

How can lines, threads, and knots be understood as a material language?

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This dissertation explores the following question: how can lines, threads, and knots be understood as a material language? Textiles have many meanings, functions and purposes; Catherine Dormor says that textiles “... is material, it is concept, it is language, it is metaphor” (2020, p.1). For this reason, the dissertation will look at the words lines, threads and knots in relation to historic and contemporary textile pieces to understand the language of these words through different contexts. There will be a particular focus on how lines, threads and knots can communicate through tacit knowledge, material language, codes and metaphors through textiles. To explore these concepts there will be a focus on the philosophies of Tim Ingold for understanding lines, knots and meshwork through his book *The Life of Lines*. For insight into the concept of material language, *The Textile Reader* by Jessica Hemmings will inform the essay of this idea. The book *Practises of Looking: An Introduction to Visual Culture* by Marita Sturken and Lisa Cartwright will help to define the words: codes, metaphors and phenomenology so that there can be a deeper understanding of these words in relation to the textile pieces. These philosophical ideas will be evidenced through the following textile pieces: *Khipu* (figure 1) from the British museum, *Quipu Womb* (figure 2) by Cecilia Vicuna, *Crochet Environment* (figure 3) by Faith Wilding and *Brain Forest Quipu* (figure 4) by Cecilia Vicuna. The explorations of these ideas, philosophies and textile pieces will lead to a deeper understanding of the question and further lead to a conclusion of these findings.

Textile language that comes from knotting and lines can be understood through the philosophical and anthropological writings of Tim Ingold and the language of touch. Ingold talks about the idea of dualities in relation to the body and the mind within Western culture called "Cartesian" dualism. By this he means that there is a hierarchy between the body and the mind. An example of this is hand crafts and textiles which is making, using the body to understand through the tactile, the haptic and kinaesthetic. This tacit knowledge used by the maker (Schon, 1983) is about the experience of making and knowing in action. Craft and the handmade are therefore given less importance and status because they are linked to the body. In Western culture, fine art is given higher status because it is linked to the mind and conceptual ideas. Knots are made with the hand and Tim Ingold (2015, p.14) argues that the metaphor of the knot has "... been largely sidelined" in "modern thought"; this reflects cartesian dualism.

Touch as a language has clear connections to textiles. Although touch has previously been regarded as low status within the hierarchy of senses, Maxine Bristow (2012, p.45) explains the need of a "sensual revolution" to better understand the "...reciprocal relationship between subject and object..." within "...cultural and artistic expression". Victoria Michelle in *The Textile Reader* "textiles, text and techne" argues "... that the privileging of words and the ocularcentrism of Western culture can mask some of the sensibilities conveyed through textile practice and that making sense through the tactility of textiles has implications for perception in a wider sense" (2012, p.6). This suggests that within the Western world there is a reliance on eyesight above all bodily senses, which restricts and limits to one perception; there is no perception of language as tactile and sensed through codes on a textile piece that cannot be communicated through words.

Lines, threads and knots can be used as a language to create and connect. In order to create a knot, a line made of fibres, a string of thread, the thread "... must bind in some such way that the tension that would tear them apart actually holds them fast" (Ingold, 2014, p.3). Once the knot is pulled, "... everything tangles with everything else..." (Ingold, 2014, p.). This is what Tim Ingold calls "meshwork" (2014, p.3). He argues that "... to describe the meshwork is to start from the premise that every living being is a line or, better, a bundle of lines" (Ingold, 2014, p.3). Ingold personifies the lines as 'living beings' that interact and form relationships with one another. Ingold states that "...our focus should be on forces and materials rather than form and content" (2014, p.3); by this he means that the most interesting part of the knot is the space between the threads and the relationship between the threads when they are in contact with each other. This can be understood as a metaphor for communication and friction in human relationships. This concept is replicated in the writings of Carol Strohecker, who discusses that knots "... are objects that enable us to explore the inner states of those who tie them" (2011, p.26). Strohecker encourages and allows the reader to think about the relationship to objects that are made, and the emotion and expression that are tied into them.

The knot as a material language joins and connects, becoming a material metaphor for relationships, connections and community. Ingold talks about knotting as being "... symptomatic of the binding of lives in relations of kinship and affinity" (2014, p.20), like the

saying to 'tie the knot' meaning to marry and bring two people together as one. Knotting is the intertwining of lines; "They must bind in some such way that the tension that would tear them apart actually holds them fast" (Ingold, 2014, p.3). This relates to Vicuna's ideas of holding space for opposing ideas of life and death, violation and care, like the words "tension" and "hold" that bring threads together in a knot; like people that come together and support one another in communities through life's ups and downs (Ingold, 2014, p.3). The idea of the plastic line also relates to the connections and communications made by lines when weaving and tangling with each other through knotted forms. Tim Ingold calls this "meshwork" and says "... to describe the meshwork is to start from the premise that every living being is a line or, better, a bundle of lines" (Ingold, 2014, p.3). Ingold directly correlates lines with living beings and that in meshwork individuals can form relationships and understanding with others and themselves through entanglement.



Fig. 1: *Khipu in the Museo Machu Picchu, Casa Concha, Cusco.*

Knots in textiles have historically been used as a form of communication, language and codes within different cultures. The British Museum states "... the word khipu comes from the Queschua word for knot" (2022, p.1). Khipu (also spelt as quipu) are textiles used by the people within the Andean highlands in Colombia. Khipu consist of one primary horizontal cord with multiple "pendant" cords hanging vertically from it. The pendant cords are coded by colour and knotted arrangements. It is said that they contained a decimal system similar to that of computer coding and thus recorded important information. The coded system was understood through touch, in the way the knots were tied and the pattern of, and distance between, each knot. Touch helps us to understand and connect to objects. Anna Hamlyn (2003, abstract) talks of this, saying "... the sensory connection that we all... have to cloth cannot be adequately expressed in language". She continues to explain that the

“language” is communicated to us not as we traditionally understand language to be, but through the use of codes and symbolism. A code is described by Sturken and Cartwright as “... the implicit rules by which meanings get put into social practice and can therefore be read by their users. Codes involve a systematic organization of signs” (2009, p.434). Codes in this context are a system which is read by the reader and understood as numerical and literacy knowledge. Sturken and Cartwright also describe the meaning of the symbolic sign as “... a term in semiotics used by Charles Peirce to indicate those signs in which there is no connection between the signifier (word/image) and the thing signified except that imposed by convention. Language systems are primarily symbolic systems” (Sturken & Cartwright, 2009, p.463). The symbolic sign becomes a way to understand a less literal meaning for the connections between the codes in an image/word.

The tactility of this device is similar to braille, where the surface is raised in a pattern of codes into a language, but instead of dots, it is understood through knots. Khipu could be knotted and unknotted to create new messaging repeatedly. The khipu was light and “...portable, rolled up in a spiral to be stored and carried from one place to another” (The British Museum (2022, p.1)). The language coded on the khipu are still being studied today as the language became lost during the Spanish conquest as the Spanish banned, burnt, and buried khipu because they did not understand the messaging and therefore felt threatened by them. The importance of touch as a form of communication and language is no longer valued within the Western world, instead the concentration lies on the visual, and the visual only. It is believed that tacit language of the khipu was invented before the visual handwriting system was introduced. The Spanish conquest enforced the idea that the visual sense is more important than the tactile sense within the hierarchy of the senses. This left a huge wound in Colombia as their culture, language and identity were stripped away from them. Luckily, some archaeologists have been able to dig up and preserve some of the khipu that were buried, so that researchers can continue to study and learn more about this advanced technology.

Knots can become a tool for many forms of communication and language. This is seen within the book *Evocative Objects, Things We Think With*. Strohecker talks about a time where she created a “Knot Lab”, as she called it, teaching children in primary school how to create knots (2011, p.25). She was able to teach mathematics through demonstrating knotting techniques; it became a way of learning through making (Strohecker, 2011, p.26-28). This is similar to the khipu that was used as a numerical device and language system. Strohecker also taught the children to be playful and imaginative through using the names of the knots to tell stories. “...inside our Knot Lab, children played with string, tacked knots onto display boards, and worked together on stories about knots” (Strohecker, 2011, p.25). Although the purpose of creating these knots were for mathematics, English and learning purposes, they also became a way for some of the children to communicate, to express their feelings and emotions verbally and metaphorically about challenging situations. Strohecker argues for knotting as a way to “... enable us to explore the inner states of those who tie them” (2011, p.26). In making knots there is the opportunity to learn, communicate, work together, and understand placement in the world around us.



Fig. 2: *Quipu Womb (The Story of The Red Thread Athens)*.

Cecilia Vicuña's work uses textiles, lines, and knots to explore the themes of language, identity and understanding in the world around her (see figure 2). She is a Colombian poet and visual artist. Khipus are central to all of Vicuña's work. She does not aim to replicate the khipu, but to use them as a vehicle to voice a language. As such her use of the knot as a language is metaphorical rather than the traditional khipu, with its symbols and codes. The wool becomes a sort of line of life. When wool is unspun, the fibres are fragile and vulnerable to breaking or tearing apart. It is a difficult material to work with and control as it does not have the strength that spun wool would have. Spun wool uses two or more strips of wool that have been twisted around each other in a meshwork, to create one strong thread of wool. The twisting method and the contact between the thread creates a strong bond.

The unspun wool and its vulnerability are an example of the balance of life and nature itself; the balance between the beauty of life and the struggles of life, as well as the need to protect it from harm or danger. The knots along the wool indicate interruptions or struggles in the flow of life in the lines. The way that the wool is draping down from the metal hoop could indicate a stream and flow through the softness in the material. The material that she uses is completely different to that of an original khipu which used spun cords that are coarse and tightly connected in comparison to Vicuna's use of unspun and loosely knotted wool. The lines in the traditional khipu represents the structured sense of understanding, in comparison to the fluid and plastic lines seen in Vicuna's work. Vicuna looks at the thread and its relationship with words and life, the way they are intertwined, connect, and reflect one another; they are fluid and have many meanings. "The word, and furthermore, language itself, have a paradoxical structure: they are nonlinear bodies which, through association and the process of writing, appear to be linear, yet at the same time, they are lines associating with other lines (Díaz, 2018, p.185). The line that Vicuna talks about is not just a line of thread made of fibres, but it also represents a "poetic line" (Díaz, 2018, p.175). Vicuna uses plastic unstructured weaving of lines for us to create connections between "...the opening and intertwining of new worlds..." (Díaz, 2018, p.176) which allows space for new perspectives and conversations to form. By creating a new plasticity of the khipu it becomes free, "from predetermined signification, [which] allows her to problematize different semantic registers as well as different technologies of registering and accounting for the past" (Díaz, 2018, p.179) the khipu becomes a way to voice injustices, to analyse time, to weave and re-weave the past and new lines. The line can create ties and connections to ideas and relationships that are not as linear or straight forward in understanding. In this work, Vicuna is using the plasticity of the line and knot to create a new language through its materiality. This concept is similarly discussed by Jessica Hemmings (2012), about Pennina Barnett's use of where she uses "... an alternative and organised way of thinking that challenges binary structures and their limiting categories" to form and communicate a new khipu language (2012, p.132).

Vicuna is also a maker and protector of the khipu; a *khipukamayuc* which is the term that references the maker, keeper and protector of the khipu. As such she is the protector and maker of language. Vicuna's work entitled *Quipu womb (The Story of the Red Thread)* made in 2017 is a large-scale khipu that is made up of over 50 large strands of unspun wool sourced from Greece (see figure 2). These woollen strips were dyed in a shocking, blood-like shade of crimson red and hung from a metal ring that was attached to the ceiling. This piece is about the "umbilical cord [that] connects Andean mother goddesses with the maritime mythologies of ancient Greece" (Selvedge, 2017). The Andean mother goddesses are representative of mother nature; the protectors of the earth and maritime mythologies are a link to the gods and goddesses that protect the sea. These two stories are linked together through the line, vein, umbilical cord that gives life. These themes make references to women, threads and lines within folk law and mythology. Examples of this are seen in Penelope's story in Homer's *Odyssey* and *Rumpelstiltskin* by Brothers Grimm, but more importantly the three mythological sisters in Greek mythology called Clotho, Lachesis and Atropos. Each sister had a role in determining the life and destiny of a new-born child. "Clotho, the most powerful, would take her spindle and spin the thread of their life; Lachesis carefully measured its length; and Atropos would sever it, determining the exact moment of death" (St. Clair, 2019, p.1).

The way that the *Quipu Womb* (see figure 2) is hung looks like a waterfall of blood, through their fluid movement and visceral quality. The water-like positioning of the wool symbolises the maritime goddesses (goddess and protector of the sea) and the Andean mother goddess (mother nature and protector of the planet). The red colour is like blood, which symbolises life in both birth and death.

The women were the ones that made the khipu; they would gather and sing songs. Women with uteruses are also the people who birth and house life within their womb, they are the creators of life. Ingold talks about a psalm in the bible which says that children are “knit together” with lines tangling to create “meshwork” in the womb, that bind the lines of two people together and resulting in a new form of life, a “knot” (Ingold, 2014, p.20). Although Ingold (2014) talks about the knot being representative of new forms of life, he also talks about death as being the knot that has been “cast off with a cut” (p.26). The knot is not just life or death but also a way that “every one of us retains a memory”, it is what we cling onto from the past, whether that is a happy or sad memory (Ingold, 2014, p.26). During an online documentary, Vicuna discusses her piece *Quipa Womb*, that was exhibited and curated in collaboration with museum experts to raise awareness of the khipu. In this talk she explains that the knots are used to symbolise babies that are attached to the mother along the umbilical cord, which is a line of life that provides the baby nutrition and connection to its mother. This relates to Ingold’s description of the knot as “...emergent outcomes...” and “...new forms...” (Ingold, 2014, p.18).

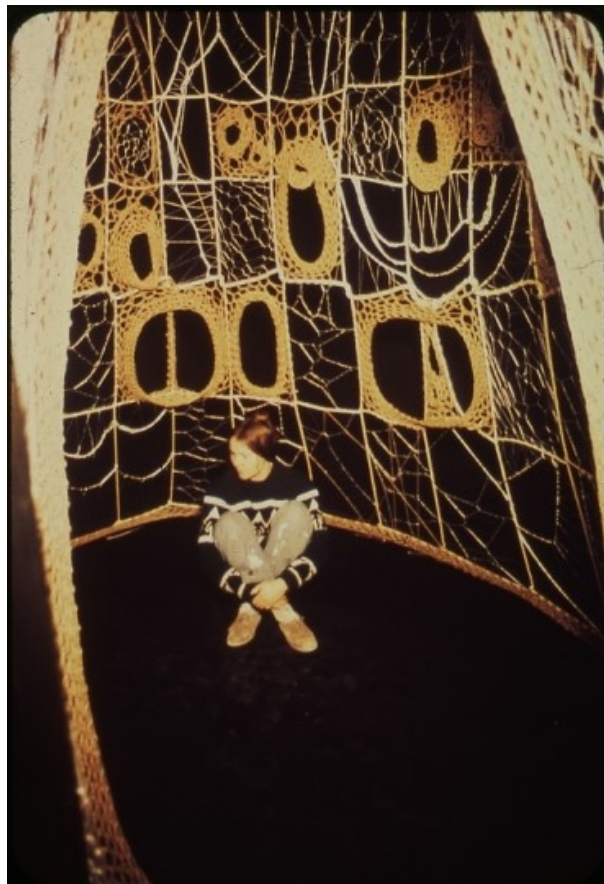


Fig. 3: Crochet Environment (Womb Room).

The *Quipu Womb* by Vicuna is similar in theme to Faith Wilding's *Crochet Environment* (1972/1995), a sculptural installation which is also known by many as the 'Womb Room' (see figure 3). This piece was part of a collective exhibition called *Womanhouse* which was organized by Judy Chicago and Miriam Schapiro, who were very famous feminists during the 1970s. This exhibition was used as an act of feminist protest during the second wave of feminism, to show the world that textile work should be exhibited in exhibitions just like any other art medium/process. This exhibition aimed to challenge people's perception of art and language, showing that the tactile is just as important as the visual. This is yet another example of the hierarchy of the senses within the Western world which Tim Ingold talks about in *The Life of Lines*. This piece uses wool like the *Quipu Womb* (see figure 2) to reflect the feminine and fragility through the softness of the material. It is suspended from the ceiling similar to the *Quipu Womb*, to form an interactive sculpture of a womb. Wilding takes the wool and crochets it to form a "weblike composition" of meshwork from the woollen threads. The interactivity of the *Womb Room* allows viewers the flexibility to stand or sit in the womb. The feelings of being inside the installation can make the viewer feel a sense of security and also, at the same time, entrapment; the clash of contradictory feelings is what Vicuna tries to encapsulate within her own work. *The Crochet Environment* or *Womb Room* is similar to Vicuna's *Quipu Womb* as it becomes a place of protection and safety, a shelter and home for knots which Ingold calls "...new forms..." (2014, p.18). In this piece Wilding is not just creating a safe space through the crochet womb, but she is also protecting textile work in general, protecting the skills, processes, and the work of other women. For some they may feel trapped or claustrophobic because of the way the lines hug around oneself. The danger and feeling of insecurity conveyed by the piece provides a space for people to reflect on injustices and pressures that women have to deal with in society and the alienation of textiles from being considered an intellectual art medium. The contradictory feelings expressed in this piece is something Vicuna plays with in her own work: to give the viewer time and space to question their perspective and reflect on these ideas for their own personal growth.

Cecilia Vicuna's piece, *Brain Forest Quipu* (see figure 4) uses a multisensory and interactive approach to language and communication within a community context, to tackle issues around climate change. Climate change is a very scary reality that is evident within our day-to-day lives, from global warming to sea levels rising, all due to the damage that humans have caused to the planet. There is no way to go back in time and change the damage made, but changes can be made that limit our day-to-day impact. If the old methods of polluting and harming the environment continue, then the inevitable reality is the end of planet earth and the end of human existence. This piece of work aims to raise awareness of climate change and is an act of protest representing the need to make changes immediately to sustain the life of both the planet and human existence. Vicuna uses the thread, line and knot to as activism and protest through tactile language. Making with the tactile can help an individual understand themselves and others and their environment. When knots are created there has to be a movement of the hand. This body movement when knotting and making helps individuals to understand the world better.



Fig. 4: *Brain Forest Quipu*

The knot, the thread and the line are what languages symbolise/reflect/convey/portray/ signify the climate change crisis through the fabrication of textile artworks. Vicuna calls her work “precarious art” because it is vulnerable and sensitive in subject and materiality. The work uses natural fibres as eventually they break down and decay over time; natural fibres are also used to represent the fragility of our planet. Some of the pieces are knotted to create cell-like patterns and others are ripped up and broken down into fragments of fibres to represent the scars humans are leaving on the earth. In this work Vicuna connects a line through time from the erasure in her cultural identity and loss of the khipu language, to the erasure of life on our planet. These ideas are contradictory as she allows space to show the cruel nature of humanity as well as the caring, loving side. She showcases the cruel nature of humanity, in the destruction of the planet and the destruction of the khipu, in addition to showing the caring and lovingness of humanity through the way repair and restoration can happen through unity.

This piece is also representative of working together as one in a tightly knit community, like a knot, which she describes as “a gathering of energies” (Vicuna, 2022). This piece is about humanity working together to fix what has been destroyed. It is about healing of wounds, preserving life and history; it is the interconnection of multiple lines coming together. The tactile language of textiles “...gives us a way to talk about a fragmented society and nation...” through textile techniques like “...mending, darning, fraying, ripping...” and tying knots to tell of struggles whether related to politics, the environment, or other injustices (Nickell, 2022, Introduction). This type of language has a metaphorical and physical meaning that can help express, understand, feel and heal emotions. This work by Vicuna explores “phenomenology” which Sturken and Cartwright define as

“a philosophical position that centres on the dimensions of subjective human experience in how we react bodily and emotionally, as well as intellectually, to the world around us. Phenomenology emphasises the importance of the lived body in how we experience and make meaning of the world”.

(Sturken & Cartwright, 2009, p.456).

Vicuna uses phenomenology to create a new language that is formed by using the whole-body experience and engaging individuals as threads with other people to create a meshwork of ideas through human experience and the body’s senses. This piece incorporates sound as a language, bringing the voices of indigenous artists around the world together, including her own. Gauntlett talks about the importance of making in community to connect to others, and the social and physical environment.

“Making is connecting because acts of creativity usually involve, at some point, a social dimension and connect us with other people; and making is connecting because through making things and sharing them in the world, we increase our engagement and connection with our social and physical environments”.

(Gauntlett, 2011, p.2).

Vicuna uses the engagement of others to form connections, relationships and solutions. This piece uses the sound of people’s voices and recordings of sounds from nature. She includes the sound of silence, which is just as powerful as any physical sound, particularly for remembering and reflecting on loss. Along with the music and tactile pieces, she includes a collection of videos created by indigenous activists, seeking justice for their people and land. The use of the multisensory is accessible and inclusive for many people who may only speak one language or who might rely on the one body sense to communicate. Adamson says “... building respect for material intelligence across our culture, we can form a bridge that emphasizes shared experience: a greater awareness of the things we hold in common” (Adamson, 2018, p.10). Adamson explains that material language “bridges” the gap in dialect and regional language as it can be understood by anyone from anywhere across the world. It uses human experience and the tactile, that anyone can relate to and understand, no matter what their background, language, age, race, gender is. Therefore, it can be argued that material language is understood by everyone as all have human experience. The human experience is how individuals can understand material language because the line that represents life creates a meshwork through weaving and connecting to other lines that

intertwine to create knots. This helps people to build relationships with the world and others around them.

In conclusion, the line is symbolic; it represents life. This idea was seen throughout women's relationship to the line within Greek mythology and folk law. The lines in these stories were spun and created by goddesses and mother nature. The line is a metaphor for the umbilical cord within Vicuna's *Quipu Womb* (see figure 2) linking this idea to women being the creators of life through the line. The line can be used as a form of space and transportation, connecting the time between the past, present and future. A line can be literal, direct and instructional in relation to language as well as being fluid or plastic, drawing loose connections through metaphors.

Meshwork is the intertwining stage where the lines come together to form knots. Meshwork is the connections that are made between the lines to connect us to each other and the planet in our hardships. The crossing of lines create contact with other lines to form new ideas and new possibilities.

When the lines are meshed, they create a knot. A knot joins, it creates new forms. This idea is explored through Tim Ingold's work in *The Life of Lines*. Vicuna describes the knot as "a gathering of energies" (Vicuna, 2022). The lines which represent life or "energy" are gathered together to create the knot. The knot creates a closeness in the space between other lines and the tightness of the knot is one language in itself, similar to that of the straight and fluid line. The bond between the threads creates a relationship, in how loosely or tightly connected they are to each other. The tying of the knot is known within marriage as bringing two people together as one, in union with one another.

Language is traditionally understood through the visual especially within Western culture, compared with other parts of the world. In this dissertation I have considered other bodily senses, in particular tactility, as a device for understanding and communicating a language through textiles. Textiles have many ways of communicating to us. Dormer explains that we can understand textiles through material, concept, language and metaphor (2020, p.1). In making textiles, individuals are able to gather together and make, enabling people to connect with each other and the environment around them during the process. Making gives people the possibility to open up and talk about hardships with others. The process of making is therapeutic and helps people to heal from hardships, whether political, environmental or social. Making brings people together to support and encourage one another. Language can be understood through the choice of material and processes used. In *Quipu Brain Forest*, Vicuna asked participants to rip up the wool and materials. This became representative of their emotions through their bodily actions. This material process became a metaphor and example of the falling apart in the relationship between humankind and the earth, and the destruction, loss and ruin of the environment and human existence.

The use of the bodily senses creates a better understanding of our human experience. The visual, tactile and sound are all important for understanding language; this is called phenomenology. This dissertation has explored the importance of the tactile in communicating through textiles, from the system of codes in the khipu language, to the metaphorical material language used by Cecilia Vicuna through her works. We need both the material language, and the bodily senses to gain an overall understanding and communication through textiles.

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Figure 2: Vicuna, C. (2017) *Quipu Womb (The Story of the Red Thread, Athens)* [photo]. Available at: <https://www.tate.org.uk/art/artworks/vicuna-quipu-womb-the-story-of-the-red-thread-athens-t15921> (Accessed: 12 December 2022).

Figure 3: Wilding, F. (1972) *Crochet Environment (Womb Room)* [photo]. Available at: http://www.artnet.com/magazineus/features/drohojowska-philp/drohojowska-philp03-23-07_detail.asp?picnum=10 (Accessed: 12 December 2022).

Figure 4: Vicuna, C. (2022) *Brain Forest Quipu* [photo]. Available at: <https://artreview.com/cecilia-vicunas-incomplete-elegy/> (Accessed: 15 December 2022).

Bibliography

Adamson, G. (2018) *Fewer Better Things: The Hidden Wisdom of Objects*. 1st edn. London: Bloomsbury.

Bristow, M. (2012) 'Continuity of Touch- Textile As A Silent Witness', in Hemmings, J. (ed. 1) *The Textile Reader*. London: Bloomsbury.

Cartwright, L. and Sturken, M. (2009) *Practices of Looking: An Introduction to Visual Culture*. 2nd edn. New York: Oxford University Press.

Díaz, C. (2018) 'Cecilia Vicuña's Quipu-Making as a Theory of Time', *A Contra Corriente, Una revista de estudios latinoamericanos*, 16(1), pp.175-202. Available at: [https://www.academia.edu/37688273/Cecilia Vicuñas Quipu Making as a Theory of Time](https://www.academia.edu/37688273/Cecilia_Vicuñas_Quipu_Making_as_a_Theory_of_Time) (Accessed: 10 December 2022).

Dormor, C. (2020). *A Philosophy of Textiles: Between Practise and Theory*. 1st edn. London: Bloomsbury.

Gauntlett, D. (2011). *Making is connecting: the social meaning of creativity, from DIY and knitting to YouTube and Web 2.0*. Cambridge: Polity Press.

Hamlyn, A. (2003) 'Freud, Fabric and Fetish', *Textile Cloth and Culture*, 1(1), Abstract. Available at: <https://www.tandfonline.com/doi/abs/10.1080/17518350.2003.11428629> (Accessed: 13 December 2022).

Hemmings, J. (2012) 'Folds, Fragments, Surfaces: Towards a Poetics of Cloth', in Hemmings, J. (ed. 1) *The Textile Reader*. London: Bloomsbury.

Ingold, T. (2015) *The Life of Lines*. 1st edn. London and New York: Routledge Taylor & Francis Group.

Mitchell, V. (2012) 'Textiles, Text and Techne', in Hemmings, J. (ed.1) *The Textile Reader*. London: Bloomsbury.

Nickell, K. (2022) 'Trouble Textiles': *Textile Responses to the Conflict in Northern Ireland*. Available at: <https://pure.ulster.ac.uk/ws/portalfiles/portal/11511359/Troubles+Textiles+accepted+version+with+images.pdf> (Accessed: 14 December 2022).

Schon, D.A. (1983) *The Reflective Practitioner: How Professionals Think In Action*. New York: Basic Books.

Selvedge (2017) 'Poetry In Wool', *Selvedge* [blog]. 23 May. Available at: <https://www.selvedge.org/blogs/selvedge/wool-wins-at-documenta> (Accessed: 11 December 2022).

St Clair, K. (2019) *The Golden Thread: How Fabric Changed History*. 1st edn. London: John Murray.

Strohecker, C. (2011) 'Knots', in Turkle, S. (ed. 1) *Evocative Objects: Things We Think With*. London, Cambridge, Massachusetts: The MIT Press.

The British Museum (2009) *Quipu*. Available at:
https://www.britishmuseum.org/collection/object/E_Am1907-0319-286 (Accessed: 10 December 2022).

Vicuna, C. (2022) *Cecillia Vicuna: Your Rage Is Your Gold: Tate* [video]. Available at:
https://youtu.be/JQfvdV3_GJ0 (Accessed: 15 December).

Vicuna, C. (2018) *Cecilia Vicuna: Disappeared Quipu: Museum of Fine Art Boston* [video]. Available at: https://youtu.be/Tu4_Ne3iZuY (Accessed: 12 December 2022).