The Power of Storytelling and Storylistening for Human Learning and Becoming

Ananda Marin (co-chair), University of California – Los Angeles, amarin1@g.ucla.edu
Kyle Halle-Erby, University of California – Los Angeles, kmhe@g.ucla.edu
Megan Bang (co-chair), Northwestern University, megan.bang@northwestern.edu
Nikki McDaid-Morgan, Northwestern University, nikkimcm@u.northwestern.edu
Mario Guerra Northwestern University, marioguerra@u.northwestern.edu
Kalonji Nzinga, University of Colorado – Boulder, Kalonji.Nzinga@colorado.edu
Meixi, University of Washington, meixi@uw.edu
Emma Elliot-Groves, University of Washington, emmae@uw.edu

Angela Booker (discussant), University of California - San Diego, a1booker@ucsd.edu

Abstract: Black, Brown, and Indigenous communities have always endeavored to ensure their own survival and thriving despite broad scale systems of domination. Researchers focused on the empowerment of Black, Brown, and Indigenous children continue to design cultural pedagogies that reach to transform understandings of historical, present-day, and future relations. We build upon this legacy by further theorizing the role that stories and storywork play within (1) sense-making activities, (2) the lives of communities that we have been a part, and (3) our own lives as researchers-storylisteners across time and place. We take a syncretic approach, bringing together learning sciences research and perspectives from Black and Indigenous studies on the acts of creating, telling, and listening to stories. We consider the multiple roles of stories in research and design, the political/ethical nature of stories, and how storywork can re-organize power relations in ways that support individual and community life.

Keywords: storywork, Black and Indigenous Studies, nature-culture relations, politics and ethics of learning

Focus of the symposium

Black, Brown, and Indigenous communities have always endeavored to ensure their own survival and thriving despite broad scale systems of domination. In the face of police brutality against Black and Brown bodies, mass genocide in Brazilian rainforests, and the continued reliance on decision-making models that separate natural and cultural worlds, communities are increasingly reaching to transform understandings of historical, present-day, and future relations. Scholarship on the empowerment of Black, Brown and Indigenous children, have focused on designing learning environments rooted in cultural ways of knowing and being (Lee, 2008; Nasir et al., 2006; Gutiérrez & Rogoff, 2003). This paper builds upon this legacy, by centering the role that stories, one of the oldest forms of human technology, plays within sense-making in cultural activity. In this symposium, we put forward that the acts of creating, telling, and listening to stories can re-organize power relations in ways that refuse singular narratives of individual and community life. Work in the Learning Sciences often draws on the scholarship of Bakhtin (1935), Bruner (1991), and Wertsch (1991) to foreground the centrality of narrative in human learning and becoming. This tradition highlights how stories are convivial technologies (Illich, 1973) that foster heteroglossic, multi-voiced meaning-making (Bakhtin, 1935; Booker, 2019). Our approach, while similar in orientation, is rooted in AOE or axiologies (values about what is right, good, and beautiful), ontologies (ways of being and engaging in the world), and epistemologies (ways of knowing) deriving from Black & Indigenous knowledge/wisdom traditions. Some learning scientists have started exploring the role of storywork with educators (Bang, et al., 2014; Barajas-López & Bang, 2018; Marin & Bang, 2015; Meixi, 2019; Sengupta-Irving, Redman, & Enyedy, 2013), but there is less research reflective of the perspectives this symposium takes up. We intentionally draw on Black and Indigenous story methodologies in order to shift the focus of knowledge production away from the accretion of information for resource accumulation and toward understanding one's role in relation to knowledge development and use (Bang et al., 2015; Battiste, 2002; Cajete, 2000). We build with the work of Archibald (2008) and use the term storywork to both signal our approach and ground our orientation.

Relevance and contribution

Black and Indigenous scholars, educators, and activists have focused our attention to the contexts and conditions through which transformative education and knowledge production can emerge. In this symposium, we bring these traditions into conversation in order to further theorize the ethics of knowledge construction, including the researched activity as well as the researchers' relationships to "data" or the stories that participants share with and gift to us. We build with the work of Archibald (2008), Hampaté Bâ (1981), and Million (2008) to describe the processes of storywork — or the storytelling and storylistening practices that people engage in with lands/waters and each other, for educational purposes. Our common aim in this symposium is to examine how storywork opens up ethical teaching, learning, and research practices in design-based contexts and our own relationships to community, knowledge, and its development.

Dian Million (2011), a Tanana Athabascan scholar, reminds us that "Story has always been practical, strategic and restorative" (p. 322). Stories are felt theories that help us make meaning of our lives, and they emerge out of our everydayness (Brayboy, 2005, Cajete, 2000; Million, 2011). On one level, stories are axiological — they grow and guide our ethical sensibilities in our own lives, with lands and with each other (Brayboy, 2005; Archibald, 2008). On another level, through story, human people and communities create environments for each other's learning (epistemological practices) and can make social dreaming – the joint orientation to a pursuit of new horizons — possible (Espinoza, 2008). Stories also provide important teachings for ways of being in the world (ontologies).

Hampaté Bâ (1981), a Malian writer, studied various griot (storytelling) traditions of the African continent, focusing on societies like the Mongo, the Fulane, the Songhay, and the Bambara, who have passed on stories through oral transmission for generations. To illustrate the role of storywork for African peoples, Hampaté Bâ gives an example from the Bambara tradition where storytellers go by the name of *dieli*, which also means blood. Like the crimson plasma that spreads nutrients and oxygen (and also viral infections) throughout the body, griots "circulate in the body of society, which they can cure or make ill, depending on whether they attenuate or exacerbate the conflicts within it" (Hampaté Bâ, 1981). Here Hampaté Bâ suggests that the health of a community's social relations is tied to the circulation of stories. His notion of "the word" also illustrates that storywork is the process through which the axiological values of the society are given flesh through their solidification in discourse. Other researchers (Penfield & Duru, 1988) have studied how orally transmitted proverbs in Igbo society are used to bring children in accord with *omenàlà* - the peaceful social order. Various researchers have also illustrated the cultural continuities between African griot traditions and the folkloric and musical traditions within the African diaspora, showing for example the griotic role that the emcee plays within hip-hop culture (Kopano 2002). Therefore, the notion of storywork can be used to make sense of discursive and oral traditions that survived and were transformed by the Trans-Atlantic slave trade including Negro Spirituals (Follow the Drinking Gourd), Afro-diasporic cosmologies (tales of the Orishas) and African-American folktales (Brer Rabbit). Both in Africa and its diaspora, holders of the tradition infuse stories into contemporary forms of multi-modal texts including film, musical recordings, podcasts, and theatrical performance.

The notion of storywork from the perspective of Black and Indigenous studies, includes various forms of metaphor, proverb, melody and rhyme, used to illustrate practices of relationality between self, land, ancestors, and futurity. Through this symposium, we seek to further theorize what is story within multiple traditions, and the work that stories might do in (1) the lives of communities that we have been a part, and (2) our own lives as researchers-storylisteners, across time and place. We present four studies that explore multiple traditions of storywork in the design of learning environments in order to engage transformative relationality between humans and more-than-humans and expand possible socio-ecological futures. With our papers, we address the following questions:

- How does storywork help us attune to the axiological, ontological, and epistemic dimensions of learning, teaching, and design?
- Relatedly, how does storywork guide us toward ethical relationships with knowledge production (as teachers, learners, and researchers)?
- What does storylistening, an under-theorized dimension in the field of learning sciences, teach us about the design of learning environments in which relational knowledge can emerge?
- How are stories learned, taken up, circulated, listened with, and brought forward across human and more-than-human interlocutors in learning environments and towards what ends?
- What methodological approaches might help us to better understand storywork across human and more-than-human interlocutors?

The papers in this symposium keenly attend to the importance of stories for meaning making in communities, with lands, humans, and more-than-humans. We will engage the audience in considering the multiple roles of

stories in research and design, the tensions and political/ethical nature of stories, and how they shape sociopolitical structures of power.

Organization of the symposium

This symposium will consist of two chairs, four featured papers, and a discussant. We intend to leave time for discussion at the end. For the most part, this symposium will follow a normative format however, we do intend to invite the audience to consider their own storywork, axiologies, and learning at the start of the symposium and will return to this at the end of the discussion.

Re-cycling rap narrative: The tension between personal authorship and oral tradition in hip-hop learning environments

Kalonji Nzinga

Hip-hop pedagogy is a collection of strategies for designing learning environments that infuses the cultural forms, values, cadences and practices of hip-hop culture (Alim 2007, Petchauer 2009, Love 2015, Emdin 2010). For hip-hop pedagogues, hip-hop represents a subset of African-American culture that contains ideologies, cultural practices, and genre-based skills that become resources for organizing learning activities. These strategies extend various forms of cultural modeling and culturally relevant pedagogy (Ladson-Billings 2015, Lee 2008), including efforts to endogenously design learning environments that ground the worldviews and cultural practices of global-south-side communities. Practitioners of hip-hop pedagogy also draw on principles from the canon of hip-hop (keep it real, stay woke) to inform their philosophical vision of the ultimate purpose of learning.

One of the most prevalent forms of hip-hop education has been structuring arts and literacy programs around the writing, recitation and recording of rap lyrics. As a cultural modeling (Lee 2008) strategy, assignments where students are given the task to write in the poetic verse of rap become opportunities for young people to learn literary devices, practice public speaking, and tinker with digital recording devices (the mic) all of which serve the ultimate goal of storytelling.

These informal educational environments, which include Fear & Fancy and Mural Music & Arts Project in East Palo Alto and Circles & Ciphers and Young Chicago Authors in Chicago have been designed around providing spaces for youth to freely express "their own" voices. These educators represent and serve youth who are from the Global South-side, those who are often discounted and whose voices are often silenced by the institutions they come into contact with. These "youth voice" spaces, which often take place in after-school extracurricular programs, are places where students are given space to describe their personal experiences in their own dialects, with their own cultural resources.

With this "own voice" framework, these hip-hop storywork(s) (Archibald 2008) programs can be easily portrayed and misunderstood as rooted in individual authorship, where students' testimonies are assumed to be "self-made." This framing occludes the extent to which stories told by young people are steeped in the conservation of cultural tradition and include the revoicing of the discourses of their cultural forbearers (ancestors, elders, and contemporaries). The following research questions ground this study: Are youth in hip-hop storywork environments engaging in appropriation and revoicing of hip-hop storywork conventions and discursive practices of hip-hop? Do we see evidence of young people appropriating traditional narratives, so that they are telling collective stories (as opposed to single-author autobiographies)? When youth re-cycle the discursive conventions of hip-hop, do they deepen participation in the axiological ways of being that have evolved in hip-hop adjacent environments?

This study explores two hip-hop based learning environments one in Bethlehem, Palestine and the other in Englewood, Chicago where students produced musical compositions, including beats produced from digital audio workstations and lyrics written and recorded by students. Analysis centers on the tension between personal authorship and oral tradition. Multi-modal discourse analysis is used to make sense of the songs produced during the week-long programs and how students revoiced hip-hop storytelling conventions and simultaneously developed personal narratives that articulated their relationship to place and community. Bakhtin's (1935) notion of revoicing is used to explore the reproduction of discourses from various social languages; hip-hop genre conventions, radical traditions of community. At the same time, these hip-hop communities of practice are also investigated according to the social analysis frameworks of Amadou Hampaté Bâ (1981), a Malian scholar that studied the storytelling traditions of pan-African societies including the Bambara, the Songhay, and the Mongo. Given hip-hop's descendance from African diasporic oral traditions, these hip-hop "texts" are analyzed to the extent that they draw upon Hampaté Bâ's notions of cultural memory.

Results suggest that hip-hop storytelling in these learning environments often operates on ethics of re-cycling, up-cycling, and sampling, in which young people re-cite the stories, lyrics, and melodic structures of popular MC's (masters of ceremony). These results cohere with work by ethnomusicologists of the hip-hop genre who suggest that recitation is a fundamental aesthetic convention of hip-hop practice (Kopano 2002, Perry 2004, Nzinga Under Review). This process was scaffolded by instructors, but also by organic desires of students to be legible within the wider hip-hop community. These results beg us to center in our analysis, the role that learning environments play, not only in individual cognitive development, but in the collective development of shared stories, shared language and shared understandings. Learning environments are spaces where participants become coherent with the cultural milieus that are centered in the environment, and the axiological systems of thought privileged there. Given the ways in which educational institutions privilege and perpetuate some discursive and cultural practices over others (based on legacies of racism, colonialism, sexism, classism, etc.), this study discusses the implications of supporting learning environments organized around the storywork of communities from the Global South.

Living stories in teaching and learning for remaking nature-culture relations

Nikki McDaid-Morgan, Megan Bang, and Mario Guerra

A critical challenge for educational researchers in the 21st century is designing learning environments that address dire issues around socio-ecological justice. STEAM-focused education in the US is often steeped in western epistemologies, ontologies, and axiologies. Here we refer to them collectively as axio-onto-epistemologies, or AOE. STEAM educational spaces can be alienating and demoralizing spaces for Indigenous children and youth (Bang, et al., 2014; Simpson, 2014) in part for their failure to engage Indigenous AOEs.

This study explores a co-designed outdoor STEAM summer program that foregrounds Indigenous knowledge systems and supports navigations between heterogeneous AOEs towards socio-ecological justice, particularly as teacher and student participants engage with storytelling and storylistening in the program. Drawing on sociocultural theory (Lee 2008; Gutiérrez & Rogoff, 2003; Nasir et al., 2006) and Indigenous storywork literature (Archibald, 2008; Brayboy, 2005; Marin & Bang, 2015; Simpson, 2014), we posit that 1) all teaching and learning is cultural, political, and ethical, 2) that stories can be frameworks that set the AOE and semiotic landscape for meaning making (Goodwin, 2018), and 3) that place/land is central to Indigenous AOEs. We bring together these bodies of literature to investigate the cultural, political, and ethical possibilities that storywork in outdoor STEAM learning environments can support.

The study is situated in a community-based design research project called Indigenous STEAM or ISTEAM, an informal two-week summer program for urban Indigenous youth in grades 1-12. It has taken place in Seattle for the last six years, was piloted in Chicago in August, and has served between 20 and 50 youth each year. The land/water-based program pedagogy supports expansive meaning and making through STEM and art or ArtScience. The program aims to create the conditions under which resurgence of Indigenous AOEs and lifeways thrive. It supports youth complex reasoning and decision-making skills, identity development, relations to and knowledge of lands/waters, and their commitments to addressing 21st century issues like climate change.

Through a longitudinal and latitudinal case study of how traditional and experiential stories travelled through the program from facilitator activity launches through youth thinking and interactions, we investigate the ways that story played a role shaping the AOE landscape of activities as well as how they showed up in socio-ecological sense-making and human-human and human-more-than-human interactions. Building with Marin and Bang (2015), we answer the questions: (1) How do stories and storywork shape activity and meaning-making in ISTEAM? More specifically, how do they shape the AOE landscape? (2) How do teachers utilize story and storywork in instruction? (3) How do youth and adults engage stories in meaning-making and how do stories mediate interactions between humans and more-than-human beings?

We present a case study of an activity in which groups of young people learned about specific plant species and their roles and relations in ecosystems. The arc of the activity began with a traditional Sammamish story called "Grandmother Cedar." Then a teacher explained the activity which asked children in smaller groups to spread out along a trail and remake relations with their focal plant through observations and learning a series of dimensions about the plant. After each groups' inquiry, youth moved sequentially through each group and taught each other about their focal plant. In this paper, we examine the conceptual and interactional ecologies and the role of storywork — in our case the use of both traditional Indigenous stories as well as peoples' personal stories — in unfolding activity and meaning-making. Our findings focus on designed and emergent forms of storywork across the activity and how storywork becomes a transformative semiotic resource for participants.

We organize our findings into several dynamics of the role of storywork including: 1) teacher's pedagogical use of storywork to cultivate particular AOE landscapes in learning environments, 2) storywork by

participants to create relational closeness with plant life and with each other, 3) the role of stories in cultivating student's understandings of powered bio-historical changes in land and plants and their connections to climate change, 4) participant use of stories as frameworks for sense-making about complex ecological systems, and 5) the role of storywork in cultivating identity formations that refuse colonial enclosures and living everyday reciprocal plant-human relations. Drawing from Goodwin's work demonstrating context shaping and context renewing functions of interaction in semiotic landscapes, we trace these dynamics through what we call planned (context shaping) and emergent (context renewing) activity. The focus on the context renewing activity for participants made visible the horizons of storywork in ISTEAM. As part of this analysis we came to see linguistic markers of story embedded in sense-making and activity. We argue that this interweaving of story in sense-making is evidence of a kind of Indigenous resurgence and presence. Further, we demonstrate how storywork supported youths' complex ecological systems reasoning in ways that previous research has claimed is difficult for learners to accomplish.

Overall, we find that storywork is alive in children who participate in this program in ways it isn't always. Through opening activities with storywork, we have regenerated living our stories for participants, developed a praxis of storywork that supports the resurgence of Indigenous AOEs, and supported an identity trajectory of Native youth as storytellers and knowers of the natural world.

Storywork with homelands towards families' collective continuance

Meixi and Emma Elliott-Groves

The learning sciences has a history of scholarship that engages homelands as a site of deep intellectual work (e.g. Bang et al., 2014; Marin & Bang, 2018; Gutiérrez & Rogoff, 2003; Nasir et al., 2006). This paper builds on such scholarship while foregrounding storywork (Archibald, 2008), land, and family axiologies (Bang et al., 2014) as they relate to a community's collective continuance - the ethical commitments that inform a community's ability to self-determine how it adapts to change, impacting their ability to flourish into the future (Whyte, 2017). Similar to others here, we use storywork to refer to the interrelated processes of storytelling and storylistening (Archibald, 2008). We explore how attention to storywork with families walking their homelands can make visible the complexity and vibrancy of Indigenous families' knowledge systems. We ask: *What is the role of storywork as families walk and story important places and practices on their homelands and in their community?* This paper aims to illustrate how storywork functions to strengthen systems of relational responsibilities for all members, resulting in continuance of families' and their stories. This paper contains theoretical and empirical contributions to understanding the importance of stories as theories (Archibald, 2008; Brayboy, 2005) and to better attune to and design with land-based storywork alongside young people and families.

Stories gathered in this paper come from a key point of evolution of a participatory design research (Bang & Vossoughi, 2016) at Sahasat school in northern Thailand where we began walking and storying (Marin & Bang 2018) home villages with families. Within a Hmong family's case study (Yin, 2013), we use interaction analysis of video data (Jordan & Henderson, 1995) to illustrate the ways that stories on homelands hold and sustain associated epistemologies, ontologies and axiologies - the practices, knowledges, values and ethics that make a family and community know who they are as a people (Bang et al., 2014; Goeman, 2013; Simpson, 2014), and who they are in relation with - including plant, animal, human family and community relations, ancestors, and the spirit world.

Using a case of the Paj family walking and storying their homelands, we illustrate how storywork emplaces members within their systems of relationships and responsibilities dynamically strengthening collective continuance. In our example, the Paj family shared their story of growing mangoes as a family. The mango farm was passed down through the generations. In this village, mango growing and harvesting is a common source of pride and family income. For the Paj family, the mango garden was also a final resting place for one of their loved ones. Resulting from the shared storywork, both the storytellers and the storylisteners have continued to demonstrate their responsibility to this homeland and each other across time. Using their story about mangos, we illustrate how storywork functions to strengthen collective continuance through both storytelling and storylistening. Broadly our main findings are (1) Storytelling their own homelands revealed and encoded the Paj families' axiologies; it illuminated their guiding practices and value systems based within nuanced contexts and relationships across human, plant, and ancestral relations. (2) In the same way, storylistening, is an act of creative, reciprocal meaning making, resulting in strengthened relationships and responsibility for both the teller and the listener. As family members or as visitors-researchers, storytelling and storylistening illuminates our relationships to knowing, grows and guides our ethical sensibilities in our own lives in intergenerational and interspatial ways, and results in the families/communities' ability to adapt and ensure their lifeways flourish into the future.

Storywork and responsibility are symbiotic. Storywork requires the continuation of shared ethical commitments to a vast system of relationships, at the same time, these ethical commitments also ensure the continuation of storywork (Vizenor, 2008). As people with responsibilities to others and to land, the interplay between storywork and axiologies has implications for how people engage their own and others' homelands; for the self-determination of families and communities; and for how they adapt and thrive into the future. In addition, storywork can help guide all people toward being in better relations with lands and each other. In these ways, stories can protection and advance just socio-ecological democracies.

Becoming listeners: Storywork and the development of robust land-based learning practices

Ananda Marin and Kyle Halle-Erby

Scholars in the learning sciences and allied fields have offered insights on the mechanics of family knowledge production as well as how family members enact particular roles across time and space to contribute to the development of conceptual practices (Callanan, Rigney, Nolan-Reyes, & Solis, 2012; Goodwin, 2007; Hall & Jurow, 2015; Keifert & Stevens, 2019; Marin & Bang, 2018; Ochs, 1979). In this paper, we (Ananda and Kyle) further explore the conceptual practices that constitute *walking, reading, and storying land* (WRSL). WRSL is a framework that explains the everyday, ambulatory methodologies that people use for the purposes of learning about, with, and from the natural world (Marin & Bang, 2018). We engage the WRSL framework to understand teaching and learning as conjoined processes. To illustrate this, we draw on a corpus of video-ethnographic data from a series of forests walks that Tanya, a Native American (Chiricahua Apache/Spirit Lake Dakota) mother, and Andrew, her 5-year-old son, went on over a period of two months.

Our aim in this paper is to understand the ethical relations and responsibilities of both mother and son in teaching and learning from one another. Using interaction analysis methods (Jordan & Henderson, 1995), we analyzed the moment-to-moment unfolding action between Tanya and Andrew. We found that individual and collaborative storytelling often occurred over the course of multiple walks. More specifically, Andrew repeatedly invoked the legends of Bigfoot and the Loch Ness Monster. His persistence in investigating the "monsters" (Andrew's words) through independent examination of the forest preserve, dialogue with his mother, and in joint activity during the walks, piqued our interest. After coding, all of the transcripts from son and mom's forest walks to identify every Bigfoot/Loch Ness episode, we used video analysis software to make a Monster Collection so that we could string each episode together in a chronological series. Through co-viewing video records and closely reading transcripts, we identified fourteen sequences where participants engaged narrative observations and imaginative perspective taking in relation to the search for the Loch Ness monster.

Driven by the WRSL framework, we re-designed transcripts to account for a range of human and MTH interlocutors. To do so, we divided transcripts into four columns: one column included recorded dialogue from Andrew, a second included the MTH interlocutors Andrew was attending to, a third included Tanya's recorded dialogue, and a final column included the MTH interlocutors Tanya was attending to. We also color-coded mom and son's columns to easily identify the narrative structure of their talk, with particular attention to instances of co-narrative, simultaneous individual narration, and sequential individual narration. Based on our analysis, we identify three interlocking findings relevant to knowledge production within the WRSL framework.

1. Tanya teaches Andrew to recognize his interactions with MTH interlocutors as a fund for knowledge to answer his questions about the forest.
2. Tanya demonstrates that Indigenous knowledge production is neither individual nor collective, in traditional senses. Instead, learners demonstrate interdependence by pursuing individual paths in and for the collective (Fryberg & Markus, 2003).
3. Andrew's search to discover the truth about the Loch Ness monster represents a case study of land-based pedagogy in which research questions are answered through interactions with land and MTH (finding #1) as well as interdependent orientations toward learning (finding #2). From this case study, we identify imaginative perspective taking as a tool for onto-epistemological closeness. In other words, we argue that imaginative storytelling is an ethical means to get closer to phenomena observed in the natural world.

Indigenous knowledge is inherently political. Speaking on the decolonization of knowledge production, Saidiya Hartman (2019) said, "We have to take seriously what we know and then depict the world from that perspective." Scholars across the field of education remind us that Indigenous knowledges are essential for creating the sustainable society our future depends on (Bang, Marin, & Medin, 2018; Goeman, 2013; Tom, Sumida, & McCarty, 2019; Whyte, 2017). With stakes this high, walking reading and storying land (Marin & Bang, 2018;

Marin, 2019), offers a framework for understanding *how* we know what we know. In this light, we are concerned with implications for future inquiry, research design, and practice.

Concerning future research, this analysis demonstrates that designing culturally-sustaining, socio-technological arrangements provides opportunities to better understand the role of mutualism in interaction. In this case, the attention to all members of the learning community as well as to the context for interaction allowed us to understand the multiple layers of interaction that shaped Tanya and Andrew's knowledge construction. Researchers committed to understanding learning in non-dominant epistemologies can use this study as a starting place to design inquiry that meaningfully records a multitude of agents. Regarding practice, this study demonstrates that young kids are capable of engaging in productive and ambitious lines of inquiry with land over time. For educators engaging land-based pedagogies, this study highlights the importance of sustained movement across land for young learners to develop and pursue lines of inquiry revolving around the natural world.

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