

Cooperation by Design: Exploring the Dynamic of Trust in an Arctic Collaborative Project

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When Indigenous and non-Indigenous Peoples come together in a project to address issues relating to Arctic communities, how do fruitful collaborations come to be? Among the elements that constitute the approach for genuine cooperation and creativity in complex projects, trust is an indispensable ingredient. From a systemic and complexity paradigm and design lens, this article explores the “dynamic” of trust in collaborative projects involving Indigenous Knowledge and Peoples in the Arctic. How does the dynamic of trust within a collaborative project operate, evolve, and re-organise in action and how can we conceptualise it? What factors influence cooperation and trust in Arctic collaborative projects? Guided by action research and project-grounded strategies in design, the research draws from the two-year Dialogues and Encounters in the Arctic (DEA) project that took place in the Indigenous Sámi context. Multiple qualitative tools were employed, including seven semi-directed interviews, two reflective journals, one workshop, and one post-project online group discussion. The research involved twelve DEA collaborators (both Indigenous Sámi and non-Indigenous). Our findings present results from a preliminary analysis, shedding light on the dynamic nature of trust in the DEA project through the example of in-person project encounters and ethical framework development, reflecting how trust weaves itself into a project's very fabric. We found that, amidst the complexities and various influences on trust dynamics (e.g., socio-political contexts, a global pandemic, or individual personalities), fostering consistent interaction between project collaborators emerges as an effective strategy to nurture a dynamic of trust. An ‘organising’ design approach is seen as being favourable to such processes.

Positionality statement

As first author of this paper, I, Caoimhe Isha Beaulé, approach this research as a non-Indigenous doctoral researcher, of French-Canadian and Irish settler descent. My perspective is rooted in my role as a designer and coordinator in a collaborative project called *Dialogues and Encounters in the Arctic* (DEA), primarily conducted within Sápmi - the Sámi traditional homelands. This study involves both Indigenous (Sámi) and Non-Indigenous participants, all of whom were involved as collaborators in the DEA project. For clarity, Indigenous Sámi collaborators will be identified as (I), while non-Indigenous collaborators will be denoted as (NI)¹. I conducted all the data collection,

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processing, analysis, and most of the writing. The second author, Pierre De Coninck, contributed to the development of the theoretical and conceptual ideas presented in this paper and provided editing support. He is also co-supervisor of my doctoral thesis.

Introduction

How do fruitful collaborations emerge when Indigenous and non-Indigenous people come together to work on significant social, cultural, and political challenges that concern Arctic² and Northern communities, particularly in design-related initiatives? Arctic projects, including research activities, can quickly become challenging given the settings they operate in: extreme climates, fragile and changing ecosystems, remoteness, limited resources, and delicate socio-political landscapes. Given European colonial history in the Arctic and in research practices on Indigenous Peoples (Smith, 2012), developing relationships with communities is a crucial task (Doering et al., 2022) with trust-building playing a key role in the process (Gordon, 2017). As damages to relationships or trust can mean the failure of a project (Le Cardinal et al., 1997; Lillie et al., 2020), these areas require serious thought and ethical considerations when embarking on new collaborative journeys. The recent publication *Comprehensive Policy-Brief to the EU Commission: Roadmap to Decolonial Arctic Research* (Herman et al., 2023) mentions the need to rebuild trust between researchers and Indigenous communities. We extend this notion, arguing that fostering trust would be beneficial for all types of collaborative projects in the Arctic, especially those engaging with Indigenous Peoples and Knowledge.

Trust is ubiquitous in our daily activities and interactions, unconsciously influencing the outcomes of events and processes. Shortly, it can be defined as a “willingness to be vulnerable” (Mayer et al., 1995: 724). However, when trying to grasp the essence of trust, things are not as obvious. This is reflected in the various interpretations it has among disciplines (Rousseau et al., 1998). Trust’s role in supporting teamwork and cooperation (Avenier, 2000; Le Cardinal et al., 1997) and team creativity (Gong et al., 2012) is clearer, but the way it operates is less. Where does trust come from? How does it emerge, maintain, or deteriorate in collaborative processes? How is it preserved beyond diverging interests or unforeseen challenges? In a study conducted by Indigenous researcher Heather Sauyaq Jean Gordon in a Greenlandic context (2017), trust arises as something that can be cultivated through action. This action entails knowing the community's history, establishing local contacts, engaging in open communication, mutual respect, adherence to Institutional Ethics, knowledge exchange, and giving back (Gordon, 2017: 243-247). Regarding researcher-Indigenous community relationships, Gordon’s study suggests that trust is nurtured through interactions or actions that occur within the broader context of a collaboration.

The potential of utilising co-creative and community-based approaches within transdisciplinary teams to address the complex problems encountered in the Arctic region has been recognised (Doering et al., 2022). Indeed, collective design practices (e.g., co-design, participatory design, co-creation, see Centazzo & Pope, 2023; Sanders & Stappers, 2008) are commonly used in projects involving multiple disciplines to address social issues and foster innovation. Though some research has addressed the notion of trust in the field of collective design practices (Clark et al., 2021; Parkinson & Warwick, 2019; Warwick, 2017), so far it has not been clearly modeled, as indicated by Parkinson and Warwick (2019). Moreover, the ongoing discussion on the ethics and decolonisation of collective design practices, particularly ones involving Indigenous Peoples, has contributed to our understanding of the concept of ‘design’ and the way in which it is practiced

collaboratively (e.g., Akama et al., 2019; Mäkiranta & Yliotapio-Mäntylä, 2019; Shultz et al., 2018; Tunstall, 2013). Unreflective application of the frameworks, methods, and tools developed for Western contexts may perpetuate colonial legacies (Akama et al., 2019; Harrington et al., 2019; Janzer & Weinstein, 2014; Smith et al., 2020; Tunstall, 2013), for instance, when it comes to defining the ‘issue’ and its ‘solution’. Like what Gordon (2017) has highlighted in the context of researcher-community relationships in the Arctic, designers collaborating with Arctic Indigenous Peoples often lack adequate frameworks for cultivating the trusting relationships required for their work. As the outcomes of collective design aim to create practical solutions and not solely new knowledge, our article seeks to shed light onto the ways of building a dynamic of trust in collective acts of design.

To further these reflections, we ask: How does the dynamic of trust within a collaborative project operate, evolve, and re-organise in action and how can we conceptualise it? What frameworks, processes or attitudes are favourable or detrimental to cooperation and trust? To explore these questions, we will draw from a two-year collaborative project that had Indigenous Sámi knowledge and Peoples at the centre of its activities: Dialogues and Encounters in the Arctic (DEA).

The article is structured as follows: First, we give background information on the DEA project. Second, we define our theoretical lens by discussing the systemic and complexity paradigm and conceptualise the dynamic of trust, cooperation, and design within this framework. Third, we explain the qualitative methodology and methods employed, data collection, and subsequent analysis. The research used multiple qualitative tools to access the implicit and experiential knowledge held by DEA project collaborators. Specifically, the material collected includes seven semi-directed interviews, two reflective journals, one workshop, and one post-project online group discussion. In total, the research involved the twelve main DEA collaborators, equally divided between Indigenous Sámi and non-Indigenous participants, including the first author.

Finally, we present and discuss the findings of this preliminary phase of analysis³, which focuses on exploring the dynamic nature of trust through the DEA project and the experiences of the collaborators involved. We found that, amidst the complexities and various influences on trust dynamics (e.g., socio-political contexts, a global pandemic, and individual personalities), fostering consistent interaction among project participants emerges as an effective strategy. In sum, our study emphasises the importance of creating opportunities for engagements in all phases of collaborative work to achieve desired collaborative outcomes, which requires time and should begin as early as possible. Although further research is required to develop more knowledge of designing with Arctic communities, the research sees an “organising design project” approach (see de Blois & De Coninck, 2009) as being favourable to such processes.

The Dialogues and Encounters in the Arctic (DEA) project

The ideas, empirical material and results presented in this paper stem primarily from a transdisciplinary, inter-organisational and intercultural two-year project (2020-2022) called Dialogues and Encounters in the Arctic (DEA), a collaborative effort aimed at initiating dialogue between the Arctic Indigenous Peoples and creating a network-based model for collaboration. Although the project maintained an international outlook, the Indigenous Peoples and communities involved were Sámi as the project took place primarily within Sápmi, the traditional Sámi territory covering parts of Finland, Norway, Sweden, and Russia⁴.

Through a series of online and on-site workshops, the project intended to strengthen the ability of Indigenous Peoples to influence issues about their own culture, and document knowledge and information on Arctic Indigenous livelihoods, languages and culture, and issues affecting them. These project activities covered three overarching themes: Indigenous food sovereignty and security, environmental observations, and Indigenous craft and design. The DEA initiative originated from and was led by the Sámi Education Institute (Sogsakk) in Finland and involved collaborative efforts with partners from the Faculty of Art and Design and Social Sciences at the University of Lapland in Finland as well as the Várdduo – Centre for Sámi Research at Umeå University in Sweden. This project united actors involved in Sámi education, Sámi handicrafts and design, Indigenous Knowledge, storytelling, and research, encompassing art and design, health, and social sciences.

The project actively engaged with Indigenous Sámi Knowledge and other ways of knowing (e.g., Indigenous, scientific, designerly). Thus, DEA provided a fruitful context to explore how different ways of knowing can have equal value, for instance local and scientific, thereby setting the grounds for a different approach to knowing and doing in the North (Valkonen, J., Valkonen, S. & Ingold, 2018). As DEA was not a research project, although it did involve some specific research activities, the strategies used by collaborators to engage, document, store, and share Indigenous Sámi Knowledge (*árbediehtu* - which translated to “inherited knowledge”, Jonsson, 2011) needed many ethical considerations from all collaborators involved to tailor the approach to the specific needs of the project. The general DEA ethical process was informed by Sámi collaborators involved, frameworks and recommendations from the university ethical advisors, and existing literature (e.g., Jonsson, 2011; Helander-Renvall & Markkula, 2017; Holmberg, 2020) given such guidelines are still under construction (Drugge, 2022). Collaborative approaches to data collection with Indigenous Peoples were particularly inspiring (see Basile et al., 2018).

The DEA collaboration started in early spring 2020. However, the onset of the COVID-19 pandemic, which limited physical encounters locally and across borders, necessitated modifying the original project plan and forced the collaborators to reimagine the central ‘in-person’ workshop format. Despite the change in format, the core idea of the project remained the same. A dozen collaborators acted as the core DEA team during the project’s duration, with about 30 total participants in the various project workshops. The changes brought about by the pandemic led to unexpected results, namely, over 100 hours of documentary and educational films were created by two DEA collaborators from Sámi Education Institute (Sogsakk), which were later used in various parts of the project⁶.



Image 1: Final lavvu dialogue workshop in Hetta, organised by the Sámi Education Institute (Sogsakk), photo by Jari Rantapelkonen, autumn 2021.



Image 2: Some lavvu workshop participants having lunch, Hetta, photo by Caoimhe Isha Beaulé, autumn 2021

Conceptual framework

The conceptual framework of this paper is based on three core themes: Systemic and Complexity paradigm, the Dynamic of Trust in Collective Practices and Cooperation by Design.

The Systemic and Complexity Paradigm

The vision underlying this paper is part of a systemic and complexity paradigm, drawing primarily from Morin (1977; 1992a; 1992b; 2015) and Le Moigne (1999). According to these authors, we can view the world as a complex and interconnected system where the behaviour and properties of the whole emerge from the interactions and interdependencies of its parts. A system as a macro concept emerges from three core concepts: *system*, *interaction*, and *organisation* (Morin, 1992b). As such, the focus lies in the inseparable dynamics that take place within the system, for instance, the interactions between the parts and the whole (Morin, 1992b). Such interactions represent the interconnected web of relationships, behaviours, and responses that jointly shape a system (Morin, 1992b). Through these interactions and encounters emerges *organisation* which gives “constructive coherence, order, regulation, structure, etc., to the interactions” (Morin, 1992b: 376) while also creating disorder and degradation of the system and of itself (Morin, 1992b). Complex systems, or wholes, are in a state of perpetual construction and deconstruction, marked by the ongoing organisation and disorganisation that result from the interactions and encounters among their constituent elements, or parts (see Figure 1). Moreover, the coupling of complementary concepts within systems and how their cyclical interaction, for instance parts \rightleftharpoons whole are termed *feedback loops* (Tatchinovsky, 2018). According to Le Moigne (1999), a system operates because it changes, and it changes because it operates. In fact, following the principles of entropy, a system that does not change is a closed system and is destined to disappear.

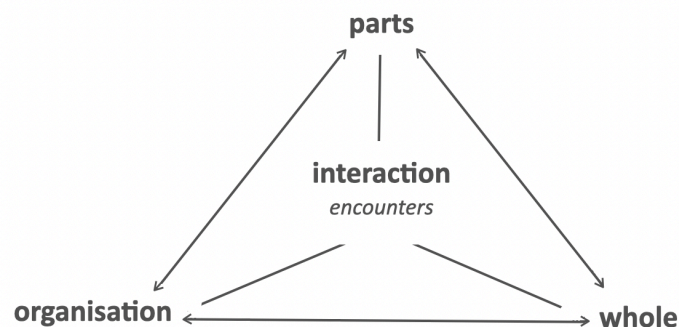


Figure 1. Interconnection of whole, parts, organisation and interaction/ encounters.

Modification based on a model by Morin (1992b: 52)

As part of our reflection on the dynamic of trust within collaborative projects, we are particularly interested in Morin’s (1992b) idea of *auto-eco-re-organisation*. Based on the different concepts introduced previously, Morin views the organisation process as a process that is: *auto* (self-organising), *eco* (connected to its environment), *re* (continuous), *organisation* (creating order within emerging disorder). Thus, the process of interaction and organisation is not linear, with a clear start and end. When using the term “organising” we are referring to this auto-eco-re-organisation process, as opposed to an “organised” one, which is given and predetermined (see de Blois & De Coninck, 2009).

We can analyse a system in four levels: 1) parts, which can have different natures (tangible, intangible, actions, values, ideas, etc.); 2) the interactions between these entities; 3) the organisation

of these interactions into subsystems; and 4) the interrelations with their environment(s) (Le Moigne, 1999).

The dynamic of trust in collective practices

A widespread cross-disciplinary study on the topic of trust provides a general conceptualisation: “Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another” (Rousseau et al., 1998: 395). Although this widely accepted definition informs us on some core aspects of trust, it does not reflect its complexity and its dynamic nature in the context of collective practices, which authors like Le Cardinal et al. (1997) and Avenier (2000) have highlighted. Trust is an essential ingredient for collaboration, serving as both a driver and as an outcome in the collaborative process (Avenier, 2000).

Thus, in collaborative processes, we theorise that trust is not just a state that should be measured in terms of scales or levels (+ or -). Rather, trust is also a process with auto-eco-re-organisation (organising) capabilities. In a non-linear and cyclical manner, trust is in constant evolution in collaborative projects: connecting (and self-connecting), maintaining (and self-maintaining), producing (and self-producing) (see Figure 2). It is shaped by the parts and whole it interacts with and in environments that are not only co-present but also co-determining as they interact with the system (ecosystem). By demonstrating the inherent complexity of trust in collaborative projects, it is easier to understand the pertinence of investigating the multiple ways in which it influences and is influenced.

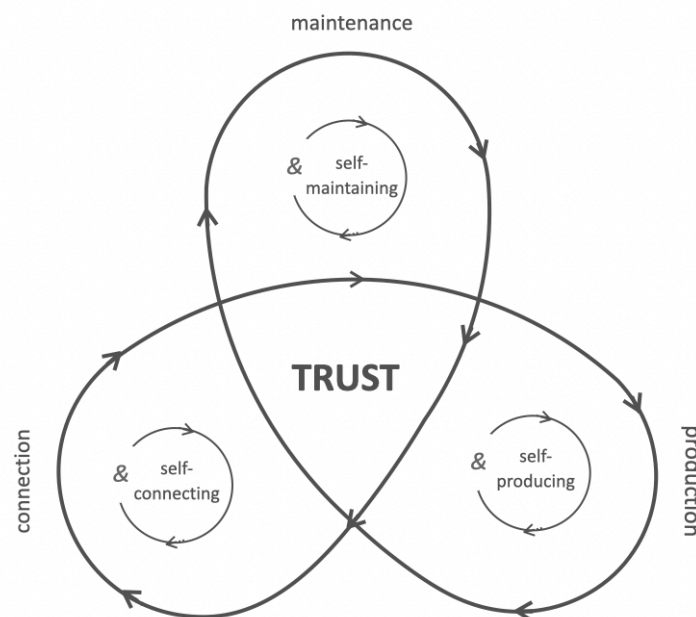


Figure 2. Trust as an organising system: an infinite connecting (and self-connecting), maintaining (and self-maintaining), and producing (and self-producing) process. Adaptation from Le Moigne (1999: 75)

This presupposes a dynamic that evolves according to the development of the interactions between the entities involved (e.g., the actors of a project, laws and regulations), but also between these entities and their respective environments (e.g., historical contexts, interpersonal histories, the natural environment). Based on Morin’s (1977) systemic and complexity theory, we argue that we

cannot isolate trust, a single system, from the network of systems within which it is nested. This is why we argue that, when examined in the context of collaborative work, trust should be conceptualised from a systemic and complex perspective, considering interconnections and non-linear dynamics, rather than investigating it with a Cartesian, linear cause-and-effect approach (Le Moigne, 1999; Tatchinovsky, 2018).

Cooperation by design

In the context of enhancing our understanding of successful collaborative work, trust is intricately linked with cooperation. Le Cardinal et al. (1997) describe cooperation⁵ as the outcome of effectively managing interactions within a dynamic of trust in a project. The authors highlight that cooperation should not be seen as a luxury to hope for when things go well, as the failure to achieve such a state opens the door to a multitude of negative consequences, including conflict and violent disruptions. Instead, cooperation is viewed as an essential condition for the success of complex projects, fostering creativity, enabling effective administration, and ensuring the sustainability of partnerships (Le Cardinal et al., 1997). The authors also make a distinction between genuine cooperation, characterised by a dynamic state eased by mutual trust, where creativity flourishes, and what is termed “non-non-cooperation”. In such cases, parties might be involved in a collaborative project but lack the willingness to really work together, for instance, if bound by contractual obligations. The intricate relationship between trust and cooperation holds significance not only in collaborative work but also in the domain of design processes that rely on collaborative work for the solutions they try to create.

Design has been described as an approach with organising capabilities (Alvarez & De Coninck, 2016; de Blois & De Coninck, 2009; de Blois et al., 2016). Like an auto-eco-re-organising system, design projects are characterised by their iterative nature. The outcomes of design processes and thinking are not pre-determined but emerge gradually through cycles of testing and feedback (see Brown & Katz, 2009; Cross, 2011; Dorst, 2011, 2019). The project, for example, community empowerment, is viewed as a driver within these processes (Kaine et al., 2010). Boutinet (2010) broadly defines a project as a deliberate approach aimed at achieving a specific objective (it is designed) and views a project as a response to a problematic situation or a desire for improvement. It involves the mobilisation of resources (knowledge, skills, material means, etc.) and an anticipated process of action. The project involves two stages: the project before (conception) and the project after (completed product) (Boutinet, 2010: 77), making a clear distinction between the project (e.g., community empowerment), the designed and anticipated action, and the product, a result of project activity (e.g., the development of a sustainable and viable business model based on Indigenous livelihoods) (Kaine et al., 2016; Ninacs, 2008).

Thus, we assume that approaching project conceptualisation and planning in an organising, design-orientated manner creates an environment favourable to the development of a dynamic of trust and the organising abilities of communities and collaborators.

Methodology & Methods

This section presents the process behind the empirical research material collection and subsequent material analysis.

Collecting empirical research material

As discussed above, this research takes a systemic paradigm approach. We seek to understand everything that composes the system and are particularly interested in the interplay between the parts and the whole. This research is of exploratory nature and uses a cyclical abductive reasoning. The research strategies used are based on Action research (Reason & Bradbury, 2008; Villari, 2014) and project-grounded research (Catoir-Brisson & Watkin, 2021; Findeli, 2008; 2015) approaches in design. The “project”, in this case DEA, acts as the fieldwork of the study with the project process and outcomes being part of the research (Raiche-Savoie & Déméné, 2022).

The empirical material used as part of this paper was collected in four different ways involving the main DEA project collaborators (see Table 1) following a thorough ethical process⁷. The material was collected both during and post-project: one workshop (drawing from focus group method, Krueger & Casey, 2002), seven semi-directed interviews (Savoie-Zajc, 2009), two reflective practice journals (method inspired by Gibbs, 1988) and one online group discussion regarding the first phase of analysis of this study on the dynamic of trust. All these activities were aimed at collecting implicit and experiential knowledge of DEA collaborators on what supports cooperation and trust in Arctic collaborative projects. Through reflective practice, the study aims at generating actionable knowledge (Schön, 1984). In all methods used, participants were invited to discuss their positive and negative project experiences and identify elements that influenced and characterised them. These research activities created opportunities to reflect and learn from past and current project-based experiences, including the DEA project.

Table 1. Empirical material collected via the DEA project

Type of material	Focus	Sample	Period	Raw material produced
Workshop <i>In-person</i>	<ul style="list-style-type: none"> Cooperation and trust in the context of Arctic collaborative projects with Indigenous Peoples (including DEA) 	4 DEA project collaborators* *2 (I); 2 (NI)	During DEA project: July 2021	3hrs audio recording, notes, and visual documentation (posters, photos)
Semi-directed interviews <i>In-person and online</i>	<ul style="list-style-type: none"> Cooperation and trust in the context of Arctic collaborative projects with Indigenous Peoples (including DEA) 	7 DEA project collaborators* *3 (I); 4 (NI)	During DEA project: Sept-Dec 2021	About 8hrs of audio recording, anonymised transcriptions
Reflective practice journal <i>In-person (self-completed)</i>	<ul style="list-style-type: none"> Organisation of DEA project material (activity traces including reports, videos, photos, notes) and creation of a project timeline to trigger reflections in the journals Identify 10 influential parts of the DEA project (what worked, what didn't). Reflecting on cooperation and trust 	2 DEA collaborators* (project coordinators) *2 (NI), including the first author	Post- DEA project: May 2023	25 pages of text

Group discussion <i>Online</i>	<ul style="list-style-type: none"> Discussion on first phase of the study findings (dynamic of trust) 	5 DEA project collaborators* *4 (I); 1 (NI)	Post- DEA project: October 2023	90min audio recording, notes
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* Legend : (I) Sami Indigenous DEA collaborator; (NI) Non-Indigenous DEA collaborator

Material Analysis

The analysis of the empirical material was conducted in progressive phases. The findings presented here emerged from the three first phases of the data analysis.

Phase 1: Systemic analysis code list (see Table 2). The first round of analysis aimed at supporting the conceptual development of the systemic perspective used in the research and to locate trust within this framework. The thematic coding was conducted in an exploratory manner, with the first half of the interview transcripts to identify themes. The concepts and themes that emerged were then gradually organised into four categories (system, parts, interaction, organisation) followed by identification of elements that would be included in those sub-categories. The remaining interviews, reflective journals and workshop notes were coded to complete the analysis grid. A basic structure of analysis was then developed through a dozen rounds of sensemaking, using visual mapping and note-taking, and the organisation and reorganisation of the themes.

Table 2. Organisation of themes and categories for analysis of empirical material

Overarching themes	Categories	Examples from DEA
1. Whole (Systems)	<p>Project (e.g., to a problematic situation, desire for improvement)</p> <p>Societal context (e.g., political, socio-cultural, environmental, historical, economy).</p> <p>Individual context (e.g., historical, interpersonal)</p>	<p>Project: Sámi Indigenous Knowledge and cultural sustainability; Community empowerment; Arctic cooperation.</p> <p>Context: History of colonialism, tense political context regarding Sámi Identity in Finland, and pre-existing work and family ties among some collaborators.</p>
2. Parts	<p>Agent - Non-living (e.g., protocols, law).</p> <p>Agent - Living Non-human (e.g., virus).</p> <p>Agents - Living (human) (Actors: Insider; Outsider; Indigenous; Westerner; University; Community; Organisation).</p> <p>Personal attributes (e.g., Beliefs; Values; Interests and Agendas; Cultural and Ethnic background; Knowledge; Skills; Personality)</p>	<p>Agent - Non-living: European GDPR regulations, Finland Ethical research guidelines</p> <p>Agent - Living Non-human: COVID-19.</p> <p>Agents - Living (human): Diverse set of actors involved and related to the project, including local, Indigenous, non-Indigenous, internationals, actors with diverse set of expertise and cultures.</p> <p>Resources: Financial limitations within the project frameworks, location possibilities (ex. Online platforms, within Finnish borders)</p>

	<p>Resources (e.g., Human; Financial; Time; Spatial; Service; Equipment)</p> <p>Outcomes and results (e.g., Product; New knowledge)</p>	<p>Outcomes and results: Project activities (workshops, video productions, Data Management Plan (DMP))</p>
3. Interactions	<p>Activity - visible (e.g., Action; Behaviour; Attitude)</p> <p>Experience - invisible (e.g., Feeling; Emotion; Atmosphere)</p> <p>Feedback loop (e.g., Project-problem; Trust-Cooperation;)</p>	<p>Activity - visible: Facilitation of a workshop, dialogue with elders in a lavvu, editing videos, communicating consent forms.</p> <p>Experience - invisible: feeling incompetent regarding a task, getting motivation after an encounter.</p> <p>Feedback loop: Trust contribution to cooperation which fuels a dynamic of trust among collaborators</p>
4. Organisation	<p>Relationships (e.g., Comradeship; Rivalry; Social Networks)</p> <p>Hierarchies (e.g., Community-based; Researcher-led, University-community)</p> <p>State (e.g., Order/ harmony; Disorder/ chaos)</p> <p>Process (e.g., Driver; Obstacle)</p> <p>Project (e.g., product, problem, object, subject)</p>	<p>Relationships: family ties between participants and/ or collaborators, new encounters, colleagues.</p> <p>Hierarchies: Hosted by community members for workshops, Sámi organisation as project leaders</p> <p>State: Chaos after an unexpected event (pandemic, mistake by university admin, etc.)</p> <p>Process: Lavvu (type of temporary dwelling) meetings helped boost synergies among collaborators, physical distance limited relational development with collaborators outside Finnish borders.</p> <p>Project: The overall aims and motivations for the project don't change, but the results and outcomes evolve during the collaboration.</p>

Phase 2: Characteristics of desired and feared collaborative experiences (see Table 3). Through the cycles described in phase 1, codes, concepts, and themes emerged from the data. In that process, the emerging characteristics that were described by participants as supporting a dynamic of trust and cooperation (i.e. tending towards *desired* collaborative experiences), or those that create friction in the dynamics (i.e. tending towards the *feared* collaborative experiences) were compiled. Furthermore, these characteristics were divided as either *actions* (activity, behaviours or attitudes) or *sentiments* (feelings, emotions or atmospheres).

Table 3. Emerging characteristics of desirable or fearful dynamics in collaborative projects

Characteristics of desired collaborative experiences		Characteristics of feared collaborative experiences	
Action	Sentiment	Action	Sentiment
Cooperation	Flow	Opposition	Frustration
Drive	Safety	Restraint	Stress
Patience	Openness	Conventionality	Deception
Leadership	Comradeship	Betrayal	Insecurity
Confidence	Humour	Isolation	Failure
Investment	Authenticity	Judgment	Fear
Hospitality	Pleasure	Bossiness	Incomprehension
Time	Experience	Secrecy	Tension
Effort	Harmony	Misleading	Pressure
Commitment	Motivation	Resistance	Trauma
Attunement	Creativity	Top-down	Competition
Bottom-up	Empathy	Infantilisation	Difficulty
Dialogue	Fluidity	Silence	Doubt
Listening	Effervescence	Control	Ignorance
Transparency	Community	Risk	Conflict
	Kindness		Rigidity

Phase 3: Conceptualising the dynamic of trust. In this phase, the material was recoded to identify examples that demonstrate the dynamic nature of trust. The data was re-analysed to further identify emerging themes, revealing stories, and descriptions. The findings presented here represent the first stage of the overall research findings, focusing primarily on exploring the dynamic of trust in ‘real life’ scenarios, further conceptualising trust, and reveal how it might take place in Arctic collaborative projects.

Preliminary findings: A dynamic of trust emerges through interaction

The empirical data collected via the DEA project provided rich insights into what can influence the dynamic of trust in collaborative projects in Indigenous contexts. An assumption underlying this study is that the nurturing of a dynamic of trust occurs through interaction. For this article, we focus on theme 3 and 4 presented in Table 2: interactions (e.g., sub-themes activity, experience, feedback loops) and organisation (e.g., relationships, hierarchies, states). Importantly, we keep these aspects connected to themes 1 (parts) and 2 (wholes) because they are inherently intertwined, as shown on Figure 2. The two following examples were selected in the collected material to discuss the dynamic of trust in the DEA project.

Fostering trust and cooperation through in-person interaction

The first few months of the projects were slow due to the disruption caused by the COVID-19 pandemic. Everyone was re-organising their work but also their personal lives. During the first six months, small meetings and group activities took place remotely, for instance on *Zoom* and *Teams*. The online meetings were highly useful as an alternative during the pandemic, for shorter meetings and planning, developing relationships amongst the main project collaborators who barely knew each other. Nonetheless, in-person meetings were essential in deepening the collaborative relationships, which led to more significant outcomes. Collaborators who found ways to meet face-to-face were more involved and could more easily continue their work.

One of the coordinators emphasised how important the physical meetings were for the project's success, where coordinators who were located within the Finnish borders could meet in one of the Sámi collaborator's *lavvu* (a type of temporary dwelling) located in their backyard. This became a common meeting place during the project, where activities were planned, ideas shared. For example, the thought of using the documentary films produced by two of the project collaborators into the DEA workshops, emerged during those meetings:

It was quite essential that [the coordinator] could come, even though we had the pandemic. Then, [they] could start planning the filming with [the other collaborators] and they could work together. And [they] would help with the editing and sharing ideas. (NI collaborator)

The Sámi *lavvu* dialogues were recurrently described with enthusiasm as having multiple positive impacts on the collaborative process. Hospitality from members of the Indigenous community was described by many as both a sign and driver of trust. Moreover, the overall experience of encounters in such settings was portrayed as mediator in the insider-outsider relations, by interacting with the materiality of the local culture and engaging with all senses:

In the *lavvu*, there is the warmth of the fire, the smell, the freshly cooked food, and the whole experience. Fresh air from outdoors, all in a circle discussing. There was no stress, discussions took as long as they needed to take, there was a friendly and collaborative atmosphere, even if we didn't know each other a lot. This was better to me than white walls and glass windows with whiteboards. (NI collaborator)

The *lavvu* dialogue setting was also highlighted as an approach that could be more commonly used in projects and research involving Indigenous Peoples and Knowledge:

Sitting around a fire in the *lavvu* is a way of dialogue that I wish we would have had more time for, because that kind of dialogue, traditional knowledge sharing, is very efficient too. You don't look each other in the eyes and threaten one another. You look at the fire and share this view, and many people, are more comfortable to speak out when you're not confronted with an interviewer. (I collaborator)

Physical interactions, which occurred through meetings, discussions, and activities, played an essential part in trust building between project stakeholders, project collaborators, workshop participants, and partner organisations. For one Sámi collaborator leading the project, the online gatherings could not replace in-person meetings and felt that the limit on physical encounters "took

something off of our project”. Both most influential happenings described by this participant involved the larger in-person workshops, where more sensitive topics could be discussed:

To achieve trust in Sámi community, it is necessary to interact a lot. And I see two big turning points in this project which were good and necessary. The first was the [initial in person meeting between two partner institutions in Sweden]. [...]. It was very important for this project. And the second meeting we had was this [final workshop in Northern Finland], where actually researchers, educators, Indigenous Peoples, businesspeople, were involved there and we were really talking about sensitive topics, like land use and so on. (I collaborator).

Similarly, Sámi collaborators located in Swedish borders highlighted that participating in lavvu workshops virtually was simply not the same and that they missed out on that experience, given the borders were closed during the pandemic. Limitations on in-person interactions had an impact on the level of participation in DEA activities by collaborators.

Another participant had strong memories about how informal meetings and discussions with Sámi community members influenced their work in the project. When describing their first work trip ‘in the field’, they described feeling nervous in those first encounters:

I remember being very nervous when meeting [Sámi community members]. I wouldn’t say anything that could potentially break trust. I was really careful with everything, and I didn’t want to take photos, etc. even though other members of the group were documenting. (NI collaborator).

After a couple of days filled with in-person encounters, listening to local people’s thoughts on social and political issues that concern them, sharing meals and daily activities together, their feelings and confidence changed immensely. This NI collaborator referred to the visit later on as “The best work trip ever”. This particular example characterised the evolving nature of trust and how it can change through involvement in project activities, those involving interpersonal connections in particular.

Mediating trust through ethical framework development and documents

Given that no ethical framework was required by the funding bodies, the DEA collaborators developed their own ethical framework (Data Management Plan (DMP), consent forms, etc.) collaboratively throughout the project. It became evident that ethical guidelines would be necessary to conduct DEA activities appropriately, particularly because collaborators would be engaging with Sámi Indigenous Knowledge during the workshops.

As the project activities were unclear due to the pandemic, it made this task difficult as the project activities remained unclear for many months. Moreover, the application of complex legal frameworks developed in entirely different contexts (e.g., the EU General Data Protection Regulation - GDPR) was described as struggle by those involved.

Nonetheless, this ethical process enabled multiple interactions between collaborators, which eventually led to a framework that was viewed as one of the important project outcomes and as a basis for future projects. Approaching this complex task collectively through action supported the sentiment of trust in oneself: “As the process developed, my self-confidence increased” (NI

collaborator), with another highlighting how this was the fruit of a collective effort “This taught me that great processes are not born alone but as a team effort” (NI collaborator). When referring to this type of work in DEA, a Sámi collaborator mentioned how clarity emerged as the project developed and their work progressed:

At least in the beginning and middle of the project, I didn't always know [how to take care of different tasks in the project], what would be the best way to work. But I think then, towards the end of the project the picture became clear.
(I collaborator)

Moreover, an outcome of the ethical process, consent forms, also played a role in mediating the trust dynamic between researchers, participants, collaborators, and organisations. If done correctly, the forms could support trust by acting as a contract between parties, alongside oral agreements. The documents could act as mediators of such relationships as their ultimate purpose is to protect the participants from potential harm. However, if the consent forms and the actions that surround them are conducted inappropriately, this could result in a failed collaboration or project.

For instance, the way in which the documents are presented and how their contents are communicated when actors interact is influential. The context but also the people receiving the information must be considered (e.g., their age, familiarity with research or projects of this nature for example). There is a risk of the ‘receiver’ having a sentiment of infantilisation or a lack of transparency which feeds into the feared dynamic of opposition. In the ethical process, DEA collaborators often questioned the limiting formats of such documents and the inevitable hierarchies they impose. They can be viewed as symbols of colonial practices as they emerge from specific Western social and cultural practices:

[...] in a way, we were scared that these very administrative and legal documents would do the opposite of what was planned, and make participants feel insecure about sharing information, them needing to sign multiple documents, etc...
(NI collaborator)

Such interactions can thus influence trust and cooperation in a project in both positive and negative ways, depending on a multitude of other factors. When referring to partnership agreements at the beginning of new collaborations, one Sámi collaborator mentioned that documents detailing collaborative agreements play an important role : “[...] first of all you have to have some kind of agreement, it could be orally or a written agreement, to be sure that both sides are serious about this project.”. Indeed, such documents and processes were viewed as important in the trust relationships developed with partners, collaborators, or participants. However, as described by the collaborator below, they do not replace trust. They are co-existing entities, with trust requiring continuous nurturing, unlike documents you sign off once:

You can't rely on the protocols and think that you have already built the trust. You need to have a parallel system, building trust independently of the document, and of course, follow the rules because you need to follow them. But they are giving a false feeling of security maybe because trust is nothing you can commit for long term. It is always a fresh product that can rot anytime. You have to keep it fresh.
(I collaborator)

In DEA, starting without a detailed ethical framework felt chaotic, but ultimately, this allowed more space for an iterative and inclusive approach and learning in the process. Through this work, collaborators involved mentioned feeling more confident about these sensitive processes, using the documents created, and motivated to work with them in other projects.

Discussion: A dynamic of trust thrives in an organising process

In this concluding section, we circle back to our journey through the complexities of trust dynamics within collaborative Arctic projects, adopting the systemic lens (Le Moigne, 1999; Morin, 1977, 1992a; 1992b, 2015) to reveal the multi-faceted and dynamic nature of trust. As illustrated with our example of the DEA collaborative project, trust weaves itself into a project's very fabric. When looking at trust in the context of collective work, trust is not static, it is constantly in evolution and restructuring. In collaborative projects, multiple elements influence the development and management of trust which leads to genuine cooperation (Le Cardinal et al., 1997). The examples provided in the findings section highlight how trust evolves through interaction(s) and the (re)organisation(s) of a project.

Collaboration often begins with a leap of faith, an unspoken intuition that propels project actors forward because, simply put, "it feels right." Yet, we have learned that trust is far from static; it is in a perpetual state of negotiation, an ever-evolving element that organises itself within the project and through intricate interactions involving actors and the entities they encounter.

Sustaining a dynamic of trust needs leadership that values actions and sentiments favourable to encounters and cooperation, such as hospitality, commitment, transparency, camaraderie, and creativity while cautioning against the behaviours that erode trust, like restraint and rigidity. By managing the interactions that nurture a dynamic of trust, we support the intricate relationship it maintains with cooperation (trust \rightleftharpoons cooperation) and with the project (cooperation \rightleftharpoons project).

Throughout our analysis, we have witnessed the diverse elements that influence cooperation and trust, for instance, unexpected challenges like the COVID-19 pandemic, the significance of regular meetings and the value of physical encounters in community-led settings (e.g., the lavvu dialogues), and the way the development and implementation of work protocols (such as ethical processes and documents) influence this system. Hence, it is impossible to have absolute control over the trust dynamics in collaborative efforts due to the multitude of variables involved.

Nonetheless, focusing on building relationships through project activity, like the planning of workshops, can help teams re-organise when faced with important challenges and simultaneously build the trusting relationships required for the collaboration. Through these interactions, actors get to see the collaborator's skills and knowledge in practice as well as increasing self-confidence (i.e., trust in oneself) which have both emerged in the study as a driver of trust. When focusing on specific parts of a project, and how they interact and organise within the whole project, we can truly perceive the organising capacities of collaboration. For instance, consider the collaborative creation of project protocols like ethical frameworks, achieved through encounters, discussions, experiences, and iterations, leading to continual cycles of interaction and organisation.

The disruption of the DEA project in its early stage due to the pandemic projected it into a space of unknown, chaotic, which was both destabilising, yet from a design point of view, quite familiar. In a design process, the beginning of a project is blurry. There is no clear idea of the end product.

This takes shape through cycles of exploration, discussion and debate, decision making, testing, prototyping, implementation.

Managing a project through an organising design approach (Alvarez & De Coninck, 2016; de Blois & De Coninck, 2009; de Blois et al., 2016) seems appropriate for complex projects like DEA. Creating an organising design project requires time and effort and a different structure than typical Arctic collaborative projects. And as highlighted by Doering et al. (2022), the limitations imposed by funding bodies makes it difficult to have the necessary resources to work in a “pre-project” area, which is seen as an important criterion to develop relationships with Indigenous communities in the Arctic. Funding bodies must also trust that communities and collaborators can organise themselves. In the post-project discussion with DEA collaborators, the project was in fact viewed as a ‘pre-project’, where a base was created for future work, with new more precise projects being developed between partners.

DEA was initiated and led by a Sámi organisation, and had a majority of Indigenous collaborators, which seemed to create favourable conditions for cooperation and a dynamic of trust. Such structures, which are more community-based, are not yet common in Arctic collaborations but are viewed as essential to building relationships and trust between Indigenous communities and researchers (Doering et al., 2022; Gordon, 2017). Viewing Indigenous communities themselves as self-organising systems was highlighted by one of the DEA collaborators:

[...] you just need to trust in the situation, need to know that these communities actually can organise themselves, they will organise themselves and they do organise themselves. That is part of their strengths, that no outsider can bring. (NI collaborator)

As such, we decide to emphasise the potential of changing perspective regarding the way we view and understand projects and their processes. To create meaningful results (products), we must not focus on what we make (the end destination) but on how and the journey that leads there. We can collectively decide to go on a trip together (project) but change the destination along the way (product) and consider this change as a success and not a failure. As poet Antonio Machado famously said : “Traveller, your footprints are the path and nothing more; Traveller, there is no path, the path is made by walking.”.

Given the exploratory nature of this study and its project-grounded approach, the findings are not generalisable to all Arctic collaborative projects involving Indigenous and non-Indigenous Peoples, nor can we suggest a general theory around trust in collective design practices. However, our in-depth exploration of the DEA project, which took place in a Sámi Indigenous context, can demonstrate the pertinence of exploring collaborative projects in all their complexity and based on a systemic approach.

In essence, this research provides the foundation for further inquiry into trust within collaborative work, underscoring the intricate nature of trust dynamics within Arctic collaborative projects. As we conclude, we emphasise the effectiveness of prioritising interactions within projects, fostering trust dynamics through discussions, meetings, workshops, and creative endeavours. An organising design project approach could be further developed in the context of collective design practices involving Indigenous and non-Indigenous Peoples in Arctic contexts.

Conclusion

In this paper, we aimed to further our understanding of trust from a systemic perspective and in collective work that requires great sensitivity, specifically collaborative projects engaging with Indigenous Knowledge and Peoples in the Arctic. We drew from the Dialogues and Encounters in the Arctic (DEA) project, which was set in the Sámi Indigenous context. The study guided by project-grounded research and action-research in design, the underlying aims of 1) creating better understandings of the topic of trust in the context of collaborative work involving designers, and 2) inform the design practice in ways in which practitioners and researchers can support cooperation through their work when engaging with Indigenous Peoples and Knowledge. We also strived to contribute to existing research that focuses on 'how to' build trust when involved in projects involving Indigenous Peoples, by opening a discussion that acknowledges the complexity and specificities of collaborative projects that are not research but project-led. We found that, amidst the complexities and various influences on trust dynamics (e.g., socio-political contexts, a global pandemic, or individual personalities), fostering consistent interaction among project participants emerges as the most effective strategy to nurture a dynamic of trust. In sum, our study emphasises the importance of creating opportunities for ongoing interaction at all phases of collaborative work to nurture a dynamic of trust and cooperation within complex projects.

Notes

1. The decision to maintain anonymity was made in collaboration with the research participants.
2. We use the term Arctic throughout the text in the text to make it easier to read, however, when speaking about Arctic contexts and communities, we mean the North(s) in its inclusive and complex meaning (Chartier, 2019; Hamelin, 2000).
3. The results presented in this paper are part of a doctoral dissertation investigating trust in collective design practices and processes, conducted by the first author. The results shared in this paper are from the first phase of analysis, which aimed at conceptualising the dynamic of trust from a systemic and complexity point of view. A next article (forthcoming in 2024) will present the remaining findings of the study.
4. The project initially aimed at including more Arctic Indigenous Peoples, namely from Canada, but due to lack of funding and COVID-19 limitations, the project focused on the Sámi context in Northern Europe.
5. Throughout this article, we align with authors such as Le Cardinal et al. (1997) by consistently using the term "cooperation." However, we acknowledge that terms like cooperation and collaboration encompass distinct meanings (see Schöttle et al., 2014). These nuances are relevant as they describe various stages of collective work.
6. A previously published book chapter describes some DEA activities in detail, including the role these films played in the project (see Beulé & Viinikainen, 2022). These will not be explicitly explored in the scope of this paper.

7. A positive statement and approval of the initiation of research was received by the first author on 01.06.2020 at the University of Lapland

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