Storytelling with Refugee Families towards a Pluriversal Vision of Sustainable Futures

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Abstract: The dominant norms for sustainability remain rooted in the Western knowledge paradigm, while the knowledge, agency, and everyday acts of historically minoritized people to design sustainable futures tends to be undermined. In this work, we draw on the pluriversal visions (Escobar *Designs* 102) to illustrate ways of relating to the environment that diverge from Western normative environmental movements. Specifically, we discuss our findings from interviewing with families from farming backgrounds in Syria and Sudan, who recently relocated to Canada. Through our community-based collaboration, we met the participating families through Gardens by Refugees and Other Newcomers Welcomed (GROW) program in Calgary, Canada. By transcending disciplinary boundaries and making space for the pluriverse, we highlight the intricate knowledges carried by the families that can inform plural visions of sustainability beyond the notions of Western modernity and development.

Keywords: pluriverse, sustainability, refugee families, intergenerational learning, relational knowing

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The discourse on "sustainability" in mainstream discourse is often entrenched in the Western visions of development and modernity that have historically been shaped by the geopolitical matrix of power (Mignolo 133). For example, the lens of Western modernity can impose a hierarchical vision of the world with life in the Global North as aspirational, while traditional ways of life in the Global South are seen as in need of development and education. This notion of Western modernity and development, inherited from colonial legacies, draws a distinction

between nature and culture - positioning nature as a resource for extraction and people as labor to sustain the cycles of production and consumption, while devaluing non-Western knowledge systems and relationships with the environment (Bang and Marin 532). Under the legacy of Western modernity, environmental degradation is viewed as an integral part of development and modernization that achieves and sustains economic and technological advancements. In this paradigm, historically marginalized peoples are disproportionately impacted by the socio-ecological consequences of modernization (Nixon 6).

The notions of Western modernity and industrialization have amplified human impact on the environment and rapidly accelerated environmental degradation (Department of Economic and Social Affairs 18), however, the dominant norms for sustainability tend to remain rooted in the Western knowledge paradigm. For example, international frameworks such as Sustainable Development Goals recommended by the United Nations reinforce a homogenous vision of development for diverse contexts around the world based in Capitalist and Colonial logics (Arora-Jonsson 8). The knowledge, agency, and everyday acts of Indigenous, Black, and other People of Color youth and families to design sustainable futures in response to climate change tends to be undermined in the dominating imaginary of environmental education (Walker and van Holstein 1170). As mainstream efforts are designed to maintain the status quo and support assimilation into Western understandings of nature and environmentalism, these responses to environmental degradation may be insufficient to ensure sustainable and just futures (Curnow and Helfrety 148; Vermeylen 89). In this work, we draw on the pluriversal visions (Escobar *Designs* 102) to reject the colonial logic of ownership and protection of land and environment, and illustrate ways of relating to the environment beyond Western normative environmental movements. Through interviews with refugee families in Western Canada, we highlight the

intricate knowledge of sustainable ways of life embedded in their stories, everyday actions and cultural ways of knowing.

Storytelling for a Pluriversal Perspective

We draw on Arturo Escobar's formulation of pluriverse, "a world where many worlds fit", as a resistance to the global move towards a homogenous world that centers capitalist, secular, liberal, white, patriarchal values (*Designs* xvi). The conception of pluriverse goes beyond dichotomies of thinking such as dominant and non-dominant, making space for diversity in ways of knowing and living. Diverging from the singular focus on economic advancements, a pluriversal approach creates opportunities to understand life in more holistic ways including diverse social, political, cultural and spiritual dimensions of individuals and communities. Specifically, in disciplinary spaces such as STEM where "the identity of white Man is preserved in being as the universal science person", pluriversal perspectives create opportunities to center identities, bodies, and ways of knowing that have been othered in the space (Kayumova and Duo 5). In designing pluriversal disciplinary spaces, the focus goes beyond adhering to traditional boundaries of disciplines by orienting ourselves to critical examination of power relations and creating opportunities for multiple identities and ways of knowing within the space (Dadkhahfard et al.; Kayumova and Duo 11). Everyday actions and stories play a pivotal role in enacting our understanding of the world and relationships within it (Escobar *Designs* 92). The concept of pluriverse builds on "telling stories differently, in the hope that other spaces for the enactment of the multiple ontologies making up the pluriverse might open up" (Escobar *Designs* 218). Towards this end, we draw on counterstorytelling (Dutta et al.) —"a method of telling the stories of people whose experiences are erased from or dehumanized by dominant stories and

modes of storytelling" (61) in an effort to legitimize their ways of knowing that transcend existing disciplinary boundaries and other imposed positionalities (62). This method of counterstorytelling is not only in response to the macro narratives rooted in Capitalistic and Colonial discourse, but a move towards centering alternate worldviews to collectively dissect the notions of what it means to be educated, knowledgeable and sustainable.

Environmentalism from Pluriversal Perspective

Mainstream environmentalism has emerged as a response to degradation caused by unsustainable production and consumption patterns, but it ignores the tangled histories between social, political, cultural and ecological dimensions (Bratman and William 199). A pluriversal lens supports us to understand environmentalism more broadly as encompassed in our ways of being and relating to the world around us (Escobar *Designs* 102). By expanding disciplinary spaces to accommodate diverse identities and ways of knowing (Bang et al. 34; Gutiérrez 382), historically marginalized communities can reclaim agency to challenge normative assumptions of environmentalism. Learning in these spaces can take into consideration the unique positionality, ways of being and relational knowing within communities (Kayumova and Tippins 833). We build on scholarship that recognizes, honors and centers the implicitly sustainable ways of living exemplified by several communities of color and indigenous communities around the world that are often dehumanized and considered in need of development (e.g., Bakal and Reyes 1; Meixi et al., 12; Takeuchi et al. 382). As Kayumova and Duo (6) suggest,

> Learning ways of "being human" from those who have been put to the margins, those who learned to exist and thrive under the most difficult conditions can offer us new and

transformative views for collective actions and shared solutions to crises facing humanity (e.g., racial, environmental).

To authentically understand knowledge and learning situated in diverse cultural communities, there is a need to critically consider the power dynamics at play and the nuanced ways of expressing their agency and resistance (Curnow 311). As individuals are simultaneously a part of spaces rooted in different ways of knowing and living, critically highlighting the learning happening within communities can "offer a counter-script to the assimilation driven education system …deeply grounded in Western epistemology" (Rahm et al. 56). Creating conversation spaces where community practices and knowledges are honored can open up opportunities for heterogeneous ways of sustainable living and demonstrate the ability of everyday actions as a context to imagine ethical and responsible socio-ecological futures (Meixi 326), especially as "plural ways of knowing have become imperative in a risk society where "normal science" is no longer adequate to deal with the complex consequences of modern and postmodern development" (Mukute and Lotz-Sisitka 365).

Individuals from several historically marginalized communities, informed by their traditional and intergenerational knowing can reflect their unique understandings of life as relational and built on the web of relationships among humans, land, environment, and life on the land (Bang et al. 32; Nxumalo 8; Takeuchi et al. 382). Presencing and sustainable everyday activities can be seen as subtle forms of resistance to the macro systems that propagate harm while prioritizing efficiency. Centering community knowledge requires a deconstruction of the dichotomy between traditional and modern, as indigenous and non-dominant knowledge systems "are often positioned as historical and past or no longer generating new knowledge" (Bang et al. 32). As Escobar (*Designs* 71) suggests, we consider ancestral and traditional knowing within the

communities as a source of knowledge and orientation towards a sustainable future "that struggles for the conditions that will allow them to persevere as a distinct world". We present our work towards collective envisioning and remaking of educational spaces by including familial and community knowledge systems.

Methodology

Through community-based design work (Bang et al. 28), we interviewed five families with elementary aged children who had participated in the Gardens by Refugees and Other Newcomers Welcomed (GROW) program at The Immigrant Education Society (TIES) in Calgary. All of our participant families had arrived in Canada as refugees within the past 5 years at the time of this study. Because the interviews were conducted during the COVID-19 pandemic, we invited the families to join the virtual interviews, where we discussed their experiences with growing and the children's vision of their ideal neighborhood. One of the participating families was from Sudan, and four of the families were from Syria (totalling 21 participants). We experienced challenges in recruitment that were partially due to the pandemic. Additionally, many of the former attendees of the program were overstretched with heightened demands at their work and family caregiving responsibilities. The interviews were conducted in English, with younger family members supporting their parents in translating to English whenever necessary. Following the virtual interview, we requested to visit their homes in Calgary to view their ongoing growing practices if the families' schedules permitted it. We were able to visit one of the participant families from Sudan (Nhail's home) (All names are pseudonyms). In lieu of a visit, one of the families from Syria (Muktar's family) took us on a virtual tour of their backyard garden. In this article, we focus on the interviews with Nhail and

Muktar because our conversations with them provided a rich description of their life and growing practices along with our access to their backyard gardens. The interviews were video recorded, professionally transcribed, and we as researchers edited the transcripts for accuracy and with transcription conventions.

During the interviews, the participants and the interviewers collectively engaged in creating spaces that allowed for sharing stories based on pluriversal ways of knowing and living. The analysis of the interviews focused on carefully listening to the stories shared by the participant families and critically considering the macro contexts to identify themes where the participants are depicting "traditions of social, political, and cultural survival and resistance" (Solórzano and Yasso 32). In our analysis, we blurred the boundaries between researcher and participant as our positionality and relationality to bring forth our inter-entangled relationships to the lands (Jadallah 231). Through reflecting on our own positionalities and the relational conversations with the families, we engage in reenvisioning sustainability and renegotiating who the actors of STEM disciplines can be (Takeuchi et al. 381).

Context of the GROW program and the leadership of late Dr. Cesar Andres-Miguel Suva

The GROW program is intended for newcomers to Canada to build a community garden, grow plants, harvest produce, and create video-recorded cookbooks for the dishes they are most familiar with. One of the goals of this program was to foster a sense of belonging and increase participants' well-being through their connection to the garden. It also sought to allow newcomers to position themselves as sources of knowledge in a context where they are often recipients of knowledge, contributing to infrastructure development in Calgary. The GROW

project was featured in CBC news prior to the pandemic and inspired other community-based garden projects in Calgary.

The collaborative vision of Miwa and Cesar laid the foundation for this project. The following (in Miwa's words) describes the crucial role of Cesar as an architect of the GROW program and their collective efforts:

I see my relationship I built with my community partner, late Dr. Cesar Andres-Miguel Suva at The Immigrant Education Society, as a source of inspiration for this project. Cesar and I crossed paths through our shared visions for food and environmental justice, centering the voices of refugee and migrant communities. Cesar led the GROW project with his heart. Our collaborative works were toward the goal of envisioning an equitable and sustainable city by mobilizing the deep knowledge of plants and environment of refugee and migrant communities. Cesar left this world too soon without seeing the maturity of our collaborative works. During one of our walks, Cesar told me that the GROW project was close to his heart because it was his mother who taught him the joy and beauty of gardening. As a Filipino immigrant, his mother grew a wide range of vegetables she used to cook traditional cuisines. As a child, Cesar hesitantly helped his mother's garden, he told me with laughter. It was only when he grew up that he came to deeply appreciate his mother's sovereignty in growing food on her own and wisdom of knowing the plants. His deep appreciation and respect for his mother were the seeds of the GROW project. To me, it was my connection with my grandmother and to Cesar, it was his connection with his mother that oriented us to food/environmental justice issues, which we discuss in this paper.

Findings

The interview with each of the families started with brief self-introductions of the researchers and the family members. In the interviews, instead of positioning ourselves merely as researchers, we tried to position ourselves as conversational partners and learners of the participants' wisdoms and knowledge, by affirming, sharing our excitement and joy, and active nodding. Our backgrounds and positionalities became inseparable from our effort to co-construct a pluriversal space where historically unseen knowledge and wisdom came to light. We begin the findings section with brief snapshots of the focal participants' and researchers' connection to agricultural practices, farming, and foraging, which will be elaborated further in the subsequent sections.

Nhail

Nhail grew up with her mother on their familial farm in rural Sudan where they grew a variety of crops and took care of farm animals. She described her mother as a farmer, businesswoman, and her primary source of knowledge. Nhail relocated to Canada in 2019 and lived in Calgary with 8 of her family members, including her siblings and children, when we interviewed them.

Muktar

Muktar owned a large farm with his father in Syria where they grew a variety of crops and had large herds of sheep and cows. Muktar and his family relocated to Canada in 2017. Muktar, his wife and their six children were living in Calgary when we interviewed them.

Mahati

Mahati grew up in a metropolitan city in southern India. Her father is from an agricultural family and was a first generation college graduate. While her parents guided her towards formal education, she also sees wisdom and learning beyond the prescribed education settings because of the experiences and stories shared by her family.

Miwa

Miwa grew up in the post-industrial city of Japan which suffered from environmental devastation that happened under the shadow of rapid post-WWII development to "catch up with the West." Amidst the environmental devastation, Miwa viewed her grandmother's wisdom rooted in seaweed forage and small-scale agriculture as deeply nurturing.

Kreisha

Kreisha grew up in a small, rural town along the Pacific Ocean in the eastern Philippines, spending the first decade of her life with her maternal grandparents. Their guidance profoundly influenced her values and worldview. Her lived experience shaped her approach to listening, respecting, and integrating the wisdom of the past into the present. It has also inspired her to advocate for preserving these essential traditions and connections for the future.

Interviews as Space for Pluriversal Sharing

During the interviews, we spent the majority of our time discussing the families' growing experiences in Canada, including the GROW program and farming experiences in their home countries. We noticed changes in the tone when the participants described growing food and farming back in their home countries—more laughter, more smiles, and excitement in their

voices. Initial awkwardness of interviews faded when the topic shifted to plants, growing, and being on the land. The conversations with the families of Nhial and Muktar offered us insights on pluriversal ways to understand living relationally and sustainably. Their movement into a Western, urban, capitalistic society often obscured the visibility of their ways of knowing and living even though subtly represented in their everyday practices following their forced displacement. By transcending disciplinary boundaries and making space for the pluriverse (Adams et al. 60), we came to understand that the intricate knowledges carried by the families can inform plural visions of environmentalism and sustainability for the future. Our collective negotiation of what it means to be knowledgeable and live sustainably are organized by three themes as follows:

1. Knowing as relational practice
2. Learning through Intergenerational and Relational spaces
3. Living slowly and intuitively

Theme 1: Knowing as relational practice

In our conversations with Nhial and Muktar, they spoke fluently about their experiences of growing a variety of crops on their familial farms in Sudan and Syria, respectively. Throughout the interviews, both Nhial and Muktar expressed an intense desire to be on the land again and continue farming, as a way of physically situating their ways of knowing and living post the forced displacement as refugees. They depicted their world which was rich in relational and embodied knowledges.

The following excerpt (Excerpt 1) is an illustrating conversation with Nhial about her ways of living. In this instance, Nhail described optimal conditions for growing vegetables and maize. For Nhial and her family, knowing was a part of doing their work as farmers and being in

relationship with the soil, plants and other life on the land. Nhial explains that her knowledge about soil was acquired because she and her mother are farmers who know "good soil" for their maize (utterance 5). Further describing her qualification of "good soil" for their maize crops, Nhial instinctively responded, "we know the soil", but waited to see if that is an acceptable response. When Miwa and Mahati acknowledged her response verbally and through nodding (utterance 7 - 8), she proceeded to break down her understanding of the relationship between the soil and maize crops. While Nhial's description of "good soil" may substantially differ from Western scientific classifications, her understanding is highly contextualized to her family's agricultural practices, local conditions and the needs of their crops. The way Nhial described the plants not only shows her close relationship to the plants ("our maize" in utterance 5), but also ascribe agency to the plants (e.g. "it can take even one acre, the pumpkin [plant]" and beans growing up to their roof in utterance 1) and their unique needs. The knowledge and wisdom deeply embedded in everyday practices as described by Nhial portray invisiblized labour (Jurow et al. 212) as consequential to caring for and co-existing with life on a farm and broader ecology. As we recognized the wealth of knowledge the families held, we also recognized how "science education" can be reframed through an alternate knowledge framework that centers diverse ways of being and doing as locations of knowledge (utterance 10).

Excerpt 1		
1	Nhial:	The pumpkin… (Miwa: um um) we plant it, them together with the … with the maize. (Miwa: Ah!) Yeah … because we have a bit different pumpkin. I've never seen here, the pumpkin, in Canada, how they grow.(Miwa: Uh um) Yeah, I've never seen, (Miwa: Uh um) but there back home, the pumpkin can go grow a lo(::::)ng, like, it can take even a one acre!(Miwa: Wow! Wow!) The pumpkin, Yeah. (Miwa: Wow) Uh…yeah, and, and, Beans. Bean, we put different. (Miwa: um um) because there are different beans. (Miwa: um um) They, they, they are, the bean grow … like … can go up to the roof… of the house. (Mahati: Wow) (Miwa: um um) We put them in different way because if we mix together with the onion or tomato, it will damage. (Miwa: um um)We

		put them different way and we put the onion different way. We put the tomato different way. (Miwa: um um)
2	Miwa:	Wow! That I didn't know. I put the tomato and the bean together. [laughs] Not good. I need a teacher like you. [everyone laughs in agreement]
3	Nhial:	Thank you [laughs softly].
4	Miwa:	Wow. You know a lo(:)t about soils. (Nhial: Yea(:)h) That's amazing (Miwa: yeah). Wow
5	Nhial:	I was doing farm, me and my mom (Miwa: Wow)… so we knows, we knows the good soil [laughs]…for our maize. [laughs]
6	Miwa:	What makes(↑) a good soil?How do you know? (Nhial: Eh?) How do you know when the soil is good?
7	Nhial:	Okay, we, we, we knows because… we(:)… we know the soil(?) [Mahati and Miwa nod to acknowledge Nhial's response]
8	Miwa:	yeah
9	Nhial:	Yes(.) we know the soil. We knows… the… the clay soil, it cannot be good for the…for, for… for the maize. We can grow maize, but it'll not be much like… the loam soil (Miwa: right right right)because it is so… thick.(Miwa: right right right)
10	Miwa:	That's so cool.
11	Mahati:	Thank you for sharing so much information(↑). It's like a mini science class for us (↑)
12	Nhial:	You're welcome.

During our interview with Muktar, the following conversation (Excerpt 2) took place as he described his farm in Syria. He explained that they always put broccoli and peas together to protect the peas, because insects don't like the smell of broccoli and "they can go far away" (utterance 10). While the concept of companion planting is not unique, Muktar's approach considers the (dis)likes of the insects to protect the plants, the produce, and the insects. This approach stands in stark contrast with the use of chemical pesticides which solely protects the produce with health hazards for all consumers including humans. While Western scientific knowledge is often positioned as a tool for humans to exert dominance over the environment, Muktar presented an alternate vision of employing traditional knowledge in non-destructive ways to achieve similar outcomes. This conversation with Muktar highlighted how his farming practice builds on an intimate understanding of the web of reciprocal relationships between soil,

plants, and life on the land. The practices as described by Muktar are implicitly sustaining the existing ecological relationships. From this perspective, considerations for sustainability are no longer external or added on to existing unsustainable practices.

Excerpt 2		
1	Miwa:	Yeah, tomato, cucumber, peas (Muktar: yeah)… um, bean? like fava beans? Fava bean?
2	Muktar:	Well, you have to have to put some …broccolis.
3	Miwa:	Broccolis(↑) too ?
4	Muktar:	Yeah, with this one because… if we don't put some for this one… maybe we have some …like…sick…get sick (Miwa: O(:)h) The plant will get sick if you don't put some … broccoli. (Miwa: Oh, really?) Yeah…yeah
5	Miwa:	I didn't know. Which plant will get sick if you don't have broccoli?
6	Muktar:	Peas.
7	Miwa:	Peas. O(::)h! because of the bugs? Like the bugs will come and eat it?
8	Muktar:	Yeah yeah. Yes, those small [checks with his son in Arabic language] Insects?
9	Miwa:	Small small insects!
10	Muktar:	Insects don't like the smell … the broccoli. (Mahati: Um(::)) They can go far away [smiles].
11	Miwa:	I didn't know, wow.
12	Muktar:	We try this in my country. (Miwa: yeah?) yeah. (Miwa: A(:)h)

The stories shared by Nhail and Muktar that depict knowledge as a relational practice can extend the current notion of scientific knowledge towards sustainability. Our observations here align closely with scholarship around Indigenous knowledge systems that recognize all entities as interconnected and knowing as relational (Pugh et al. 427; McDaid et al. 394). In contrast to mechanized farming techniques that can disrupt the ecosystem for desired results, our participant families communicated intricate knowledge of their ecosystems and subtle ways of drawing on this knowledge for living amicarably with non-human beings. The knowledge communicated and practiced by the participants was learned by carefully and respectfully attending to their surroundings while practicing farming. The knowledges practiced by these families diverge from the notions of scientific knowledge in formal education, highlighting alternate epistemological and axiological possibilities. Analyzing this conversation, Kriesha noted the importance of

alternate ways of knowing, especially in times of ecological uncertainty, based on her own personal experiences:

> Despite lacking formal education, my grandparents possessed a wealth of environmental knowledge. They understood the cycles of the seasons, the nuances of crop cultivation, and how to adapt to environmental challenges. Their resourcefulness in the face of natural disasters instilled in me a profound respect for traditional knowledge and the enduring strength of rural communities.

Through these observations, we note that these alternate ways of knowing and relating with the environment around us can support our moves towards alternative visions of sustainability that honor ways of knowing and living that have been long deemed as "less developed" and "less civilized."

Theme 2: Learning in Intergenerational and Relational Spaces

The families were cultivating intergenerational learning spaces through their everyday interactions with each other, the land and life on the land. The teaching and learning happening in these spaces looked different from that in a formal education setting. Through conversations with the families, we collectively acknowledged learning opportunities created through everyday interactions with family members.

At the tail end of the interview, when Nhial was asked about her formal education, she began her response with laughter and proceeded to explain the local custom that prevented her from going to school (Excerpt 3 utterance 2). While we recognized the partially forced circumstances shared by Nhial, we also saw Nhial's care and agency to decide on the path based on her desire to support her mother who was a single mother. The conversation collectively affirmed wisdom that Nhial shared with us and together we affirmed and honored the learning that can and did happen

outside the formal systems (Excerpt 3 utterance 10). This conversation highlights our collective resistance to equate formal educational qualifications as the sole benchmark of knowledge and skill; and the need to recognize the learning opportunities beyond the school context in its own light.

Excerpt 3		
1	Mahati:	What did you study when you were back in your country?
2	Nhial:	Okay, you know when [laughs] It's so funny. [Nhial laughs. Miwa and Mahati nodding and smiling in anticipation] When I was in my country, there, you know, there is something called early marriage.
3	Miwa:	Okay?
	Mahati:	Early marriage(?) okay [nodding in anticipation] …
4	Nhial:	Yes. Early marria(:)ge (Miwa: uh um)
5	Mahati:	[nodding slowly and realizing the meaning] O(:)h!
6	Miwa:	Oh, Early marriage. Yes! (Nhial: Early marriage) Yes! (Nhial: yeah) O(:)h! I see(:)
7	Nhial:	So, the girl, they don't, they don't like to go to school (Miwa: right, right while nodding) so much. (Mahati: okay, okay while nodding) Yeah … so they like them to do the work in the house (Miwa: right, right) … (Mahati: Oh!) hmmm… and also to get married, go your home, get children. (Miwa: yeah, yeah) A girl may get married while you have a 13 years, 14 years you already have your firstborn (Miwa: um … while nodding) yeah (Mahati: oh wow! while nodding)
8	Miwa:	Yeah! yeah! [nodding to indicate understanding]
9	Nhial:	So, I have not gone to school so much (Miwa: uh um). I just, think I just end up with class four (Miwa: uh um)…then I done. Also, I was not focused on school so much too [Mahati smiles] because my mom is, she is the only one (Miwa: uh um). I like to help her so much (Miwa: yeah). She like me to be close to her to do the work (Miwa: uh um).
10	Miwa:	You know what(?) I think you are a great(.) teacher(.) [Nhial: laughter] because you know so much about soil and plants. Much, much more than many people who went to lots of schools. You know wa(:)y more. [Nhial, Mahati, Miwa together laugh]
11	Nhial:	Thank you.
12	Mahati:	For sure … yes!

Throughout the interview, Nhial referenced her mother several times as a source of her knowledge. She explained the agency and efforts of women, especially in their role as farmers. Nhial portrayed her mother as a teacher who prepared her from a young age to become a skilled

farmer and entrepreneur. Nhial presented a vision of empowerment and sovereignty passed down generationally through the expectations set up for her (utterance 7). At the same time, because Nhail immigrated to Canada with her family, she was distanced from her familial land and also from opportunities to practice and share her knowledge.

Excerpt 4		
1	Nhial:	my father died, my mom is the one who stand(↑) with us [Mahati: nodding slowly to show empathy] hmmm
2	Miwa:	[nodding and placing her hand on her chest to show empathy] hm…wow…strong woman.
3	Nhial:	She is very hardworking woman, my dear (Miwa: yeah!) [Mahati smiles]… I really appreciate her… Um…
4	Miwa:	Wow…
5	Nhial:	She is very hardworking woman… (Miwa: wow) (Mahati: I'm sure she was). She was teaching, was teaching me the time I am … like …six years old, how to cook (↑) (Miwa: Wow) [Miwa, Mahati, and Nhial laugh together], how to clean the house (↑) [all laugh together], how to do everything in the house [all laugh together] … Imagine. You know, you know, you know the time I was young, so I will say … "hmmm … this woman is maybe not my mother…because why?"
6	Mahati:	[Laughs] why is she making me do all the work? [Miwa laughs]
7	Nhial:	yeah! because why did she treat me like this? Why did she make me do all the thing? I'm young! Why? Eh? [Mahati and Miwa laugh] But my dear (↓), When I grow up (Miwa: uh um), so I realize, I realized (↓), back my mom was loving me [Mahati and Miwa nodding in agreement], love (.) me (.) because she was teaching me how to be independent …and how to be taking care of.

In our collective analysis of this interview, we came to acknowledge and honor the intricate knowledges and skills held by the participant families, while also gaining firsthand stories about the social and economic implications of being in the farming profession. For example, interpreting Nhial's interview, Mahati shared her own personal experiences:

> I observe a movement away from farming related professions, many of my cousins and younger people are moving away from their villages and agricultural land in search of

> stable salaried jobs in urban locations. I wonder why professions like agriculture are looked down upon when they involve so much specialized knowledge and hard work, but at the same time, I see the contradiction that I'm able to do this work and make this argument only because their path was not chosen by my father or me.

The intergenerational learning spaces created by the families were unique to their experiences, and ways of knowing and living. In line with a pluriversal vision, Muktar's family presented a slightly different version of intergenerational learning, through stories of the family's way of life on their familial farm in Syria and the family's practices post their immigration to Canada. Through their pre-migratory lives in Syria, the children had developed an intimate relationship with farm animals by being in presence with them. When asked about the animals she saw in Syria, 8 year-old Saba and 12 year-old Dahlia shared stories of their family's relationship with each of the animals (Table 1). Through their ways of living and working, rich opportunities were created for intergenerational learning and knowledge sharing. The experiences shared by Saba and Dahlia are relationally-oriented unlike the experiences of learning about the facts about animals through secondary sources such as textbooks and TVs. While Saba vividly recollects the products they gathered from the animals, the family's knowledge about caring for these animals were not necessarily verbally articulated. By virtue of being in their presence, the families knew the needs and behaviors of these animals. In the interview, the children depicted how they were keenly aware of the life cycle, the source of produce such as milk and eggs and the labour that goes into birthing them. In our co-analysis session, Mahati noted that the observations shared by the participants resonated with the teachings passed down by her family about our dependence on several people and their effort in bringing every grain of rice onto our plates. This connection

between the consumer and food supply is often obscured by the nature of the grocery and retail stores in the urban context.

Table 1: Collection of quotes by Saba and Dahlia about animals on the farm

Cows	"When I was little, I used to not drink any milk except from the cows… My grandpa would milk the cow and put them in the bucket and then put it in my bottle and I would drink it… My mom bought me every kind of milk, but then I didn't like any."
Chickens	"The chickens would make eggs that we would love to eat in breakfast… Every day, most days, we would go get eggs and eat them". As Saba was describing the little house that chickens live in, her father humorously recreated the chicken sounds they would hear while they pick up the eggs.
Sheep	Talking about sheep and their hair, Dahlia added, "That's where we get our fabric from". Saba explained that they cut the sheep's hair every year, "My grandma washes them and makes them into fabric… Then my grandma lays it out in the sun and then we use it for bed covers." Saba also volunteered to tell us "some facts about sheep" and explained, "if you don't cut sheep's fur, then it'll keep growing forever".

After relocating to Canada, Muktar's family had been cultivating a small backyard garden. Their 4-year-old daughter, who they identified as "Canadian" had never experienced being on the farm like her older siblings. However, she continued to learn about growing from her family through the backyard garden. She reported that the "purple flowers" that her father grew were her "favorite.. Muktar's family, even though displaced from their familial farmland, continued to sustain their stories and create opportunities of learning for their children through their everyday acts.

Fig. 1 Purple flower grown in their backyard by Muktar's family

In our co-analysis session of interviews, the research team had shared their own intergenerational learning in their home contexts. These intergenerational stories and teachings could provide plural visions of living sustainably beyond the Western paradigm of modernity. For examples, Miwa described:

> Growing up, I felt stuck in this place - feeling and smelling air pollution and struggling with health issues, I oriented myself to what my grandmother brought as a wisdom as a source of hope - the knowledge and wisdom deeply rooted in her seaweed forage and small-scale agriculture. My grandmother's wisdom and knowledge felt like such a contrast to life-taking smokes that covered my city. Her wisdom felt more life-giving and nurturing. My deep connection with my grandmothers' wisdom was probably a reflection of my nostalgia toward what was lost in the process of "modernization" "industrialization" and "development."

By sharing these stories and ways of life, we highlight that heterogenous and localized knowledge systems are invaluable to design sustainable futures rooted in pluriversal visions. At the same time, we acknowledge that, due to the socio-economic viability of certain professions and forced displacement, traditional knowledge and alternative ways of knowing are often forced to exist in the margins and practiced only in informal contexts like a small section of garden space at the participants' home.

Theme 3: Living slowly and intuitively

Nhial's and Muktar's families relocated from living on a farm to an urban area and experienced a substantial shift in the source, quality, and accessibility of food. However, through their practices, they sustained and modeled certain literacy in food and nutrition to their families. We visited Nhial's home a few days after the interview. She was a generous host who prepared a variety of food for us. We were impressed with the skills she used in the kitchen which almost looked like magic. She used her hands to spin dough in a bowl and created a homogenous batch of small balls of dough (resembling couscous), which she steamed and served as a part of the meal. Nhial explained her approach to food consumption as a family:

> We balance it. We don't eat it every day. We eat it one day. Another day, we eat another food. Another day we eat another food. Another day we eat rice … We cook, but mostly we just cook at home. We don't use the junk food…We just maybe buy a pizza, two in the month, but mostly we cook.

Muktar and Nhial, comparing growing practices in Canada to their countries (Syria and Sudan respectively), mentioned the risk of chemical fertilizers and pesticides. Because of the soil quality, Muktar believed that chemical fertilizers are helpful in Canada. While "the plant is growing faster", he thought the use of chemical fertilizers is "not good". Referring to the produce

in Syria where only manure was used as fertilizer, Muktar recollects, “When you eat those vegetable, you're feeling you eat something that is good”. In the same vein, Nhial explains that they did not rely on chemical fertilizers in Sudan, “We don't use chemical. We just plant it natural. They are so sweet, but it takes time to grow”.

All of the authors and the participant families noted a difference in food quality between Canadian context and their countries of origin. Collectively, during co-analysis sessions, we discussed a strong relationship between growing practices and taste, which was brought up by Muktar and Nhail. Kreisha shared her observation that North American grocery stores often carried produce that was larger in size due to genetic modification, simultaneously resulting in less flavor versions of the non-genetically modified produce available in the Global South. While Mahati reminisced about the fresh and delicious food in her home context, Kreisha described that her greatest shock while moving to Canada from the Philippines was not the culture or language, but food. She experienced difficulty adjusting to a lifestyle where food often felt distant and disconnected from its source, having grown up with a farm-to-table perspective where food was fresh, affordable, and accessible. Similarly, Miwa highlighted the stark difference in taste between vegetables that local small-scale farmers grew and vegetables that were packed and sold in large grocery stores in Japan and North America. Based on their lived experiences, participant families and the research team shared their understanding of what is considered as “good” for their bodies. However, these food literacies can be rendered invisible or deemed illegitimate when systemic imposes mainstream health standards and constraints that restrict their ability to act on their understanding. The version of growing that Muktar and Nhial are pointing out goes against the notion of efficiency and comfort, and points towards a more sustainable approach to living. They remind us that being environmentally conscious includes fundamentally rethinking

the pace and quality of our production and consumption. There was an underlying sense of joy and accomplishment as Muktar and Nhial shared their traditional practices, intergenerational wisdom and way of life. Particularly thinking of her life with her maternal grandparents, Kreisha notes:

> By societal standards, we were considered poor, but I never felt deprived. My childhood was enriched by the rhythms of rural life: harvesting rice, feeding chickens, and planting vegetables. Our table was always filled with fresh and homegrown produce, a testament to their deep connection with the land and unwavering dedication.

While they shared their stories, the participants reminded us that practicing farming and growing as they did involves a tremendous amount of labour, oftentimes with no safety net to fall back on. Nhial explains that it was the "hardest", but "that is the way we survived because if we don't do farming, no food. We have to work hard to get food". As we make these observations, we want to refrain from idealizing the life of our participants. We are keenly aware of the risks of imposing idealized views onto the participants we interacted through the GROW program—those who were forcibly displaced due to war and other forms of violence. Particularly, Miwa articulates her consideration:

> As I listen to our participants' stories, I discipline myself not to essentialize their struggles, hopes, and realities just with labels like "refugee," "Global North," and "Global South." Without essentializing these, I wanted to hear and orient myself to vivid lived realities that often include contradictions and paradoxes (de Oliveira Andreotti, 2021).

Discussion

Approaching complex and urgent issues such as environmental degradation solely from the lens of Western modernity can restrict our vision of sustainable futures (Mukute and Lotz-Sisitka 365). Through our work, we draw on a pluriversal lens to respond to the need for heterogeneous understanding of caring and relating in our changing environment. Pluriversal approach offers the framework to reconsider Western modern life as the only possible way of living. By narrating the stories from their everyday life, our participant families demonstrate ways of reciprocal living and caring for the environment that looks different from the Western normative recommendations for sustainability. By expanding our view of living sustainability, we expand our view of who can offer us expertise. As our participants, Nhail or Muktar may not be identified as sustainability experts by dominant standards, their knowledge and expertise remain hidden in plain sight. In fact, as they relocate to urban locations due to forced displacement, they are viewed as individuals who need to be trained to blend into the Canadian workforce. Through this work, we hope to highlight the expertise and intergenerational traditional ecological knowledge rooted in their ancestral lands that migrant families carry. In doing so, we are hoping to reposition such expertise and knowledge as invaluable to design sustainable and just futures. The stories shared here decenter narratives of damage and deficit in non-Western ways of life while legitimizing alternate ways of knowing, living, and relating to the world (Bang et al. 32; Tuck 414).

Life as illustrated by participant stories goes against the modern notions of fast-paced convenience, and pushes us to fundamentally rethink what it means to be sustainable. The stories we shared in this article teach us that living sustainably requires shifting our worldviews and reconsidering the ecological cost of comfort. We recognize that going beyond performative and

capitalistic notions of environmentalism may require us to experience discomfort, inconvenience and uncertainty.

As we share our stories, we explicitly make an effort to not romanticize the lives of our participants or claim that any particular way of life is better. Given the existing socio-economic inequities in the world and the ecological impacts of normative economic development and industrialization, we acknowledge that "development" and "sustainability" can take many different forms in different parts of the world depending on local priorities (Escobar "degrowth" 461). Through a pluriversal approach, we hope that environmentalism and environmental education can support a nuanced understanding of sustainability by questioning normative assumptions around who is, whose lives are, assumed to be the center.

The pluriversal approach has methodological contributions: Sharing our stories in conversation with each other beyond the dichotomies of participant and researcher facilitated a space for pluriversal sharing. By moving away from a neutral position as interviewers, we were able to affirm our participants' intricate knowledge and expertise, while also sharing our ancestral knowledge. This work provided an opportunity to center conversations between distinct lifeways and knowledge systems that are often forced to exist in the margins (Dutta et al. 61), in order to envision sustainable ways of living that diverge from Western normative visions.

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