exhibition display introduced above meet all three criteria in exemplary fashion. As a small selection, they represent the collection’s wider encyclopedic ambitions and embedded ideas of the scientific potential of film.<sup>2</sup>

The digital display, titled *E-EC String Figures*, is part of a larger series of custom research interfaces that I designed and developed together with Sarine Waltenspül and Mario Schulze within the project *Visualpedia* at the University of Lucerne. Adapted versions of two of the developed prototypes are presented to the wider public in the exhibition for the first time. The research project aims to activate the EC collection for a more extensive study and to unfold its complex institutional histories, intellectual heritages, and

1 At least one more string figure film produced by Irenäus Eibl-Eibesfeldt and Gunter Senft (IWF signature E 2958) is part of the EC collection but was not included in the interface due to its complex copyright situation.

2 For a more detailed discussion of the Encyclopaedia Cinematographica and the string figure films in the collection, see also Sarine Waltenspül, “Who Owns the Films, Who Shows the Films? Films of String Figures in a Web of Relationships,” in this volume and the vitrines on the provenance of the string figure films from Kiribati and Switzerland, as documented in the exhibition views, pp. 288–293.

media-historical legacies. Examining a heterogenous collection of this size, and a film collection at that, is technically and conceptually challenging. An integral approach of the project is therefore to develop various context- and media-specific research tools and interfaces, which reconfigure the large-scale collection in ways that allow us to better survey, comprehend, inspect or interrogate it. Some of the developed tools are primarily designed to help handle the sheer amount of material in more meaningful ways and get a better sense of the structure of the collection as a whole, which is crucial to opening it up for analysis in the first place. Aside from that, other interfaces, like the *E-EC String Figures*, focus on a series or subset of related films in each thematic section of the collection. Here, the particular selection and arrangement of films and the display modalities offered by these interfaces are also meant to constitute visual and interactive arguments in their own right. By exhibiting and emphasizing aesthetic tendencies, historical conceptions or encyclopedic ambitions embedded in the material, they enable us to test or illustrate hypotheses and, ideally, to generate new research questions and insights. *E-EC*, the prefix used in the working title of each interface prototype, is intended to encapsulate their various purposes by not having a single fixed meaning. It could be read as “electronic,” “expanded” or “entangled” EC, indicating the reconfiguration of the collection under digital conditions. Equally, the “E” might stand for “encountering,” “examining” or “enquiring” to emphasize the character of the developed interfaces as research tools.

The *E-EC String Figures* display shown in the exhibition brings together the string figure films of the EC in a unique way. The individual scenes from the original films, which are separated by title cards with the names of each of the figures performed, have been manually extracted and laid out as separate clips in the interface. In this parallel view the films can be experienced as a thematic series in a way that is not inherent in the original organization of the EC collection, where relations between films based on subject or other aspects are not represented. Thus, in some regard, the elaborate mediality of the interface realizes and even exceeds the encyclopedic ambitions of the EC in ways its creators could only have dreamed of. The composition highlights the films’ aesthetic

homogeneity and caters to the collection's fundamental aspiration of achieving a comparative view of cultural practices through film. At the same time, it is exactly this embedded agenda that the interface might be able to render more clearly visible and expose for closer examination. The deliberately overwhelming display also aims to destabilize the authority and structural boundaries of the EC. The encyclopedic classification of the films is consciously obscured in the interface, by refraining from showing their titles (as well as cutting out the main title cards in the films) or their E-number, a prominent internal identifier for all films in the EC collection. Instead, whenever possible, the names of the performers featured in each clip are displayed, which are mostly not included in the original films, in an attempt to restore at least some of the traces of their provenance. By devaluing the encyclopedic indexicality of the films, this strategy also allows a focus on the depicted performers and their practice as well as the aesthetic and filmic qualities of the films as films.

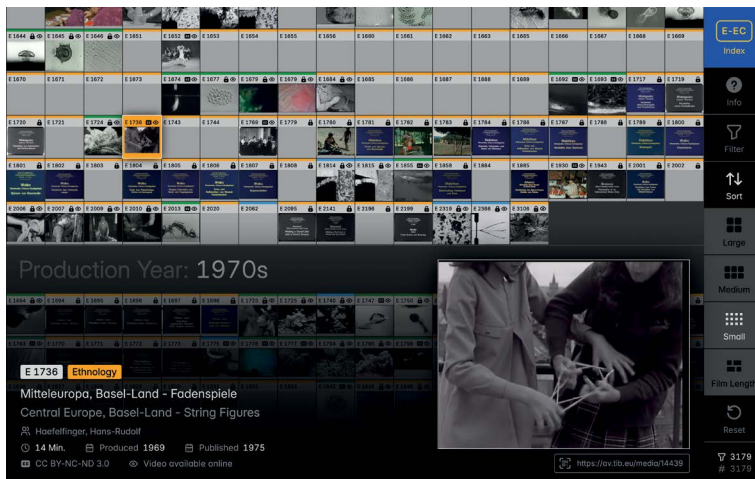


Fig. 2: Screenshot of *E-EC Index*, interactive browser-based research interface, 1280 × 800 pixels. Meta data and images provided by TIB Hanover.

As you continue to explore this section of the exhibition, the string figure films of the EC are further contextualized in the vitrines curated by Mario Schulze and Sarine Waltenspül that present the stories of three selected films of the series through additional archival materials, as well as put into dialog with artistic works related to ethnological filmmaking. On two tablet computers, you

also encounter the *E-EC Index*, the second interface of the project featured in the exhibition. The *Index* is an interactive catalog of the whole EC collection that lists all entries in a grid with preview images, if available, and displays additional meta data about each film upon selection. The entries can be filtered and sorted by a set of categories, like thematic sections or year of production, to explore and investigate the structure of the collection from different perspectives. The string figure films are highlighted in the index to contextualize them within the wider encyclopedic project of the EC, the filmic cataloging of movement patterns across biology, technology and culture. Sitting next to entries on the mating behaviour of fish or the processes of machining steel, the string figure films appear in a new light, reframed as the scientific films they were originally conceived as. The *Index* interface is based on the publicly available data provided by the TIB Hanover, the German National Library of Science and Technology that today owns and houses the digitized as well as the analog EC film collection. The data has been scraped from the online media catalog of the library with a dedicated browser tool that automatically traverses the catalog pages and collects previously defined content fields in a data sheet. Although TIB Hanover provides open data repositories in specialized formats, scraping the data ourselves was deemed to be a quicker and more accessible approach. As a positive side effect, the process of web scraping requires a more intimate familiarization with the structure and quality of the available data than a ready-made data set may do, and can be considered a methodological choice for approaching the research of a large collection like the EC. Due to the complicated and inconsistent copyright status of many of the films in the collection as well as ambiguous policies around the handling of sensitive contents, not all EC films are accessible in digitized form via the online media catalog of the library. The *Index* interface also aims to highlight these conditions of digital access, for instance through icons that indicate the copyright status for each film (e.g. if it is freely accessible online or not) or by the inconsistencies regarding the existence and contents of the films' preview images in the online catalog, which become more evident in the visual index of the interface. The *E-EC Index* thus also serves as a

subtle mapping of the digitization politics of the library and the continued history of the EC collection as a digital archive.

Through the lens of the string figure films, the *E-EC String Figures* illustrates ethnological ambitions to capture, compare and conserve cultural practices through the medium of film. The *E-EC Index* puts these ambitions into perspective within a lineage of science films and an encyclopedic mindset that manifested in the large-scale project of the EC. Together, they may act as tools for critical encounters with the EC collection in all its fascinating and monstrous ambivalence.



## Connections in Time and Space

### On Katrien Vermeire's and Rudolf Haefelfinger's String Figure Films

Making string figures is an activity that occurs in almost every corner of the world. But not all figures are made everywhere. Based on common construction techniques and a core repertoire of figures different regions can be distinguished. The European cities of Basel (Switzerland) and Brussels (Belgium) are situated 434 km from each other as the crow flies, and belong to the European region. Their string figure repertoires have much in common: many figures are known in both cities, be it under (mostly) different names. Two films on string figures from these cities are evidence of this:

— *Mitteleuropa, Basel-Land—Fadenspiele*, made by Hans-Rudolf Haefelfinger (recorded in 1969, published in 1975)<sup>1</sup>

— *Touwfiguren. Brussel 2016*, made by Katrien Vermeire

In 2016 Museum M in the city of Leuven, Belgium,<sup>2</sup> organized an exhibition on games. As photographer and filmmaker Katrien Vermeire had recently made a documentary short film on a typical Belgian children's tradition,<sup>3</sup> she was asked to contribute to the exhibition. Katrien at that time was living in California, where she saw the string figure collection of Harry Smith and came into contact with James Inoli Murphy, who inspired her to explore the rich and many-sided tradition of string figures further.

1 Institut für den Wissenschaftlichen Film, Göttingen, Film E 1736, <https://av.tib.eu/media/14439> (accessed April 6, 2024).

2 M – Museum Leuven, <https://www.mleuven.be/en> (accessed April 6, 2024).

3 On the Belgian North Sea coast children make paper flowers and sell them on the beach, often for handfuls of shells. Vermeire documented this tradition in her film *Der Kreislauf* (2012).

During her research she ran across Hans-Rudolf Haefelfinger's 1975 film, in which the sisters Ruth and Gertrud Beriger show the construction of traditional Basel string figures. The beauty of the carefully staged analogue images, the slow-motion sequences which gave the movements of the hands and string a surreal feel, combined with the vague familiarity of the subject, fascinated Vermeire. She decided to make a local contemporary Brussels version of this particular film as her contribution to the Leuven museum exhibition.

The film was shot in 2016 on the roof terrace of Vermeire's Brussels apartment using analog equipment. The main performer is Hannah (fig. 1), a girl from the apartment building, and she is assisted by Nathan, the son of one of the film crew members, who was totally fascinated by the subject. The string figures Katrien decided to show in her film are almost exclusively those of the Basel film because she (vaguely) remembered them from her own youth. The Belgian names (in Flemish) are based on what people around her told her.

When I in turn studied both films my attention was drawn in particular to two figures, because of their rarity and their striking similarity to objects in reality.



Fig. 1: Hannah displays *Strijkplank* ("Ironing Board"). Still from the film *Touwfiguren, Brussel 2016* by Katrien Vermeire.

A three-dimensional pattern represents an Ironing Board (Basel: s'Glettibrätt, Brussels: Strijkplank) (fig. 1). The Basel film is in fact, as far as is known to me, the first published recording of this figure, although unpublished archival recordings are known from Sweden (1939) and from Denmark (1965/1966) with closely related figures.<sup>4</sup> In these the figure is part of a longer series of figures sometimes accompanied by a short story; it represents, however, the same object. The design closely resembles a (modern-style) ironing board with foldable legs, which apparently first appeared in that form in the early twentieth century.

The construction of the figure starts with the opening configuration of the two-player take over game with which the films begin. It is interesting to note that Hannah in the Brussels film constructs her figure in a more efficient way than Ruth in the Basel film: she has no need to take over the middle-finger loop with the index finger prior to the display.

The Sewing Machine (Basel: s'Naimaschinli, Brussels: Naaimachine) (fig. 2) starts with almost the same opening configuration. It is a remarkable action figure, mimicking the movement of the needle of a sewing machine going up and down when the hands are turned around the wrists to and fro. I do not remember having seen this figure in other recordings, and it is thus possible that it is a Basel invention.<sup>5</sup> As the first sewing machines started to circulate in the first half of the nineteenth century,<sup>6</sup> at least the name of the figure cannot be older than that.

Studying the two films closely reveals further intriguing details. Ruth, constructing most of the Basel figures, sometimes

4 Stephan Claassen, "Swedish String Figures I: The 1939 Questionnaire from Lund (Southern Sweden)," *Bulletin of the International String Figure Association* 17 (2010), pp. 38–71, SF1 *Brevet/Bordet* series; Stephan Claassen, "Swedish String Figures II: A 1970 Research in Uppsala," *Bulletin of the International String Figure Association* 18 (2011), pp. 46–135, esp. pp. 75–79; Philip D. Noble, "Danish String Figures: A 1965–66 Film Transcription," *Bulletin of the International String Figure Association* 18 (2011), pp. 136–195, esp. pp. 160–164.

5 Actually the Basel film shows two variants of this figure, a large and a small sewing machine. The film and the accompanying booklet contradict each other as to which version is which. The Brussels film shows only one variant, naming it Sewing Machine.

6 Graham Forsdyke, "A Brief History of the Sewing Machine," International Sewing Machine Collectors' Society: [https://ismacs.net/sewing\\_machine\\_history.html](https://ismacs.net/sewing_machine_history.html) (accessed April 6, 2024).



Fig. 2: Ruth displays s'Naimaschinli (the Sewing Machine). Still from the film *Mitteleuropa, Basel-Land-Fadenspiele* by Hans-Rudolf Haefelfinger (1969).

has her index and middle fingers switch roles, which is not the case in the Brussels film. It is known that in European string figure-making the middle finger can have the role that the index finger has in other parts of the world, and it could well be a specific European phenomenon.

In the Brussels film Hannah can, for almost thirty seconds, be seen untangling her string loop after the display of a figure. Katrien Vermeire decided to include it in her film as this is an integral part of string figure-making happening in real life. It links her 2016 film to a forthcoming project intending to document further dimensions of this age-old activity.

Moya Lawson

## ***Te whai waewae a Māui***

### On Maureen Lander's String Games

Gloved hands delicately unpack an edition of Marcel Duchamp's *Boîte en valise*, pausing with each miniature work for the viewer to see: *Bottle Rack* (1914), *L.H.O.O.Q.* (1919), *The Large Glass* (1915–1923). Under the artificial light of a museum's storage space, we could be anywhere in the world, such is the spread of Duchamp's innumerable travelling museums. However, what happens next locates us: *Boîte* is refilled with black and white photographs of hands enacting string games along with a book, *Maori String Games*, and a mussel shell (fig. 1). The shell is similar in scale and shape to Duchamp's pocket-sized *Fountain*. In the next sequence, another pair of hands uses such a shell to strip a blade of harakeke—a flax plant native to Aotearoa New Zealand—slowly



Fig. 1: Detail from Maureen Lander's *String Games* (1998), screenshot.

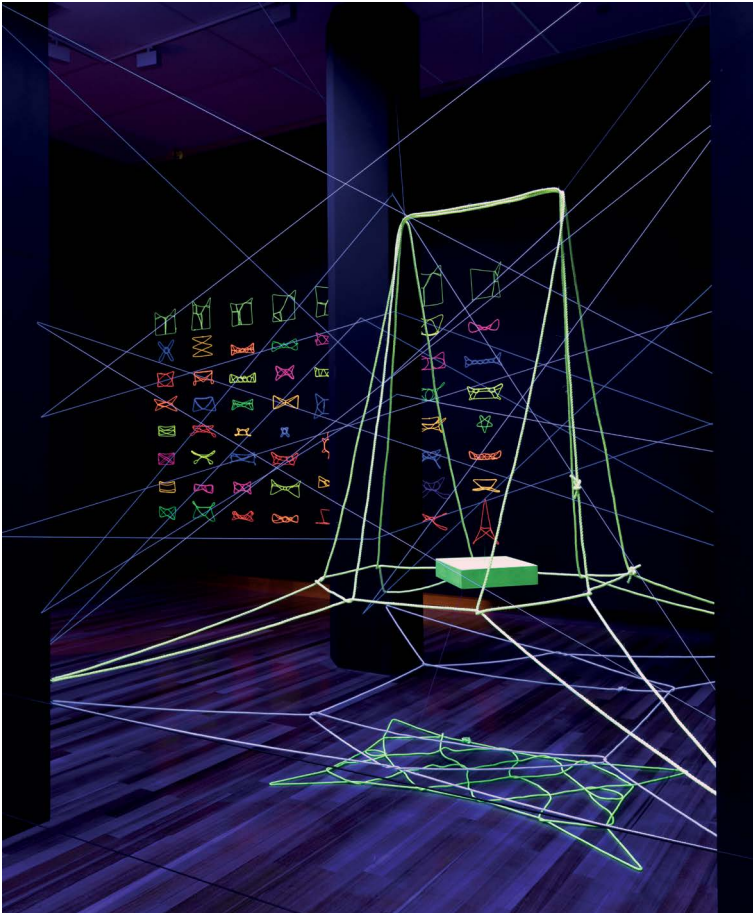


Fig. 2: Installation shot of Maureen Lander's *String Games* (1998/2023), rope, nylon fishing wire, neon painted string, cardboard, paper, linen, glue, laser discs, CDs, photographic prints, white and ultra-violet light. 'Restaged for "Aho Marama / Strings of Light" at Christchurch Art Gallery Te Puna o Waiwhetū, 2023.

extracting its fibrous tendrils before rolling it into string. The string is held up and stretched, robust and full of potential.

*String Games* by Maureen Lander follows this string, as both matter and medium. It runs in many directions, looping around disparate subjects—Duchamp, *whai* (Māori string games) and digital technologies—before circling back onto itself.

*String Games* was a multimedia installation commissioned for the opening of the newly conceptualized National Museum, Te Papa Tongarewa Museum of New Zealand, in 1998. Immersive and site-specific, the installation glowed under ultra-violet light in a dark room (fig. 2).

It included the video described, smaller *whai* constructions which lined the walls, and was dominated by a larger-than-life fluorescent *whare kēhua* (house of spirits) pattern, at the center of which floated a neon-green box, a replica of Duchamp's *Boîte*. The installation was part of *Facing IT*, an art exhibition which contended with information technology's escalating impacts on photography and its material histories. The artist and academic Maureen Lander was invited to respond to the exhibition's concept through items in Te Papa's collections. She chose to work with two very different objects: a series of photographs and films of string figures—made in Aotearoa by the anthropological photographer James McDonald between 1912 and 1926—and the aforementioned edition of *Boîte en valise* (1935–1941) by Marcel Duchamp.

Maureen Lander is an artist of Ngāpuhi, Te Hikutū and Pākehā (New Zealand European) descent who has been exhibiting, teaching and mentoring in fine art and Māori material culture in Aotearoa for the last forty years. Her in-depth knowledge of *raranga* (Māori weaving) interlaces with her contemporary art practice, building from the practices and sensibilities of traditional fiber arts to enquire how they might be understood within—and applied to understand—our post-colonial, globalized context.

The pastime of string games is generally called *whai* in Te Reo Māori, although its full name is *te whai waewae a Māui*—due to the fact that some believe the practice was gifted to humans by the demi-god Māui. Other origin myths name *patupaiarehe*, fairy-like creatures who live deep within the forest or on mist-covered mountain tops, as the beings who taught Māori string games. *Whai*'s movements play out *pūrakau* (stories) of significance to Māori, such as the myth of Te Moana-nui-a-kiwa, the Pacific Ocean; of Tāwera, the navigational morning star; and of the celestial ascension of the demi-god Tāwhaki to fetch the three baskets of knowledge.

McDonald's record of *whai* were made with Māori communities across Aotearoa's Te Ika a Māui (North Island) during several anthropological surveys commissioned by the Dominion Museum, Te Papa's predecessor. Made as and when the opportunity arose, the images recorded string game practices in Rotorua

in 1920; in the villages of Koritini, Hiruhāmara and Pipiriki on the Whanganui River in 1921; and at Whare-ponga, Waiomatini, Waitangirua and Te Araroa on the East Coast in 1923.<sup>1</sup>

Proposing to Te Papa, Lander said that “The McDonald photographs and films form an important part of the way in which this knowledge [of *whai*] has been retained. To me, a museum should not act as a collecting and storing agent without making that knowledge accessible back to the people it collected from.”<sup>2</sup> Her words speak to the then-buried archive, and in the early days of a life-long commitment to Māori material culture and the collaborative revitalization of fiber practices lost through colonization. This *kaupapa* (purpose) takes shape in *String Games*’s film as its images begin to loop between the people recorded by McDonald and the contemporary Māori filmed by Lander. They make *whai* in green spaces, on park benches, and on *marae* (communal Māori meeting places), charting *whai*’s endurance into the present.

The photographs and films of *whai* were inherited by Te Papa from the old museum at the end of the twentieth century, along with the nation’s compounded collections in history, natural history and art. Contending with its inheritance, Te Papa proposed a new museology, reflecting recent cultural and political shifts which had begun to acknowledge the Treaty of Waitangi (the 1840 treaty made between the British Crown and Indigenous Māori *iwi*, or tribes) as the founding document of the nation state. It did this led by the incorporation of more Māori voices in the museum’s operations while packing away the drably Eurocentric centerpieces from its displays and unearthing new objects to tell the nation’s stories.<sup>3</sup>

*Boîte en valise* was the closest that the National Museum would come to owning an original Duchamp, but against the backdrop of the museum’s renovating identity—attempting to

1 Johannes C. Andersen, *Māori String Games* (Wellington: Steele Roberts Ltd, 1927), p. 1.

2 Maureen Lander, Art Now correspondences with curator Ian Wedde, MU 422/2 – MU000433/001/0003, Museum of New Zealand Te Papa Tongarewa, Aotearoa New Zealand.

3 “Exhibition space designed for flexibility,” *The Evening Post*, July 6, 1993, p. 13.

shake off its imperial roots—it occupies a somewhat paradoxical position in *String Games*. *Boîte* is also referenced in tandem with *Sixteen Miles of String* (1942), a labyrinthine installation of string placed by Duchamp throughout the 1942 *First Papers of Surrealism* exhibition (fig. 4 in the introduction, p. 26), which was a major influence on Lander’s installation practice. As *Boîte en valise* challenged the rise of the cultural commodity, *Sixteen Miles of String* ensnared the viewer within the institutional strings of art’s display and consumption. Lander’s gesture through Duchamp draws attention to the shell that houses the work, its politics and aspirations—a floating box at the intersection of multiple entangled histories.

Grounded by *raranga* and its attendance to the earth, Lander has long worked with a mixture of gathered local, natural and man-made materials to create her site-specific installations. The concepts of her work are channeled through the work’s materials and the correlations these form with their place. The photographs of *whai* and *Boîte en valise* might be considered site-gathered materials. They entwine in Lander’s *String Games* at the end of very different journeys. Through the symbolic replacement of the contents of *Boîte*, *String Games* identifies the colonial records of *whai* as a valuable resource for Māori communities to engage with and revitalize, and as significantly capable of displacing the inherited legacies and ontologies of the West. From here *String Games* reaches into the future.

The strings in *String Games* glow as if they are electrified, representing string games and digital technologies simultaneously. According to Lander, *String Games* would “pick up on the word ‘digit’”—which in the etymological sense denotes the use of “fingers”—to “create a kind of *whakapapa* [or genealogy] for the relationship of technology to this particular art form [*whai*]—manual, photographic, film, video, sound, computer, www.”<sup>4</sup> We might also insert the 20,000-year-old technology of string into this continuum, as well as the textiles, looms and machines it later sustained, which crucially informed computer technologies as we know them today. In *String Games*, hands render string from

4 Lander, Art Now correspondences.

plants, string weaves through fingers to create moving images, and a common language manifests among far flung societies with no physical connection. In digital technologies, precious minerals form conduits for electrical currents, which carry woven strings of code, before manifesting as images among far flung societies with no apparently physical connection either.

*String Games* follows haptic, embodied and material associations through *whai* to bring digital technologies back to earth, drawing on both Indigenous ontology and the provocations offered by Duchamp. It locates our relationships with technology at the tips of our fingers, with the material, uncontrollable phenomena that make these technologies possible while being profoundly threatened by them in turn. As the hands in the film strip the waxy skin from the harakeke to make string, they animate the practice of *whai* while enacting an origin story for our technological world. They point to a gap in the continuum—or another continuum entirely—from the material world to the digital screen.

## Multispecies Obscenity

### On My Poster Multispecies Cat's Cradle

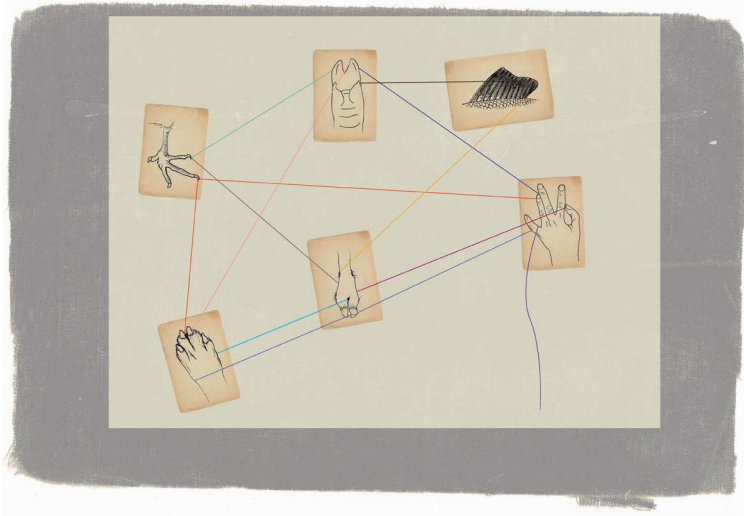


Fig. 1: Nasser Mufti, *Multispecies Cat's Cradle*, 2011. Digital print.

*Multispecies Cat's Cradle* (fig. 1) began as, and in my mind has always been, a poster for the 2010 Wellek Lectures at the University of California, Irvine. The annual lecture series has been housed within the Critical Theory Institute since the early 1980s, and has featured the likes of Jacques Derrida, Edward W. Said, Judith Butler and Ngũgĩ wa Thiong'o. In 2010 the speaker was to be Donna Haraway, and I, a Graduate Assistant at the Institute, was tasked with designing a poster for the lectures.

Haraway's lectures were titled *Playing Cat's Cradle with Companion Species*. Knowing little else about Haraway's work other than "The Cyborg Manifesto," and having never heard of cat's cradle (some Googling offered a very basic idea), I composed an image that took Haraway's title literally: a claw, a cou-

ple of paws, a couple of hooves, a fin, and a hand intertwined by a string. Using (if I recall, a pirated copy of) Adobe Illustrator, I drew the aforementioned appendages, composed a draft of the poster in Adobe InDesign (also illegally obtained), and shared it with Haraway and the Director of the Institute on the eve of the printer's deadline. Being a lowly graduate student, I was quite chuffed when Haraway, distinguished professor, appeared to genuinely like what I had made. Acutely aware of the precarity of the academic job market (particularly in the humanities), graphic design was my "plan b," so receiving such praise had implications beyond my immediate job as a Graduate Assistant being "professionalized" (read: cheap labor) at the Critical Theory Institute. In my mind, the poster supplied evidence that, in the likely event that I would not find secure employment in the academy, I could make my way as a graphic designer (as though a career in graphic design is as stable as an oak!)

That evening, however, the Director of the Institute wrote a very brief and cryptic email saying the poster just would not do, and asked me to quickly design a new one. No further explanation was offered. Flummoxed and frustrated (and now doubting my abilities), I produced a different poster (it meant more hours of work, which meant more billable hours, which softened the blow of the Director's rejection) (compare fig. 9 in the introduction, p. 38, and fig. 2). Later, I learnt that Haraway also didn't know why the original poster was pulled.

The mystery was resolved some weeks later when, following one of Haraway's lectures, one of my advisors (and, crucially, an Executive Committee Member of the Institute) approached me and smirkily said: "I heard you made a bunch of dicks for Donna Haraway." Seeing my utter confusion, she repeated, "Dicks, Nasser. I heard your poster was a bunch of dicks!" The insinuation—that my drawings of paws and hooves and claws and trotters were phallic—was hilarious, tinged as it was with the shame that I might be an unconscious dick-drawer. Either way, the Director felt it was too obscene, and hence intervened.

But the image lived on. Some months later, Haraway asked if she could use the illustration used in the original poster for a workshop she was going to run in Cerisy, France. Some years



Fig. 2: Nasser Mufti's poster design *Playing Cat's Cradle with Companion Species* that was eventually used for the Wellek Lecture by Donna Haraway, 2011.

later, she asked to use the image in her book *Staying with the Trouble: Making Kin in the Chthulucene*. And ever since, about once a year I receive a request (usually from art students) about using the image in their writings or exhibitions and I always, of course, agree, amused in part by how my multispecies obscenities continue to circulate.<sup>1</sup> Most recently, Mario Schulze and Sarine Waltenspül asked if they could include the image in the *String Figures* exhibition at the Tinguely Museum, and kindly asked me to write these words.

Given that I research nationalism, Victorian culture and decolonization, and the traditional genres of those discourses and movements (the novel, in particular), my research has no overlaps with the content of *Multispecies Cat's Cradle*. While some would rightfully disagree about the disconnect between string figures and decolonization, I would also note the difference between the noun “decolonization,” a world-historical movement that, in

1 See, for example, the collective exhibition *Seen By #7: Moles*, Berlin, Staatlichen Museen zu Berlin, November 25, 2016 to January 8, 2017; Louisa Bufardeci, “Tacking and a Tacktical Methodology: Moving Towards a Different Politics for Art” (Ph.D. Diss., University of Melbourne, 2021), p. 175; and the artwork by Isabel McLeish, *Aquaculture Cradle*, 2022.

Frantz Fanon's famous words, "consists of reintroducing man into the world," and the verb "to decolonize," which has a much more recent history, and a far more elastic meaning.<sup>2</sup> The story of the poster and its afterlife has therefore always been a funny anecdote, often deployed to disarm tedious academic conversations. The punchline is usually: "more clicks for my dick drawings than my scholarship."

Karl Marx taught us that farce is a mode of intelligibility. Louis Napoleon Bonaparte self-seriously saw himself as an actor on the stage of world history, but all the audience saw was a clown using "borrowed" "names, marching orders, uniforms."<sup>3</sup> Farce lies in the eyes of the beholder, who sits apart from the stage at a safe critical distance. *Multispecies* hints at farce with the carnivalesqueness of fins and hooves and hands playing with a string (in the original poster, the strings were multicolored), and the strange afterlife of the poster is a testament to the slipperiness between self-seriousness and comedy. The rectangular framing of the image, situated within the canvas cover of an old book, suggests a tension between textuality and the stage, both crucial components of farce. Undergirding this story, however, is labor. *Multispecies* seems entirely disinterested in the category of labor, and in a telling negation, the original title of Haraway's lecture (the reason for the poster's existence) was *Playing Cat's Cradle with Companion Species*, which indicates an antipathy to work. And yet, the great irony of *Multispecies* is that the condition and occasion for the image's production was precisely that: it was composed at an hourly rate for supplemental income in the aftermath of the Great Recession. Haraway begins *Staying with the Trouble* by noting that string figures offer small ways to "get on together."<sup>4</sup> If there has been any such "getting on" in *Multispecies*, then it has been entirely premised on people working: working on their art, on their studies, working at work in places as diverse as

2 Frantz Fanon, *The Wretched of the Earth*, trans. Richard Philcox (New York: Grove Press, 1963), p. 62.

3 Karl Marx, *The Eighteenth Brumaire of Louis Bonaparte* (New York: International Publishers, 1988), p. 15.

4 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, N.C.: Duke University Press, 2016), p. 10.

Irvine, Rochester, London, Catalonia, Berlin and Melbourne (the non-West is tellingly absent). Perhaps the most revealing of these many unexpected encounters was a semi-frantic email in 2022 from a researcher at *The Architectural Review* asking for permission to reprint the image in the journal. Printing deadlines (evoking the original deadline for the Wellek poster) meant she needed my confirmation by the next end-of-day. There was no embellishment or praise or commentary about the image itself—just a simple email, a routine task of an average workday. No joke—all business.



## Cinema and String Figures

### On Maya Deren's *Witch's Cradle*

To play string figures, a specific degree of freedom is required: strings must neither be too tight nor too loose for the game to work. Playing the game of cat's cradle actually means to negotiate relations between tension and space for play. While topology, the science of knots, nodes and edges, will try to eliminate indeterminacies, these are constitutive in playing string figures. The game requires physical interaction, in terms of both materiality and transmission. In the manifold translations between body and strings, new perspectives are produced and new options for agency. In the 1940s, Maya Deren discovered that filmmaking itself could be practiced as a game of string figures.

To consider the film strip as a material that could, with the help of hands and fingers, create ever-new patterns and meanings was a starting point for Maya Deren's cinematic experiments as well as for her theoretical texts on cinema as a ritualistic form. Exploring film simultaneously with studying Gestalt theory, cybernetics and an anthropology of games, she discovered that filming and editing follow a set of rules and procedures, practices for processing, permuting, inverting and finally projecting the film, which connect the camera and the body, the filmstrip and scissors in her hand in a physical act (fig. 1). Anyone can interfere with these rules. There is no fixed law. In this, too, cinema resembles the playing of string figures.<sup>1</sup>

1 See Maya Deren, "An Anagram of Ideas on Art, Form and Film [1946]," reprinted in *Maya Deren and the American Avant-Garde*, ed. Bill Nichols (Berkeley: University of California Press, 2001), pp. 267–322.



Fig. 1: Maya Deren with her hand-operated flatbed device for editing film.

The best-known example of Maya Deren's film work as string figure game is *Meshes of the Afternoon*. The film's title already refers to threads and interweavings. Deren shot it in 1943 with Czech filmmaker Alexander Hammid in the house they shared on the outskirts of Hollywood. The film paradigmatically shows that time and space, identities and affects, relationships and forms of movement are always generated by media. They never simply represent profilmic realities. In the interplay of camera, film tape, objects and people a ritualistic reality in its own terms is created. Not "one" director holds the strings in her or his hands, but many are needed to keep up relational tensions, both physical and medial. This is what cinema is made of.

The project *Witch's Cradle*, which Maya Deren shot shortly afterwards, by which time she was based in New York, has only survived as an open set of filmic strips and threads, perhaps not even in its entirety.<sup>2</sup> The distribution company has simply joined

2 Maya Deren, "WITCH'S CRADLE Shooting Script," in *The Legend of Maya Deren: A Documentary Biography and Collected Works. Volume I, Part Two, Chambers (1942–*

presumably unedited materials, including its visibly marked leaders. But it is precisely in these fragments of work in progress, in these loosely linked shots, that Maya Deren's film concept is revealed: creating a new form of cinematic perception. The title of the film combines the name for a common string figure game, a dialogue of fingers well known in all cultures and called "cat's cradle" in English, with the name for a torture device for witches, which she had learned about from William Seabrook, an ethnologist who had also worked in Haiti. Apparently, he still liked to experiment with his witch's cradle.<sup>3</sup> In her own anthropological studies, Deren had explored the relationship between children's games and ritual procedures. In *Witch's Cradle*, she combines cultural, artistic and ethnographic aspects of games. In her film she transfers magic and the magical into cinematographic forms in terms of motifs, methods and media.

*Witch's Cradle* was filmed in Peggy Guggenheim's Art of This Century gallery, a forum where European and American avant-gardes met in the New York of the 1940s. The architect Frederick Kiesler had set up an experimental decoration for the gallery, which Maya Deren was allowed to use as a film set. As a central motif, Deren, who did the lighting and all of the camera work herself, chose individual threads and strings tied across the art space, as well as entire webs of strings, illuminated against the black background of the gallery space. She also used self-illuminating stiff strips of light, tubes and reflecting metals. These materials differ in the black and white of the film only in that they exhibit a different degree of flexibility, or, technically speaking: a different degree of play. The camera methodically films these strings and figures in very long takes and tracking shots, turning them, just like all the other surfaces filmed in the gallery, into endless ribbons of light.

Between the one-dimensionality of the strings and the filmically produced two-dimensionality of luminous strips, between the filmed objects on the one hand and the filmic procedure on the other, a media-generated form of perception emerges that

47), ed. Vévé A. Clark, Millicent Hodson and Catrina Neiman (New York: Anthology Film Archives, 1988), pp. 163–165.

3 Ibid.

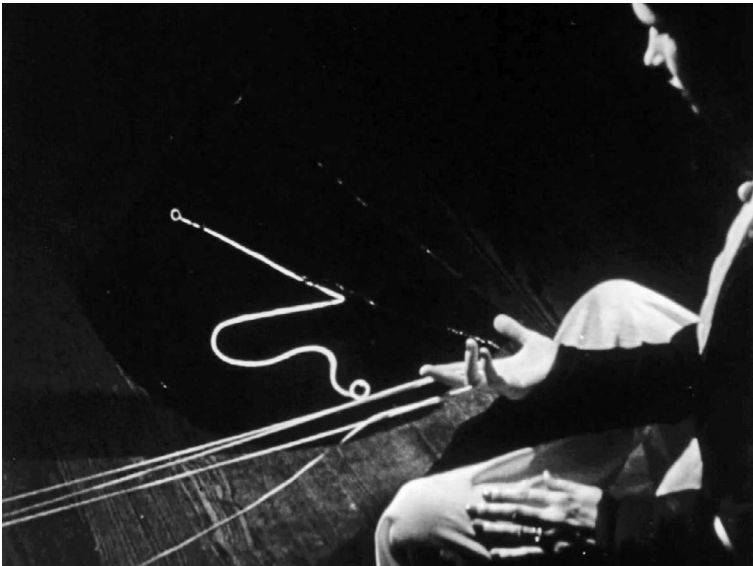
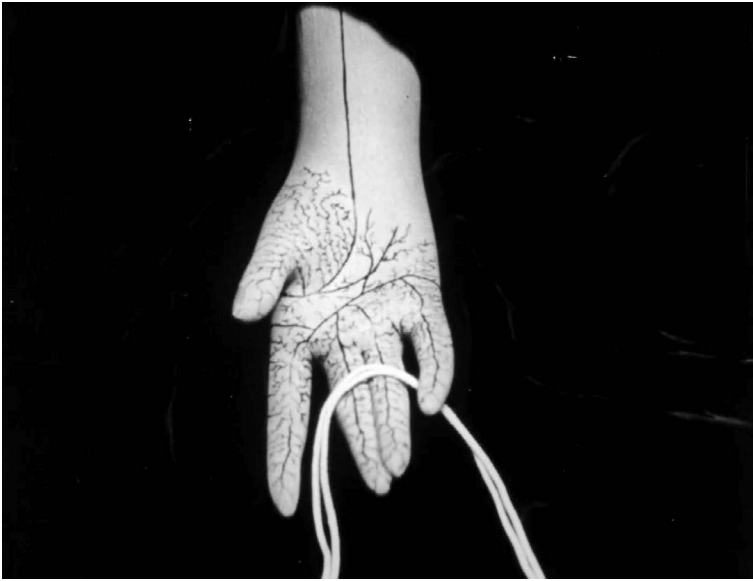


Fig. 2.1 and 2.2: Screenshots taken from Maya Deren's *Witch's Cradle*.

only cinema can produce: a spatiality that oscillates between dimensions, as Rudolf Arnheim observed.<sup>4</sup>

4 Rudolf Arnheim, *Film as Art* (Berkeley: University of California Press, 1957): "The effect of film is neither absolutely two-dimensional nor absolutely three-dimensional, but something in between," p. 12.

Movements in the film are choreographed through camera work. This is why the shooting script for *Witch's Cradle* primarily consists of a list of various experimental and unusual camera movements. These are used to cinematically animate objects and works of art in the film as well as the players' bodies, which are often shot in different takes that experiment with the same mimicking and gestural play. *Witch's Cradle* strings together raw materials and figures. Close-ups are relentlessly combined with long shots. Deren frames her shots against all rules of gravity, in a dance-like manner. The characters in the film, played by Deren's friend Marcel Duchamp and the artist and curator Anne Matta Clark, are also set in motion by the camera. While they are playing with strings, forming figurative patterns according to the logic of cat's cradling, or while threading themselves through spaces, they also become objects of string games (fig. 2.1 and 2.2). Duchamp and Matta Clark are entangled in strings, when the camera, using stop-motion, animates pieces of thread to climb up and down on their bodies. As in others of her films, Deren also edits material in reverse: Shots are played backwards so that threads, pulled under the clothes of the actors, appear to crawl out of them.

Maya Deren allows Matta Clark to glide and crawl in between the art works of the gallery, between sculptures and installations, so that objects and her body intertwine and snare, creating new, unexpected connections between dimensionalities. Such effects are reinforced by Deren's illuminations, lighting filmic quasi-subjects and quasi-objects always differently, from above or below, frontally or with backlighting. The figures in the film are not psychological characters, but themselves figurations of constantly changing nodes and connections in a very material network of relationships. In the process, more degrees of play are offered and afforded, making further permutations conceivable. This playing with strings beyond the subjective and the objective is what Deren calls "ritualistic." In her fundamental text on film form *An Anagram of Ideas on Art, Form and Film*, she states:

The ritualistic form treats the human being, not as the source of the dramatic action, but as a somewhat depersonalized element in a dramatic whole. The intent of such depersonalization is not the destruction of the individual; on the contrary, it enlarges him beyond the personal dimension and frees him from the specializations and confines of personality.<sup>5</sup>

As in the figures of string games, volume is created in the film by switching back and forth between figure and ground. For Maya Deren, filming means to create skipping images on all axes by tilting the camera, shifting the depth of field and inverting the lighting conditions—in later films she will also play with negative material. Thus, Deren systematically applies her knowledge of Gestalt theory, which she had studied, to modulate cinematic perception. In *Witch's Cradle*, Deren negotiates the transformation of scripture into materiality and the imaginary. To do so, she uses motifs of cabalistic and anagrammatic signs inscribed on objects and bodies in the images as well as rotating discs with inscriptions, in the tradition of Duchamp's *anémic cinéma*. She transfers the linear string of scriptures into the figurative of imagery and connects it to the gaze. String figures are turned into the cinematic play of dimensionalities.

In this way, the production of meaning, just as in string figure games, is freed from abstraction and universals in thinking and becomes, according to Donna Haraway's diagnosis, connected, entangled, concrete thinking. Like playing string figures, cinema produces thinking as procedures in radical materiality and among people. And just as the meshes of the strings tear or fall if the players do not maintain the right tension, the filmstrip will tear or fall off the reel if it is not wound correctly, if it is not projected carefully. The tensions that Deren repeatedly stages in the close-ups of Matta Clarke's face in the mirrors also applies to the relationship between camera and reality: in the shots of *Witch's Cradle*, filming itself can be recognized as a volatile relationship of tension between everyone and everything involved, lights, materials and distance, entangling the camerawoman herself into the play of strings and threads. As Walter Benjamin, whose

5 Maya Deren, *An Anagram of Ideas on Art, Form and Film* (New York: The Alicant Bookshop Press, 1946), p. 20; facsimile in Nichols, *Maya Deren*, pp. 267–322.

text Maya Deren would not have known, writes, this is not just a banal representation of materialities and milieus, it is the exploration of unknown possibilities for agency and action:

On the one hand, film advances insight into the necessities governing our lives by its use of close-ups, by its accentuation of hidden details in familiar objects, and by the exploration of commonplace milieus through ingenious camera movement; on the other, it manages to assure us of a vast and unsuspected field of action [Spielraum].<sup>6</sup>

The cinematic experiments of *Witch's Cradle* explore this field of action as a room-for-play, which remains unassured to this day. Maya Deren shows that the complexity itself, bewitched as it is, must be discovered as a play space, in cinema and beyond.

6 Walter Benjamin, "L'œuvre d'art à l'époque de sa reproduction mécanisée," *Zeitschrift für Sozialforschung* 5, no. 1 (1936), pp. 40–68. English translation according to Miriam Bratu Hansen, "Room-for-Play: Benjamin's Gamble with Cinema: The Martin Walsh Memorial Lecture 2003," *Canadian Journal of Film Studies* 13, no. 1 (2004), pp. 2–27, here p. 13.



Lynton Talbot

## **Against Immediacy**

On Toby Christian's *Stringer*

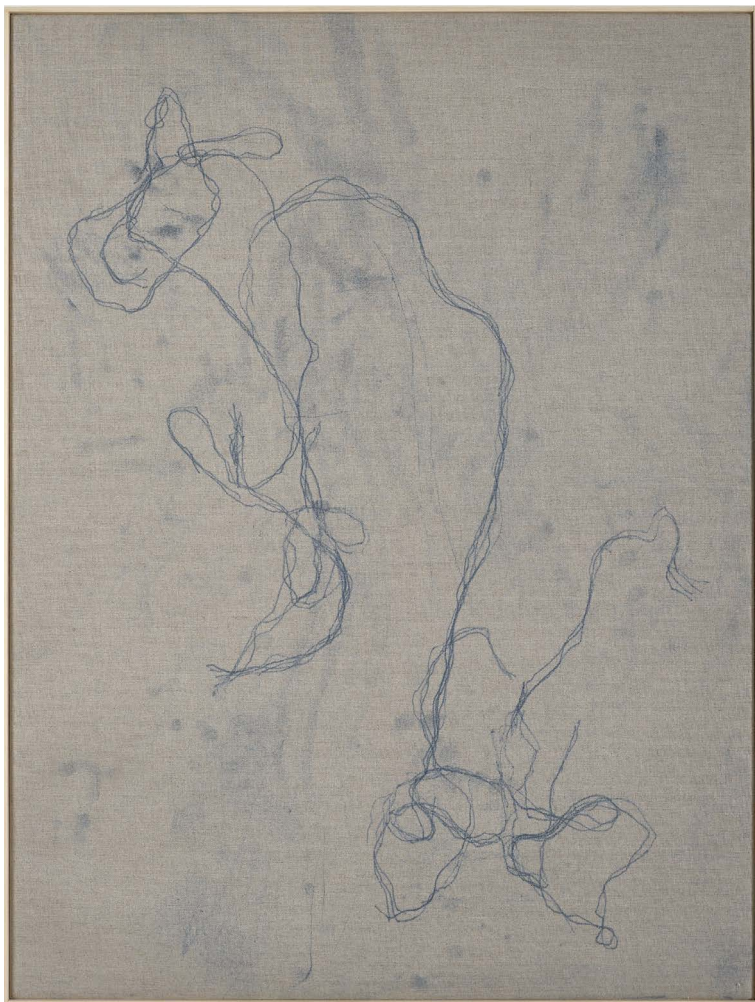


Fig. 1: Toby Christian, *Stringer Study (Un coup de dés...)*, 2024, carbon copy on unprimed linen, 90 x 120 x 2.5 cm, photo by Stephen White and Co.

*Stringer*, by the British artist Toby Christian, is an embodied experience that warrants pure unadulterated subjectivity when being talked about. It is an embodiment of the pressing issues of our time. It is unresolved and unresolvable. It is a project of holding in different ways; holding space, holding the body, holding language. It is holding the very essence of what we must continue to understand art to *be*, not *do* in the context of our extreme present.

*Stringer* is an AI that presents no answers but instead extends a hand and invites you somewhere else, somewhere unknowable. It establishes a dialogue with you and implicates you in the construction of its meaning. *Stringer* is an AI that connects the body through a careful, slow mediation and is an antidote to much recent theorizing of our current moment, characterized by a sense of immediacy and a broad anxiety about artificial intelligence. Not as a conservative or reactionary return to older values but as a way to deal with the now differently. An uncanny situational work that is productively uncomfortable.

I write this short text on *Stringer* while I am reading Anna Kornbluh's *Immediacy or The Style of Too Late Capitalism*, and Benjamin Bratton's 2024 essay for *Noëma*, "The Five Stages of AI Grief."<sup>1</sup> Anna Kornbluh gives us a fatal diagnosis of our contemporary moment, where the virtues of connectivity and instantaneity as economic premiums, have so heavily inscribed us as subjects of the extreme present, that they have also become our cultural premiums, too. We need art to *do* something we understand. We need art to reify what we already know to be true. We need to see ourselves and our experience reflected back to us in ways that are instantaneously validating. Complexity and unsurety are obstacles to overcome, not transformative moments to hold. Mediation has been lost according to Kornbluh. Directness and literalism are the new techniques; immersiveness and surety are the effects. Immediacy has surpassed slow mediation.

Benjamin Bratton, an American writer whose work spans philosophy, computer science and geopolitics, considers our various

1 See Anna Kornbluh, *Immediacy or The Style of Too Late Capitalism* (London: Verso, 2023), and Benjamin Bratton, "The Five Stages of AI Grief," *Noëma Magazine*, June 20, 2024, available at: <https://www.noemamag.com/the-five-stages-of-ai-grief/> (accessed October 18, 2024).

responses to the increasing and unrelenting dominance of AI in different social spheres including the arts. He uses the Swiss psychiatrist Elizabeth Kübler-Ross's "five stages of grief"—denial, anger, bargaining, depression and acceptance, from her 1969 book, *On Death and Dying*<sup>2</sup>—to pathologize our current trauma and anxiety as we recognize we are losing our monopoly over intelligence on earth. Bratton suggests that a philosophy of AI must be sought that is "neither pessimistic nor optimistic, neither dystopian nor utopian. A philosophy that simply recognizes the fact that human intelligence is not what human intelligence thought it was all this time. That it is both something we possess but which possesses us even more. That it exists not just in individual brains, but even more so in the durable structures of communication between them, for example, in the form of language."<sup>3</sup>

While I write, I am also living with a tattoo on my body of an early *Stringer* rendering, before it assumed the detailed frays and twists of twined string. It is simply an auto-generated vector drawing of one of the first words to ever be parsed through the *Stringer*—the word *parrhesia*. There is an intimacy to being tattooed like no other. The person tattooing must trust the sitter, the person being tattooed must trust the person altering their body forever. There is care, pain, and risk. It is a slow, collaborative process that ends with a permanent alteration to one's life that allows meaning to wax and wane in slow durational time. There is a circularity that brings the collaborative discourse at the heart of *Stringer* back to the body; from Toby Christian's meticulous development, with programmer and collaborative partner, Gabriel Stones, to the dialogue between a human intelligence and an artificial intelligence, to the emotional, divinatory realizations of the sitter, and for me, at least, to the relationship between body and image as a tattoo on my skin.

My first encounter with *Stringer* began before it functioned as we know it now—just a speculative conversation about the possibility of language and its potential to somehow emancipate itself

2 See Elizabeth Kübler-Ross, *On Death and Dying* (New York: Collier Books/Macmillan Publishing Co., 1969).

3 Bratton, "Five Stages of AI Grief."

from useful function, to create a space of another kind. *Stringer* became the focus of conversation over the summer months of 2022, after I had invited Toby to make a work for a project space I run called Parrhesiades. During one key conversation, he informed me that he and Stones were close to getting *Stringer* to generate an image in dialogue with the speech and text it heard. The “alphabet” of possibility was there, and *Stringer* was nearly able to speak back. On my way home from Toby’s studio, on that very same day, I received an email with an image attached. It was of a twisted, complex line, meandering and looping like a long hair stuck to a tile, rendered rudimentarily, as white on a black background. The email explained that soon after I left, *Stringer* was becoming workable. It needed a word to process, and Toby gave it “parrhesia” to parse. *Stringer* replied. This word now lives on my skin, unreadable as an abstract image and yet somehow embodying everything that parrhesia means. *Stringer* holds meaning and knowledge as we would expect from art, but not in ways we have come to demand of art.

Parrhesia in simple terms translates from Ancient Greek to “speaking truth to power,” but this is an oversimplification and a platitude that dilutes its function in linguistics and political discourse. More accurately, parrhesia is a linguistic intervention that wrestles power from the speaker to the listener. The Italian philosopher Maurizio Lazzarato positions parrhesia as the antithesis of rhetoric.<sup>4</sup> In rhetoric, the speaker has access to more rights. The knowledge they impart is pre-determined, engineered outside of the scope of the conversation and then simply delivered to the listener with an outcome in mind. This places the speaker in a dominant and privileged position, their words a vehicle to arrive at their desired effect. A parrhesiatic speech act, from the listener, forces the speech through a different frame. It is an intersection that levels the playing field, creating a situation where neither speaker or listener knows the outcome of the conversation, exposing both to what Michel Foucault in *Fearless Speech* would call a new “field of dangers.”<sup>5</sup> In this scenario, the stakes are

4 See Maurizio Lazzarato, *Signs and Machines: Capitalism and the Production of Subjectivity* (Los Angeles: Semiotext(e), 2014).

5 See Michel Foucault, *Fearless Speech* (Los Angeles: Semiotext(e), 2001).

levelled, and a true discourse can emerge on equal terms based on a mutual unknowability of outcome. One of *Stringer's* first responses was to parrhesia. *Stringer* is parrhesiatic by definition in its absolute unknowability.

At every turn, *Stringer* is laden with mediation. Mediation, interpretation, divination are the materials in play more so than the technology. Words are the technology of language, but meaning is in the inference, the prosody, the context, the conditions, and the relations between those who are speaking and listening. Language transcends the pure function of words to become meaning. *Stringer* is a languaging project built entirely on such inference, prosody, context and conditions. There is no codified speech, no pre-determined outcome, no delivery of knowledge or specified meaning to impart. It is an esoteric poetry only possible in the space of relation between you and an AI.

In *The Accursed Share*, French theorist Georges Bataille talks about the economy of usefulness and how something's value is often based on how useful it is.<sup>6</sup> For Bataille, withdrawing anything from the economy of usefulness is to sacrifice it for the good of something else. Withdrawing anything from profane circulation makes that thing sacred for Bataille. Poetry is a perfect example. If we understand that poetry holds within it the possibility that words are emancipated from their useful (informational) function, then for Bataille, poetry itself consists of a sacrifice where the words are the victims. Poetry removes words from the use meaning we believe we are making when we speak to each other. Poetry spends words without calculating gain and surrenders them to the power of language itself. This kind of uselessness produces a radical space, impervious to co-option, as it cannot have its potential extracted in the same way codified speech acts can.

When we are face to face with *Stringer*, and see new forms emerge from hyper realistic rendered string, fraying, unravelling, and in its self-determined motion, speaking, we are not encoun-

6 See Georges Bataille, *The Accursed Share: An Essay on General Economy*, vol. 1, *Consumption*, trans. Robert Hurley (New York: Zone Books, 1991). Originally published in French as *La partie maudite* (Paris: Les Éditions de Minuit, 1949).

tering something conclusive. We are not afforded the right to understand. As a string figure emerges out of darkness, on what curator and theorist Michael Newman has described as “an edge between recognizability and disappearance,”<sup>7</sup> understanding is secondary to feeling. We are being held in a space, in dialogue, and neither the speaker nor listener (who is even who?) knows the outcome in that moment. We are in a field of dangers, together emancipated from the functional, set free into a new set of relations that makes demands of us in ways only art and poetry can. *Stringer* is poetry we must sit with. *Stringer* renounces our dependency on being given things we need and reconfigures our fears of AI. *Stringer* gives us a moment and presents an opportunity to step outside of the demands of the extreme present to think and reflect. These are perhaps the most important assets of the now. *Stringer* rejects immediacy and, in its place, gives us a sense of real intimacy. *Stringer* doesn't impart knowledge; it allows us to make meaning.

7 From Michael Newman's exhibition notes on *Stringer*, as part of *After Mallarmé*, an exhibition curated by Michael Newman at Large Glass, London in 2024. See <https://largeglass.co.uk/After-Mallarme> (accessed October 18, 2024).

# Authors and Artists

**Jan Bachmann** studied directing at the German Film and Television Academy Berlin (DFFB) and works as a comic author and illustrator on his own books and in various cooperation projects. Most recently, his graphic novel *Der Kaiser im Exil* based on sources from the immediate surroundings of Wilhelm II was published by Edition Moderne, and the August Verlag published *Blutsauger*, an illustrated script version of the eponymous Marxist vampire comedy by Julian Radlmaier. Bachmann is currently studying art education at the Zurich University of the Arts, where he is dealing with drawing as a tool of power.

**Paul Basu** is a professor in the School of Anthropology and Museum Ethnography and a curator at the Pitt Rivers Museum, University of Oxford. In his work, he draws upon a wide range of ethnographic, historical and participatory methods to explore how pasts are differently materialized and mediated in the present, and how they shape futures. His research has often involved re-engagements with colonial archives and collections relating to West Africa, exploring their ambiguous status as both sites of epistemic violence and, potentially, resources for communities to recover cultural histories, memories and alternative ways of knowing and being in the world. A trained filmmaker, he continues to use audio-visual as well as other multimodal and exhibition-based approaches in his research.

**Edgar Calel** (\*1987, Chi Xot, San Juan Comalapa, Guatemala) studied at the Escuela Nacional de Arte Rafael Rodríguez Padilla. His work spans various media, exploring Indigenous experiences through the Mayan Kaqchikel cosmovision, spirituality, rituals, and beliefs, juxtaposed with the systemic racism faced by Indigenous people in Guatemala. Notable exhibitions include the 35th São Paulo Biennial, 12th Liverpool Biennial, 14th Gwangju Biennial (all 2023), 58th Carnegie International (2022) and 11th Berlin Biennial (2020). His works are part of the permanent collections of Rijkscolectie, Hammer Museum, Tate, Museo Reina Sofía,

National Gallery of Canada, and others. He has participated in residencies including Tropical Papers (2021), Residencia Rua do Sol (2019), Lastro (2015), among others.

**Toby Christian's** interdisciplinary practice centres around objects and language to question dominant modes of representation and communication via dissociative and divinatory processes. His writing presents the reader with high definition textual spaces for habitation, where objective descriptions elicit feral, destabilised poetics. Since 2020 Christian has been developing *Stringer*, an application which produces a unique, temporary, suspended digital string sculpture in response to a user's spoken statement. His books *Commuters* (2021), *Collar* (2017) and *Measures* (2013) are published by Koenig Books.

**Stephan Claassen** (\*1968, the Netherlands,) studied chemistry and theology. As an independent researcher he studies and writes on traditional string figure making worldwide, especially in Europe, the Arctic and Papua New Guinea. With a local organization in Nunavut, Canada, he was involved in the production of a series of instructional videos for preserving local string figure traditions.

**Seraina Dür** is an artist and lecturer in the Bachelor Art Education program at the Zurich University of the Arts. Her artistic practice is social and explores questions of how communities can be strengthened through artistic processes. To this end, she creates spaces in which participation is made possible by actors with a wide range of needs and abilities. Her works have been shown at Helmhaus Zurich, Kunstmuseum Luzern, Kunstmuseum Liechtenstein, Museumsquartier Bern and Theater Basel, among others. She was commissioned by Museumsquartier Bern and the Commission for Art in Public Space to initiate a participatory artistic process with various associations in Bern, from which a community kitchen in public space resulted. Since 2024 the kitchen is run by participants.

**Piet Esch** (\*1979, Berlin) initially worked as a cameraman and director of short films, music videos and in advertising. He later co-founded the video department of the Hebbel am Ufer Theatre in Berlin. After studying art at the Zurich University of the Arts, Piet Esch spent three years working on his first feature film project. He is a member of the Basel-based production company *point de vue*. From 2019 to 2023 he worked as an artistic research associate at the ZHdK. In 2023 he was a fellow at the Academy for Theatre and Digitality.

**Mareile Flitsch**, sinologist and social anthropologist, completed her studies in Münster, Paris, Shenyang/VR China and at the FU Berlin. After completing research projects at the FU and the TU Berlin, including on everyday technologies in China, and heading the China Research Unit at the TU Berlin, she was appointed to the University of Zurich in 2008, since when she has held a chair in social anthropology and been director of the university's Ethnographic Museum. Mareile Flitsch specializes in the social anthropology of China, the anthropology of technology, material culture and museums, and is particularly concerned with questions of human self-understanding and the pluriverse of systems of competences and skill – including skill in terms of craftsmanship and play.

**Jonas Gillmann** works as a dramaturge and creative producer in the performing and visual arts. He studied philosophy, theater and dance studies and has further qualifications in cultural management and feminist economics. Since 2022 he works as production manager at Gessnerallee Zurich. As a freelance artist, he has worked at Neumarkt Zurich, Kaserne Basel, Theater Basel, Tinguely Museum, Festival Belluard Bollwerk International and Helmhaus Zurich, among others. His work focuses on artistic research, mediation formats, gender budgeting, accessibility, urban ecosystems and a critical approach to power and privilege. In his vision, theaters and museums are art centers with stages, libraries, public gardens, lunch tables, studios and spaces for exhibition and relaxing.

**Moritz Greiner-Petter** is a designer and design researcher based in Basel, with a background in visual communication and digital media design. Since 2013, he has been working on various research, design and publication projects as a designer and junior researcher at the Critical Media Lab, Institute Experimental Design and Media Cultures (IXDM) at the Basel Academy of Art and Design FHNW. In his practice, he explores alternative digital modes of representation and the design of media-reflexive interfaces and digital tools for research, publication, design and knowledge processes. Within the SNSF-funded projects *Visualpedia* (University of Lucerne, 2022–26) and *Research Film Provenance* (University of Basel, 2024–25) he currently focuses on the design of research interfaces in the context of film archives.

**Diana Guzmán Mirigõ** studied linguistics and education and is a teacher at the Escuela Normal Superior Indígena Maria Reina in Mitú, Colombia. She runs a community museum attached to the school, where she holds classes and workshops. Diana Guzmán has been working closely with the Ethnological Museum Berlin since 2017 and integrates the experience gained from these collaborations into her educational practice.

**Rainer Hatoum** is Head of Ethnographic Collections and Provenance Researcher at the Städtische Museum Braunschweig. He developed the SMBS's new permanent exhibition, which opened on October 8, 2023. Before, Hatoum has worked on several collaborative research projects, including with the Navajo Nation in the American Southwest and the Kwakwaka'wakw on the Northwest Coast. These projects have included various collections of song, object and archival manuscript material. In that context, Hatoum came to work intensively on Franz Boas and his shorthand field notes, which he deciphered for the first time.

**Ute Holl** is a filmmaker, media scholar and professor for media aesthetics at Basel University. Her research focuses on a media-history of perception and on the epistemology of audiovisual media. She has published on film and cinema as well as on the mediahistory of acoustics and electro-acoustics. On Maya Deren,

she published e.g. *Choreographie für eine Kamera, Schriften zum Film* (1995, co-edited by Jutta Hercher) and *Cinema Trance and Cybernetics* (2017).

**Ines Kleesattel** is a scholar of critical aesthetic studies with a background in philosophy, cultural studies, art education, and artistic research. Her work addresses relational practices of critique, situated aesthetics, queer-feminist ways of doing theory, and methods of artistic research. Since 2023 she is a professor at Basel Academy of Art and Design. Before, she was a guest professor at Academy of Fine Arts Stuttgart, a senior Researcher at University of Applied Arts Vienna as well as at Zurich University of the Arts. Kleesattel holds a PhD in Aesthetics/Philosophy. As a post-doc, she contributed to the SNSF project Aesthetics of Translocality. Recently, she has published on the topics of queer-feminist witchery as critical fabulation and on landscaping as a relational practice.

**Maureen Lander** is a New Zealand artist of Māori and Pākehā (European) descent. She is a multimedia installation artist and weaver working with Indigenous and introduced materials to produce works that embrace both customary and contemporary ways of making and understanding art. Her artworks draw inspiration from woven fibre and are often based on her extensive knowledge of Māori textiles in museum collections. She is fascinated by string and made the first iteration of *String Games* for the opening of Te Papa Tongarewa Museum of New Zealand in 1998. In recent years her contribution to New Zealand art has been recognised by several awards including the prestigious Walters Prize (with the Mataaho Collective) in 2021 and an Arts Foundation of New Zealand Laureate in 2022.

**Moya Lawson** is an arts worker, researcher and writer from Aotearoa New Zealand, currently based in Berlin. She has held curatorial and facilitator roles at City Gallery Wellington Te Whare Toi and play\_station artist-run space in Pōneke Wellington. Her research interests circle digitality, ecology, materialism and the metaphysical, as explored in art and elsewhere. Her 2023 Art His-

tory Masters thesis explored the installation *String Games* (1998), by Maureen Lander (Ngāpuhi, Te Hikutu), offering new contexts from which to look back at the work.

**Meyakarraṅgi Marika** (\*2004, Rirratjiṅu, Dhuwa): I love art because my mum is an artist. My mother is the artist Burṅanydji #2 Gaykamaṅu who was taught by her uncle Guwaykuway Wanambi. My mother's uncle, taught me to paint the frill necked lizard. Burṅanydji #2 began to paint in a highly pedantic formal style with great detail at a very young age which was unusual in the case of a young woman whose patrilineal line was from far to the West of the Miwatj side of NE Arnhem. It was a measure of his trust and respect for her that he gave her this role and she has continued to honour that precise style following his death.

**Robyn McKenzie** was born in the South Island of New Zealand. She currently lives and works in Canberra, Australia on Ngambri/ Ngunnawal country. She trained as an Art Historian at the University of Melbourne and wrote extensively on Contemporary Australian Art earlier in her career, including three years as Visual Arts Critic on The Age newspaper in Melbourne. In 2016 she was awarded a PhD from the Australian National University undertaken in the Interdisciplinary Cross Cultural Research Program for a project focussed on the collection of string figures from Yirrkala at the Australian Museum in Sydney. Her work has since been focussed on researching museum collections of Australian Indigenous material culture. She held a post-doctoral position at the ANU from 2016–22, and is currently working as a researcher in the School of History.

**Caroline Monnet** studied Sociology and Communication at the University of Ottawa, Canada, and the University of Granada, Spain, before turning to visual arts and film. Her work has been featured at the Whitney Biennial, Toronto Biennial of Art, KØS Museum Copenhagen, and the National Art Gallery, Ottawa. Solo exhibitions include the Montreal Museum of Fine Arts, Arsenal Contemporary, NYC, Centre d'art international de Vassivière, France, and the Baltimore Museum of Art. Her films have been

programmed at film festivals such as TIFF, Toronto, Sundance, Aesthetica, UK, Palm Springs International Film Festival. In 2016, she was selected for the Cinéfondation residency in Paris. Her work is included in numerous collections in North America and at the permanent UNESCO collection. She is based in Montréal and represented by Blouin-Division Gallery.

**Nasser Mufti** is Associate Professor of English at the University of Illinois at Chicago. He is the author of *Civilizing War: Imperial Politics and the Poetics of National Rupture* (2018). His second book project is tentatively titled “Looking West Again: Decolonization and the Invention of Nineteenth Century British Culture,” and explores anticolonial encounters with Romanticism and Victorianism.

**Wanharrawurr #2 Munuggurr** (\*2003, Garrthalala, Djapu, Dhuwa) or Wanharrawurr B.J. is an emerging football talent playing for Djarrak in Yirrkala. B.J. was recently selected to attend the 2019 NAB AFL Under 16 National Championships after being named in the NT Thunder Under 16 squad. *Miyapunu - String Figure* is the first print he has done. His grandfather is Guykuda.

**David Ket’acik Nicolai** was born and raised in Anchorage, Alaska, where he grew up hunting, fishing, hiking, playing soccer, and generally having a wonderful time. After graduating from high school, he spent five years going to college at Rensselaer Polytechnic Institute in Troy, NY. David’s day job is as a mechanical engineer, designing Heating, Ventilating, and Air Conditioning for buildings all over the world. David’s wife, Elizabeth, is a librarian, and their daughters are Annabelle and Rose. David can be found salmon fishing in the summers, hunting moose, caribou, and bison in the fall, cross-country skiing in the winter, and enjoying time with family and friends year-round.

**Christoph Oeschger** is an artist, filmmaker, photographer, and publisher based in Zurich. His work spans various forms of documentary expression. He studied Media Art at the Karlsruhe University of Arts and Design and Photography at the Zurich Uni-

versity of the Arts. In 2014, he co-founded the publishing project *cpress* with Christof Nüssli, focusing on artist books. In 2020, they expanded the project by founding *cpress films* to produce artist films. Oeschger's work has been exhibited at numerous museums and film festivals, including Fotomuseum Winterthur, Zentrum für Kunst und Medientechnologie, Centre de la Photographie Genève, Ann Arbor Film Festival, and Solothurner Filmtage.

**Andres Pardey**, (\*1965) studied art history, history and archaeology in Basel, wrote his dissertation on narration in the work of Hans Holbein the Younger, and has been at Museum Tinguely since 1995. In addition to his administrative duties and his responsibility for the collection, he has participated in various capacities in the organization of numerous exhibitions at the Museum Tinguely, including *Panamarenko* (2000), *Daniel Spoerri* (2001), *Niki de Saint Phalle* (2001), *Jean le Jeune* (2002), *Bernhard Luginbühl* (2003), *Eva Aeppli* (2006), *Robert Breer* (2011), *Krištof Kintera* (2014), *Ben Vautier* (2015), *Michael Landy* (2016), *Wim Delvoye* (2017), *Len Lye* (2019) and recently on *Impasse Ronsin* (2020) and *Jean-Jacques Lebel* (2022). He also worked as curator or consultant for exhibitions on Jean Tinguely in other venues.

**Adam Piron** (Kiowa/Mohawk) is a filmmaker, writer, and curator based in Southern California. He is a cofounder of COUSIN, a collective supporting Indigenous artists expanding the form of film. As a film curator, he has served as a member of the Sundance Film Festival's short film programming team since 2013 and was previously the Film Curator for the Los Angeles County Museum of Art. His films have screened at the New York Film Festival, International Film Festival Rotterdam, MoMA Doc Fortnight, The Geffen Contemporary at MOCA, and various other festivals and programs. His writing has appeared in The Criterion Collection's Current, MUBI Notebook, Cinema Scope Magazine, the Metrograph Journal, and CNN. He currently serves as director of Sundance Institute's Indigenous Program.

**Andrea Scholz** is an ethnologist and curator for transcultural relations at the Ethnological Museum Berlin. Based on the collec-

tions from South America, she has been building relationships with Indigenous communities since 2014. The resulting projects are concerned with the conservation, activation and transmission of material practices, and the communication of Indigenous concerns and perspectives to a Western audience.

**Mario Schulze** (\*1986, Halle/Saale, Germany) is one of the curators of *String Figures/Fadenspiele: A Research Exhibition*. He works as a postdoctoral researcher at the Department of Media Studies of the University of Basel, specializing in the history of scientific films and exhibitions from the 1920s to the present. Mario Schulze holds a doctorate in Cultural Analysis from the University of Zurich. Postdoctoral appointments and Fellowships took him to the Humboldt University of Berlin, University of Lucerne, Collegium Helveticum Zurich and the Zurich University of the Arts. He is the author of *Wie die Dinge sprechen lernten. Eine Geschichte des Museumsobjektes 1968–2000* (2017) and coauthor with Sarine Waltenspül of *Fließend. Die Geschichte eines wissenschaftlichen Films* (2025).

**Mark Sherman** learned his first string figure “Cup and Saucer” at the age of five. At the age of eight he bought Caroline Furness Jayne’s *String Figures and How to Make Them*, and learned them all. In 1982 he joined the String Figure Association based in Japan. During his post-doctoral studies (1987–1989) Mark wrote his first book, *Kwakiutl String Figures*, which he co-authored with Russian ethnographer Julia Averkieva. Between 1984 and 1992 he contributed several articles to *Bulletin of String Figures Association*. Then in 1993 Dr. Hiroshi Noguchi, the journal’s editor, asked him to take over. He renamed the journal, recruited several associate editors, and created a web page for the Association. During the subsequent 30 years ISFA Press, which Mark founded, has published several hundred articles on string figures.

**Rani Singh** is the Director of the Harry Smith Archives. Based in Santa Monica, CA, Singh focuses on strategic planning and legacy management for artists and artists’ estates. Previously she worked as Director of Special Projects at Gagosian Gallery and for

many years at the Getty Research Institute, Los Angeles in Modern & Contemporary Collections. She met Harry Smith at Naropa Institute and was his assistant until his passing in 1991, when she initiated the Harry Smith Archives, a not-for-profit organization dedicated to the location, preservation and presentation of the work of Smith. She is the co-curator of *Fragments of a Faith Forgotten: The Art of Harry Smith* an exhibition organized by the Whitney Museum of American Art and the Carpenter Center for the Visual Arts at Harvard University in 2023–24.

**Ellen Spielmann** is an affiliated scholar at the Hannah-Arendt-Institute for Totalitarianism Studies of the Technical University Dresden. She holds a PhD in Latin American Literature from the Free University of Berlin and has taught at German and Latin American universities since 2000. In 2008, she was a visiting scholar at the Department of Spanish and Portuguese at Stanford University (2008). She is the author of several books: *Blaise Cendrars Brasilienreisen in den 1920er Jahren* (2022), *Die Argonauten der letzten terra incognita*. (2018), *Samba, Zuckerhut und andere Siegel für Brasilien* (2013), *Das Verschwinden Dina Lévi-Strauss' und der Transvestismus Mário de Andrades* (2003).

**Henry Adam Svec** holds a PhD and an MA in Media Studies from the University of Western Ontario and a BA in English Literature from Mount Allison University. His research interests include media archeology, utopia and authenticity, and popular music, and he has published articles in such venues as the *Canadian Journal of Communication*, *Convergence*, and *Popular Music & Society*. He is the author of two books: *American Folk Music as Tactical Media*, a scholarly monograph, and *Life Is Like Canadian Football and Other Authentic Folk Songs*, a novel. He teaches in the Department of Communication Arts at the University of Waterloo in Canada.

**Siena Milkila Stubbs** (\*2002, Bawaka, Gumatj, Yirritja): Born and raised in Yirrkala. Singer. Dancer. Photographer. Attended Nhulunbuy High School. School Captain 2019. Awarded Administrators Medal as Outstanding Year 10 student Northern Territory

2017. NT Finalist for Young Australian of the Year 2019. National Showcase Dance gold medal winner. Finalist in Childrens Book Council of Australia national awards 2019. Plays AFL for Djarrak. Winner Multi Media Award NATSIAA 2020. Worked at The Mulka Project in 2020. Enjoys dancing in ceremony and hunting with family.

**Lynton Talbot** is an independent curator and writer from London. He has curated exhibitions including *The Noon Sirens* at Amant Foundation, NYC, *The Season of Cartesian Weeping* at The Roberts Institute, London, and *The boys the girls and the political* at Lisson Gallery, London. In 2019 he started a non-profit project space called parrhesiades for artists that centre writing practices where he worked with P. Staff, Sophia Al Maria, Anaïs Duplan, Sung Tieu among many others. In 2021 he co-edited *Intertitles; An Anthology at the Intersection of Writing and Visual Art* and has written extensively on artists working with language for journals and magazines, most recently for *Vitamin Txt*. Talbot is Co-Director of The Balkan Institute of Art and Architecture in Sofia, Bulgaria and founding Director of London based gallery, TINA.

**Eric Vandendriessche** is a researcher at the French National Center for Scientific Research (Section 38-Anthropology), a mathematician by training, and PhD in Epistemology and History of Science. He is a member of the Centre de recherche et de documentation sur l'Océanie (Aix-Marseille University, CNRS), where he carries out research in Ethnomathematics. His main research interest concerns mathematical practices developed in oral tradition societies. Eric Vandendriessche was the PI of the *Encoding and Transmitting Knowledge with a String: a comparative study of the cultural uses of mathematical practices in string figure-making* (Oceania, North & South America) research project (2016–21), funded by the French National Research Agency.

**Katrien Vermeire** (\*1979, Ostend, Belgium) is a photographer and cinematographer. She studied photography at the Royal Academy of Fine Arts in Ghent, Belgium, and Art History at Ghent University. Her photographic and audiovisual work has been presented

internationally in museums, galleries, and festivals such as the FOAM Photography Museum, Amsterdam; Biennale of Sydney; Museum of Fine Arts Ghent; M Museum Leuven; Locarno Film Festival; Rhode Island International Film Festival and Mount Holyoke College Art Museum, Massachusetts. Her work has been acquired by private and public collections in Australia, Belgium, France, Luxembourg, the Netherlands, Switzerland, and the US. She works and lives in Ostend, Belgium.

**Maria Julia Fernandes Vicentin** (\*1993, Caiçara from Serra do Mar and Serra da Mantiqueira, Brazil) holds a degree in Social Sciences (2019) and a Master's in Social Anthropology (2024) from the University of São Paulo, funded by FAPESP. In 2022, she participated in a research exchange at the Ibero-Amerikanisches Institut, Berlin. She was a Scientific Initiation Researcher at PPGAS-USP, funded by CNPq, from 2017 to 2019. Between 2014 and 2017, she interned at the Museum of Archaeology and Ethnology, focusing on conservation and collaborating with documentation, education, curatorship, and exhibitions. She works as a consultant and manager in social, cultural, and environmental projects related to Afroindigenous peoples in Brazil.

**Sarine Waltenspül** (\*1986, Basel-Stadt, Switzerland) is one of the curators of *String Figures / Fadenspiele: A Research Exhibition*. She is a media scholar and historian of science focusing on the 20th and 21st centuries, who also works as a filmmaker and curator. She studied philosophy, art history and cultural analysis, theory and history in Basel, Zurich and Berlin, earned a doctorate in media studies, worked at the Zurich University of the Arts, was a fellow at MECS/Lüneburg, Collegium Helveticum/ETH, Deutsches Museum Munich and a visiting professor at the University of Basel. She has co-/led various research projects, currently the *Visualpedia* project. She is the author of *Modelle im Film. Eine kleine Kinogeschichte* (2024) and co-author with Mario Schulze of *Fließend. Die Geschichte eines wissenschaftlichen Films* (2025).

**Dhukumul Wanambi** (\*2003, Gurka'wuy, Marrakulu, Dhuwa) is the youngest daughter of the late Wukun Wanambi, esteemed

artist and Cultural Director of The Mulka Project. Dhukumul has demonstrated exceptional academic and professional achievements. Graduating with distinction from Yirrkala Bilingual School in 2021, she was admitted to Charles Darwin University to study law. Before starting her university education, Dhukumul worked as a linguist at The Mulka Project, where she co-authored an analytical essay on the Gurrutu system (Yolŋu kinship), written in both English and Yolŋu Matha. In 2024, Dhukumul was a finalist in the National Aboriginal and Torres Strait Islander Art Awards for her digital artwork *Gurka'wuy* which represents a rock formation in the bay of her homeland. She received a Highly Commended award for this artwork.

**Mulkun Wirrpanda** (1942–2021, Dhuruputjpi, Dhudi-Djapu, Dhuwa). As the eldest and most knowledgeable of her clan, Mulkun was acknowledged as a leader, one of the few Yolŋu women to have this status. She was an early practitioner of works without figurative imagery within the *miny'tji* (sacred clan design) – until recently restricted to ceremonial use – using natural earth pigments (ochres). She painted on bark, *larrakitj* (memorial poles), *yidaki* (didgeridus) and was a talented carver, weaver and print maker. Each one of Mulkun's projects led on from the other naturally, creating a unique body of work that showcases the artist's passion for revitalising, maintaining and sharing Yolŋu cultural knowledge. Mulkun Wirrpanda's work has been presented in several solo exhibition in Australia as well as over 100 group exhibitions in Australia, Europe, Asia and America.



# Image Credits

**Introduction: Mario Schulze and Sarine Waltenspül:** Fig. 1.1: Honor Maude, *The String Figures of Nauru Island* (Adelaide, Libraries Board of South Australia, 1971), frontispiece. | Fig. 1.2: Adelaide Research & Scholarship University Library: Rare Books & Manuscripts Harry Evans and Honor Maude Digital Archive, Part II, Series 4, Section 12: Photographs. | Fig. 1.3: Maude, *The String Figures of Nauru Island*. | Fig. 2.1–2.2: Mounted figures from the Ethnological Museum Berlin, photos by the authors. | Fig. 3: Mulkun Wirrpanda, *Minhala/Long-necked Tortoise* (2013), courtesy Buku-Larrnggay Mulka Art Centre, Yirrkala. | Fig. 4: John Schiff, *Sixteen Miles of String: First Papers of Surrealism* (1942) [Marcel Duchamp], © Leo Baeck Institute, F DM 343 010. | Fig. 5: Maya Deren, *The Witch's Cradle* (1943), screenshot by the authors. | Fig. 6.1–6.3: Maya Deren, *The Witch's Cradle* (1943), screenshots by the authors. | Fig. 7: Photo by John Palmer, courtesy of Harry Smith Archives. | Fig. 8: Maureen Lander, *String Games* (1999), collection of Museum of New Zealand Te Papa Tongarewa, commissioned 1998, photo by Haru Sameshima. | Fig. 9: Nasser Mufti, *Playing Cat's Cradle with Companion Species* (2011), design 1, courtesy of the artist. | Fig. 10.1–10.2: Maria Julia Fernandes Vicentin and Edgar Calel, *Ru setelen chaj* (2024), courtesy of the artists. | Fig. 11.1: Hans-Rudolf Haefelfinger *Mittelleuropa, Basel-Land—Fadenspiele* (IWF 1975), provided by the Technische Informationsbibliothek Hannover / German National Library of Science and Technology (TIB), screenshot by the authors. | Fig. 11.2–11.3: Courtesy of the artists.

## I. Essays

**Robyn McKenzie:** Fig. 1: Ngarrawu Mununggurr, *Devil Devil/Morkoi* (1948), E.83666, First Nations Collections, Australian Museum, Sydney. © Australian Museum, reproduced with permission | Fig. 2: Ngarrawu Mununggurr making *Devil Devil/Morkoi* (1948), Fred McCarthy Field Trip Photographs, V08960.15, AMS 353. Courtesy of the Australian Museum Archives, Sydney. © Australian Museum, reproduced with permission | Fig. 3–6: Photograph by Robyn McKenzie. | Fig. 7: Photographer unknown, courtesy of the author. | Fig. 8: Siena Milkila Stubbs, *Turtle—String Figure*, 2013, courtesy of Buku-Larrnggay Mulka Art Center, Yirrkala. | **Paul Basu:** Fig. 1: University of Cambridge Museum of Archaeology and Anthropology A.195.NWT, p. 61. | Fig. 2: Photos by Josh Murfitt, University of Cambridge Museum of Archaeology and Anthropology. | Fig. 3: Photo by the author. | Fig. 4: Photo by Josh Murfitt, University of Cambridge Museum of Archaeology and Anthropology. | Fig. 5: Photo by Andrei Nacu, Royal Anthropological Institute 400.19855. | Fig. 6: Royal Anthro-

pological Institute 400.16252; 16254; 16250; 16253. | Fig. 7: Royal Anthropological Institute 400.16256; *Journal of the Anthropological Institute* 36 (1906), p. 134. | Fig. 8: Alafuro Sikoki-Coleman, Royal Anthropological Institute 400.20057. | Fig. 9: Photo by the author. | **Sarine Waltenspül:** Fig. 1: Ailima Saipele in Gerd Koch's *Polynesier (Ellice-Inseln, Niutao)—Fadenspiele*, provided by the TIB, screenshot by the author. | Fig. 2.1–2.2: Screenshot of the AV portal of the films by Hans-Rudolf Haefelfinger *Mitteuropa, Basel-Land—Fadenspiele* and Gerd Koch *Polynesier (Ellice-Inseln, Niutao)—Fadenspiele*, provided by the TIB, screenshots by the author. | Fig. 3.1–3.2: Ailima Saipele in Gerd Koch's *Polynesians (Ellice-Inseln, Niutao)—Building a Sleeping House*, provided by the TIB, screenshots by the author. | Fig. 4.1–4.2: Ailima Saipele in Gerd Koch's *Polynesier (Ellice-Inseln, Niutao)—Fadenspiele*, provided by the TIB, screenshot by the author. | Fig. 5.1: Ailima Saipele photographed by Gerd Koch around 1960, published in Honor Maude, "E 885/1965 *Polynesier (Ellice-Inseln, Niutao) Fadenspiele*," with general remarks by Gerd Koch, in *Encyclopaedia Cinematographica* (Göttingen: Institut für den wissenschaftlichen Film, 1969), p. 12. | Fig. 5.2: Gerd Koch, *Die materielle Kultur der Ellice-Inseln* (Berlin: Museum für Völkerkunde, 1961), p. 170; drawings by E. Armgardt after photographs by Gerd Koch of Ailima Saipele. | Fig. 6.1: Photograph by Koch in Maude "E 885/1965 *Polynesier*," p. 8. | Fig. 6.2: Drawing by E. Armgardt in Koch, *Die materielle Kultur der Ellice-Inseln*, p. 170 (detail). | Fig. 6.3: Drawing by Maude in Maude "E 885/1965 *Polynesier*," p. 8. | Fig. 7: Maude "E 885/1965 *Polynesier*," p. 18. | **Rainer Hatoum:** Fig. 1–2: Kwakiutl string figures, Anthropological papers of the AMNH; no. 71, courtesy of the Division of Anthropology, American Museum of Natural History. | Songs 1–3: Cat's cradle songs, Boas Collection, Courtesy of Indiana University Libraries' Archives of Traditional Music, with friendly permission by U'mista Cultural Centre. | **Eric Vandendriessche:** Fig. 1.1: © Eric Vandendriessche. | Fig. 1.2: © Céline Petit 2018. | Fig. 1.3: © David Jabin 2020. | Fig. 2–8: Photos © Eric Vandendriessche. | **Mareile Flitsch:** Fig. 1: Boyce Richardson and Tony Ianzelo, *Cree Hunters of Mistassini* (1974), National Film Board of Canada, screenshot by Piet Esch. | **Mario Schulze:** Fig. 1.1: Lynn Randolph, *Cyborg* (1989), © the artist. | Fig. 1.2: Lynn Randolph, *The Laboratory, or The Passion of OncoMouse* (1994), © the artist. | Fig. 2: *Donna Haraway Reads "The National Geographic" on Primates*, Paper Tiger Television, screenshot by the author. | Fig. 3: Donna Haraway, *Pilgrim Award Acceptance Comments*, July 7, 2011, <https://vimeo.com/28892350>, screenshot by the author. | **Rani Singh:** Fig. 1: Photograph by K.S. Brown, courtesy of Harry Smith Archives. | Fig. 2: Cover of *Film Culture* No. 37, 1965, photograph by John Palmer, courtesy of Harry Smith Archives. | Fig. 3.1–3.6: Harry Smith Papers, Getty Research Institute, Los Angeles, gift of the Harry Smith Archives, 2013.M.4. | Fig. 4.1–4.3: Harry

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All photos by Christoph Oeschger.

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## **String Figures / Fadenspiele: A Research Exhibition**

Museum Tinguely Basel, Switzerland

20 November 2024 – 9 March 2025

Curators: Mario Schulze and Sarine Waltenspül

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