What is Community in Early Childhood Education and Care for Sustainability? Exploring Communities of Learners in Swedish Preschool Provision

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Abstract

In UNESCO's recent publication *Education for Sustainable Development: A Roadmap* the idea of community is described as playing an important role in the organization of education for sustainable development as a means of supporting transformations towards sustainability. In the present study we examine the relationship between community and the organization of Early Childhood Education and Care for Sustainability (ECECfS). This examination is based on case studies of Swedish preschool teachers' perspectives and practices in relation to ECECfS. Drawing on Cultural Historical Activity Theory and the concept of ontological Communities of Learners, we describe ways in which community-based characteristics of the preschools shape and are shaped by cultural tools used to pursue ECECfS. Themed-Project Work (TPW), a common means in Swedish preschools of organizing day-to-day activities, emerged as an important practice through which to examine questions of community within and across preschools. We describe organizational tensions concerning how pedagogical practices like TPW change from being tools to support a preschool's activities, to being objects toward which these activities are oriented. Such changes can enable or constrain a preschool's possibilities for building pluralistic and democratic ECEC environments. We also discuss how the said organizational tensions are rooted in how community is conceived of in preschool provision. Community is constituted not only through the relationships among members of individual preschools but also through the relationships that preschools have with other preschools in their administrative networks. We discuss contradictions that emerge in this matrix of relationships that shape how preschools enact good governance in the pursuit of ECECfS.

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Résumé

Dans la récente publication de l'UNESCO, *Education for Sustainable Development: A Roadmap*, la notion de communauté est présentée comme jouant un grand rôle dans l'organisation de l'éducation au développement durable pour soutenir les transformations vers la durabilité. Dans cette étude, nous examinons la relation entre notion de communauté et organisation de l'éducation et de l'accueil des jeunes enfants pour le développement durable. Cet examen s'appuie sur des études de cas de perspectives et de pratiques des enseignants suédois de maternelle par rapport à l'éducation et de l'accueil des jeunes enfants pour le développement durable. En nous basant sur la théorie de l'activité historique culturelle et le concept de communautés ontologiques d'apprenants, nous décrivons comment les caractéristiques des écoles maternelles façonnent et sont façonnées par les outils culturels utilisés pour développer l'éducation au développement durable. Le travail sur projets thématiques couramment utilisé dans les écoles maternelles suédoises pour organiser les activités quotidiennes, paraît être un moyen très important pour traiter des questions de communauté au sein même des écoles maternelles et entre elles. Nous décrivons comment les tensions organisationnelles, à propos des pratiques pédagogiques comme le projets thématiques, passent du statut d'outils (sur lesquels se basent les activités en maternelle) à celui d'objets vers lesquels tendent ces activités. De tels changements peuvent soit développer soit restreindre les possibilités qu'offre une maternelle de construire un environnement pluraliste et démocratique pour l'éducation et de l'accueil des jeunes enfants pour le développement durable. Nous examinons également comment ces tensions organisationnelles sont enracinées dans la façon dont la communauté est conçue dans l'offre préscolaire. Ce ne sont pas seulement les relations des personnels d'une même école qui constituent la communauté, ce sont aussi les relations administratives des écoles maternelles entre elles. Nous discutons des contradictions qui naissent de ce réseau de relations et qui façonnent la manière dont les écoles maternelles adoptent une bonne gouvernance pour atteindre l'accueil des jeunes enfants pour le développement durable.

Resumen

En la publicación *Education for Sustainable Development: A Roadmap* de la UNESCO, el concepto de comunidad se presenta como un medio importante para apoyar transformaciones hacia la sostenibilidad a través de la educación para el desarrollo sostenible. En el presente estudio examinamos la relación entre el concepto de comunidad y la organización de educación y atención infantil para la sustentabilidad. Este estudio está basado en estudios de caso que documentan las perspectivas y prácticas de maestros suecos de preescolar en relación con educación y atención infantil para la sustentabilidad. Basándonos en la Teoría Histórico-Cultural de la Actividad y el concepto de Comunidades Ontológicas de Aprendizaje, describimos las formas en que las características comunitarias de los centros preescolares moldean y son moldeadas por las herramientas culturales utilizadas para desarrollar e implementar educación

y atención infantil para la sustentabilidad. El trabajo de proyectos temáticos, un medio común en los centros preescolares suecos para organizar las actividades diarias, surgió como una práctica importante a través de la cual se podían examinar preguntas relacionadas a cuestiones de comunidad dentro y entre los centros preescolares. Describimos las tensiones organizativas relacionadas con cómo las prácticas pedagógicas como trabajo de proyectos temáticos pasan de ser herramientas para apoyar las actividades de un preescolar, a ser objetos hacia los cuales se orientan estas actividades. Estos cambios pueden apoyar o limitar las posibilidades de un preescolar para construir entornos de educación y atención infantil para la sustentabilidad pluralistas y democráticos. También discutimos cómo dichas tensiones organizativas están basadas en cómo se concibe la comunidad en los sistemas de provisión preescolar. Observamos que la comunidad se constituye no solo a través de las relaciones entre los miembros de los centros preescolares individuales, sino también a través de las relaciones que los preescolares tienen con otros preescolares en sus redes administrativas. Discutimos las contradicciones que surgen en esta matriz de relaciones que forman como los centros de educación preescolar promulgan la buena gobernanza en la implementación de la educación y atención infantil para la sustentabilidad.

Introduction and Background

Education for sustainability (EfS) is critical to the accomplishment of the Sustainable Development Goals (SDGs). It is a dynamic concept that integrates and interacts with the activities embodied in the SDGs (Shulla et al., 2020). Because of the diffusion of EfS in the SDGs, how EfS is developed in theory and practice requires careful consideration. An opportunity to engage in this critical consideration is offered by UNESCO's (2020) *Education for Sustainable Development: A Roadmap*. The *Roadmap* represents one of the most current and comprehensive collections of recommendations for organizing EfS in relation to the project of accomplishing the SDGs. In the present article, we engage with the call of this special issue by discussing research that offers insights into the proposals that this consequential *Roadmap* lays out for engaging the SDGs through EfS. Specifically, we focus on how the *Roadmap* conceives of and leverages the idea of community in relation to Early Childhood Education and Care for Sustainability (ECECfS).¹

Our exploration is based on case studies of organizational and pedagogical activities in two Swedish preschools with explicit commitments to EfS. The preschools are of particular relevance for examining issues of community in relation to the *Roadmap*, as the preschools voluntarily participated in a series of networking and

¹ Various phrases have been used to refer to EfS in ECEC including Early Childhood Education for Sustainability, Early Childhood Education and Care for Sustainable Development, and Early Childhood Education and Care for Sustainability (Ärlemalm-Hagser & Pramling-Samuelsson, 2017). We use Early Childhood Education and Care for Sustainability to foreground the importance of conceiving of early childhood provision as the integration of education and care *throughout* early childhood, from age 1–6 (vs. split systems, (Moss, 2018)), and to link this provision to sustainability broadly defined (vs. situating sustainability in a developmental frame).

professional development activities that fit the recommendations of the *Roadmap* concerning the priority action areas of transforming learning environments, building capacities for educators, and advancing local level actions (UNESCO, 2020, pp. 25–36). Drawing on Cultural Historical Activity Theory (Cole, 1996; Engeström, 1987/2015), and the concept of ontological Communities of Learners (Matusov et al., 2012), we describe ways in which community-based features of the preschools shape and are shaped by cultural tools used to pursue ECECfS. Two core issues emerge concerning this pursuit: the importance of creating space to negotiate shared goals and intentions for guiding the organization of activities in ECEC settings, and the importance of understanding the relationship between this process and where one draws the boundaries that define community in the context of ECEC provision.

Education and the Sustainable Development Goals: UNESCO's Education for sustainability Roadmap and the Concept of Community

Examining the link between community and ECECfS in the *Roadmap* can be a challenge. The *Roadmap* makes no explicit mention of early childhood education and care (ECEC) or related terms (e.g., preschool, kindergarten). The only indication that ECEC is accounted for in the Roadmap's vision is in one of the document annexes.² At the same time, the *Roadmap* offers no explicit definition of community. While it recognizes the concept as polysemic—though again, timidly, doing so in the annexes³—community is predominantly described in ways that reflect a conventional definition, one seen in the SDGs (e.g., Sustainable Cities and Communities, #17), in which community is understood as a “a group of people bound by geography with a shared destiny,” (Roseland, 2012, p. 12). This is clearly illustrated in the text that introduces the *Roadmap*'s fifth priority action area, *Accelerating Local Level Actions*. Here, we italicize words that indicate such a place-based framing of community:

Meaningful transformation and transformative actions for sustainable development are most likely to take place *in* the community. It is in their daily lives, at the community *level*, where learners and people make their choices for sustainable development and act upon them. It is also in the *local* community where people find partners for their sustainability efforts. This is why active coop-

² Annex B, Section 5.15: “For priority action area 2 on education and training settings, attention is required to promote the whole-institution approach, emphasizing the importance and necessity for schools or other education institutions, at all levels from early childhood to higher education and lifelong learning in communities, to work together. There have to be strategic policies and measures to reinforce the interaction and cooperation of the formal, non-formal and informal educational settings,” (UNESCO, 2020, p. 61).

³ Annex B, Section 4.6: “Last, but not least, the reflection on transformative action points to the absolute importance of community. In a community, which can be defined not only physically, but also virtually, socially, politically or culturally, learners find values and causes that concern them both individually and collectively. They can also find other fellow members and bond with them, which generates solidarity and facilitates collective action for transformation and a culture of sustainability,” (UNESCO, 2020, p. 58).

eration *between* learning institutions and the community should be promoted to ensure the latest knowledge and practices for sustainable development are utilized to advance the *local* agenda. (UNESCO, 2020, p. 31)

Even if the *Roadmap* does not explicitly invoke ECEC, its conception of community as localized and bounded is one that ECEC practitioners can orient to in their efforts to develop ECECfS. For example, one could interpret this view of community as localized in Dahlberg, Moss and Pence's (2013) framing of ECEC as "public forums situated in civil society in which children and adults participate together in projects of social, cultural, political and economic significance," (p. 78). However, positioning ECEC institutions (or any "learning institution" as termed in the *Roadmap*) as one node in a network of collaborating institutions can also be problematic. For example, the proposal of "active cooperation *between* learning institutions and the community" could be read as a separation of the learning institution *from* community. This in turn raises questions about how learning and community institutions can, do, and could go about defining and pursuing shared interests in relation to the SDGs. What, for example, would be the implications for how educational activities are organized in relation to this process of "communal" goal negotiation, not to mention the arrangement of care activities so fundamental to ECEC (Winther-Lindqvist, 2021)?

At the same time, it is important to consider alternate ways of conceiving of community. For example, it is possible to move horizontally and inward from the ECEC institution in a "more local" direction to consider how community is developed and maintained. One can raise questions about the sense and constitution of community underpinning activities at the level of preschools in a network of preschools, or even more "locally," say, among children, parents, and teachers in a preschool. Conceiving of community in these multidirectional and expansive terms is not new in ECEC research and practice. In her qualitative explorations of life in early childhood settings (including Swedish preschools), Davies (2014) deploys a New Materialist (Barad, 2007) lens to problematize a notion of community as a "stable... geographically determined population that can be represented in demographic terms," an entity whose members "can be pinned down, categorized and made predictable," (2014, pp. 6–7). Based on her experience becoming part of the lives of various early childhood settings, Davies argues that community should rather be understood as always relational, plural, and "always-emergent," in "ongoing encounters among coexisting multiplicities" (2014, p. 6). In our own research, we have observed that preschool teachers come to similar conclusions about the nature of community in preschool. For example, teachers working in culturally diverse Swedish preschools, when negotiating cultural tensions with parents and guardians, came to see the constitution of community within and beyond preschool walls as situated and contingent (Anderstaf et al., 2021). That is, they came to see each preschool (including individual departments) as places where groups of people routinely interact around shared activities, each contributing knowledge, values, and practices to create diverse idiocultures (Fine, 1979) within and between the departments that made up their preschools.

In the present study, we draw on both the geographic-/place-based and the situated/contingent definitions of community. Both perspectives share an understanding of community as a relational process (e.g., from interpersonal to interinstitutional relations) which we consider to be critical for developing and enacting possibilities for the organization of ECECfS to support transformations toward cultures of sustainability at all levels of society.

Preschool Community and the Pursuit of ECECfS

While the *Roadmap* does not explicitly invoke ECECfS, its advocacy of engagement with community actors is in line with recent ECECfS research and policy recommendations for developing ECECfS through the creation of “multi-level coordination, engagement of diverse stakeholders and implementation of localised initiatives,” (Ärlemalm-Hagsér & Elliott, 2017, p. 268). These efforts are seen as supporting forms of ECECfS that afford critical engagement with the SDGs by creating contexts for adults and children to learn about and act on sustainability-oriented questions. However, recent ECECfS research in Sweden highlights challenges to ECEC provision for creating such contexts, particularly ones that support children’s engagement as active agents, capable of creatively contributing to meaningful social change (e.g., Ärlemalm-Hagser & Sandberg, 2017; Engdahl & Ärlemalm-Hagsér, 2014; Hedefalk, 2014). A general tension identified in this research concerns tendencies for adults to focus on creating opportunities *for* children to contribute versus co-creating and participating *with* children in these opportunities.

Further evidence for making sense of the latter tensions can be found in studies of in-service and pre-service preschool teachers in Sweden. For example, Hedefalk and her colleagues (Hedefalk et al., 2014, 2020) describe pedagogical tensions that have the potential to shape how teachers approach the task of teaching ECECfS. They describe these tensions as related to three teaching traditions in environmental education: fact-based, normative, and pluralistic (Sandell, Öhman, & Östman, 2005). These traditions are distinguished in terms of the educational content, intended outcomes, and attendant methods for arranging such an education. The fact-based tradition focuses on arranging for the acquisition of relevant facts as the basis for developing learners’ capacity for making decisions and taking actions. The normative tradition focuses on inculcating the learner with values deemed appropriate for pursuing sustainable actions. In contrast to the fact-based and normative traditions, the pluralistic tradition eschews guiding the learner to “correct” sets of values and facts. Instead, this tradition acknowledges and supports the competence of the learner to identify and evaluate different ideas and points of view, and to make value judgements independently and through engagement with others. Hedefalk and her colleagues make the case for greater efforts to support a pluralistic approach into ECECfS, i.e., one affording children and adults possibilities to explore different views and come to conclusions without the overarching need to reach a single, dominant consensus (Hedefalk et al., 2014, p. 3).

It can be a challenge to create preschool environments that support such a pluralistic approach, particularly when trying to base these environments in activities that

involve the coordination of various actors in the local community, as advocated by the *Roadmap*. Much depends on how pedagogues⁴ conceive of their work in these environments—what is expected of them, what is possible to do. These conceptions both shape and are themselves shaped by the idiocultural knowledge, values, and practices that constitute the preschool community. For example, research examining teaching and ECECfS in the Swedish preschool context shows the relevance of community, in the situated sense, for supporting children’s learning (Sundberg et al., 2018). In this work, community is defined in relation to the knowledge, values, and practices relevant for how teachers work collaboratively, such as the degree to which teachers have a “shared approach and joint understanding of” the purposes to which activities are oriented (p. 2062).

The question then becomes how a preschool community develops *as* a community—having a shared approach and understanding among its members—and how this community interfaces with the local community. While the *Roadmap* does not elaborate on the development of the “learning institution” as a community, it gestures at such a conception. It emphasizes democratic governance within learning institutions as a means of implementing EfS, doing so in a manner that could be read to imply the formation of community within and beyond levels that make up the learning institution. For example, the *Roadmap* advocates for ensuring “democratic bottom-up decision-making processes” in which “all members of the institution and other stakeholders can have a voice on specific sustainability challenges that need to be addressed in the learning institution,” (p. 28). However, absent from this elaboration is what this decision-making process might look like in the context of ECECfS, i.e., what forms of democratic self-governance are possible in a context in which a complex network of actors and interests have to be negotiated?

Cultural Historical Activity Theory

In ECECfS, if one is to theorize and study the integration of preschool community and the “surrounding” community (the framing we see in the *Roadmap*), one must consider the various social and organizational structures implicated in this integration, as these also shape the possibilities for pursuing a pluralistic ECECfS (Årlemalm-Hagsér & Elliott, 2017; Moss, 2019). In the present study, we draw on Cultural Historical Activity Theory (CHAT) as a tool for mapping out these structures.

CHAT is a conceptual framework for studying processes of cultural development in social groups. Rooted in the socio-cultural theories of the development scientist Lev Vygotsky (1929, 1978), the framework has been applied in the study of a wide range of social phenomena, including Swedish preschool education (e.g., Alnervik, 2013; Nilsson, 2003; Sundberg et al., 2016, 2018). At the heart of this approach is the idea that persons make meaning by active, social appropriation of cultural

⁴ We use the term pedagogue to refer to early childhood staff who work directly with children in education and care activities. This includes preschool teachers (those with university-degrees) and child minders (those with secondary-school degrees).

tools, and deploying them in collective activity. From this perspective, the relevant unit of analysis for studying learning and development is human activity understood as a situated system of culturally constituted and historically contingent conditions (Cole, 1996; Engeström, 1987/2015). Research into meaning-making thus involves studying the activity systems within which these processes occur and observing the emergence and resolution of tensions—within and among activity systems, and realized in interpersonal, organizational, and inter-institutional relations—that manifest in conflicts and dilemmas at various levels of the system (Cole & Engeström, 2006).

An activity system is conceptualized in terms of the motives of the activity, which are defined by the actions that transform the object(s) toward which the system's activities are oriented into outcomes that meet human needs. The structure of an activity system is conceptualized in terms of the various means that mediate the relationships among persons and the culturally constituted environment such that these objects are negotiated and accomplished. These means include cultural tools (broadly defined) and—critically for our analyses—the community of persons engaged in the activity(ies), the social rules that mediate the relationship between persons and community, and the ways in which the community's orientation to activity is mediated by divisions of labor (Fig. 1).

As an approach which defines activity as a dynamic, collective, and object-oriented process, CHAT provides a relevant framework for paying “analytic attention to the complexities that surround activities and practices,” (Timmis, 2014, p. 13) involved in the development and maintenance of local community of a preschool. Thus, CHAT's emphasis on mediation allows us to draw on cultural tools, social rules, and division of labor as means for characterizing community development at various levels in a preschool's activity. This in turn allows us to address the under-theorized links between preschool and “local” community that we have identified in the *Roadmap's* proposals for enacting EfS in support of the SDGs.

Fig. 1 A representation of the constituents of human activity (adapted from Engeström, 1987/2015)

Ontological and Instrumental Communities of Learners

As noted, the *Roadmap* invokes community as a means through which *learning* institutions can develop activities in support of the SDGs. To make our conceptual apparatus sensitive to this link between community and education, we also draw on concepts from the Communities of Learners (CoL) model of teaching and learning (Rogoff, 1994). CoL involves designing learning activities based on a view of learning, resonant with CHAT, as the “transformation of participation in socio-cultural activity,” (Rogoff, 2003, p. 37). A CoL approach seeks to supersede transmission, or “adult-run,” models of learning, as well as acquisitionist, or “child-run,” models (Rogoff, 1994, p. 224). Instead, it conceives of adults *and* children as active in “structuring shared endeavors... with adults responsible for guiding the overall process and children learning to participate in the management of their own learning,” (p. 213).

In line with the pluralistic tradition described earlier, Matusov et al. (2012) argue for a more expansive conception of how the “structuring of shared endeavors” unfolds among members of a CoL. They advocate for a dialogic and polyvocal approach to CoL, one that problematizes the notion of overall leadership in the structuring process as being located largely with the adults. Instead, they argue for the structuring to be continuously negotiated among all members of the CoL.

Matusov et al.’s (2012) argument is based on observations made in a scoping review of the CoL literature. This review showed differences across CoL projects related to the provenance of the object(s) or overall field of learning to which CoLs were oriented. In *instrumental* CoLs, the object/field of learning is extrinsic, imposed from outside the community, as for example through curricular benchmarks. In *ontological* communities of learners, the object/field of learning is intrinsic, emerging from community member’s shared interests. Rather than imposing predetermined benchmarks on learners, communities with an ontological orientation are organized to create conditions that provoke the interests of the learner. Ontological communities are further distinguished in terms of *who* takes a leading role in these provocations. In *dialogic* communities, teachers generally take the lead, while in *polyphonic* ones all participants have a hand in these provocations. Here, we highlight the special responsibility that teachers have in both kinds of communities for developing a sensitivity to social dynamics of the community to allow them to develop the said provocations. The idea is that teachers engage learners in “dialogic provocations” that elicit “puzzling perplexities” such that learners are productively unsettled to acknowledge their perplexity and be, “willing to address it and the social conditions that surround it, the self, and others. The person does not dismiss his or her own puzzlement but commits to the honest investigation of it with the self and others,” (Matusov et al., 2012, p. 57).

Research Aims and Questions

The aim of the present study is to develop knowledge about the role that community, at the level of preschool, plays in enabling preschool teachers to pursue an ontological community of learners approach to organizing ECECfS. We draw on this knowledge to engage in a nuanced and critical reading of the concept of community in UNESCO's *ESD Roadmap* where it is deployed as an important aspect for addressing priority action areas related to transforming learning environments, building capacities for educators, and advancing local level actions (UNESCO, 2020, pp. 25–36). We draw on CHAT and CoL as frameworks for characterizing the kinds of community-related, decision-making, and value-setting processes that shape preschool activity. Specifically, we focus on how these processes enable and/or constrain the degree to which an ontological orientation can be pursued in the enactment of ECECfS. The study is guided by the following research questions:

What characterizes community in preschools with explicit commitments to ECECfS?

How do these characteristics of community shape a preschool's approach to pursuing an ECECfS in ways that afford an ontological orientation to the organization of local activities?

Methods

We examine two examples drawn from qualitative case studies (Lampert-Shepel, 2008; Yin, 2014) of preschools from a larger project. The larger project focused on characterizing preschool staffs' understandings and practices related to *play*, *exploration*, *teaching*, and *ECECfS* (PETE study) in the context of an expanded teaching mandate in Swedish preschools (Lecusay et al., 2021). The two cases specifically examine issues related to teachers' perspectives on ECECfS.

Participants

Participating preschools were selected from a group of schools that took part in a regional government-funded project focused on supporting preschool staff' in developing Multifunctional Outdoor Preschool Environments (MOPE). The project brought together government, university, and non-profit actors with expertise in domains related to sustainability. The actors collaborated in designing, implementing, and studying outcomes of the workshops for the development of MOPE (for examples of research developed through this project see Almers et al., 2020; Kjellström et al., 2020). Schools in the MOPE project all self-described as pursuing sustainability-related activities. As noted, the networking and workshops arranged through this project afforded the preschools with opportunities to engage in inter-institutional collaboration with diverse stakeholders

around localized initiatives, as advocated for in recent ECECfS research and policy (Ärlemalm-Hagsér & Elliott, 2017, p. 268).

Three of the ten schools enrolled in the MOPE project volunteered to participate in the PETE study. In the present paper, we focus our discussion on two of these schools. Both schools were similarly organized in terms of network structure (each was a preschool in a network of three versus the third school which was a stand-alone, independent school). Participants in the present study included three university-trained teachers from each school (six total). For each preschool, the configuration of participants was such that staff who worked with the younger (1–3 years olds) and older (4–6 years old) children were represented.

The Ibis preschool was located in a section of a public housing complex in a suburb of the main urban center. It belonged to a network of three preschools (12 departments total) with a staff of 7, and 36 children. We refer to the preschool's network as *The Ibis Network*. The Ibis was initially divided into three departments but changed to two over the course of the study.

The Elk preschool was located in the region's largest urban center. It belonged to a network of three preschools (ten departments total), with a staff of 16 teachers and 80 children, divided into five departments). We refer to the preschool's network as *The Elk Network*.

Ethical Considerations

The study followed the Swedish Research Council's (2017) guidelines for ethical research practices. Participants gave their consent to participate in the study after they were informed orally and in writing of the study purpose and design, how data would be used and securely managed, and of their rights as participants (including the right to withdraw participation at any time). Pseudonyms are used for the preschools and participants.

Data Collection

Focus group interviews were conducted in groups based on the preschool at which participants worked. Interviews were conducted in teams (first and second author) to ensure elicitation of relevant discussion and improved documentation of content and context (Ryan & Lobman, 2007). Interviews were conducted on three occasions at each of the corresponding schools (i.e., six interviews, three per school): before the start of the teachers' participation in the MOPE workshops, at the approximate mid-point of their participation in the workshops, and approximately one year after the first interview.

Adoption of a selective intermittent data collection mode (Jeffrey & Troman, 2004) drove the decision to interview participants at different points over the course of the MOPE project. The staggered data collection design allowed us to produce a thickly descriptive data corpus of the teachers' perspectives and

practices in relation to the concepts being examined in the PETE study and identify and track the development of preschool-specific activities/projects.

Our interview elicitation strategy involved asking teachers to complete a brief, online survey prior to the interviews. The survey consisted of four prompts, each of which was designed to elicit free-text descriptions of participant perspectives and ways of engaging with the four PETE study concepts (play, exploration, teaching, and education for sustainability). Each prompt consisted of an excerpt of text from Swedish preschool steering documents that described or defined the relevant concept. Participants were asked to describe a recent example from personal experience that illustrated what was described in the excerpt. The first and second authors jointly reviewed survey responses prior to the interviews to identify relevant examples and observations that could be recalled during the interviews. This was done to encourage the participants to elaborate on their perspectives and practices in relation to the study concepts. Examples and observations that were deemed relevant for the study were incorporated into the interview guide. In this way, revisions of the interview guide were made for each subsequent interview in order to incorporate examples and observations from past interviews that were deemed relevant for addressing our research questions.

The interviews were audio recorded and transcribed. Field notes documenting interviewer observations of the interview were also produced to triangulate data and aid in navigating the corpus of transcripts during analyses. Participants and their preschools were anonymized in all the study transcripts and field notes.

Analyses

In line with a CHAT framework, each preschool was understood as having a characteristic complement of mediational means (tools, division of labor, rules, and communities) corresponding to the various historically and culturally constituted arrangements that shaped the preschool's day-to-day activities (Fig. 1). A CHAT framework also informed the overall interview procedure. Interview guides were revised prior to the second and third interviews in order to gather information that captured contradictions and tensions relevant for understanding how preschool pedagogues conceived of and practiced ECECfS.

Our abductive analyses unfolded in four overlapping phases. This involved immersion or “dwelling” in the data corpus (Timmis, 2014), iterative readings of the data set, characterization of each preschool activity system, and thematic analyses of the data set. As noted, our focus in the current paper is on the characterization of the preschools as activity systems with a focus on how their community features informed pursuit of ECECfS. Guided by prior research indicating the importance of shared goals and approach among preschool staff in the characterization of community (Sundberg et al., 2018), we revisited thematic analyses conducted as part of the PETE study to examine areas where such questions emerged. These analyses had originally yielded three themes related to how the participants understood and approached the task of engaging in ECECfS in preschool: *Defining sustainability*; *what is learned through ECECfS*; and *how is learning organized for in ECECfS*

(Lecusay et al., 2021). It was in the latter area that we discovered systemic tensions that threw into relief conditions that motivated the findings described below.

Ontological Communities of ECECFs: Constraints and Potentials

Characterization of community at the Ibis and the Elk revealed a mix of constraints and affordances for pursuing an ontological orientation in the organization of pre-school activities. At both schools, it was possible at times for the teachers to collaborate with children in ways that fit an ontological orientation. That is, teachers from both schools described examples of activities driven by an open negotiation among children and teachers concerning what the field and means of learning were and could be. Here, we introduce two anecdotes, one from each of our cases, to illustrate such activities. These anecdotes were compiled from interview and field note data.

The Ibis & Ibis Network Anecdote. *Project Theme: The Forest.* Staff at the Ibis integrated activities from the MOPE project in the redesign of their school grounds in ways that supported more outdoor engagement in a small forest abutting the pre-school (a specific goal for some of the pedagogues). This included actions involving collaboration with the children—e.g., creating mini-forest gardens and composting—and ones pursued with local partners—e.g., working with property managers to landscape the grounds to allow children easier access to the forested areas. At the start of the MOPE project Ingela, a teacher leading the 3–5-year-old department observed that several of the children were interested in a popular animated film. Ingela considered the movie to have clear links to *The Forest* theme and sustainability as a general topic. She noticed that the children had been engaging in socio-dramatic play based on the narrative of the movie, and she subsequently planned with the children to continue this play while also engaging them in consideration of issues related to sustainability and *The Forest* topic. These adaptations included changes that did not involve the children—collaboration with property managers to change the physical landscape that made local wooded areas more accessible to the children—and some that did—elaborating props to link this narrative play between indoor and outdoor environments and recruiting symbols from the movie (e.g. an ancient relic) to support these links (both to pretend play and to issues of sustainability).

The Elk & Elk Network Anecdote. *Project Theme: Sustainable Future.* The Elk's four-year-olds department settled on exploring the topic of birds as the topic they linked to the overarching topic *Sustainable Future*. At the time our study began, the department had been pursuing the topic for over two years (i.e., the staff and children began this exploration when they were the department of two-year-olds). Consequently, these children were considered by the Elk's staff and children to be the local bird experts. For example, when one day the children in another of The Elk's departments discovered a dead pigeon on the school grounds, they preserved it overnight in one of the preschool's freezers to present it to their ornithologist peers the

next day. The children in the bird department discovered that the pigeon had a ring around one of its legs. This led the children to recall a past experience: During an earlier outing to a nearby lake, they met a biologist who was tagging/tracking birds. He explained his work to them and shared his contact information. The children subsequently contacted the biologist when they needed answers to their question about the ring on the bird's leg. The biologist explained that if the ring was plastic, which it was, it was a messenger pigeon. The idea of messenger pigeons was new to the children, so they went online to find more information. As part of this work, they discovered information about the existence of local messenger pigeon associations

Fig. 2 Activity system representation of the Ibis, from the perspective of its teachers, oriented to object(s) of activity related to ECECfS

Fig. 3 Activity system representation of the Elk, from the perspective of its teachers, oriented to object(s) of activity related to ECECfS

and this in turn led to further contacts with people in the local community, including emailing these associations to inquire if they were missing a bird.

These anecdotes illustrate how at each school opportunities were developed by adults and children for pursuing activities based on authentic problems and common interests. However, we also found that under certain circumstances possibilities were constrained for engaging in activities that were clearly linked to shared (adult–child) interests. These concerned aspects of local governance: each preschools’ pedagogical approach; staff retention and experience; and organizational considerations within and between preschools. Each of these aspects highlighted systemic tensions that appeared to influence where the teachers drew the boundaries of community, and consequently, whether they viewed goals meant to guide their shared activities as intrinsic or extrinsic. A key observation in this respect was that in situations involving networks of administratively connected preschools, one must consider the ways in which community at the local preschool level is understood in relation to community at the network level.

The noted systemic tensions were clearly reflected in how the teachers engaged in the practice of Themed-Project Work (TPW). A common means for organizing educational activities in Swedish preschools, TPW in principle involves adult–child collaborative exploration of topics that relate to a common theme(s). It is often organized using a year-long *pedagogical calendar* for arranging activities related to this exploration. TPW also involves engaging in this exploration in ways that allow for preparation of activities at varying time scales (from daily to yearly) and with linkages to national curricular goals. From a CHAT perspective, TPW is an important cultural tool through which adults and children engage objects of their collective activity. As such, TPW plays a central role in mediating organizational, pedagogical, and values-oriented processes in preschools (i.e., relevant domains of practice for characterizing preschool community; see Figs. 2 and 3).

The teachers at the Elk and Ibis described TPW as providing routine means of developing and coordinating activities among children and adults (pedagogues, other preschool staff, guardians). However, how TPW was understood at the network level appeared to play an important role in how the teachers deployed this practice locally at their individual preschools and departments. Specifically, the possibilities for local pursuit of activities in an ontological orientation were inseparable from the constraints and potentials stemming from the interaction of the preschools with their networks. The difference between preschools in application of the TPW could be gleaned in the respective themes selected for the TPW. *The Forest*—the theme pursued at the Ibis—invokes a concrete object, a defined place. *Sustainable Future*—the theme pursued at the Elk—invokes an open, abstract concept. At the Ibis Network, TPW was seen as a *topic-setting* tool to provide a “stable” common object to support coordination among staff across network preschools. By contrast, use of the TPW at the Elk was seen as a *topic-exploring* tool, one meant to be productively “unstable” for disrupting normative learning orientations among adults and children in the service supporting curiosity and mutual learning.

Matusov et al.’s (2012) arguments about the role of intrinsic and extrinsic goals in shaping CoL’s fields and means of learning helped us map out actual and potential constraints on the development of ontological communities in each preschool. When

seen through the lens of CHAT, the perception of agreement among tool, community, and the objects of each preschool's activities reflected teachers' experiences of the motives and goals of their work as intrinsic to their local (preschool-level) activity; this in comparison with tensions within and between tools and community in relation to objects of activity that evidenced consequential disruptions of local activities based on adult–child mutual interests (Figs. 2 and 3). These latter tensions, we argue, are born out of negotiations over the intrinsic versus extrinsic quality of learning goals in a preschool's pursuit of ECECfS. We develop this argument by discussing each preschool case.

The Ibis: The Forest, Extrinsic Objects, and Tool-Community-Object Tensions

At the Ibis organizational issues concerning relations between the Ibis and the Ibis Network highlighted consequential tensions between what characterized community at both levels (the individual preschool and network levels). The tensions were consequential because they appeared both to limit and enable an ontological orientation to the organization of local activities. The noted topic-setting focus of TPW within the Ibis Network related to matters of staffing within the network. As described by Ingela, one of the Ibis' teachers, the network lacked sufficient university-trained preschool teachers, relied significantly on the work of substitutes and childminders, and had an employee turnover rate that from her perspective made for an unpredictable work environment. She explained that she found it difficult to build a local "pedagogical culture" with her colleagues given the unpredictability of the staffing situation.

The constraining effects of the staffing situation were reflected in how the TPW was conceived and deployed. Another teacher, Åsa, noted that selection of *The Forest* as a theme was driven partly by concerns about the staffing situation. She explained that the network's development group settled on this theme partly because it was seen as one likely to be sufficiently familiar to staff at all levels of experience to ease coordination among staff within and between preschools. On other interview occasions, Åsa also described an "us versus them" relation between The Ibis and network-level decisions, citing examples of activities that all schools in the network had to engage in even though these activities were meant to address challenges identified by the national School Inspectorate that were understood to affect only one school in the network.

The Ibis' teachers described other ways in which the staffing concerns restricted their ability to pursue activities with direct connections to children's interests. For example, the play activity that Ingela and the children developed (described in the Ibis anecdote above) was something that Ingela eventually felt forced to give up when the decision was made, at the level of the preschool network, that the Ibis should be reorganized from having three departments to having two. Staffing constraints motivated this: Reorganization would allow there to be at least one university-trained preschool teacher per preschool department. The reorganization forced Ingela to work with a larger group of children, a wider range of ages and a new team member. She explained that these circumstances made it difficult to develop

and sustain an interest in the play activity on the part of the new children. At the same time, she described an ethical dilemma: not wanting to force the new children and her new colleague to adopt a long-term play activity that was foreign to them.

At the same time, the Ibis' teachers described ways in which they saw the "stabilizing" topic-setting aspect of the TPW as facilitating their broader goal of occasioning more time outdoors for the children (Ibis anecdote above), a goal they linked to the pursuit of ECECfS. For some of the Ibis' teachers, the Ibis' location in a culturally diverse suburb had implications for how they pursued these goals. For example, Åsa and Ellen described resistance by some parents/guardians who objected to their children spending too much time outdoors. They attributed this to cross-cultural differences between staff and parents. The forest theme, Åsa argued, helped address this particular issue because it could be held up as pedagogical content to justify more time spent outdoors. The issue of making sustained outdoor time more acceptable further threw into relief a more general issue related to the school's location in a culturally diverse area. From the teachers' perspective, greater effort was required to connect with parents/guardians in the community, which required engaging with other entities that formed part of parents/guardians' social network. Consequently, the teachers also conducted information sessions about the Forest project at the local library, health and social welfare centers, and second language learning programs.

From a CHAT perspective, deployment of the TPW as a familiar point of reference to ease coordination among staff and parents, reflected systemic tensions concerning the Ibis' simultaneous pursuit of goals set at the level of The Ibis Network and local goals pursued by the Ibis preschool (Fig. 2). The goal of exploring the topic of the forest was one that could be seen as intrinsic to both the Ibis and its network, but also extrinsic to the Ibis in prioritizing stabilization of coordination across preschools in the network. Here, it is important to note that The Forest theme was set at the level of the network. A more normative approach was at play here. Bottom-up motives were not the primary driver. This we see as a possible constraint to pursuing an ontological orientation in local activities where TPW's role as a tool for supporting bottom-up, democratic engagement is potentially diminished: With TPW as a topic-setting tool, the risk is that children "take part in" adult-determined ideas and activities in relation to ECECfS versus co-creating them (Ärlemalm-Hagsér, 2014).

The need to address the extrinsic (network-level) goals put the Ibis' teachers in a position which, from their perspective, required prioritizing network over preschool goals. This both undermined and developed the potential for pursuing an ontological orientation (the collapse of the play activity and engagement with the parents/guardians and local stakeholders, respectively). What emerges are tensions concerning how goals are defined as intrinsic or extrinsic and by whom. Thus, at the Ibis and the Ibis network, conditions were such that the TPW was simultaneously treated as an object and a tool: an object, initially, because it required definition in relation to the object of preserving preschool quality (i.e., staffing), and a tool because once it was re-defined to meet these multiple objects it was deployed as a tool for staff coordination, exploration of the theme, and local community engagement (Fig. 3).

The Elk: Sustainable Future, Intrinsic Objects, and Tool-Community-Object Agreement

How TPW was practiced in The Elk Network provided a contrasting picture of those features of community that enabled an ontological orientation to the organization of local activities. The distinction between topic-setting versus topic-exploring approaches to TPW (The Ibis vs. the Elk, respectively) is again important. The Elk's teachers described the TPW as a prompt for inducing departments in each network preschool to explore their own topics. That is, staff and children were expected to collectively pursue topics that they saw as related to the *Sustainable Future* theme (these varied widely, e.g., birds, tornadoes, historical shipwrecks). This exploratory focus, exemplified in the Elk anecdote above, can be partially attributed to the Elk Network's following the Reggio Emilia early childhood education philosophy, which notably emphasizes child-led exploration and an expansive curricular approach (*progettazione*; Rinaldi, 2006) mediated by collaborative *pedagogical documentation* (Giudici et al., 2001).

At the Elk pedagogical documentation played a central role in mediating how TPW was practiced. Pedagogical documentation refers both to the documentation produced as well as the attendant practices for creating, reflecting on, and leveraging documentation in daily activities. This was reflected at The Elk where the teachers described this practice as motivating not only adult-child joint exploration, but also exploration among adults. For example, the teachers emphasized the importance for orienting to TPW themes and topics of having weekly, bi-monthly and yearly meetings dedicated to group documentation reflections with teachers from their own and other departments. Inger, one of the teachers, described this system of peer review as a "way of working" that was "itself sustainable" ("hållbart arbetssätt"), and, relatedly, having "other eyes" on one's work as eliciting diverse perspectives for self-reflection on pedagogical activities. All teachers repeatedly invoked "the project" and used phrases like "returning to the theme" to refer to the process of continuously considering the over-arching theme in relation to the topics chosen by the departments.

Other aspects of the Elk Network's activities suggested a cohesion, organizationally & pedagogically, among the Elk's teachers. In all interviews, the teachers used self-referential language in a manner that indicated a self-perception as a community at the level of the network (e.g., describing their approach to activities as "The Elk Network's way"). This kind of self-referential talk was absent from the Ibis data. This comparison also raises the question of the role that staffing conditions potentially play in the development and maintenance of community at both the preschool and the network level. Every department in the Elk Network was staffed with at least two university-trained teachers. Furthermore, during the course of the study no staff turnover issues were reported, and among the cohort of participating teachers, all had worked at the Elk Network for ten years or more. This predictability of staffing, relative to the conditions at the Ibis Network, raises additional questions about the extent to which such conditions make it so one can "afford" to work with TPW in ways that allow for the "designed" spontaneity of a more ontologically friendly,

topic-exploring approach versus a more predetermined, predictable topic-setting one.

Seen from a CHAT perspective, the TPW's mediation of activity at the Elk highlights how the relation between the preschool and its network may support an ontological orientation in the organization of preschool *and* network-level activities. The TPW existed in a context in which, from the teachers' perspectives, it functioned more-or-less as intended: As a means for adults and children *within and between preschools* to continuously identify and negotiate shared objects of activity. The TPW was thus a central aspect of the "shared repertoire of tools" indicative of a strong community structure (Sundberg et al., 2018) at both the preschool and network level. In other words, the TPW was understood as oriented to objects that were seen as *intrinsic* to the Elk and its network, such that there was agreement among cultural tools, community, and objects of activity (Fig. 3).

Discussion and Conclusion: Multi-level Ontological Communities of Learners and ECECfS

We turn now to consider the findings from our cases in relation to the framing of community in UNESCO's *Roadmap* (2020) and the SDGs. Through these case studies, we have put forth an argument about the relationship between community as constituted in ECEC provision and the possibilities for pursuing a pluralistic (ontological, in the terms we have used) ECECfS within this provision. At the heart of this argument is the claim that for teachers and children to develop ontological communities of learners at the level of a single preschool, these communities have themselves to be embedded in ontological communities of learners at the level of the preschool's network and geographic community. Seen from the perspective of the teachers this means that the process of defining and negotiating the means and goals of preschool activities should be one that is democratically distributed throughout the various levels and nodes that make up the networks of preschool provision. This is in line with the mentioned recommendations in the *Roadmap* concerning the "governance and culture of learning institutions," to "ensure democratic bottom-up decision-making processes" (UNESCO, 2020, p. 28). However, as illustrated by the differences in how the Elk and Ibis practiced TPW, if, how, and the extent to which this democratic collaboration is ensured depends on the fostering of strong community structures within and between preschools in a network as well as in the development of relations between the network and, as framed in the *Roadmap* and SDGs, the local community.

In the case of the Elk, we observed how the practice of TPW was central in mediating an ontological pursuit to ECECfS. The TPW provided a window into a strong community structure (Sundberg et al., 2018). Characterization of the Elk as an activity system revealed its basis in "strong mutual engagement and joint enterprise" among the Elk's teachers coordinated through a "shared repertoire of tools" (*ibid.*, p. 2076). This strong community structure was integrated by and itself helped integrate the levels of the individual preschool, the preschool network, and the local community. This integration was done in ways that sought to distribute democratic

decision-making capacity among all members, adult and child alike, of the resulting community (Elk anecdote above). Put in the terminology of CoL, the Elk's teachers understood themselves to be pursuing goals that were intrinsic in relation to the values and practices of their preschool, the network, and stakeholders with whom they and the children collaborated with in the local community.

An important implication of seeing goals as intrinsic across preschool, network and local community is that it requires us to rethink other concepts that are integral to the overall project of accomplishing the SDGs through the study and development of a democratic ECECfS (Somerville & Williams, 2015). In this respect, the example of the Elk resonates with recent research considering the consequences for ECECfS of rethinking how we conceive of sustainability. Grindheim et al. (2019) argue for expanding the well-known three-dimensional model of sustainability (the Borromean rings interlocking social, environmental, and economic dimensions) to include the political dimension of *good governance* (e.g., policies, decision-making, and value-setting processes; Sachs, 2013). They link the democratic ethos of ECECfS to the question of good governance, noting that ECEC settings are organized through political processes—"rules, structures, choice of content, and plans for the day," (2019, p. 379)—and that these processes have the potential to facilitate "children's opportunities to disturb the established ways of thinking, which could pave the way for new practices when striving for achieving sustainability," (p. 376). Furthermore, they argue that systems of good governance should create spaces that allow "conflicts to meet contesting demands" such that power is distributed among actors to encourage a pluralistic collaboration (p. 379).

As noted, the *Roadmap* gestures at this good governance perspective in its invocation of bottom-up, decision-making within learning institutions. It also arguably does so in its advocacy of *whole-institution* approaches to building capacities for educators (e.g., ensuring coordination between teaching colleges and learning institutions). However, there is ambiguity in this framing of learning institutions as communities themselves, reinforcing a sense of the learning institution as distinct from the "local community." This complicates how one goes about fostering spaces that allow "conflicts to meet contesting demands" within learning institutions. The case of the Ibis is illustrative.

When we look at the "conflicts and contested demands" that emerged in the case of the Ibis, the question becomes: What sort of conflicts could the Ibis "afford" given its organizational conditions? While there were arrangements at the Ibis that were ontologically oriented (e.g., the initial pursuit of the play activity in the Ibis anecdote), they unfolded in a general context of a top-down, topic-setting TPW approach. This raised questions about the extent to which network-level selection of the Forest as a relatively bounded theme foreclosed opportunities for children (and adults) to co-determine preschool activities within, but particularly outside the theme. At the same time, the application of the TPW as a stable means of interpersonal and interinstitutional coordination threw into relief the efforts of the Ibis' teachers to secure buy-in from parents and guardians. This in turn showed ways in which the Ibis and its network engaged the local community. As a result, some key tensions were laid bare. Revealed was a process of negotiating objects of shared activity across several domains of practice that the Ibis and its network considered

necessary for pursuing ECECfS (e.g., parents/guardians, governmental and community institutions). This process of give and take, however, showed that the framing of community deployed in the *Roadmap* and the SDGs—as localized, bounded—can contain blind spots regarding interests and expectations from outside institutions (e.g., school inspectorates and departments of education). The expectations can undermine just the kind of bottom up, collaborative organization that the *Roadmap* and SDG's seek to encourage.

For one, the example of the Ibis highlights the need to think critically about the nature of the collaboration between ECEC settings and the local community. Note that The Ibis' engagement with parents, guardians, and community institutions was driven in part by top-down decisions that were shaped by concerns about preschool quality: Selection of the Forest theme was made by a development group within the Ibis Network in part to address the consequences of the difficult staffing situation. The risk highlighted here is one of the Ibis working under conditions that forced it to accept “an overriding or closed set of rules and definitions dictated by powerful alliances,” (Davies, 2014, p. 9) that placed limits on its agency as a community, including, potentially, limits on forming community with relevant local stakeholders.

The cases in this study thus push us to consider how the boundaries of community are understood by the various stakeholders committed to pursuing ECECfS. How these boundaries are understood can shape how those who inhabit ECEC settings understand objects of activity as intrinsic or extrinsic to these settings (i.e., the difference that makes a difference with respect to the potential of activities to be authentically, intergenerationally democratic and pluralistic). This understanding of community—as something that can be flexibly defined across institutional spaces and time scales (Lemke, 2001)—also underpins recent calls to reorient analyses of ECEC away from the “individual centre to the *overall system*,” (our emphasis) to understand the system as interconnecting local, national, and institutional levels, and to study aspects of the system (e.g., workforce education, administration), relevant for considering “what conditions would promote and sustain a democratic system of early childhood education,” (Moss, 2019, p. ix). These arguments highlight the critical role that ECECfS can play not just in problematizing and pursuing the SDG of quality education (goal #4) but also as a key site for pursuing goals whose consequential diffusion throughout the SDGs impact the accomplishment of the SDGs overall. These include the creation and maintenance of sustainable cities and communities (Goal #11) and the inter-institutional partnerships needed in order to pursue the SDGs (Goal #17). However, as we have argued, these goals and the *Roadmap*, which spell out the links between them and education, need to be rethought to more forcefully highlight community in expansive and situated terms.

Finally, our call for an ECECfS rooted in an understanding of the “overall system” as an ontological community of learners should also be understood in light of recent proposals for rethinking ECECfS pedagogically. Ødegaard (2021) argues for *collaborative exploration* as a “relevant mode of action for sustainable practice” in ECECfS (p. 1). Its relevance rests in its conception of learning as relational (dialogic), learning-by-doing/being (exploration) and intergenerational. It is also relevant because learning through exploration involves grappling with

aspects of collective activity that are spontaneous and indeterminate. This in turn can develop our capacities to be adaptable and improvisational in a world that is more unpredictable than we are used to.

However, the challenge remains of how to engage in this kind of collective exploration in the context of building and maintaining ECECfS through “multi-level coordination with diverse stakeholders.” The case of the Elk indicates that practices like the TPW can function as an important boundary object through which actors at various levels and nodes in the system can negotiate and sustain such collaboration. The key is to craft the theme of the project with an openness that allows the preschool and its network to negotiate and balance the various and sometimes contradictory expectations from the collaborating institutions, while at the same time managing to sustain a core idioculture and identity (Folke-Fichtelius, 2008). That is, TPW can be a practice through which we *collectively* develop our motivations for and approaches to exploration in relation to the overall project of ECECfS (i.e., the communities in *communities of learners* and the cultures in Ødegaard’s (2020) notion of *cultures of exploration*). Here, it is worth returning to Dahlberg, Moss and Pence’s (2013) conception of ECEC as a public forum in civil society, as it reminds us that ECEC in general, and ECECfS in particular, are projects fundamentally about the creation of environments for the development of shared values. As we have tried to illustrate in this paper, this is a complex and challenging task, but it is one in critical need of continued pursuit.

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