Oxford Review of Education

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/core20

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To cite this article: Ricardo Nemirovsky & Don Duprez (2023) Tessellation, shamanism, and being alive to things, Oxford Review of Education, 49:4, 496-518, DOI: 10.1080/03054985.2023.2225851

To link to this article: https://doi.org/10.1080/03054985.2023.2225851

Published online: 21 Aug 2023.

OXFORD REVIEW OF EDUCATION
2023, VOL. 49, NO. 4, 496–518
https://doi.org/10.1080/03054985.2023.2225851

Routledge
Taylor & Francis Group

Tessellation, shamanism, and being alive to things

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ABSTRACT

This study examines the entanglement of affects that occurred during a short episode at a science museum. The episode involved a small number of children and a teacher who had come to the museum in the context of a school field trip. It took place inside an exhibit called 'Hmong House', which reproduced various components of a traditional house of the Hmong people. A key aim of this paper is to trace, via the microethnographic analysis of a brief video recording, an affective journey meshing mathematical tessellation and Hmong shamanism. In addition, we elaborate on ways in which disparate themes, such as tessellation and shamanism, became interwoven in the life of those visiting the Hmong House at the time. The episode of the Hmong House may inspire other activities in which students or visitors, with life trajectories partially rooted in Indigenous cultures, can share practices that are foreign to other students. The most important qualities of these activities, we suggest, are the respectful dignity with which they are demonstrated and engaged with, and the freedom to undertake interdisciplinary journeys – without subjection to artificial disciplinary boundaries – in which improvisation and surprising turns are expected and ever-present.

KEYWORDS

Informal education; museum; affect; Indigenous; shamanism; tessellation

1. Introduction

This paper follows a five-minute recording made during a field trip by 5th graders to a science museum. The children were given worksheets to guide their exploration of the museum in search of tessellations – geometrical patterns that, if infinitely extended, cover a plane surface without gaps or overlaps. This programme of school field trips had been designed to investigate innovative ways in which mathematical ideas could be encountered and learned in a science museum. The group followed by the camera included children of Hmong descent, as they chose to visit an exhibit called 'Hmong House' which was meant to reproduce a traditional home in their ancestral lands. The students' school obtained ethics approval to record the fieldtrip for use in research presentations and publications. Informed consent was given by both the participating children, as well as by their parents or legal guardians. We have used pseudonyms and blurred their faces in the frame captions to anonymise their identities.

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The Hmong people, who are considered autochthonous people from Laos' highlands, became entangled with the Vietnam War until the US withdrawal in 1975. Fleeing Laos, many Hmong people became refugees living in camps in Thailand. As a result of the war and their becoming a refugee group in Thailand, a Hmong diaspora emerged and several vibrant Hmong communities have been established in the US and around the world, many retaining elements of traditional ontological views relating to shamanism and animism. These views contribute to how generations of Hmong Americans construct and understand knowledge and interpret and engage with the world around them. Herein exists a Hmong identity and way of knowing derived from multiple cultural systems and experiences. These ways of knowing have been studied by a few anthropologists whose writings (Duprez, 2016; Faderman & Xiong, 1998; Fadiman, 1997; Vang, 2010) inform the present article.[1]

During the 1990s, the 'Hmong House' exhibit was designed and built by volunteers from the local Hmong community, sponsored by the Museum. The second author, Don Duprez, talked with community members to learn about their past involvement in the exhibit development: The house design relied on the memories of community elders who assisted in fashioning tools and hand milling the lumber to make the house, and its contents, in ways they had done in Laos and Thailand. As an example, steel was collected from abandoned car springs and forged into axes to work the lumber.

Before presenting the microethnographic analysis of the episode as an affective journey meshing mathematical tessellation and Hmong shamanism, we briefly introduce two horizons that we explore through our interpretations: Care/New Animism and Past/Radical Diversity. This is followed by the annotated transcription accompanied by interpretive commentaries. The discussion elaborates on educational reflections prompted by the Hmong House episode.

1.1. Care and new animism

Care appears to be the mark of life. All living beings – cells, microorganisms, plants, and animals, to name a few – care. All groupings of living beings – flocks, shoals, music bands, trade unions, coral reefs, bodily organs, Gaia – care. Care entails being-oriented-towards and sometimes seeking; it is not just an expression of being alive but, borrowing Ingold's words, 'being alive to things' (2013, p. 225). Care prompts past and future to flow into an enduring, shifting and contested present. While this latter thesis is at the heart of *Being and Time* ('Because being-in-the-world is essentially care', Heidegger, 1962, pp. 237 [193]) we note that, beyond Heidegger's emphasis in his magnum opus, we see caring beings as not just human individuals or communities, but life in all its forms.

Ordinarily in our experiences, care manifests itself in bodily, speech, gestural, and all manner of expressive acts, between and among humans and other beings. However, care is a unity not constituted by parts or components:

> The phenomenon of care in its totality is essentially something that cannot be split up; thus any attempts to derive it from special acts or drives such as willing and wishing or urge and predilection, or of constructing it out of them, will be unsuccessful. (Heidegger, 1996, pp. -180–181 [193–194])

Instead of thinking of care as summed up by the behavioural traits of a subject, it is more accurate to think of it as a medium – a caring continuum – in which acts of willing, wishing, urge, or predilection come to be, but not the other way around. In other words, a medium in

which living beings spontaneously move and act. Such a medium is never an individual's possession. Rather, it is constantly being transformed by the life of institutions, communities, and political movements. We think of affects as the 'stuff' that circulates in a caring medium. Affects, we suggest, are feelings and thoughts in germinal or embryonic stage, which become diversely full-fledged as they circulate through living beings.

The notion of affects circulating across a caring medium (see also in this Special Issue Rival, 2023; Gomes & Dumont-Pena, 2023) resonates with the emerging proposals of *new animism*. New animist approaches 'look for animism "in between", in the relating together of persons (often of different species), rather than "within", in the possession of or by "spirits"' (Harvey, 2013, pp. 2–3). Foundational and traditional anthropological accounts of animism (Durkheim, 2001; Tylor, 1903) stand as vestiges of a non-reflexive Western academic and colonial gaze. Harvey points out, 'The old usage constructed animists as people who did not or could not distinguish correctly between objects and subjects, or between things and persons' (2006, p. xiv). Case studies of new animism have been written in the context of diverse traditions and practices (Bird David, 1999; Halbmayer, 2012; Pedersen, 2001, 2011; Viveiros de Castro, 1998; Willerslev, 2007).

1.2. Past and radical diversity

Any close analysis of a dynamic interaction is likely to reflect the radical diversity of ways in which things and people embedded in a certain caring continuum become affected by it. Each of the children and the teacher entering the exhibit during this episode inhabited the Hmong House differently. The same can be said about the ways they came to care about the place and the situation. While such radical diversity is a matter of great complexity beyond the scope of this paper, we propose that one major source of alterity is the past: the past of their lives, families, communities, languages, migratory trajectories, places of residency, dreams, schools, health, and so forth.

In *Matter and Memory*, Bergson included a diagram (see Figure 1) depicting memories contracting progressively from the distant past (A-B) to the near past (A'-B'), until they touch the plane of the present (P) at the apex of the cone (S). It is in P – the present – that care actualises (i.e. action and willing occur), because the past, which is the immense interior of the cone, cannot be actual by virtue of belonging to the past ('The past is powerless; the present is sensori-motor, and therefore active'; Bergson, 1990). The past conditions S without determining it. While in recollection the past reaches the present rooted in a particular bygone event, in most cases the past contracts into the present in the form of habits or ways of being (i.e. 'our character'):

> The whole of our past psychical life conditions our present state, without being its necessary determinant; whole, also, it reveals itself in our character, although no one of its past states manifests itself explicitly in character. (Bergson, 1990, p. 88)

While Bergson treated the diagram to elucidate the memories of individual consciousnesses, we strive to envision it in correspondence to the shared past of a community and their practices. A first step in this direction might be to think that each family, neighbourhood, workplace, country, language, and so on, upholds its own cone, as it were, by means of an ongoing collective mnemonic practice. Anyone who grows in that family, moves to that neighbourhood, or speaks that language, gets encultured in its past, both in terms of recollections and by way of it imbuing character or way of being. Each past-cone is inherently sociohistorical and pre-exists encultured individuals. These ideas are

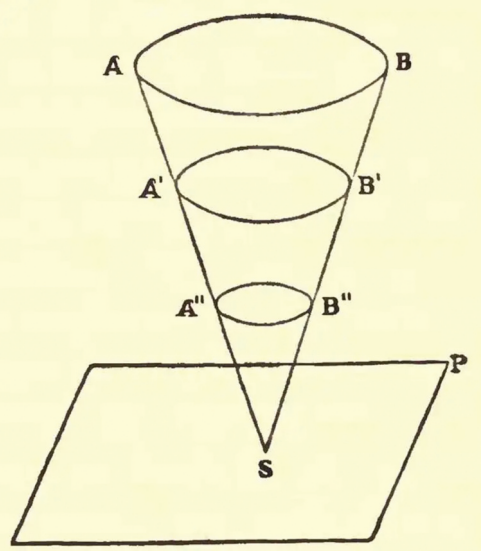


Figure 1. The cone of memory (Bergson, 1990, p. 88).

part of the sociology of memory, pioneered by Halbwachs (1992), which has stimulated a large number of case studies and theoretical frameworks on the mnemonic practices of churches, governments, political movements, academic departments, and so forth (Connerton, 1989; Rothberg, 2009; Zerubavel, 1996). This body of work has foregrounded that, far from an inert or passive archive, the past is actively and relentlessly reformulated: '[cultural memorisation is] an activity occurring on the present, in which the past is continuously modified and redescribed, even as it continues to shape the future' (Mieke Bal, cited by Thomas, 2009, p. 26), as well as, in many cases, be actively erased.

Such broadening of the past beyond individual consciousness renders Bergson's diagram in serious need of deconstruction because positing a multiplicity of cones does not illuminate their interplay across social, historical, and political platforms. In this regard, we find Glissant's pronouncement 'Memory is an archipelago' (cited by Thomas, 2009, p. 36), especially inspiring. Instead of a single point S touching a moving plane which holds the present, we can imagine multiple islands (i.e. neighbourhoods, workplaces, traditions, etc.) surrounded by the sea, without obvious symmetry or centre, inscribed in a thick present, and traversed by meteorological/political phenomena. Archipelagic thinking helps us to imagine the fragmented unity of actions and performances by means of another of Glissant's ideas: creolisation.

> Creole languages, for Glissant, are not things, but rather the activities, always creolizing. 'For me', Glissant writes in *Introduction à une poétique du divers*, '(. . .) creolization is a perpetual movement of cultural and linguistic interpenetrability'. (Drabinski, 2019, p. 16)

Creolisation involves the pervasive presence of improvisational and future-oriented acts, which become small streams contributing to emergent languages. That the present is a time of improvisation conditioned by a past that is partially unique to the individual, family, community, or tradition in question, converts the past into a source of radical diversity. This is the diversity that manifests in how affects transform themselves into the dissimilar fully fledged thoughts and feelings of each living being and each affective journey.

2. Looking for tessellations in the Hmong House

Primarily, our interpretations of the events of the Hmong House episode stem not from hypothetical 'applications' of theoretical ideas gleaned from the literature, but from an open study of the ephemeral nuances occurring in them: gestures, tones of voice, pauses, body motion, pointing acts, word usage, and so forth, all of them meshed with a parallel research on what they are part of, such as the nature of a school field trip, the local presence of a Hmong community, and the socio-institutional roles of a science museum. The fact that we focus on a short episode is not accidental of course: complex traces of feelings and thoughts reverberate in the most minute happenings of a dynamic interaction with others and with things. The previous sections on Care and Past emerged for us not as a-priori beliefs, but in retrospect, as ideas largely inspired or questioned by the recorded events themselves. That is, although we have introduced them in preliminary sections as if they would stand on their own, this is simply to comply with prevalent writing styles in our field. This approach is sometimes called 'microethnography' (Streeck & Mehus, 2005). A groundbreaking precursor of microethnography is 'Balinese character: A photographic analysis' (Bateson & Mead, 1942), which includes a large collection of photographs of life scenes in a Balinese community, each with a commentary reflecting on its circumstances and sociocultural context. A microethnographic study involves the preparation of complex transcriptions, which are critical to sustaining the generation of unanticipated ideas but, at the same time, are rather difficult to read for those who are unfamiliar with the recorded events. To alleviate this difficulty, it may be useful to read in advance an overall account of the main events. This is the aim of the following description:

> During a summer-school field trip to a science museum by a group of 10- or 11-year-old students, Evelyn and her classmate Sylvia are charged with the task of finding mathematical tessellations in the museum's collections gallery. Accompanied by a teacher, Ruth, they set off on their search. The group is equipped with worksheets on which they are to draw the tessellations that are found. Evelyn points to a region of the collections gallery where she sees 'a lot of patterns': the Hmong House, a life-size replica of a traditional Hmong home.
>
> When Evelyn, Sylvia and Ruth enter the Hmong House, Evelyn quickly breaks away from the group, boisterously darting towards a replica of a Hmong altar. Ruth and Sylvia attempt to regain Evelyn's attention, beckoning her to come see a tessellation Ruth has found on a quilt displayed inside the Hmong House. But Evelyn's interest in the altar proves too magnetic, and Ruth and Sylvia are ultimately drawn towards the altar as well. When they arrive, Evelyn is bouncing up and down and singing on a bench positioned in front of the altar. Ruth laughs a little, then asks Evelyn if she sees any examples of tessellations on the Hmong altar. Evelyn readily replies yes, tracing over patterns made of paper cuts on the altar with a finger atop the exhibit's protective glass. When Ruth asks her if she would like to draw those tessellations on her worksheet, Evelyn happily sets to work with pencil and worksheet, drawing the shapes she has just traced with her finger.
>
> As Evelyn draws, she is interrupted twice. First, a classmate comes by and asks Evelyn what the altar is. Evelyn stops writing on her worksheet and gives an elaborate response. The classmate, perhaps unsure how to respond, walks away without comment and Evelyn returns to drawing tessellations.
>
> Shortly after, Ruth sits down next to Evelyn on the bench. Although Evelyn now appears fully engrossed in drawing on her worksheet, Ruth asks her if she has been to a shaman's house before. This time Evelyn replies that her grandpa and grandma are shamans. Setting pencil and worksheet fully aside now, Evelyn engages in an even

more elaborate description and enactment of the shamanic ritual, explaining how people like her grandpa move, chant, and arrange objects on the altar to help others who might be troubled by ghosts.

As Evelyn answers several follow-up questions from Ruth about her grandparents and the people who come to seek their assistance, another Hmong boy from the class arrives on the scene. He announces, 'I know how to do this', and Evelyn responds, 'I know how to do it too', bouncing up and down again on the bench in demonstration. The boy shows Ruth and a growing group of student onlookers what they know how to do.

Sylvia, who has left for other regions of the gallery for a few minutes, returns and sits on the bench in front of the altar as well. She gently taps a bouncing, chanting Evelyn on the shoulder as if to remind her of the mathematical task at hand, and Evelyn returns to drawing tessellations on her worksheet.

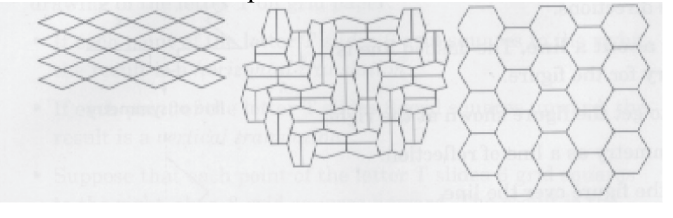
We start our transcription and interpretation at the beginning of the task: just after Ruth has finished explaining how to use the tessellation's worksheet with Sylvia and Evelyn. The worksheet was designed by educators at the science museum to provide mathematics-related activities for school groups visiting the museum. It begins by a general discussion of patterns. It then discusses tessellations as follows (see Box 1):

Box 1. Worksheet extract (tessellation discussion).

A special kind of repeated pattern is a tessellation.

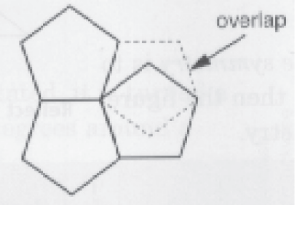
Tessellation is a mathematical term. It is a pattern of closed shapes that completely covers a surface.

Examples of Tessellation:

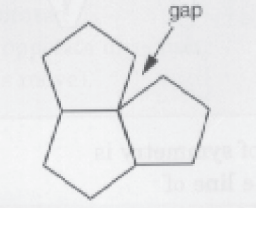


There are no overlaps or gaps in a tessellation.

Overlaps



Gaps



The worksheet provides examples of tessellations in images of textile craft and artwork from various cultures, showing photographs of these artworks layered over with drawn geometric shapes to indicate the basic form of the pattern (see Figure 2).

In this example the tessellation shape is a triangle (outlined in black).
The triangle is reflected in many directions covering the entire space.

Figure 2. Excerpt and image from Tessellations worksheet.

The worksheet specifies the following tasks (see Box 2):

Box 2. Worksheet extract (tasks).

TO DO
(1) Read the plastic covered sheet.
(2) Find an object that has a tessellation pattern on it in the *Collections* gallery.
(3) Draw a section of the pattern with the coloured pencils in the box below.
(4) OUTLINE the tessellation shape with a black line, like the examples on the plastic covered sheet.
(5) Take a close look at your object, what shapes do you see? (circle ones you see)
Circle **Rectangle** **Square**
Pentagon (five sides) **Hexagon** (six sides)
Parallelogram (2 pairs of parallel sides) **Rhombus** (4 equal sides)
Trapezoid (1 pair of parallel sides) **Kite** (2 pairs of equal sides)

Having finished reading and discussing the worksheet, Ruth, Sylvia and Evelyn begin gathering materials and readying themselves to venture through the museum. The episode begins.

3. Annotated transcript and interpretive commentaries

3.1. Now and you were anxious to go in here so let's see (37 seconds)

3.1.1. Transcript segment

1 Ruth: girls what we're looking for are examples of tessellations (0.6) so patterns

2 Evelyn: yeah ((*points at the door of the Hmong House and starts walking towards it,* see Figure 3)) I see a lot of patte [rns

3 Ruth: [now and you were ((*turns towards the Hmong house, points at it, and begins to walk towards it. Sylvia turns as well and follows Evelyn*)) anxious to go in here so let's see ((see Figure 4))

Figure 3. Evelyn follows up on Ruth's uttering of 'patterns' by pointing towards the Hmong House with her right hand, holding a pen, as she starts walking towards that Hmong House.

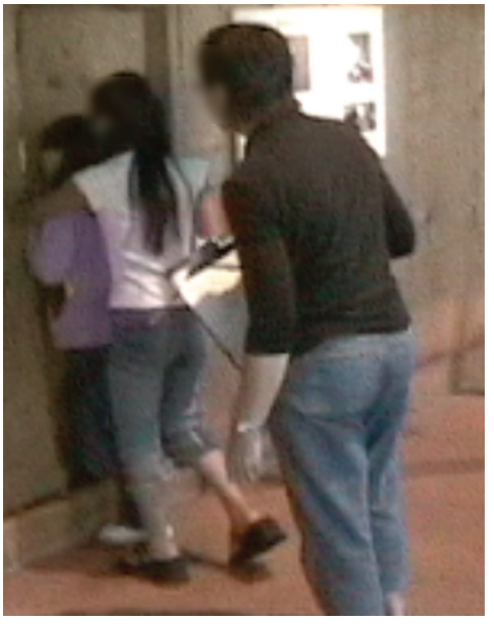


Figure 4. Entering the Hmong House.

Figure 5. Upon entering into the Hmong House, Evelyn walks towards the altar.

(7.3) ((*Evelyn walks towards the altar,* see Figure 5))

4 Ruth: Do you see the tessellations here? ((see Figure 6))

5 Sylvia: Evelyn? Evelyn? ((*Calling Evelyn,* see Figure 7))

6 Ruth: Evelyn oh! (0.2) well- okay let's take a quick look ((*Ruth and Sylvia walk towards Evelyn who is sitting in front of the altar,* see Figure 8))

7 Evelyn: ((chanting)) [he hee hee ((laughing))

8 Ruth: [ahhh ((laughing exhale))

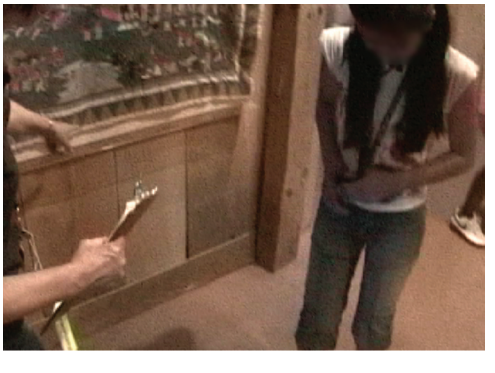


Figure 6. Ruth points at the border pattern of a quilt.

Figure 7. Sylvia calls Evelyn.

Figure 8. Sylvia and Ruth walk towards Evelyn.

3.1.2. Interpretive commentaries

In turn 1, Ruth sums up their ensuing goal: finding examples of tessellated patterns. Her utterance can be taken as expressing that, at this time, Ruth cares about tessellations, about the girls identifying tessellations in the museum, and so on. Despite the apparent simplicity of such interpretation, attributing this caring to Ruth, as an individual source for it, is likely to impose, rather implicitly, a strong case of tunnel vision. In this interactional context, caring about tessellations is not reducible to an individual source: it stems from the worksheet, from the project in which it had been created, from the grand architecture of the museum that hosts them, from the wider sociocultural acknowledgement of the mathematical significance of tessellations, from the institutional character of a field trip, and more. Ruth's articulation of the goal as shared by using the pronoun 'we' (see turn 1) may justly resonate with such broad inclusiveness. The same can be said with respect to turns 2–3 regarding care about the Hmong House: it also emerges from the presence of a large Hmong community in the city, from the communitarian effort involved in the

design and construction of the Hmong House, to its authorised and supportive emplacement in the museum, and so forth.

From the interior of such huge 'cone of the past', what Ruth, Evelyn and Sylvia *do* is manifest their caring, which is diversely oriented as they improvise their past. Rather than portraying them as beings with inherent traits and mental fixtures, we see them as being affected and improvising from their pasts. Improvising their pasts entails perceptual phenomena, decision-makings, articulating utterances, facial expressions, gestures, and so on. Some of the phenomena involved along turns 4–5 include Ruth's noticing the stripe of triangles around the quilt hanging from the wall (see Figure 6); her immediate attempt to show it to the girls as a tessellation; or Evelyn (in turn 2) seeing 'lots of patterns' inside the Hmong House, as she pointed at it and sprang towards its entrance. At the same time, Sylvia improvised her past in her noticing Evelyn's walking as she turned to follow Evelyn closely (see Figure 4). Perceptual phenomena were engaged with oriented actions, such as when, right after entering the Hmong House, Evelyn decides to walk towards the altar (see Figure 5). Evelyn's sprinting echoes socio-historical-emotional roots: altars are located within the central portion of traditional Hmong houses. A prominent feature, the altar is situated next to the central pillar of a traditional Hmong house to which it is often connected by several strings at the top of the altar, that run across the roof, over a branch suspended from the ceiling, finally tying off at the main door. These connections create a means by which the domains of earth and sky, or upper realm, can become coupled through the house, they are meaningfully located to permit the altar to serve as a point of spiritual juncture and engagement.

A complex interplay of collective decision-making can be traced across turns 4–6. In turn 4, as Ruth points at the triangular pattern on the quilt, she also points at a bearer of ancient traditions. The quilt on display is commonly referred to as a Hmong story cloth. Prior to the development of a written Hmong language in the 1950s, the Hmong relied on oral histories and traditions to preserve the Hmong past and to convey moral, ethical, and spiritual understandings of the world. During the beginning of the Hmong diaspora in the 1970s, these embroidered cloths became a mainstay in Hmong cultural life and have served to pictographically relay particular scenes or chains of events (Duprez, 2016). Additionally, the stories represented can be coupled with oral histories. Someone who knows the oral tradition of the cloth will be able to trace the events displayed through the cloth and serve as a guide for others, in some cases reliving their personal experiences through the retelling. Contemporary cloths often exhibit delicately embroidered figures and features, including the flight from Laos and the establishment of the Hmong in their new lives in the US. Others may display mythical figures or fables, or stories of rural life in Laos. The cloths are often bordered by interconnected or alternating triangles. Interviewed Hmong artisans explain that triangles can be understood as being either the mountains of Laos, or teeth to ward off spirits who may seek to inhabit the cloth. Occasionally the triangles were simply seen as an aesthetic choice that is in keeping with Hmong embroidery practices (Duprez field interviews, 2012–2018).

These cloths are often displayed decoratively in homes, and while their purpose may have shifted from practical to decorative, they represent a connection to historical and contemporary Hmong identities and the past. Meshed with these traces from remote history, Ruth's pointing was entangled with a wave of circulating affects: it prompted

Sylvia to immediately call Evelyn to come to see it (turn 5), then Ruth joins in calling her as well (turn 6), but, upon noticing that Evelyn ignored their calls, and while Ruth was still gesturing her left hand for Evelyn to come (see Figure 9), she utters 'oh' and decides, instead, to walk towards Evelyn while gently gesturing to Sylvia to do so as well.

For the most part, and this, we think, is a key point, all these processes emerging from the caring continuum of Ruth, Sylvia and Evelyn, *happened* to them. It is not as if each of them silently deliberated in advance assessing alternatives and reaching a decision towards what they say, move, or gesture. It is rather a matter of undergoing: Ruth underwent seeing the triangular pattern, Sylvia calling Evelyn, or Evelyn ignoring their calls.

In everyday life we are always striving to anticipate the actions of others and ourselves. A means to do so is the attribution of individual dispositions. That Evelyn was 'anxious to go in here [*Hmong House*]' (turn 3) made Evelyn's sprinting towards it unsurprising to Ruth. We can confidently surmise that Evelyn's eagerness spins off largely from her life history – a life history that encompasses family, communities, neighbourhoods, geographies, classrooms, and numerous events, many of which occurred before she was born. Evelyn's life history is her past being-with others and being-in events, sometimes literally and often virtually through oral, written, or pictured stories. The partial uniqueness of Evelyn's life history is transfinite and surpasses any attempt to grasp it entirely, which makes the effort to transpose it onto individual dispositions practically unavoidable, even at the cost of losing countless nuances of their origins. However, the uniqueness of Evelyn's environments and circumstances exceeds any speculative set of discrete elements. Evelyn's circumstances in turns 2–3 encompass not only being next to the Hmong House, but also participating in a school field trip, holding a pen with her left hand and a worksheet with her right one, being-with Ruth and Sylvia, and not being pressed by other temporal demands, and much more. From this complex milieu, something not trivial to have anticipated did occur: Evelyn *saw* 'lots of patterns' (turn 3) inside the Hmong House.

The actual but indeterminate past being-with, and present circumstances, makes ineradicable a degree of spontaneity, which continually escapes the hold of ongoing anticipatory efforts – efforts that at times seem to be like striving to clamp the wind with

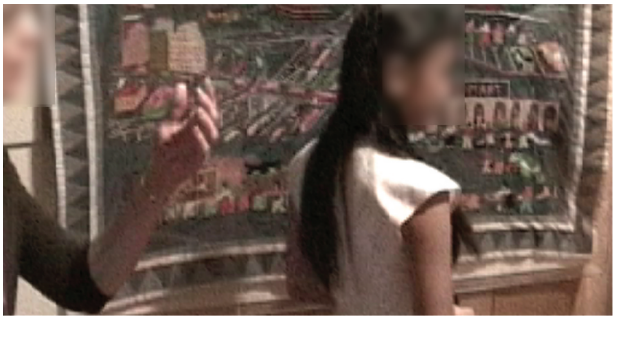


Figure 9. Ruth in-between calling Evelyn to see a triangular pattern on the quilt and walking towards her.

our hands. Such creative opening of the unanticipated is what Ruth underwent in turn 8, upon seeing Evelyn happily chanting.

3.2. Do you see some tessellations here? (53 seconds)

3.2.1. Transcript segment

9 Ruth: so (0.9) d'you see? um= ((*Sylvia sits next to Evelyn*))

10 Evelyn: =yeah (0.9)

11 Ruth: do you see some tesse [llations here?]

12 Evelyn: [yeah] (0.2)

13 Ruth: where? (0.3)

14 Evelyn: um right he:re ((*with her finger touching the acrylic sheet covering the front of the altar, she traces along a decorative paper hanging from the edge of a shelf in the altar,* see Figure 10. *The paper has regular cuts of the kind that can be obtained by folding a sheet of paper and cutting out sections of it*)) (0.6) (some) (0.2) like right here? (1.2)

15 Ruth: Do you want to=((*Sylvia smiles to someone else we cannot see*)) Do you want to draw that, on your clipboard?

((*Ensuing 38 seconds: Noticing that Sylvia does not have a clipboard, Ruth gives hers to Sylvia, and points out that in Evelyn's there is an extra worksheet that she can use. Sylvia takes the extra sheet from Evelyn's clipboard. Someone briefly talks to Evelyn. Evelyn returns to drawing on her worksheet; Ruth and Sylvia walk away.* See Figure 11))

Figure 10. Evelyn tracing patterns on a decorative paper. On the right side there is a magnified view on some of these decorative papers posted on the side of the altar.

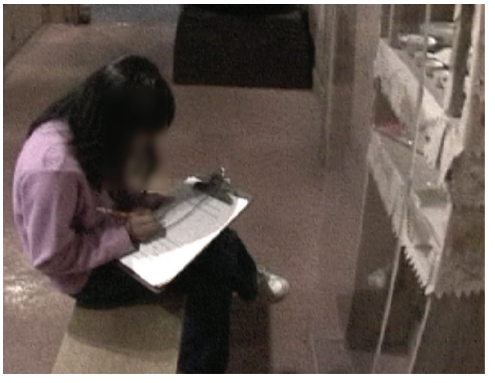


Figure 11. Evelyn drawing on her worksheet.

3.2.2. Interpretive commentaries

In this episode it is possible to recognise a multiplicity of circulating affects, which intermingle in what Ruth, Evelyn and Sylvia come to care about. There is caring about the altar, about tessellations, about the decorative papers, about Ruth, Evelyn, and Sylvia, about the worksheet requests, about others walking in the area, about tasks to be accomplished in this field trip, and so on.

Circulating affects along turns 9–14 resist the question of how many. It is nonsensical to assert that there are, say, eight affects; how would care about tessellations count as different from care about the decorative papers? Or how would care about Evelyn be separate from care about the drawing task the worksheet calls for? Furthermore, all these affects get incorporated by a continuum, which is no other than the life experience of Evelyn, or Sylvia, or Ruth, and them altogether at the science museum and the city. As opposed to the continuum of light spectra, which is only inclusive of shades of colour, life experience is a continuum for which nothing is necessarily, or in an a-priori manner, excluded. Tessellation and a Hmong altar can be part of a lived continuum, as much as the science museum and English as a second language may also be. This is a continuum along which paper hanging from a shelf can be tessellated and holy.

How is it that an affect can circulate through places and people independently of their being explicitly or consciously aware of its history and origins? Or through animals, plants and things for whom it is not even clear what 'consciously aware' might mean? Hmong traditions include reference to carefully cut and folded pieces of paper as symbolic money for the spirits. While the ones Evelyn traced were made out of white sheets of paper, in other cases they include either silver or gold rectangles, representing ingots of precious metals, further marked by smaller red diamonds on its borders. This form of spiritual currency can be used in prayer, such as being burned for use by the spirits, or used decoratively as a form of acknowledgement and respect. The use of these papers is not strictly confined to shamanic altars and can be used for other practices involving spiritual matters, such as funerals. We do not know the extent to which Evelyn is aware of Hmong practices with these types of spiritual currency. Nonetheless, her utterances express that these pieces of folded and cut paper, like all other elements of the altar, are connected to spiritual matters and

rituals of great significance for the Hmong and for her family. This is enough. An affect does not depend on intellectual accounts of its origins to circulate. For those of us who have not imbibed these practices, intellectual accounts, such as anthropological renderings from fieldwork, help us enrich our understandings of Evelyn, but they do not necessarily make us 'feel' these affects. What makes us susceptible to undergo new affects is the extent that they merge in the continuum of our life experience. For us, as analysts of these episodes, tessellation will always remain connected to Hmong Shamanism. For Evelyn, perhaps, this field trip left traces of the word 'tessellation' meshing geometric shapes with spiritual matters.

3.3. What is this? (28 seconds)

3.3.1. Transcript segment

16 ((*Evelyn is drawing on her worksheet; a girl walks to her left side*))

17 Girl: What is this thing=((*See* Figure 12))

18 Evelyn: =it's a Hmong thing that u:::m that Hmong people (.) when the yu::m do this (.) they light that ((*Evelyn points at some items on the shelf*)) (.) and then they um (.) they like (.) say a little prayer ((*Evelyn bounces up and down a few times*)) (0.2) so the ghosts don't ((*Evelyn makes a circular motion with her pencil*)) (um) (.) come back to them and haunt them forever ((*After shrinking/shrugging? her shoulders*, *Evelyn goes back to drawing on her worksheet*)) (2.5)

19 ((*Girl walks away*))

3.3.2. Interpretive commentaries

Evelyn's explanation of the altar details the accoutrement of the shaman and different offerings made to spirits. An altar will generally contain a pair of split horns made from the horns of water buffalo used for divination and a pair of brass finger bells that the shaman may use during trace and prayer (known as *ua neeb* in Hmong). Additionally, the altar holds bowls of incense and perhaps instruments intended to battle with spirits, such as knives or small swords. Within this altar, an egg can be seen on the left side. Eggs are often

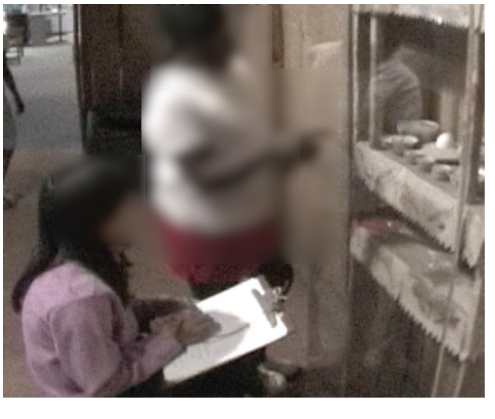


Figure 12. Girl asking Evelyn.

placed within a bowl of rice as an offering to the spirits. It is common practice to burn offerings as part of a shaman's *ua neeb* under the altar. The act of burning materials transforms the nature of the offering, making it accessible to the spirits.

Evelyn described the altar in terms of what the 'Hmong People' (turn 18) do with it. Her explanation is articulated in third person plural: 'they . . . ' Evelyn's talk reflects, we think, that affects are always, at least in part, impersonal. Affects can always elicit what 'they' do, what is proper or improper to a situation, or what someone is by way of living in a neighbourhood or of speaking a certain language. This crucial point resonates with Heidegger's answer to the question of 'Who is *Dasein*?' He questioned the pervasive view that *Dasein* is an individual subject, often named by singular pronouns, such as 'I' or 'you',

> By ['They'] we do not mean everyone else but me — those over against whom the 'I' stands out. They are rather those from whom, for the most part, one does not distinguish oneself — those among whom one is too. (Heidegger, 1962, pp. 154 [118])

Such a response to who *Dasein* is, is sometimes translated into English as '*Dasein* is the They', and other times by '*Dasein* is the One', the latter using 'one' in the pronoun sense meaning people in general. The *They* Evelyn refers to in turn 18 might have been not only the Hmong people but also the ghosts who come back and haunt them, unless they are prayed to. That affects are partially impersonal does not take away a full bodily engagement in relating to them; this is salient in turn 18 when Evelyn says 'they like (.) say a little prayer' while bouncing her body up and down, that is, by enacting 'their' little prayer.

3.4. That's my grandpa (54 seconds)

3.4.1. Transcript segment

20 ((*Ruth sits next to Evelyn, who keeps drawing on her worksheet*)) (5.5)

21 Ruth: so have you been- have you been to a shaman's (.) house (.) where you (0.2)

22 Evelyn: that's my grandpa ((*Evelyn looks at Ruth and stops drawing*)) (0.3)

23 Ruth: is a shaman? (0.8) ((*Evelyn assents with her head*)) awesome!

24 Evelyn: u:m (1.0) my grandma's a shaman too they u::m like (.) if you (.) like say (.) they're not s'posed to- ((*Evelyn leaves her clipboard on her right side*)) people are not s'posed to sit by 'em (0.2) ((*Evelyn moves slightly away from Ruth and puts herself in a 'prayer' position,* see Figure 13)) and they say a little prayer and they say that ((*Evelyn bounces up and down on her bench*)) (.) like help them (.) like they light that ((*Evelyn points at the upper shelf*)) (.) they u:m (.) they put (.) um (.) all this right here? ((*Evelyn gestures over the two shelves*)) (.) and they go ((*briefly Evelyn returns to the prayer position*))

Figure 13. Evelyn positions herself to enact the little prayer.

25 Ruth: so it looks a lot like this? ((*Ruth gestures towards the shelves*))

26 (1.7) ((*Evelyn bounces up and down*))

27 Evelyn: (then) they um ((*Evelyn keeps bouncing up and down*)) (.) they pray so the (.) ghosts don't come back to them? (.) ((*Evelyn grabs her clipboard as if to return to drawing*)) so they don't get haunted (0.9)

28 Ruth: so people will come to the:m [to

29 Evelyn: [it's like- like gho:sts? they come to 'em? And like haunt them forever? (0.2) because they did something to them?

3.4.2. Interpretive commentaries

In turn 24 Evelyn recounts, with more detail and nuance, the explanation she had told Girl in Episode 3.3. Through her expressions and imitations of her grandfather, Evelyn explains how shamans engage with the spirits through the altar. Here, she demonstrates the process of trance and prayer by bouncing up and down on the bench, which is sometimes denominated 'riding the horse'. While she explains the process of *ua neeb* from a seated position, shamans can also stand on the bench during trance and congress with the spirits (Duprez, 2016).

She initiates her account personally ('my grandma's a shaman too'), but she immediately follows by referencing to the 'they' (i.e. shamans). Her account goes back and forth between what shamans do and what happens in their surroundings as they do those things; people, for example, are not supposed to sit next to them, which is likely to have motivated Evelyn to move a bit away from Ruth in turn 24, prior to enacting a little prayer. In turn 24 Evelyn shows the lighting of candles and all the pieces set on the shelves, then returning to the little prayer ('and they go'). By means of Evelyn's performance, *the altar became a shamanic altar*. For an unfamiliar visitor, such as Ruth, the altar might initially be seen as a piece of furniture with two shelves holding an unusual assortment of things. In her being-with Evelyn over turns 21–29, she was likely to experience the altar becoming a shamanic altar:

an animated nexus of relations crisscrossed by shamans and ghosts. In turns 27-28 Ruth and Evelyn refer to different *They*s, Ruth to the people coming to her grandparents' house, and Evelyn to the ghosts; however unaware they might have been of this, the mismatch added new aspects to the animistic mixture circulating through the altar.

3.5. I know how to do it too (30.5 seconds)

3.5.1. Transcript segment

30 Ruth: [you mean like somebody else and then they would come to your grandma ((*a Hmong child, whom we will call 'Boy', comes walking next to Ruth*)) and grandpa to [

31 Boy: [I know how to do this

32 Evelyn: yeah I know how to do it too ((*Evelyn bounces slightly up and down*))

33 Boy: want me show you guys? ((*Points at the place where Evelyn is seating*))

34 (0.5) ((*Boy leaves his clipboard on the floor*))

35 Boy: watch they do this=

36 Evelyn: =yea:h watch ((*Evelyn stands up to leave her sitting place to Boy*))

37 Evelyn: (they would come but I [wanted to)

38 Boy: [hey hey (.) hey (I wanna show it)= ((*Boy sits in front of the altar*))

39 Evelyn: (ready) [yeah watch

40 Boy: [they do this (0.2)

41 Boy: they put something over their head ((*Pulls the back side of his T-shirt as if to cover his head,* see Figure 14)) and then [they brrr brrr brr ((*laughing and jumping up and down*))((*Boy stands up and picks up his clipboard*))

42 Evelyn: [yeah (0.3)

43 Evelyn: ((laughing))

44 Evelyn: my grandpa (did) that

45 (9.0) ((*many people talking at once, difficult to hear, Boy talks to Ruth, Evelyn sits again and bounces up and down, Sylvia sits next to Evelyn*))

46 (4.0) ((*Sylvia gently touches Evelyn's shoulder and Evelyn begins to draw on the worksheet, see* Figure 15

Figure 14. Boy pulls his T-shirt as if to cover his head.

Figure 15. Evelyn returns to drawing on her worksheet.

3.5.2. Interpretive commentaries

In our previous commentary we discussed how circulating affects and the actions manifesting Evelyn's care facilitated the process by which the altar became a shamanic altar. The following commentary is about another kind of becoming: Place Becoming. Places become all the time everywhere, such as in turn 24 when Evelyn moves slightly to the right signalling that Ruth is not supposed to be sitting so close. However, this particular episode invites us to discuss Place Becoming in more detail because of the prominent displacement of Evelyn to let the Boy sit in front of the altar. As the Boy says: 'watch they do this' (turn 35), he gets to sit on the centre of the bench in front of the altar, while Evelyn adds: 'yea:h watch' (turn 36). Evelyn and the Boy understand that the seat at the centre of the front side of the altar is where the shamanic ritual must be performed. Locations are not equivalent: the altar irradiates an asymmetric distribution of here's and there's for each role. Once in the proper place, the Boy gestures the covering of his head, a ritual element that Evelyn had not enacted, and then briefly shows 'ride the horse' and its accompanying chant. As the Boy acted in this way, more children came to Hmong House standing behind and around the bench. It was as if the front side of the altar opened a small stage for the Boy whereas the surrounding arch, further from the altar, created an

audience space. The altar, the bench, and Boy, with his head covered, constituted a place for shamanic rituals that held everyone around them as witnesses of a brief ceremony. Upon completion of the ritual, the place breaks apart: some children leave the Hmong House, others start talking with each other, such as the Boy with Ruth, and Evelyn, smiling and excited, returns to the seating in front of the altar as she begins lightly bouncing up and down. All these movements, tipped by Sylvia's touching of Evelyn's shoulder, let another place to become around the altar: a place where Evelyn and Sylvia draw tessellations on their work sheet. A notable shift had taken place: from the performance of the shamanistic ritual to completing the tasks of this school field trip.

4. Discussion/Conclusion

After each of the five sections of transcription, we authored interpretive commentaries articulating ideas and reflections that the transcribed events inspired in us, without a pre-defined thematic structure. Reading them back over again, we see that the first three explored aspects of the interplay between the circulation of affects and the performance of care. The last two commentaries reflect on the processes of *becoming a shamanic altar* and *place becoming*, which conjure up the idea of new animism. Harvey points at a new animism that 'no longer depends on notions about "spirits" or "supernatural" entities', and for whom 'what is important is the mutual recognition of the ability to reciprocate, relate and engage' (Harvey, 2005, p. 83). The ghosts that Evelyn alluded to emerged from her bodily and ritualistic engagement with the altar; without such reciprocating, her uttering *ghost* would just echo generic images from movies and stories, lifeless and remote, rather than active and fully in transaction, not with the objects, but with the *things* (Ingold, 2013) on the shelves of the altar, and with the shaman's little prayer. Analogously, the place around the altar transforms itself by the Boy's performance, such that locations surrounding it distribute assignments and roles along patterns of radial symmetry. In both cases the altar becomes a protagonist animating those around it.

Even though the transcribed episode is, obviously, short-lived, and ephemeral, its microethnographic transcription and interpretations may help us awake far-reaching imaginaries concerning education. The enactment of shamanism in a *science* museum, the spontaneous appearance of tessellations on the shelves of an altar, or the dignity with which a couple of Hmong children shared ritualistic practices, prompt us to explore unsettled questions addressing, say, the reality of shamanism and the relationship between matters that are, at first sight, extraneous, such as mathematical tessellation and repelling ghosts. To think about these questions we find inspiration in ideas from *On Decoloniality* (Mignolo & Walsh, 2018). One key thesis by Mignolo and Walsh is that 'ontology is made of epistemology. That is, ontology is an epistemological concept' to which they later add that 'epistemologies are always derived from cosmologies' (p. 135). In other words, the existence or the reality of something is bestowed by the cosmology of those who live such existence or reality. The question is not whether Hmong ghosts exist, or not, independently of the lives of those who transact with them. These ghosts exist 'in parenthesis', that is, in the context of a particular 'praxis of living' (p. 137). But then, everything that exists, including electrons, planets, and plants, do so in parenthesis. This is not a matter of loose relativism because a cosmology is embedded in forms of life and knowing that are themselves rooted in complex entanglements of histories, geographies,

practices, and technologies. On the other hand, it does imply that there is no single and universal praxis of living determining the ultimate reality – without parenthesis – of something. This leads Mignolo and Walsh to propose that the world is 'pluriversal', to which they add that this 'does not mean a rejection or negation of Western thought; in fact, Western thought is part of the pluriversal' (p. 3) – in the same sense, Hmong shamanism is part of the pluriversal. The conception of pluriversality is closely related to the theses of new animism: each vers(ion) of the world corresponds to a manner of reciprocating, relating, and engaging. In the present unstable, fragmented, and global anthropocene, there is perhaps no vision more important for education than nurturing the pluriversality of the world. Mignolo and Walsh propose that such nurturing is to be centred on 're-existence, understood as "the redefining and re-signifying of life in conditions of dignity"' (p. 3). The Hmong House episode is a tiny example of re-existence; here the word *dignity* becomes the heart of the matter. The pride and joy with which Evelyn shared the shamanistic practice of her grandparents re-signified aspects of her family's life in conditions of dignity.

In addition to re-existence, we add another aspect for an education that nurtures the world as pluriversal, which involves trespassing disciplinary boundaries. It is a perspective in which no matter how separate certain topics seem to be, they can be joined over *affective* journeys that include encounters with them. We stress *affective* in contrast to journeys that are predominantly intellectual, such as reviewing a list of beliefs held by Hmong shamans. We do not need to come up with a chain of syllogisms connecting the mathematics of tessellation and shamanistic prayers; it is enough to encounter pieces of paper that turn out to be tessellated and sacred. Many other kinds of indisciplinary journeys are possible, some of which may involve craftwork (Bunn, 2010), art (Akínyemí, 2003; Mills & Doyle, 2019), and land reclamation (Simpson, 2014). Given the pressures on time, curricular objectives, test performance, and the use of prescriptive didactic materials, it is not clear to what extent re-existence and affective transgression of disciplinary boundaries are compatible with formal education, from kindergarten to graduate school. Perhaps the most promising possibilities within formal education are to be found in those usually scarce, but precious periods, in which teachers are free from most of those pressures. These are times in which students or visitors with life trajectories partially rooted in Indigenous cultures can share practices that are foreign to other students. The most important qualities of these activities, we suggest, are the respectful dignity with which they are demonstrated and engaged with, and the freedom to undertake indisciplinary journeys – without subjection to artificial disciplinary boundaries – in which improvisation and surprising turns are expected and ever-present. Sharing Indigenous practices cannot be purely textual (e.g. reading a descriptive text) because authentic sharing involves participative bodily activity. The episodes in the Hmong House include some examples of activities that can broaden our horizons towards grasping the infinite diversity of the pluriverse.

Notes

1. Reflections on the content of this paper by members of the Hmong community themselves are limited to conversations with a young Hmong couple with Ricardo Nemirovsky.

Acknowledgements

The authors wish to thank Stephanie Bunn for her feedback on a previous version of this paper and Molly Kelton for her involvement in the writing of an overall description of the episode, as well as the editors and reviewers of this Special Issue who provided valuable feedback.

With deep appreciation, we dedicate this paper to Evelyn, Sylvia, Ruth, Boy, and Girl, as well as to the members of the Hmong Community who designed and built the Hmong House exhibit.

Disclosure statement

No potential conflict of interest was reported by the authors.

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