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10 Decoloniality of Knowing and Being

Artistic Research Through Collaborative Craft Practice

Nithikul Nimkulrat

Introduction

> Experimentation is . . . one of the oldest methods with which artists have always worked, as central for them as it is for scientists.
>
> (Nowotny, 2011, p. xxiv)

Both artists and scientists carry out experimentation in their respective fields. In the research context, both research in the arts and that in the sciences may utilise experimentation as a method in their research inquiry. While this can be a key method for research in both disciplinary realms, one major difference lies in the aim of the experimentation. In scientific research, the aim is to witness the repetition of the results of the experimentation, whereas artistic research does not have such aim, as artistic experimentation tends to yield plurality of the results. Another difference would be the context or the 'site of knowledge' (Koskinen et al., 2011, p. 55) in which the experimentation takes place. In science, a laboratory is the site in which a thing or a phenomenon is brought from its natural environment to a controlled space for the researcher to focus on, one at a time. On the contrary, the site of knowledge of artistic research is a studio which is the real world in which an artist makes things. While the artist/researcher may study one thing at a time, a studio is not a controlled space as such, meaning that several factors may influence the artist in the shaping of the thing. Nevertheless, the concept of the laboratory as the site of knowledge is useful for artistic research. Even though the artist/researcher may not be able to turn their studio into a controlled space to function as the site of knowledge, by being aware that the studio is the site of knowledge, the artist/researcher can be critical of their own making and document it as if the making would have taken place in a laboratory. This may be one way to align artistic research with scientific research so that artistic research can be better received and accepted by the academic world at large. However, questions have arisen from this line of thought: Why should artistic research be conducted using normative methods of scientific research, when the arts have artistic or creative practice embodying tacit knowledge that may, in turn, be demonstrated through tangible objects in addition to textual communication? As transferability and rigour are indispensable merits of research in academia in general,

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are there ways or approaches to artistic research that would not place it in a position inferior to scientific research?

With these questions in mind, this chapter seeks to demonstrate how practical and local forms of tacit knowledge generated from within artistic research may overcome the state of being subordinate to scientific research by the very nature of artistic research practice that involves artistic production and art objects. It does so by examining collaborative craft practice as a way of approaching a research problem and driving the artistic research process and its role in the decoloniality of knowing and being. Artistic research encompasses other disparities in process and output that can present challenges to non-arts researchers and university systems seeking to understand this research within their own scaffolds of reference of the research process. This chapter starts by considering the development of artistic research in the creative and performance arts and the arts-based research (ABR) in social sciences in order to compare and contrast their approaches. The role of collaborative craft in the decoloniality of knowing and being is exemplified through my artistic research in which I collaborated with mathematicians. Working collaboratively with researchers from a completely different discipline also sheds light on how arts-based methods can foster pluralism, lower disciplinary hierarchies and increase multivocality, thus situating artistic research in the praxis of decoloniality (Mignolo, 2018).

Development of Artistic Research in the Creative and Performance Arts

Artistic research identifies scholarly research that intertwines artistic activity that is a mode of knowledge production inseparable from artistic practice (de Assis & D'Errico, 2019, p. 3). Its focus is on practice being conducted by researchers who are practitioners, e.g. artists, designers, writers, dancers, musicians, architects, etc. The practitioner/researcher participates in discursive formations stemming from their art practice which includes the works of art, the artistic actions and the creative processes. Although art practice can be a subject matter or topic of academic research in general, what makes art practice distinguishable in artistic research is the central role it plays in the research process (Nimkulrat, 2009, p. 51) as a vehicle for theoretical inquiry (Nimkulrat, 2012). The aim of artistic research, as Borgdorff (2011) puts it, is to 'convey and communicate content that is enclosed in aesthetic experiences, enacted in creative practices and embodied in artistic products' (p. 45). In general, artists may say that their work involves research that they use to inform their art production. However, in regular art production, artists do not need to define and justify their methods or express themselves contextually. The need arises only in research in the sense of seeking dialogue to develop ways of working and knowing (Lilja, 2015, p. 58).

De Assis and D'Errico (2019) succinctly describe the artistic research process and the way in which knowledge is produced in artistic activities:

> An artistic research process always starts with the choice of specific working materials which implies knowledge of and a sharp focus on their contingent modes of existence, including their history and their temporal, geographic and cultural situatedness. Second, the scholarly dimension is fundamentally intertwined with the material and affective dimension of art. It is then not simply a matter for a practitioner to 'double' as an observer of his or her own practice or artistic production; rather, throughout its development and renegotiation, practice

> generates discourse, and can in turn be steered, communicated, and reflected by the discourse.
>
> (p. 3)

Due to artistic research's subjective and situated approach, its tacit and intuitive processes, the experiential and emergent nature of its methodologies and its intrinsically interdisciplinary dimension all are derived from material and social relationality (Barret & Bolt, 2007). While the artistic research process seems methodical to some extent, Bolt (2016) points out that, in academia, 'artistic research continues to be seen as lacking credibility because the methods cannot be replicated exactly' (p. 137). Replicability and correspondence in findings between studies are principles of *scientific* research. However, the *performative* principle of artistic research demonstrates that iteration can never produce the same result. This is considered a unique characteristic of practice-led research in which creative practice can 'disrupt the status quo and allow [researchers] to explore new scenarios', and a consequence of such disruptive quality is a novel dimension to interdisciplinary research (Rust et al., 2007, p. 57).

Development of ABR in the Social Sciences

ABR emerged as a novel methodological genre during the period from the 1970s to the 1990s (Sinner et al., 2006, p. 1226). According to Leavy (2015), ABR encompasses 'a set of methodological tools that adapt the tenets of the creative arts in order to address social research questions in holistic and engaged ways in which theory and practice are intertwined' (p. 21). Within social science research, art processes may be used to generate data, to conduct analysis and interpretation or to present findings. The intention for using arts-based tools, as Greenwood (2019) points out, is:

> to open up different, and hopefully more empowering, options for exploring the specific problem or issue, and for expressing participants' perspectives in ways that can bypass participants' discomfort with words or unconscious compliance with dominant discourses, or perhaps to present findings in ways that better reveal their dynamics and complexity than written reports.
>
> (p. 7)

ABR seems to be human friendly in a way that participants may not be able to articulate their experiences. The process of making offers the participants the opportunity to express more truthful complex feelings, reactions or beliefs than answers that may be given as words in an interview, regardless of the language command of the participants (Greenwood, 2019, p. 9). ABR therefore creates opportunities for enhanced engagement amongst research participants. Healthcare researchers, special education researchers, psychologists and other researchers dealing with human participants have increasingly turned to arts-based methods for their therapeutic and empowering qualities (Leavy, 2015, p. 26). ABR often involves collaboration between academic researchers and artists or participants who may not possess artistic ability or training. Although the aesthetic quality of the resulting artworks made by amateurs may not be comparable to professional artists, they can still be powerful with respect to expressing emotion and meanings (p. 196). In addition, ABR practice does not belong to the domain of a single discipline, but rather has an ability to expand on existing disciplines

and establish synergies amongst disciplines (Chilton & Leavy, 2014, p. 406), thus contributing to transdisciplinarity (Osborne, 2015).

Artistic Research and ABR: Differences and Decoloniality

Artistic research and ABR are similar in their practice being geographically and culturally situated in a specific context or the 'site of knowledge' (Koskinen et al., 2011, p. 55), e.g. a studio or a workshop in a location, and principle of including art-making as a research method to generate, analyse and interpret data or to present findings. In general, a research question posed in artistic research or ABR tends to arise from within the researcher's own practice, being art or social sciences. The major difference lies in who makes art, the aesthetic quality of the artistic outcomes and the disciplines in which the research question is situated. In artistic research, the researcher has the role of an artist/researcher, carrying out research through their own professional art-making, the outcomes of which are expected to be of a professional standard. On the other hand, it is not necessary in ABR that the researcher is a professional artist, and the aim of art-making is not about achieving works of art of a high aesthetic standard, but works of art that function as tools for empowering the research participants to express their ideas and/or feelings and promoting their opportunities to engage themselves with one another. The relationship between the researcher and the research participants in ABR and that between the artist/researcher and the material in art production in artistic research are both non-hierarchical, meaning that they are equal partners in the research conduct and epistemic hierarchies are eliminated. This non-hierarchical relationship that may potentially unlock local or situated knowledge can be looked at from a decolonial perspective that has arisen from opposition to liberalism in the Industrial Revolution during the eighteenth and nineteenth centuries.

During the Industrial Revolution, changes and new demands upon the individual and the political system were made. The Western *modern* state was shaped by liberalism that 'focuses on the individual, who has the capacity to reason . . . and to attain this potential through education, through a systematic form of organizing knowledge, then it became possible to debate these ideas in rational and "scientific" ways' (Smith, 1999, p. 59). Knowledge systematically organised in the West is local yet perceived as universal. Western discourse and ideology of modernity hence constitute coloniality, representing its fundamental aspect called the 'colonial matrix of power', which involves the control over four interdependent domains: economy, authority, gender and sexuality, and over knowledge and subjectivity (Mignolo, 2011, pp. 8–9). Coloniality recognises 'knowledge and understanding, controlled by a local imaginary [sic] that poses as universal, and that includes sciences, philosophy, ethics, aesthetics, religion, and . . . economics and politics (e.g. Eurocentrism)' (Mignolo, 2018, p. 127). In his decolonial thinking, Mignolo proposes acts of 'epistemic disobedience', which involve the process of 'delinking' from Western Eurocentric colonial knowledge systems, as the decolonial option to 'place human lives and life in general first rather than making claims for the "transformation of the disciplines"' (Mignolo, 2009, p. 178). The decolonial option, or an act of delinking from the rhetoric of modernity and the logic of coloniality, becomes a non-normative space, as a space open to the plurality of alternatives (Mignolo & Vazquez, 2013). Mignolo's decoloniality signifies a practice, as distinguished from theory, that dismantles and reinvents methods, systems and logics—the transformation of knowledge and its institutions. It differs

from decolonisation in that, unlike decolonisation, decoloniality does not negate the colonial rules nor refer to the transfer of sovereignty from a colonising society to an Indigenous one.

Although the methodologically radical development of artistic research is not generally concerned with a decolonial scaffold as such, it grapples with decoloniality at the level of methods that does not conform with methods in the scientific research sense.

> [C]oloniality describes the hidden process of erasure, devaluation, and disavowing of certain human beings, ways of thinking, ways of living, and of doing in the world—that is, coloniality as a process of inventing identifications—then for identification to be decolonial it needs to be articulated as 'de-identification' and 're-identification,' which means it is a process of delinking.
>
> (Mignolo as cited in Gaztambide-Fernández, 2014, p. 198)

Delinking here in relation to the art world means that decolonial artists, curators, etc., are not aiming to achieve recognition but rather to delink from the following factors influencing art that consider modern Eurocentric aesthetics as universal ones: first, the market—where art is converted into commodities with market values; second, the altermodern (Bourriaud, 2009)—where art is considered as having artistic and intellectual values within global common artistic discourses; and third, de-Westernisation—where the value of artistic practices is based on the aim to dissociate from the imperial supremacy of Western artistic values (Mignolo as cited in Gaztambide-Fernández, 2014, p. 204).

The next section presents my artistic research carried out in collaboration with mathematicians that shows how I become a decolonial artist who delinks my craft practice from the previously mentioned three factors. It also demonstrates how I attain decoloniality, learning to unlearn colonial epistemology as a researcher and a textile practitioner by giving up established notions of expertise and disciplines and opening up to other decolonial options (Tlostanova & Mignolo, 2012, pp. 19–22). Delinking, epistemic disobedience and learning to unlearn not only 'question and deconstruct coloniality as a hegemonic pattern of Western domination . . . [but also] seek for and support the establishment of alternatives by promoting other modes of knowing and experiencing' (Siegenthaler & Allain Bonilla, 2019, p. 6). My collaborative craft is expected to exemplify a new mode of knowing and experiencing, thus playing a role in the decoloniality of knowing and being.

Decoloniality of Knowing and Being: The Case of Collaborative Craft-Mathematics

Academic knowledge is organised around the idea of disciplines and fields of knowledge. However, a research question that arises from within a particular practice may go beyond its disciplinary context, such as the research project to be presented in this section. In this project, I played the role of both a researcher and a textile practitioner, who has used knotting as a technique for over a decade to create large-scale installations. The material was paper string, which was locally found and has been historically significant in Finland, the country in which I started adopting knotting, which I actually learned during my childhood in Thailand, as the main technique to construct

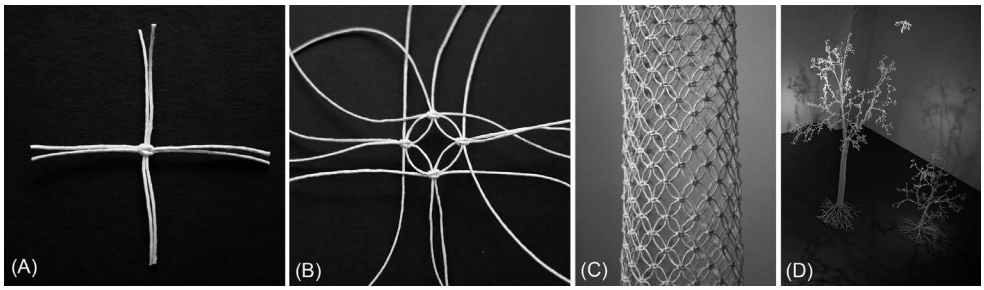

Figure 10.1 From left: (A) a single reef knot with two additional central strands passing through the centre; (B) a group of knots forming a circle; (C) a lacy structure; and (D) an installation with knotted elements named *The White Forest* (2016).

Source: Photographs by Nithikul Nimkulrat (2013–2016)

the repetitive lacy structure. The only type of knot used was the reef knot with two additional central strands passing through the centre that allow more reef knots to be connected, forming a circular shape and subsequently the lacy structure (Figure 10.1).

Prior to collaboration with mathematicians, my work had been monochromatic, as dealing with the positions of multiple strands intuitively did not facilitate the incorporation of more than one colour. Sketches were usually made to imagine the form and the overall installation, but never the structure. Seeing diagrams from mathematical knot theory that appeared as if they were visualisations of my knotted structures suggested to me the possibility to expand my practice further to incorporate colours in order to create new patterns and to initiate new research that asks: (1) whether craft and mathematical knots share comparable characteristics; (2) whether knot theory can examine the mathematical properties of knotted textile structures; and (3) how knot theory can facilitate the design and production of knotted textiles. To answer these questions, the expertise and knowledge of a textile practitioner/researcher alone are not sufficient. Therefore, moving beyond the disciplinary boundary is inevitable. For me, this was the start of unlearning in order to learn.

An iterative research process was developed between me and my collaborator, a South African/British mathematician. The process included initiating a discussion to set goals, working individually, working together, articulating relevant observations, questioning and setting goals for the next iteration (Figure 10.2).

The mathematical characterisation process shed light on the differences between textile knot practice and mathematical knot theory (Table 10.1). Pattern development for knotted structures was explored, envisaged and modelled through the iterative process of a textile practitioner and a mathematician working together (Figure 10.3).

After achieving new knot patterns and answering the initially established research questions, the project expanded to an area of mathematical tiling as both my mathematician collaborator and I recognised its potential in constructing new knot patterns and, possibly, new structures in a more systematic way. How mathematical tiling can be adopted as a tool for designing knot patterns and structures became a new research question. Another collaborator, a Finnish mathematician, whose expertise is in mathematical tiling, was therefore invited to join the project. Based on the knotted samples and a tiling concept, he identified 16 possibilities of two-tone coloured, four-strand

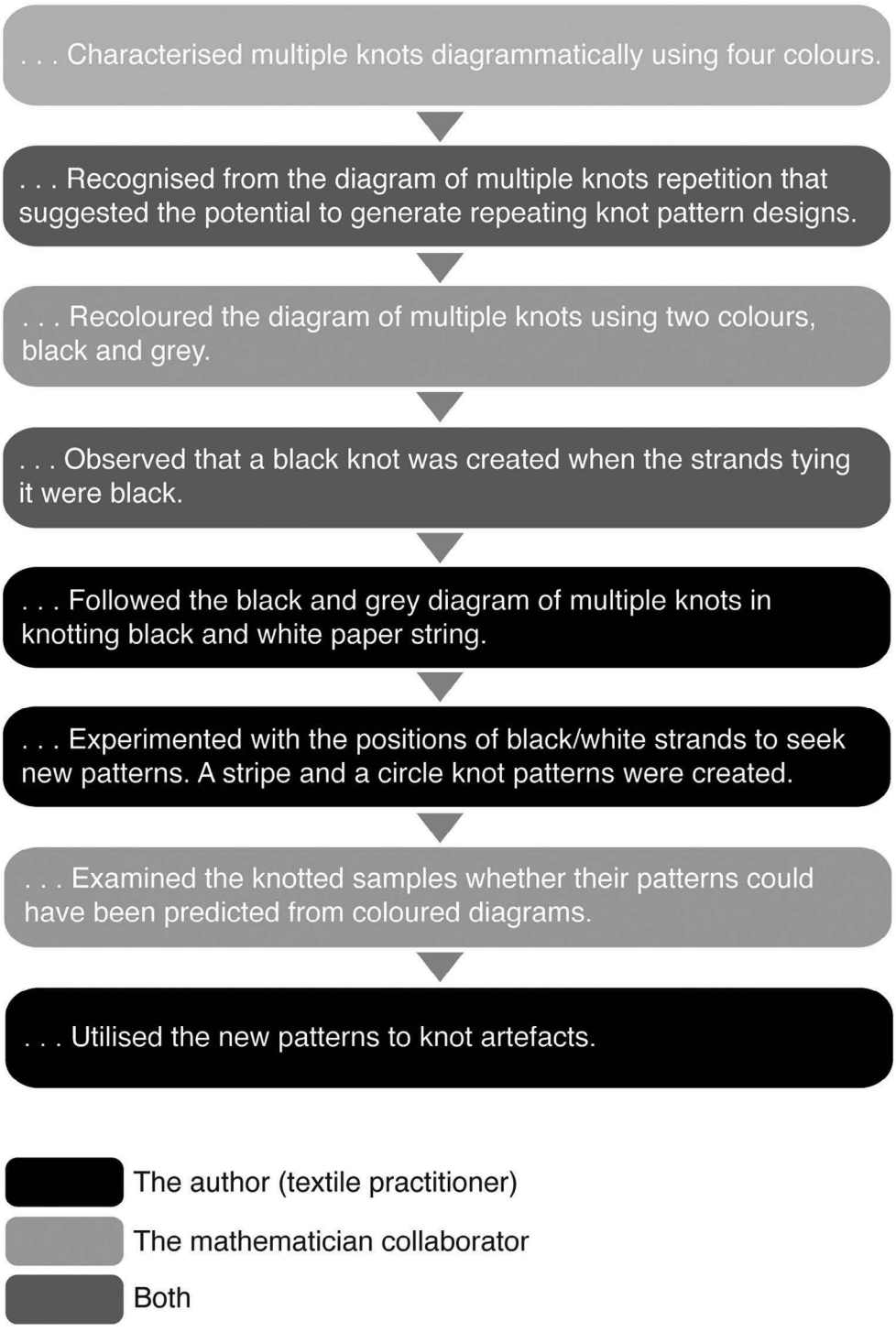

Figure 10.2 Collaborative process between the author and her mathematician collaborator.
Source: Diagram adapted from Nimkulrat and Matthews (2017, p. 71)

Table 10.1 Differences between textile knot practice and mathematical knot theory

Property	*Textile knot practice*	*Mathematical knot theory*
Ends	May have loose ends.	Continuous curve with no loose ends.
Material	Material dependent. The appearance of a knot is governed by material properties and dimensions.	Not concerned with materiality. Cross-section of strand deemed to be a point.
Tension	Tension-dependent. Internal and external spaces are pertinent.	A tight knot has the same representation as a loose knot, so they are considered equivalent.
Form	The addition of extra loops changes the appearance of a knot.	If a knot may be simplified to the same representation as another knot, they are considered equivalent.

Source: (Nimkulrat & Matthews, 2017, p. 64)

reef knots defined as unit cells that, hypothetically, can be tiled together, following the matching conditions that touching edges must have the same colour, to create a countless number of knot patterns (Figure 10.4). I followed this matching rule to explore the possibilities of tiling two-, three-, four- and five-unit cells from the 16-tile set. Numerous tiling notations were created; all of them were knottable. Figure 10.4 shows examples of knot patterns and samples created based on the use of three tiles.

In this collaborative partnership, the interaction between my mathematical collaborator and I differed from the previous partnership, primarily in that there was no period of working together synchronously. We both worked in different countries for the entire study period; when one finished their exploration, the result was handed over to the other for verification according to the researcher's disciplinary knowledge and expertise, i.e. the mathematician collaborator produced tiling notations based on a certain tiling concept and sent them to me to prove their knottability by physically knotting them using paper string. While I was open to adopting the working process that followed the essence of mathematics, which is about 'proving propositions', my mathematician collaborator was willing to accept a non-mathematical approach (i.e. craft) to prove the propositions. In this case, the mathematician came up with the proposition that tiling notations of identified unit cells were knottable and then transferred it to me to prove it through actual hand knotting. Once the proposition was proven to be true, I presented the knotted samples to the mathematician to examine, contemplating ways to apply other existing theories to analyse the physical knot again and/or discard some principles/rules and coming up with a new proposition for me to prove.

Though both researchers were each rooted in their own disciplines, we had to use an inter/transdisciplinary approach to counterbalance disciplinary limits to mediate discussion when working collaboratively on the same project. We had to go beyond our disciplinary boundaries to explore a new, unknown territory. In an unknown territory, our expertise and knowledge only were not enough, and a plurality of knowledge sites became essential.

Discussion and Conclusion

When artistic research has a scientific attribute, collaboration between an artist and a scientist is natural. Bringing together expertise from the artistic and the scientific

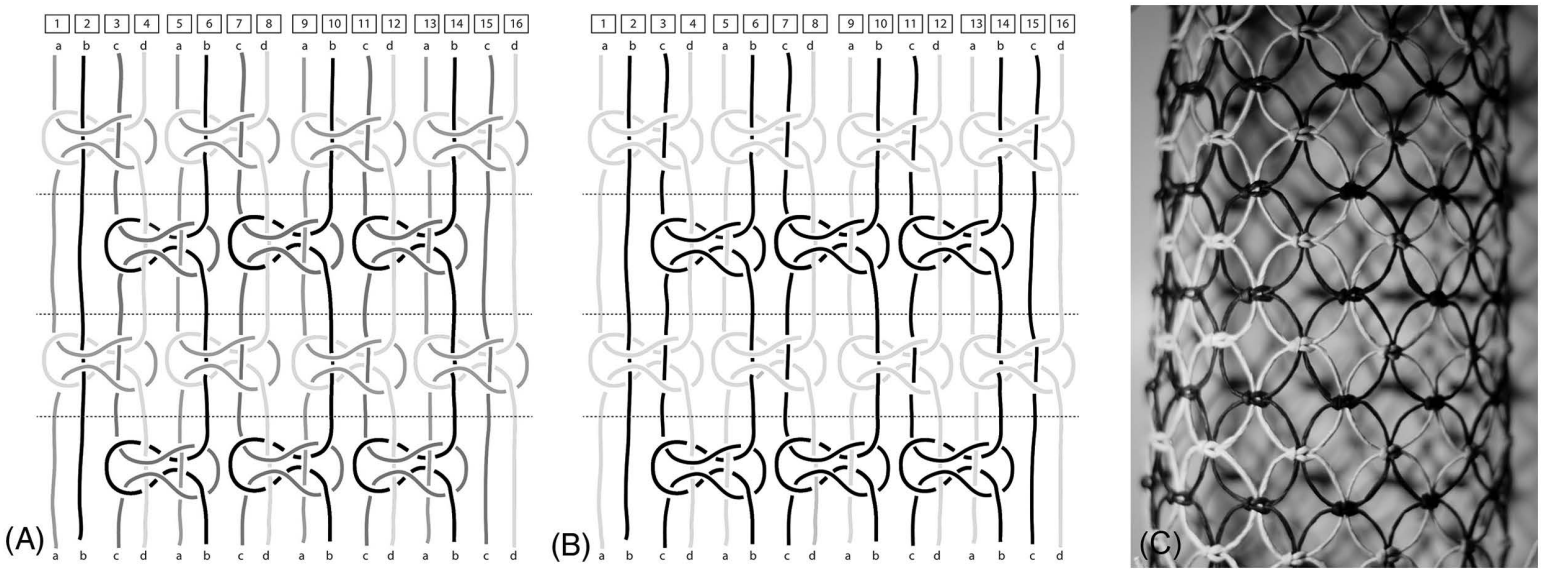

Figure 10.3 A mathematical characterisation process that results in a new knot pattern. From left: (A) a diagram of multiple knots using four colours; (B) a recoloured diagram using black and grey; and (C) a circular knot pattern of knotted paper string based on the black and grey diagram.

Sources: Diagrams by Janette Matthews (2015); photograph by Nithikul Nimkulrat (2015)

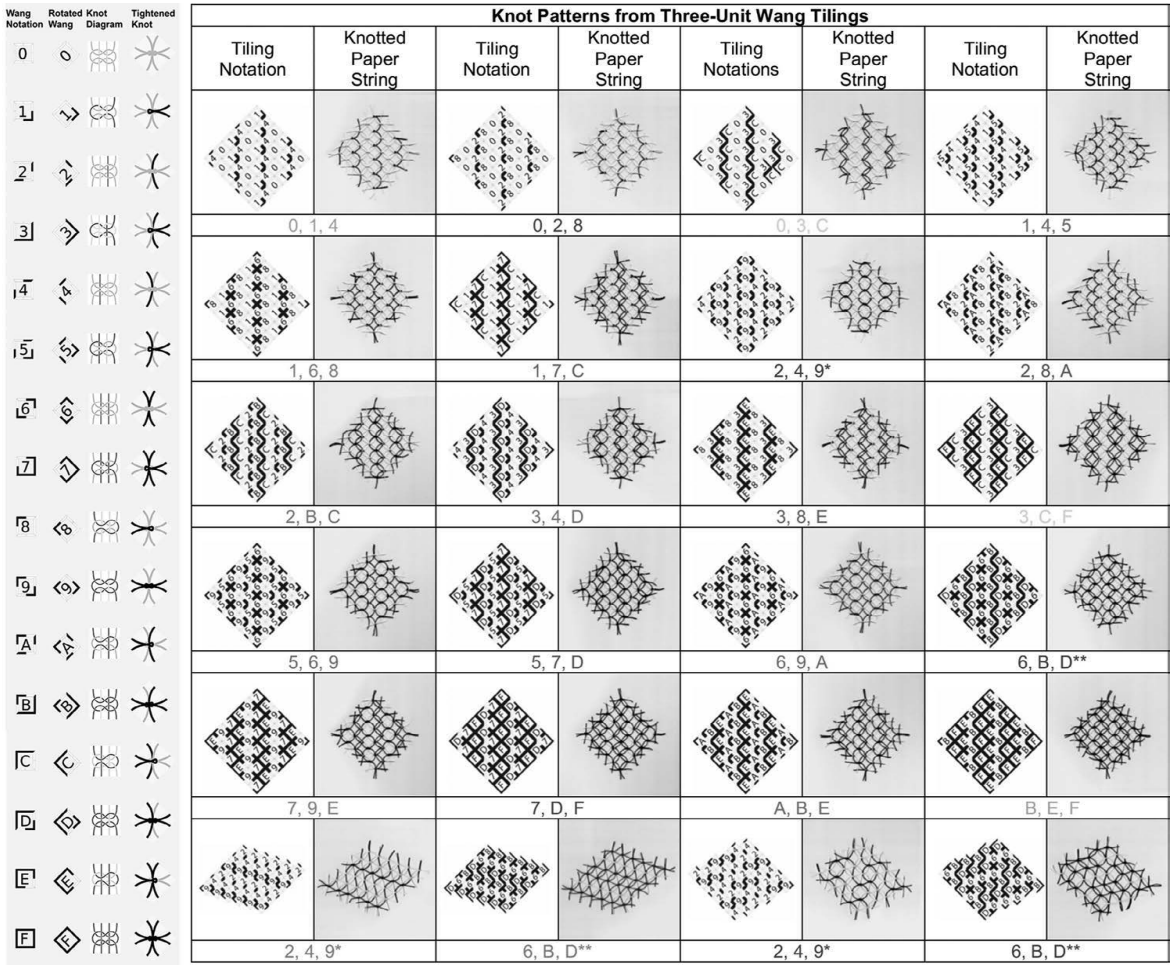

Figure 10.4 Left column: the 16 knot units that were mathematically identified. Right panel: 24 two-tone knot patterns, each produced from knot units shown in the left column. The pattern number indications with asterisks show that the same set of knot units can be tiled in multiple ways to create variations of knot patterns and structures.

Sources: Diagram adapted from Nimkulrat and Nurmi (2019, p. 20); photographs and notations by Nithikul Nimkulrat

worlds can lead to innovative findings and inspiring insights. Borgdorff (2011) suggests two different forms of multidisciplinary collaboration between artists and scientists: 'the scientific research serves or illuminates the art; or the art serves or illuminates what is going on in the science' (p. 53). However, neither form of multidisciplinary collaboration between artists and scientists, according to Borgdorff, corresponds to the collaboration in the artistic research exemplified in this chapter. While mathematical concepts illuminated and transformed my craft practice, the mathematicians did not conduct scientific research as such to do so, but rather implemented their mathematical knowledge in a new territory which was also new to me, a textile practitioner. Working in a new territory resonates with Pye's (2010) notion of craft as

> workmanship of risk that uses any kind of technique or apparatus, in which the quality of the result is not predetermined . . . The essential idea is that the quality of the result is continually at risk during the process of making.
>
> (p. 342)

In this case, the transdisciplinary method of working together required delinking from the model of knowledge production from both disciplines and dismantling the hierarchies amongst knowledge in different fields. In the collaboration presented previously, there is no power hierarchy, no knowledge hierarchy, no discipline hierarchy. The mathematicians and the artist worked together collaboratively and unlearned their established notions of expertise and disciplines in order to learn from one another, through this collaborative experience, new ways of knowing and practicing their disciplines which could be considered 'decolonial options' for their disciplinary practice.

All forms of knowledge are connected in one way or another through unlearning and learning. In this artistic research, I unlearned my way of knotting intuitively and learned a new way of knotting based on knot diagrams and tiling notations used in mathematics that were outside my textiles discipline. Knotting intuitively here means the hand and the mind working synchronously to construct lacy knot structures that can be learned by doing, through trial and error, or by observing an expert's demonstration. In my case, I had learned how to knot as a child in scout camps in Thailand. Knotting that I had known in my childhood naturally returned to me in 2004 when I conducted my PhD research (Nimkulrat, 2009), in which I examined the expressivity of material (i.e. paper string) and intended to experiment with the material without any tools. I unlearned weaving, which had been my specialisation, in order to learn a material that was new to me at that time; this resulted in my learning how to knot intuitively using only my bare hands to interact with the material that led to the lacy structure I have used since. This past experience of mine also supports the aforementioned statement that all forms of knowledge are connected through unlearning and learning, and also confirms that knowledge is embodied, experiential and accumulative. In the case of the mathematicians, they unlearned their way of proving propositions through equations and learned a new way of doing it through a visual and craft method. '[T]he decoloniality of knowledge is concerned with asserting multiple sources and sites of knowledge, transcending empirical observation and scientific reasoning', according to Kasturi & Goitsione (2019, p. 142). Working collaboratively with researchers from a completely different discipline also shed light on how arts-based methods can foster pluralism, lower disciplinary hierarchies and increase multivocality, thus situating artistic research in a decolonial context. Being respectful of

each other and of what the other knows are key to a successful collaboration in the decoloniality of knowing and being.

This artistic research has established a new standing for me as a 'decolonial artist' in that my knot practice that served as a research method delinked me from all 'colonial options' that Mignolo points out (as cited in Gaztambide-Fernández, 2014, p. 204). The knotted works did not aim at achieving value from the market, the global common artistic discourses or de-Westernisation (i.e. value of artistic practices that aim to dissociate from the imperial sovereignty of Western artistic values). Rather, they functioned as evidence of research results and outcomes of the methods that do not conform with methods in the scientific research sense. According to Mignolo (2018, p. 125), de-Westernisation is an 'interstate-led project that disputes the control and management of the colonial matrix of power but doesn't question its very foundation'. By detaching from de-Westernisation, not only did the artistic practice in this research free itself from the colonial matrix of power; it also focused on knowledge creation rather than the Western state and capitalist economy.

My new standing as a decolonial artist/researcher differs from my previous position as an artist/researcher in that in my previous artistic practice, although carried out as a method in artistic research, I still situated the resulting artworks in the art world by exhibiting them in contemporary art galleries. By being featured in a gallery, the artworks are inevitably attached to values—i.e. 'colonial options', in Mignolo's term—that are not essential for being the evidence and outcome of research that aims at generating or enhancing knowledge. One important implication of my learning and unlearning during this project is that my future work in decolonial research will depend heavily on collaborators who have mutual interest, trust and equity, and none of whom will play the lead but will be willing to work together and learn from one another.

The knowledge creation of making two-tone craft knot patterns and structures gained in this collaborative research was situated and embodied. As the methods used were dependent on the researchers involved, they cannot be replicated exactly. If other researchers were to conduct this research based on the same research questions, the methods would differ; hence, the results would not be the same. This explains how subjectivity cannot be eliminated from research as long as researchers are living beings.

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