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Reindeer as Draught Animals in Tourism: Bringing Past Traditions into Modern Practices

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ABSTRACT. Driving with reindeer is an old tradition in northern Fennoscandia that became almost extinct in the last century but that has increased in the past few decades along with tourism. This study investigates the current use of draught reindeer in Lapland, identifies changes since the mid-1900s, and explores the human-reindeer relationship related to this practice, including draught training. We conducted interviews and participatory research with 15 reindeer herders who trained draught reindeer for tourism and competitive racing in northern Finland. Reindeer training today follows similar steps to those followed in the last century, but today the draught training starts earlier, with calves in their first autumn, and takes longer, usually three to four winters. The reindeer are carefully chosen, and their training and roles are more specified than in the past. Mutual trust, communication, and learning play essential roles in the establishment of human-reindeer relationships and collaboration. Herders treat reindeer as individuals and co-actors and take into account their interests and well-being. Driving practice was restarted in the 1970s because of tourism. In the early years of tourism, when draught reindeer were not available for this, racing reindeer were used for sledging; this contributed to the revival of the practice. We conclude that draught reindeer training and use in tourism is reviving old draught-reindeer culture and passing it forward, albeit in a new form. It combines reindeer herders' traditional knowledge with modern requirements, deepens the herder-reindeer relationship, and supports reindeer herding as a livelihood.

Keywords: reindeer herding; traditional knowledge; tourism; training; animal behaviour; human-animal relationship; human-animal collaboration

RÉSUMÉ. En Fennoscandie, conduire des rennes est une ancienne tradition qui s'est presque éteinte au cours du dernier siècle, mais qui a pris de l'ampleur ces dernières décennies grâce au tourisme. Cette étude porte sur l'usage actuel des rennes de trait en Laponie, cerne les changements qui se sont produits depuis le milieu des années 1900 et explore la relation entre les humains et les rennes par rapport à cette pratique, notamment en ce qui concerne l'entraînement des rennes de trait. Nous avons réalisé des entrevues et effectué une recherche participative auprès de 15 éleveurs ayant entraîné des rennes de trait à des fins de tourisme et de courses de compétition dans le nord de la Finlande. De nos jours, l'entraînement des rennes passe par des étapes semblables à celles qui avaient cours au siècle dernier, sauf que l'entraînement commence plus tôt, dès le premier automne de vie des rennes, et qu'il dure plus longtemps, soit de trois à quatre hivers. Les rennes sont choisis avec soin, sans compter que leur entraînement et leurs rôles sont plus définis que par le passé. La confiance mutuelle, la communication et l'apprentissage jouent des rôles essentiels dans la collaboration et l'établissement des relations entre les humains et les rennes. Les éleveurs traitent les rennes comme des individus et des co-acteurs. Ils tiennent compte de leurs intérêts et de leur bien-être. La conduite des rennes a recommencé dans les années 1970 en raison du tourisme. Dans les débuts du tourisme, lorsqu'il n'y avait pas de rennes de trait pour occuper ces fonctions, des rennes de course étaient utilisés pour la glisse, ce qui a contribué à la relance de cette activité. Nous concluons que l'entraînement des rennes de trait et leur utilisation dans le domaine du tourisme permettent de redonner vie à l'ancienne culture des rennes de trait tout en lui conférant une autre forme qui allie les connaissances traditionnelles des éleveurs de rennes à des exigences modernes, soutient l'élevage des rennes comme gagne-pain et approfondit la relation entre l'éleveur et le renne.

Mots-clés : élevage des rennes; connaissances traditionnelles; tourisme; entraînement; comportement animal; relation entre l'humain et l'animal; collaboration entre l'humain et l'animal

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INTRODUCTION

Using reindeer as draught animals is a long tradition in Fennoscandian reindeer herding and probably started very early in the course of reindeer domestication (Turi, 1979; Ingold, 1986; Bjørklund, 2013; Salmi et al., 2021). Historical and material evidence suggest that draught reindeer have been used since the beginning of reindeer herding in the 700s CE (Salmi et al., 2022). In particular, draught reindeer played an important role in Saami pastoralism: they were used for transportation of people and goods and for guiding the herd from pasture to pasture in different seasons (Itkonen, 1948; Turi, 1979; Paine, 1994). In addition, the agrarian Finnish population in northern Finland practised reindeer herding and used reindeer as draught animals since the 18th century (Kortesalmi, 1996, 2008). Draught reindeer also carried out transportation tasks for the army during the wars and in forestry during the post-war reconstruction in northern Finland (Kortesalmi, 2008; Turunen et al., 2018).

However, the use of working reindeer drastically declined after the middle of the 20th century because of the establishment of roads, motor vehicles, and modernization as a whole (Pelto et al., 1968; Kortesalmi, 2008). The emphasis shifted from using the reindeer for multiple purposes towards a focus on meat production and herding less intensively, that is, reindeer were left in most districts to freely graze unattended on pastures for the majority of the year (Helle and Jaakkola, 2008). There was less need for draught reindeer for transport and work, and less need for herd management. In 1900, the statistics recorded 10,764 draught reindeer in Finland, most of them castrates (Kortesalmi, 2008); that number had decreased to a few dozen by the 1970s. The final blow to the use of draught reindeer was the rapid introduction of snowmobiles in the 1960s and 1970s (Pelto et al., 1968; Valkonen and Nykänen, 2017).

The increase in tourism in Lapland from the mid-1900s and its extension to mass tourism with international travellers in the 1980s (Partanen, 2009) led to a new beginning in the use of draught reindeer. Reindeer tourism became an important side—or even a main—livelihood for many herding families in northern Finland, especially those living in the vicinity of tourist centres. During the past 20 years, reindeer tourism has increased particularly rapidly in Lapland (Bohn et al., 2018; García-Rosell and Tallberg, 2021; Visitory, 2024). This, in turn, has increased the demand for draught reindeer rides and for reindeer training. In 2020, there were 30–40 reindeer tourism enterprises that regularly organized reindeer rides and safaris and 1318 registered draught reindeer working in tourism in northern Finland (RHA, 2020). Reindeer herders provide reindeer rides, other services based on reindeer, and introduce tourists to their way of living with reindeer. Many herders also train racing reindeer as their hobby, and tourists are invited to visit the competitions. Reindeer competitions have been regularly organized in northern Finland since the middle of 1900s and unofficially even earlier (RHA, 2024a).

There is a growing interest in modern society in human-animal relations, including the use of animals for work. Animals are increasingly understood as subjects with agency and interests equal to those of humans (McFarland and Hediger, 2009; Oma, 2010; Orton, 2010; Ingold, 2013). Post-humanistic studies have introduced the topic of animals in human industries for discussion (O'Connor, 1997; Knight, 2005), while tourism studies have drawn attention to the status of animals working in tourism (e.g., Fennell, 2011; Bertella, 2014). Both groups focus on the role of animals as co-actors, their ethical treatment, and their welfare. Tourism studies have shown that the attitudes of operators of animal-based tourism enterprises toward their animals are reflected in their operations, and that these operators acknowledge working animals as stakeholders or partners to varying degrees (García-Rosell and Tallberg, 2021; Hoarau-Heemstra and Kline, 2022). These enterprises include ones that work with huskies, reindeer, or horses in Lapland (García-Rosell and Tallberg, 2021). Post-humanist animal studies, on the other hand, have focused on the social interaction and relations between humans and animals (highlighting the role of animals as active agents) and the influence of both parties on each other, including how they have shaped and still shape each other during their joint activities and histories (Knight, 2005; Haraway, 2008; Istomin and Dwyer, 2010; Stépanoff, 2017; Salmi et al., 2022; Mazzullo and Soppela, 2023).

Despite the increased growth of reindeer tourism in Lapland and interest in it in general (Leu and Müller, 2016; Bohn et al., 2018), there are few present-day studies on draught reindeer practice in tourism and its transformation. The few examples include the above-mentioned stakeholder study among tourism entrepreneurs (García-Rosell and Tallberg, 2021) and the anthropological study by Vuojala-Magga (2010), in which she describes her own experience of training reindeer among Saami in Finland. Apart from her work and that of Hoarau-Heemstra (2018), the role of traditional knowledge and experience in the working-reindeer activities in tourism is understudied.

This study investigates the practice of using draught reindeer in tourism in northern Finland today and identifies changes that have taken place in this and related human-reindeer collaboration (including training) since the mid-1900s. In particular, we were interested in reindeer herders' knowledge and experiences: how herders approach reindeer and establish contact with them, how herders and reindeer communicate and interact, and how their relationships and collaboration are established. The focus of this study was on the praxis rather than on theoretical insights. However, we paid attention to how herders take into account certain aspects of animal agency, such as animal interests, preferences, and social dynamics when they interact with reindeer and how this is reflected in different practices. We discuss the findings in the context of current understandings of human-animal interactions.

FIG. 1. A group of reindeer pulling tourists in sledges at Pallastunturi in the later 1930s. In the background is the newly built functional-style tourist hotel of Pallas, the first mountain hotel in Lapland. It was destroyed only a few years later in the Lapland War (1944–45). (Photo: Soldan, Museoviraston historiakokoelmat, 1938).

The key questions, based on further analyses, were: (1) How have draught reindeer traits and training changed when adapting to tourism? (2) How have herder-reindeer relationships and collaboration changed? (3) How has the role of draught reindeer changed in relation to tourism? In addition, we asked how herders who work in tourism see these changes with respect to their traditions, culture, and social life.

Although this paper mainly addresses draught reindeer in tourism, we also include some relevant references to racing reindeer, as many of our interviewees had trained or were training racing reindeer and brought up the similarities and differences between them and draught reindeer. It also turned out that racing reindeer had played an interesting role in the revival of draught reindeer practice in the last century. The preliminary results of this study were previously published in Finnish (Soppela et al., 2020).

History of Draught Reindeer in Tourism

The early stages of reindeer tourism in northern Finland are connected to the rise of skiing tourism. Skiing tourism in Lapland started in the 1930s in Pallas, northwestern Lapland, when domestic cross-country skiers started to organize trips and courses in the mountain region (Sippola and Rauhala, 1992; Annanpalo, 1998). These trips became very popular among skiers, and the first mountain hotel in Lapland was built in Pallas in 1938. There were not always proper roads in winter, and visitors were driven to the hotel from the nearby village by local herders using reindeer. They later started to offer travellers reindeer rides both for benefit and fun (Annanpalo, 1998). The level of activity was small, but continued until tourism was paused during the Second World War (Fig. 1).

During the Lapland War (1944–45), the army used draught reindeer for transportation and supply tasks (Turunen et al., 2018). Skiing tourism started to slowly revive in the 1960s and 1970s, and new ski resorts (including the rebuilt Pallas resort) were built in several mountain regions. Draught reindeer had, however, almost disappeared and so had the herders who could train them (Pelto et al., 1968). The use of draught reindeer declined during the second half of the 20th century (Fig. 2), mainly because of rapid modernization and motorization of reindeer herding (Pelto et al., 1968; Valkonen and Nykänen, 2017). There was a similar trend in other Scandinavian countries. In Russia, however, draught reindeer use has persisted to this day because of herding between seasonal pastures (Vitebsky, 2005; Stépanoff, 2017).

Despite the heavy introduction of snowmobiles in the 1970s, travel agencies and visitors in Lapland continued to ask for reindeer rides. The demand was accelerated when mass tourism began in the mid-1980s with the landmark introduction of Christmas flights on the Concorde from Britain to Rovaniemi in the Arctic Circle (Partanen, 2009).

During the last few decades, reindeer tourism has spread throughout northern Finland. Reindeer tourism farms have been established mainly in the vicinity of large tourism resorts and skiing centres (Bohn et al., 2018), many of which are located in the mountainous parts of Lapland and

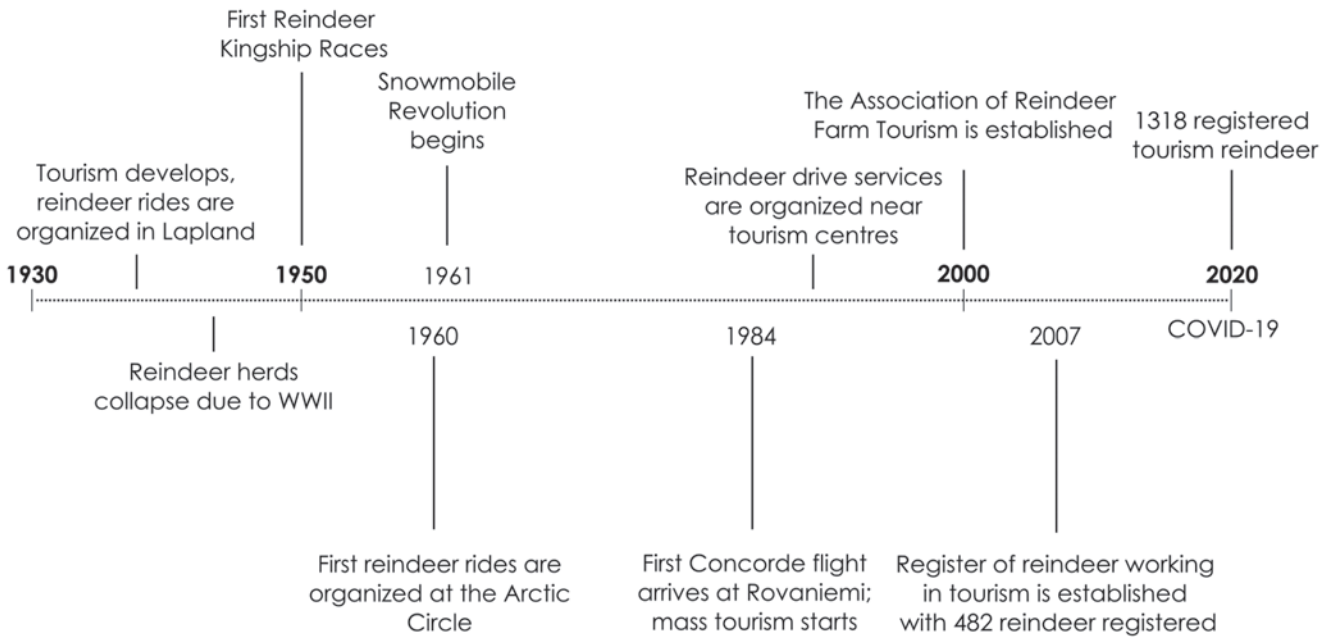

FIG. 2. A timeline of the use of draught reindeer in tourism between the 1930s and 2020 in Finnish Lapland.

in the Kuusamo area (Fig. 3). These reindeer farms are mostly family enterprises of reindeer herders run by one or two persons with some temporary employees during the high season (Bohn et al., 2018). However, nowadays there are also big reindeer safari companies run jointly by several owners or agencies, and the number of visitors and the demand for reindeer rides have markedly increased. The main service of reindeer tourism enterprises is still to provide rides, showing their popularity and persistence. Reindeer tourism has increased also among Saami in Sweden, Norway, and Russia, although the extent of reindeer tour services varies between countries (Leu and Muller, 2016; Hoarau-Heemstra, 2018).

There are detailed ethnographies about the use and training of draught reindeer in Lapland in the last century (Itkonen, 1948; Kortesalmi, 2008), but only a few contemporary studies exist related to these subjects (Vuojala-Magga, 2010; García-Rosell and Tallberg, 2021). In particular, the shift from the traditional use of draught reindeer to their modern use in tourism has not, to our knowledge, been previously studied, nor have there been studies on how draught reindeer practices began to be revived. The oldest herders we interviewed had lived through this change, and we took a rare opportunity to draw on their first-hand experiences in this study.

MATERIAL AND METHODS

Interviews

The focus of the fieldwork was on interviews with reindeer herders. We interviewed thirteen reindeer herders (nine men and four women, assigned labels from H1 to H13) from different parts of the reindeer management area in Finland during 2019 and 2020 (Fig. 3). Nine herders managed tourism enterprises of their own and trained their working reindeer themselves. Their enterprises were located mainly in the vicinity of large tourism resorts. Five of the herders had trained racing reindeer. The other four herders trained mainly racing reindeer. We found the herders for the interviews by asking our earlier contacts (the first herders) and then used a snowball method to identify further interviewees (Given, 2008). All the interviewees except one had been reindeer herders their whole lives. They all had long experience of training draught reindeer (mean 30 years) and practising reindeer herding in general, including for meat production. The average age of the herders was 47 years: 35 years for women (range 27–43 years) and 53 years for men (range 37–66 years). Five of the herders (H1, H2, H6, H8, H13) were interviewed a second time in the autumn of 2020 to collate supplementary data on the first impacts of the COVID-19 pandemic on draught reindeer tourism. In terms of changes in the use and training of draught reindeer after the mid-1900s, older herders described their own experiences, while the younger herders described experiences of the older members of their families. In addition to the above-mentioned interviews, we used our two earlier interviews about training and the use of draught reindeer in the last century (H14 and H15, unpublished data). The first one of the earlier interviews was conducted in 2011 with an elderly herder from northeastern Lapland who had trained draught and racing reindeer his whole life. The second interview was with a long-term developer and organizer of reindeer racing competitions. All the interviews were conducted in Finnish, and the audio was recorded and transcribed.

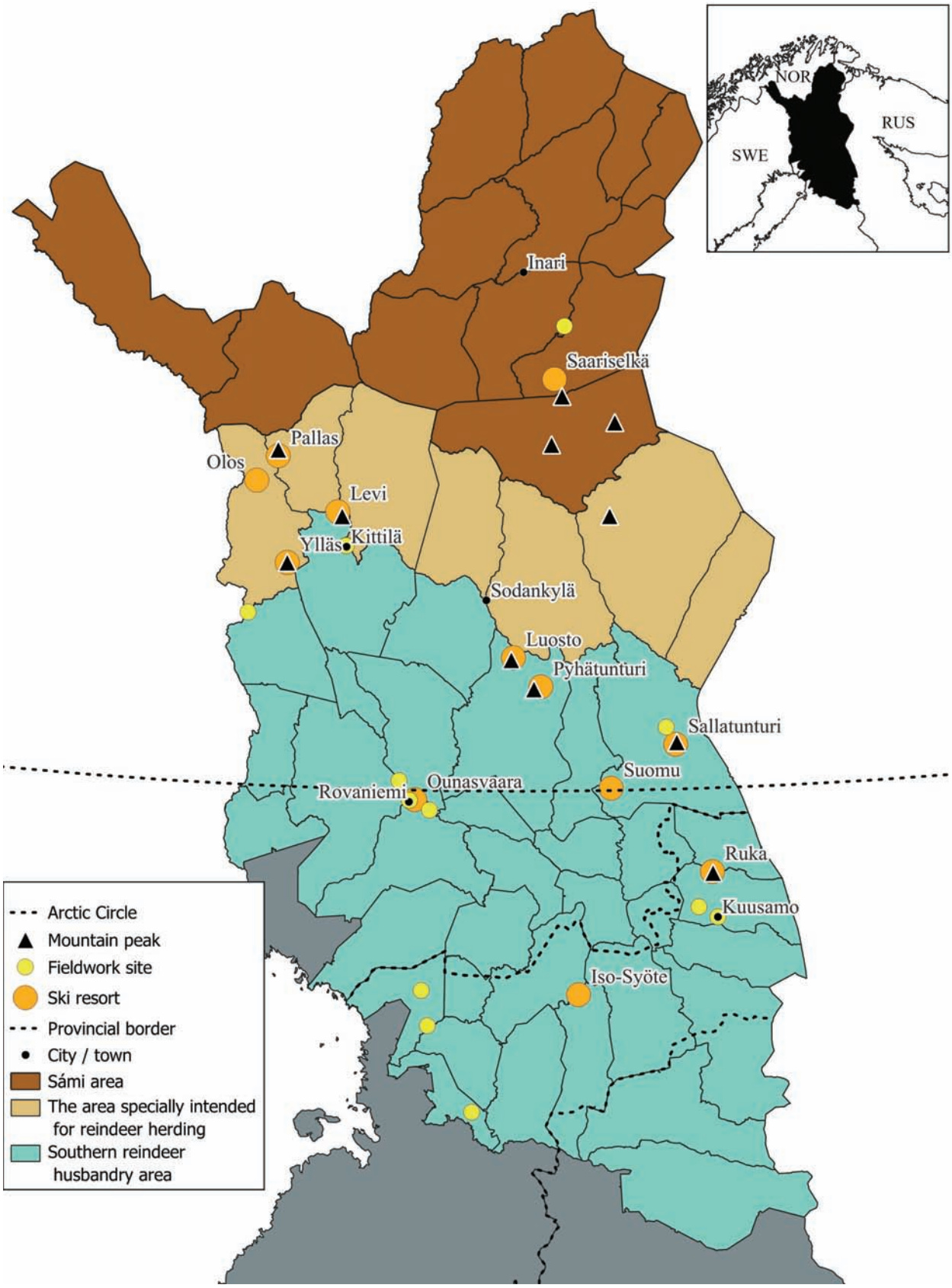

FIG. 3. Locations of the fieldwork sites in the reindeer management area in Finland. The majority of the sites are located in the vicinity of large tourism or skiing centres. The reindeer management area is divided into 54 reindeer herding districts (borders shown as solid lines). The area covers most of the Lapland Province and the northern parts of Northern Ostrobothnia and Kainuu Provinces (border shown with a dashed line).

FIG. 4. Reindeer farms in Lapland provide tourists with reindeer rides and safaris for either their side or their main livelihood (Photo: Kaisa Sirén).

The herders were interviewed by Author 1, Author 2, and Author 3 in 2019−20 in the herders' homes, at their tourism enterprises, or at the authors' academic meeting rooms or offices. The interviews were semi-structured and included questions that dealt with the following topics:

- the selection of draught reindeer for tourism and racing
- their training and use
- castration and feeding
- behavioural and physical characteristics
- personhood and agency
- relationship with other reindeer and humans
- narratives of certain reindeer or events
- history and traditions of draught reindeer use
- the significance of the present draught reindeer use

The interview questions were organized according to these themes, but the interviews were kept flexible and open-ended. The interviews of two elderly herders in 2011 were conducted by Author 1 and Author 2. The purpose of the interviews was presented to the interviewees, and they confirmed their participation by giving their written consent. All the interviews were coded, and the data were used anonymously (using assigned labels) according to the data protection and research ethical practices (University of Lapland, 2009).

Participatory Observation

The fieldwork included the participation of the authors in various activities on the reindeer tourism farms associated with draught and race reindeer, such as round-ups (observing the selection), training, feeding, racing competitions, and other activities in the winter season. The activities were photographed and videoed when needed (with the permission of herders). The videos were mainly used as a tool to complement discussions between authors and herders. The herders were asked questions about the specific topics that required further clarification, and notes were taken, but the videos were not systematically analyzed. All the authors have extensive experience in research related to reindeer herding and are familiar with its practices, which helped in interpreting the observations. In addition, one of the authors (Author 2) is both a researcher and a reindeer herder with long-term experience in training and driving racing reindeer, which was an additional benefit for the team.

Data Analyses

The transcribed material was analyzed with a thematic analysis (Braun and Clarke, 2006) using the RQDA package (Huang, 2016) of the R programming system (R

FIG. 5. Draught reindeer training and use (outer circle) follow the seasonal events of the reindeer herding year (inner circle, see also RHA 2024b).

Core Team, 2020). This included choosing the codes for the keywords that were drawn from the interviews and marking the transcriptions with the codes. Each researcher coded the transcriptions separately. The results of the coding were then examined and considered together, and a preliminary summary created. This was followed by the classification of the results under the themes drawn from the interviews and using them for further analysis, discussion of the results, and reporting.

We identified the following themes from the interviews and observations: (1) using reindeer as a draught animal in tourism and racing activities, (2) the selection and training of draught reindeer and changes in these activities over time, (3) the human-reindeer relationship, including habituation, communication, mutual learning, and collaboration, (4) personhood and agency of draught reindeer, and (5) historical and cultural changes over time.

RESULTS

Draught Reindeer in Tourism Today

Based on our field observations and interviews with a number of herders (H3, H4, H5, H8, H10, H11, H12, H13), we are able to describe the role of draught reindeer in tourism at present and in the past.

There are two kinds of draught reindeer working with herders in tourism: (1) individual reindeer that pull a sledge (so called self-driven reindeer) with a tourist as a driver (Fig. 4) and (2) reindeer that work as members of a team of several reindeer pulling sledges linked together. Most skilled reindeer are able to do both of these tasks. A draught reindeer team (Northern Saami [NS]: ráidu, Finnish [FI]: raito) is usually led by a herder guide that walks or drives the first reindeer in front of all the others and sets the pace. Draught teams are commonly used on longer safari trips, whereas self-driven reindeer are used for short trips. The rides take place on well-tamped routes in forests, on open lakes, in mountain areas, or in large enclosures near the reindeer farms. The driving distances depend on the size of the enterprise and its level of activity. On safaris, a draught team can drive five to fifteen kilometres a day, while a self-driven reindeer usually covers shorter distances of between four and five kilometres (Fig. 4).

The choice and training of draught reindeer for tourism are scheduled according to events of the reindeer herding year, which, in turn, are based on the biology of reindeer (Fig. 5). The reindeer herding year starts in May when the calves are born. The calves are usually ear marked in May, June–July, or at the latest, in the autumn (taking into account the variation among districts). Reindeer herders take reindeer for training near their farms in the autumn, a little before the tourism season starts. In the autumn round-ups, the reindeer are counted and separated into those selected for breeding and those to be slaughtered for meat. Herders also select new individuals for training during the round-ups and also at other occasions where they can be observed, such as during supplementary winter feeding. When a herder sees that a reindeer is ready to meet tourists, it is allowed to start work. The season for reindeer rides usually begins in November or December, depending on the arrival and persistence of snow, and lasts about five months. The driving season extends until March or April, or as long as there is snow on the ground. After the season, draught reindeer are released to pasture.

Like draught reindeer for tourism, racing reindeer are carefully selected and trained. They are especially trained for pulling a driver on skis. When they are sufficiently trained, usually at four years of age, they will start to take part in the competitions.

Desired Traits of Draught Reindeer

Today: The first step of selecting reindeer as preliminary candidates for training is made in autumn round-ups, when herders first pay attention to big and handsome male calves born in the previous spring. The selection is made by identifying the character and talents of reindeer (H3, H10). The desired traits of the reindeer are based on both the herders' traditional knowledge and personal preferences. Some calves approach humans more readily than others and these are chosen for training. As the herders have the opportunity to make further observations and become more familiar with the reindeer, the selection is continued.

The herders use multiple criteria for selecting draught reindeer, depending on the type of work they intend the reindeer to do. The criteria are partly the same for both sledging reindeer working in tourism and for racing reindeer (Table 1). In general, personality and ability to

TABLE 1. Selection criteria of draught reindeer trained for tourism and racing today and those of multipurpose draught reindeer used in the past.

Present purpose	Personality and behaviour preferred by herders	Appearance i.e., physical characteristics preferred by herders
Draught reindeer in tourism; pulling a sledge, driven by a customer	• Reliable (H3, H4, H5, H6) • Anyone can easily drive it (H4, H5) • A bit wild but curious (H3, H4, H8) • Happy (H5, H6) • Peaceful (H3, H4, H5, H6)	• Size does not matter much (H4, H5) • Long/high feet (H3, H4)
Draught reindeer in tourism; pulling a sledge in a team (FI: *raito*, NF: *ráidu*)	• Peaceful/calm (H8, H10-H12) • Friendly (H8) • Reliable to work with (H8, H11) • Lazy going (H13) • Curious (H8) • Trustworthy (H8, H10, H12) • Able to draft well (H8, H10)	• Size does not matter much (H8, H10, H11) • Broad chest (H8, H11, H12) • Strong feet (H10, H11, H12, H13) • Healthy hair (H13) • High withers (H11) • Long back (H11, H12)
Racing reindeer	• Fast (all) • Wise (H1, H2, H9) • Has own will (H1) • Mentally strong (H7) • Quick learner (H2) • Alert (H5, H9) • Lively (H5) • Willing to run alone (H9, H13)	• Long back (H1, H13) • Broad chest (H13) • Curved heels (H1)
Past purpose	**Personality and behaviour preferred by herders**	**Appearance i.e., physical characteristics preferred by herders**
Draught reindeer	• Lively/energetic (H5, H8, H10, H11, H12, H13) • Walks well behind the trainer (H14)	• Strong (H10) • Vigorous (H8) • Broad and high chest (H8) • Good size (big) (H14)

learn are the most important criteria for a reindeer working in tourism. These criteria are important also for racing reindeer but appearance, including body structure, and other physical characteristics usually play a bigger role in their selection (Table 1). In addition, liveliness, mental strength, and the willingness to run alone and win were also highlighted for selecting racing reindeer.

Draught reindeer in tourism are expected to be calm and stable, and thereby reliable to work with, but the herders highlighted that they should not be fearful or too calm either. Wilder individuals are preferred for training as racing reindeer, as they are regarded to be faster and better competitors due to their mental characteristics.

Different personality traits of draught reindeer are desired depending on whether they work directly with tourist drivers or in a draught team (Table 1). Herders reported that a self-driven reindeer—a reindeer that will be driven by a tourist—should be reliable, so that it is easy to drive, but also fearless and lively. The criteria for choosing a reindeer to work in a draught team are not as strict, and training is not as long as for self-driven reindeer, thus more reindeer can become draught reindeer as long as they are calm and reliable.

However, a lead reindeer in a draught team is chosen more carefully than the others. It is expected to be "a bit wild but curious" (H8), thus reminiscent of a self-driven reindeer. Herders also take into account the reindeer's own will. For example, if a reindeer is eager to lead the team, after testing it is usually placed in that position. A lead reindeer is the most important reindeer of the draught team, so it is important that it has the desire to lead and to cooperate with the driver. The herders highlighted that some reindeer want to lead, some prefer to be in the middle, and some necessarily want to be the last ones (H3, H4, H8, H10, H11). This behaviour of reindeer is related to their nature as a gregarious species who develop a hierarchical behaviour and structure in their social groups. Altogether, draught reindeer in tourism have more strict selection criteria than racing reindeer, and among draught reindeer, self-driven reindeer and lead reindeer in the draught team have the strictest criteria.

The herders also have various physical preferences for the body structure of draught reindeer in tourism and racing reindeer (Table 1). These include, for example, long and strong legs, a broad chest, high withers, a long back, and a healthy look to the hair. The body size is not seen as a decisive factor for a reindeer working in tourism if it is otherwise capable of working as a draught reindeer. Several herders (H12, H13, H7, H1) prefer erect, knotted, and pointed antlers in both tourism and racing reindeer as signs of alert reindeer. The colour of the hair is not seen as an important criterion in the selection of reindeer working in tourism. Some herders prefer reindeer with special colours such as spots, a white line on the head, or white socks (H10, H11, H12). They mentioned that tourists pay attention to special colours and like them. Some others see ordinary grey reindeer to be particularly suitable for tourism (H4, H12). White reindeer are generally seen to be sleepy and

TABLE 2. Annual training scheme for a draught reindeer in tourism. Language: FI = Finnish; NS = Northern Saami.

Winter	Training subject	Age of reindeer	Nomination
1	Accustoming reindeer to nearness of humans and being on a leash	Male calf in autumn (< six months)	FI: vasa, NS: miessi
		Male calf during its first winter	FI: kermikkä NS: čearpmat
2	Walking behind a trainer (FI: talua, juovoa, NS: čuovvut)	Mainly a male reindeer in its second winter	FI: urakka NS: varit
3	Harnessing and training for pulling a sledge	Male reindeer in its third winter	FI: vuorso NS: vuobirs
4	Ready to drive with tourists; acceptable as a registered working reindeer in tourism	Male reindeer in its fourth winter	FI: kunteus NS: gottas, gottodas

not active enough, while dark reindeer are viewed as strong and alert.

As it is not easy to make long-term observations of the behaviour of the calves in round-up situations, herders have certain known reindeer: females whose family line, behaviour, and personality the herders know well and use in the selection of calves. They believe that features such as calmness or a docile personality are inherited and that certain female reindeer can give birth to good draught reindeer (H5, H8, H11, H12, H13). The herders also mentioned that the mothers are able to teach preferable behavioural traits to their calves.

Importantly, the assessment of suitability of a draught reindeer for training is not a single decision but a process that continues throughout the whole training period. Depending on the reindeer's motivation and progress in learning, training is either continued or ended. Herders continuously estimated a reindeer's willingness and ability to learn different things during this process. For example, in the first winter, a criterion was how well a reindeer adapted to being on a leash (see Table 2). The herders also pay attention to the reindeer's responses to human nearness and approach. If a reindeer does not become accustomed to humans and handling, the training is not continued, and the reindeer is returned to the company of ordinary reindeer in the herd. Herders highlighted that not all the candidates become draught reindeer: some are either not willing to learn and cooperate or they are too wild and cannot get used to humans (H3, H4, H8, H10), in both cases, it is impossible to train them.

Last Century: There have been several changes in the desired traits of draught reindeer since the middle of 1900s. Until then, they were widely used for transportation and cargo tasks in Lapland, and some were also used for racing. The change in desired traits was raised by several herders (H5, H8, H10, H12, H13, H14). In the past, strong and vigorous reindeer were preferred because such reindeer could be used to drive long distances and pull a sledge (Table 1). Additionally, liveliness was mentioned as an important trait of draught reindeer in the past by all herders who talked about them. The herders had the following comments: "Such a perky bull (FI: raistakka härkä). It was good, it was fast" (H13). "Lazy reindeer were not liked those days" (H5). Liveliness meant that the reindeer was willing to drive even long distances at a fast speed (H5, H10, H12, H13).

High and narrow antlers were mentioned as signs of liveliness, implying that a reindeer with such antlers could find its way quickly between trees in forests (H13). Reindeer with a high chest and spacious lungs were seen to possess strength and endurance; that was important on long journeys through roadless regions as well as for other tasks requiring strength. This was explained by the oldest of the interviewed herders who reported, "Those reindeer that could walk well behind a trainer and were good-sized and good-looking—those were chosen for training draught reindeer. In those times, it was according to size and behaviour of reindeer, how well it walked behind a trainer, that we trained draught reindeer and some of them became even racing reindeer" (H14).

Lively working reindeer were used in many kinds of transportation tasks in winter before snowmobiles became common. The same reindeer could be used for multiple purposes, for both working and racing. In general, the reindeer selected for draught purposes were said to be wilder in the old days than today. One of the herders pointed out the difference between the past and today as follows: "My grandfather wouldn't have qualified most of my sledge reindeer, which in tourism must be very calm, very friendly towards people, and always reliable to drive" (H8).

Draught Reindeer Training

Today: The training of draught reindeer usually starts with calves during their first autumn. In addition to male calves, some herders prefer to start training with yearling male reindeer in their second autumn. Older reindeer are sometimes also taken for training if they are seen to be suitable. Training usually takes three to four years (winters), but that varies between individuals depending on how fast they learn. Training takes place in successive winters, and each of the herders have specific goals for the development

of the reindeers' skills. What is taught each winter depends on the age of reindeer, its sensitivity to training, its progress, and its future working purpose (Table 2).

During the first winter, a male calf or a yearling reindeer is familiarized to the nearness of humans and to being on a leash. When this is successful, the reindeer is commonly trained to walk behind a trainer (during the second winter). Many herders then teach the reindeer to be harnessed and to pull a light sled. Before the reindeer are taught to be harnessed, they are habituated to human touch and the weight of the harness. During the next step, usually in the reindeer's third winter, there is much practicing of driving and pulling a sledge with people in it. Driving of draught team reindeer and self-driven reindeer are practiced separately. The driving and pulling practice could be continued in the fourth winter, but generally the reindeer are considered strong and skilled enough by then to work and start driving with tourists. The herders mentioned that some reindeer could be ready much earlier, with some exceptional individuals even ready in their first winter.

The training of racing reindeer does not include as many stages as the training of draught reindeer working in tourism. Racing reindeer are trained to walk behind a trainer a bit later compared to draught reindeer. The training of reindeer to drive with a human behind on skis is practiced during the third or fourth winter, and test drives and time recordings are organized then too. When sufficiently trained, racing reindeer start their careers in competitions during the fourth winter.

In terms of learning, herders mentioned that the beginning of the training is a particularly critical period for the reindeer. If a reindeer adopts a bad habit or pattern of behaviour at the beginning, it does not easily unlearn that habit. Herders pointed out that experienced, older draught reindeer are often used as models for other reindeer because reindeer learn in social interaction. There are also friendships between reindeer, and those reindeer that are friends work well together.

The training of draught reindeer is based on both herders' traditional knowledge and on personal experience. In addition to the basic methods and their stepwise implementation (Table 2), the trainers in our study train reindeer for different tasks according to the reindeer's interest or agency, such as for specific places in a draught team (lead, middle, or back reindeer). The herders emphasized that a trainer should know her/his reindeer so well so that they can place them in the order the reindeer would naturally choose themselves. Different locations in the draught team are tested so long that "the step patterns match together" (H12).

The herders noted that a fully trained draught reindeer differs from an ordinary reindeer not only by the skills it has been trained to perform, but also by its behaviour toward human nearness. Most of the herders used the terms "tame" or "domesticated" in this context. For instance, one herder explained, "A draught reindeer becomes tame and gets used to work. He differs in this way from an ordinary reindeer" (H6). Another trainer described the behaviour of a reindeer that is ready for work as follows: "The reindeer learns that when you put the harness on, you are at work, and he acts accordingly—even his posture changes and becomes straight" (H8).

When a reindeer, through training, regular contact, and caretaking has learned to trust a human, he shows certain "imprinting" behaviour, as one of the herders called it (H8). Many herders pointed out that this behaviour is a turning point in the state of the relationship: the reindeer seeks human shelter or protection in unexpected or alarming situations, such as when it is afraid of predators. In other words, the reindeer shows a preference and high trust in its herder in such situations. In the participatory observations, we saw how the draught reindeer remembered their role and the trusting relationship they had with their trainer after the summer. For example, in one autumn round-up, the herd was going around in the fence, the herder's hand touched the reindeer's antler, and a quiet "prrr" was heard; the reindeer stopped and let the trainer put him on a leash. The reindeer then peacefully followed the herder, nose touching the herder's back, out of the fenced area.

Herders reported that the purpose of the training is to establish such co-operation between a reindeer and a herder that the reindeer can be trusted and safely used in tourism services. They highlighted the importance of mutual trust between a reindeer and a trainer in the establishment of the co-operation (H3, H4, H5, H6, H10, H12, H13). Many herders saw it as important that a reindeer trusts in a trainer right from the beginning of the training, which makes it possible to work with the reindeer without use of physical power (H3, H4, H12). All the herders emphasized that it was important to teach reindeer in a peaceful manner, to read the behaviour of the reindeer all the time, and to respond to their interests.

The draught reindeer working in tourism are usually castrated when their training is complete, at the age of three to four years, or at the latest at five years (FI: kosatus, NS: goaistas, goasohas). The herders reported that the castration keeps the reindeer healthier and avoids injuries that might happen in the rut-time fights. The herders reported that the males behave more peacefully when they are kept from the rut. The castration age and timing are carefully considered and matched to the most suitable points of the season, usually to late spring (Fig. 5). The castration is done at the age when the reindeer had reached most of its mature size. The herders reported that sledge reindeer may provide five to ten years of service in tourism, sometimes even twelve years.

Similarly, some racing reindeer were castrated after their training period at the age of four years, but others not until they finished their careers. Herders leave racing reindeer uncastrated to affect their behaviour as little as possible and to preserve their wild characteristics, such as keeping their high speed and competitive spirit. Potential effects of the castration on the behaviour, training, and speed of racing reindeer are carefully considered before deciding on castration.

TABLE 3. Ways of communicating at different stages of draught reindeer education.

	Making contact	Training	Steering
Voice	• "It hears my voice, and it hears '(reindeer, of course, have ear of tuning)' that I speak calmly and nicely so there is nothing to worry about and things are going to be just fine" (H10).	• "And then if the reindeer is a bit tensed up, then you just say what you need to say, with a little louder voice but still in a neutral way" (H4).	• "I have taught it 'place,' 'stop,' and commands like this ... I actually chat with them all the time, but among that chatting I use these commands" (H3).
Smell	• "It is like this… even when a total stranger puts on my jacket, then reindeer are immediately like 'right, this is a home person'" (H3).	• "The reindeer is such that it follows and knows people, it recognizes them by their voice and smell. If you treat a reindeer badly, it will remember you" (H10).	
Vision	• "The reindeer imprints on clothing. It's one really big thing that it imprints to clothing. It doesn't necessarily imprint on people, but to clothing" (H4).		
Motion	• "The reindeer should know that someone is coming so that the person doesn't just suddenly appear in view" (H4).	• "Every reindeer has its own way to learn. One is sensitive and needs calm movements, another needs sturdy movements" (H8).	• "...when a reindeer is sent (to drive), we spin to the right side, that is our way to give the reindeer permission to go" (H3).
Body Language	• "The most important thing in training is that when you go there, you need to be calm. They will sense your mood" (H5).	• "...you already know that reindeer so well that when it flicks its ear, you can say 'well, could you just calm down now'" (H3).	• "It [our communication] is mostly body language. If the reindeer starts to get nervous, then there isn't much you can do" (H11).

Last Century: The conversations with the elderly herders revealed that: (1) the training steps and their order used in the mid-twentieth century are similar to those used today (Table 2), and (2) mainly the castrated males were used for the transportation work. However, unlike today, the training was not started with calves but in the reindeer's second or third winter, when they were castrated and more mature (FI: *raavas*, NS: *rávis*) (H7, H10). A castrated male that was not yet trained was called a *pailakka* (FI) or *spáillit* (NS). In addition, a draught reindeer could be trained for just one winter (or even less) and start work in the same winter (H14); nowadays, the training takes several winters. Those reindeer who were quick learners could be used at once for driving, while slower learners were placed into draught teams or used for pulling loads and continued their learning on the road. Older, experienced draught reindeer were very commonly used as examples to other reindeer (H14).

Purposes of Feeding

Today, draught reindeer in tourism and racing reindeer are regularly fed throughout the training and working season, that is, during the six-month period from late autumn to spring. Feeding is important for many purposes: establishing a relationship between the reindeer and humans; helping with taming; and keeping reindeer in good condition. Herders emphasized that feeding plays an important role in the habituation of calves to human presence and thereafter to training, particularly at the beginning.

Herders used food, most often lichen (that the reindeer particularly like), both as a bait and as a reward in training. Some of the herders offered lichen when they wanted to teach the reindeer a certain turn or a skill, and the herders could end the lesson with another portion of lichen when the session had gone well. One of the herders mentioned that "a reindeer that is keen on food is easier to train because food is a bait by which you can get reindeer to do things" (H10). In addition, herders encouraged frightened or nervous reindeer by offering them lichen during a training session (such as while driving a route). Many herders continued to give lichen to their reindeer before and after safaris, even though they had finished their training.

The herders reported that when feeding is a regular practice or a reward, the reindeer learn to anticipate it, recognize the herder who feeds them, and this helps the reindeer to trust the herder. Similarly, the feeders get to know their reindeer better and better, and build trust with them.

While feeding reindeer, it is possible for a herder to regularly observe the appearance and behaviour of their reindeer and assess their wellbeing. For example, if a reindeer does not eat, a herder knows that something is wrong. Similar to other animals, reindeer do not display their problems visibly, so it is important to follow their feeding habits daily. The herders also emphasized the importance of high-quality food to keep their reindeer fit and strong throughout the training and working seasons. Herders feed and observe their reindeer daily and make sure that all the reindeer get food equally—despite their status in the herd—when they were fed together.

Collaboration in Action—"Herders Have to Learn From Reindeer all the Time"

The herders spoke about their interactions with reindeer in concrete terms and by giving examples and accounts. As they highlighted their mutual trust with reindeer, they

explained how they saw it developing. First, they said, it is important for the reindeer to get accustomed to the proximity of humans and "unlearn its natural instinct to escape [from the situation]," as one of the herders articulated (H8). They said that the reindeer constantly read the herders' behaviour and emotional state and tune their behaviour according to the state of a trainer. For example, if a trainer was feeling nervous or worried during a training session, the reindeer was likely to reflect that mood and be difficult to teach. Thus, trainers need to read the behaviour of reindeer and adjust their behaviour to the state of the reindeer, reassuring the reindeer and adjusting the training to the motivation of the reindeer and the situation.

Herders emphasized that it is important to be sure that a reindeer has its own will to cooperate with a trainer. They said it takes several years to build trust between a human and reindeer to the extent that the reindeer can be considered a steady working reindeer. Trust is built and renewed by frequent and continuous contact between the trainer and reindeer from the very first steps of training. One of the herders explained, "It is exactly that, the trust. An ability to trust. It is very hard to teach a reindeer that is sort of totally wild. It has not been in contact with people. You can see it clearly if you start to teach reindeer at about four years of age" (H3).

The herders used the words "taming" or "imprinting" when describing the learning and habituation process of reindeer with humans, and mentioned it was a dynamic situation-dependent process that occasionally also regressed. The establishment of a trusting relationship with humans was important to familiarize draught reindeer for their future work with tourists. Reindeer learn from the trainer as well as from other draught reindeer. Likewise, the reindeer teach the trainer in different situations and give feedback. Training progresses when the trainer learns to read the reindeer and to understand its behaviour. As one of the trainers explained, "Since there are no two similar kinds of reindeer, humans have to learn from the reindeer all the time, … and one has to learn to read the reindeer" (H3). The herders highlighted that a reindeer cannot be forced to learn; it must be allowed to learn at its own pace. One of the herders explained this, "When the reindeer itself realizes the right things, it is the best. That way it is possible to progress quickly. If you try to force him, then you may regress quite fast" (H5).

The herders communicated with reindeer in various ways in different stages of training (Table 3). Most of the herders said they spoke or chatted with the reindeer. They saw it as important to speak to a reindeer in a relaxed way to calm him and help him recognize them. Doing so was important at the beginning of the training, to create trustful contact, but also in the later stages of the training. Visual cues such as the colour and the shape of clothing were also seen as important signals for the reindeer to recognize the trainer as a familiar person. Smell worked in a similar manner. Sudden movements and appearing in view without prior notice were to be avoided. Almost all herders pointed out the important role non-verbal communication or body language and emotional tuning played when working with reindeer.

Trainers described reindeer as a highly teachable species. They reported recognizinng that reindeer were alert, had the ability to remember, and were able to read humans. Draught reindeer training includes repetition, reinforcement, and routines, which also build trust. Herders who train draught reindeer know them by name and personality and see them as persons. They have numerous accounts and stories of them, even entire life stories. In addition to the individuality of the reindeer, the herders noted that the trainer must be aware of important species-specific behavioural features of reindeer, such as their escape reaction when alarmed and the hierarchical status of the reindeer in the herd, which affect their behaviour.

Changes in Coaching Styles

There were few accounts of the nature of the relationship between herders and draught reindeer from the last century. Some of the present-day herders had the opinion that, in the last century, reindeer were trained more with force, whereas nowadays a lot of time is used for socializing with reindeer and building trust (H3, H8). This was seen to make collaboration easier. It is also noteworthy that today, training is started at a younger age when the reindeer are smaller and thus easier for herders to handle. Also, because they are younger, it is easier for reindeer to grow accustomed to being handled, allowing the herders to, for example, harness them more easily and without stress to the animal. One of the female herders mentioned, "The (draught) reindeer were earlier handled forcefully, and I hadn't enough strength to handle them. In some way, my idea of training was different then and that's why I didn't even want to go for it. I changed the methods because the starting point was that I wanted to be able to handle the reindeer" (H3).

The ways herders co-operate now with reindeer in situations when the reindeer are alarmed or nervous, or in other challenging situations, provided examples of what kind of alternatives they use for training instead of physical power. These include stopping the training until the reindeer calms down (H8), holding the reindeer gently but firmly (H8), talking to the reindeer gently and giving them lichen (H11), and chatting and rubbing the reindeer (H11). The herders emphasized it was important to be attentive, handle the reindeer with patience and peace (H4), and let the reindeer take the first step (H5). The herders' considerations may reflect changes in attitudes towards handling animals in general but may also reflect the increased participation of women and young people as reindeer trainers. However, this is not necessarily a gender or generation issue. One of the older, experienced herders mentioned that, by far, when training reindeer, it is important to know oneself as a trainer. He explained that the reindeer will know "whether you are good enough to

educate a reindeer because the reindeer will measure you, it will recognize your weaknesses and see whether you are a friend or not" (H12).

Changing Purposes of Draught Reindeer Training

The use of draught reindeer in Lapland is strong today, but only 50 years ago it had almost disappeared (Fig. 2). There were only a few herders who trained draught reindeer at that time; in some cases, draught reindeer were used for domestic work such as pulling loads and doing short trips for various purposes, but mainly they were used for racing, which was still a popular hobby. One of the interviewees summarized the change as follows: "At the beginning of the '90s, nobody around here had any draught reindeer. Before tourism created the need… snowmobiles came in the '70s and the use of skis (in reindeer herding) stopped" (H8).

Some herders started to offer reindeer rides to visitors in the 1960s and 1970s (H13), but more widely reindeer tourism in Lapland and Kuusamo started in the 1980s (Fig. 2). The herders who participated in this study reported that the activities were initially small and local. They mentioned that it was not a question so much about the income but about arranging something special to honour guests and to take them to places with no roads. One of the older herders explained, "Nobody asked money for it in the early days; it was done, but it wasn't done for money. It was just done to offer something special for them (guests) and besides, it was one way to travel" (H13).

The older herders reported that racing reindeer were used in tourist rides in the early years of tourism, when there was a shortage of draught reindeer. Racing reindeer were also used for teaching and learning training skills. The herders reported that even in the 1960s when sledge reindeer disappeared, it was still common to train and use reindeer for racing, mainly for small competitions. Those racing reindeer or ordinary working reindeer, if available, were used for driving tourists. One of the herders mentioned, "Well, it was 15 to 20 years that there weren't many (draught) reindeer. I think there were only racing reindeer, no sledge reindeer" (H5). Some family enterprises started their business by using their racing reindeer for reindeer rides, because some of them had been used for that purpose previously when tourists had been asking for rides. These accounts often referred to areas near Rovaniemi or ski resorts in the eastern part of Lapland.

Increased demand for reindeer rides was an important impetus for the tourism businesses, and they were established particularly in the vicinity of ski resorts. The demand for reindeer rides quickly increased the need for trained reindeer and also for reindeer trainers. One of the herders reported, "Yes, it was '98 when we had our first customers here. It was kind of exciting, as we started by accident. Our neighbour was a tour organizer. He asked my father, who had racing reindeer, if he could train a couple of draught reindeer for him and he could then bring some customers for rides. He called in December and said that there would be 150 customers coming in two weeks' time" (H3).

There were challenges in training working reindeer for tourism because there had been such a long break since the last time of using draught reindeer. There was also a shortage of trainers. The herders explained that old, experienced draught reindeer could be borrowed from other herders who had such reindeer to use as models to train new draught reindeer. However, many herders didn't have that opportunity. For instance, one herder noted, "It was over 40 years since the last draught reindeer, so I needed to start learning from scratch… It is always easier to train when you have old draught reindeer available because the reindeer learn from each other, but we did not have that old draught reindeer, so we had to start from scratch" (H8).

The herders who had contributed to the establishment of draught reindeer tourism reported that they had learned the basics of training from their parents or relatives who still had those skills. The oldest interviewees had themselves trained multi-purpose draught reindeer in the last century to pull a sledge or sleigh and to transport people, goods, and even timber; they had also travelled using reindeer teams for long journeys (H8, H12, H14). Draught reindeer were trained alongside other daily work and seasonal activities. These herders' methods, skills, and experience have developed over the years to suit reindeer sledding for tourism (H10).

Challenges by Global Change

During the last five to ten years, there has been a particularly high peak in tourism in Lapland. As the demand for trained draught reindeer has continuously increased (H5, H10), the practice of training has become professional and require more labour. Today there is also more investment of time and finances in driving routes. To make the work easier, particular attention is focused on the profiles and condition of the routes. The routes can be shorter, but they are kept in better condition. In some enterprises, the distances of the reindeer rides have increased. One of the herders noted, "Well, travel distances have now increased. At one time, we used to say that riding was just walking around the flagpole again and again" (H13). Longer distances and varying weather conditions have increased the need to monitor and keep the routes in better condition. One of the herders explained, "Tourists are also offered longer rides that last one or more days and provide memorable experiences in the heart of nature" (H13).

The herders mentioned that they are concerned about the snow every winter: when it comes, how long it lasts, as well as melting and icing. Due to climate change, snow tends to arrive later in the autumn and disappear early in the spring making the tourist season shorter. This tends to intensify the season, increasing the number of draught reindeer needed and making working days longer (H12).

The peak in tourism was suddenly cut off by the global onset of the COVID-19 pandemic in the winter of 2020, with severe impacts on all tourist activities including draught reindeer tourism. The spring season in 2020 ended abruptly when travel restrictions were set in place in March. When we conducted our additional interviews in the autumn of 2020, the herders were expecting that the winter season of 2020–21 would be quiet, as there were virtually no inquiries from travel agencies.

However, all the herders were planning to continue training draught reindeer during that winter season, as usual. They noted that training is a long process, and since tourism was expected to be running on a small volume for some time, they chose to use that time for training new draught reindeer (H8, H13). The herders were nevertheless optimistic about the future, since reindeer rides were not the only source of living on which they would be fully dependent. They could still rely on reindeer herding as their livelihood, with meat production and, in some cases, direct sales of meat, handicrafts, and other activities (H13).

Herders' Views of the Draught Reindeer Tourism

As the use of draught reindeer in tourism has increased, it has revived the use of draught reindeer and the related culture, although in a different form than in the last century. The herders we interviewed noted the significance of reindeer tourism and draught reindeer training and rides for the reindeer herding culture. In their view, it maintains and strengthens the old draught reindeer culture, deepens knowhow about reindeer, and supports reindeer herding as a livelihood.

The herders were of the opinion that draught reindeer would have disappeared without reindeer tourism. One herder explained, "Well, without them [reindeer working in tourism], they would have disappeared; they almost did, when those snowmobiles came, they were finished" (H5). This was explained by one of the herders, who noted, "Without tourism training of reindeer, the tradition would have totally finished. That knowhow would have disappeared. Tourism has saved that history and the tradition of how people have moved with reindeer with sleds and sleighs" (H10).

The handicraft tradition was seen as becoming stronger with reindeer tourism and the use of draught reindeer in tourism. One of the herders reported, "That, tourism… has strengthened that old tradition (draught reindeer use), but also handicraft tradition. There is an increased need of those who can make harnesses, sew headstalls, and whittle collars for reindeer and such things…" (H8).

Draught reindeer rides and reindeer tourism were seen to have an important economic significance as a side livelihood to reindeer husbandry and tourism in Lapland. The herders also noted that reindeer tourism makes reindeer herding better known locally and internationally, to visitors and society at large, and increases the understanding of reindeer herders and their families' everyday life (H3, H10).

DISCUSSION

The results show that the training and use of draught reindeer in tourism is a highly advanced practice and culture where the traditional knowhow of reindeer herders and the requirements of modernity meet.

The use of reindeer for transportation was restarted in the 1970s from near extinction in northern Finland, when the demand for reindeer rides in tourism increased. Reindeer tourism services were started as a side livelihood for reindeer herders, and although this type of activity was not widely accepted by herders, it extended to various parts of the reindeer management area in the 1990s. The results suggest that racing reindeer contributed to reviving the draught reindeer practice during the early years of tourism in the 1970s in a few parts of Lapland where racing reindeer were still raised. Racing reindeer were used to pull sledges when draught reindeer were not available, and they were also used for reviving training skills among herders.

Today's draught reindeer are directly trained to work in tourism. There are similarities in the current practices in tourism and those of the multipurpose draught reindeer of the early twentieth century, in terms of using castrated males, training methods, and favoured traits (Grotenfelt, 1920; Itkonen, 1948; Paine, 1994; Kortesalmi, 2008). However, today's training is started earlier, it takes longer, and is more specific than in the last century, focusing on training reindeer for certain tasks. Reindeer working in tourism are also well fed and taken care of (Maijala, 2018). The results show that regular feeding today plays an important role in strengthening the relationship and collaboration between herder and reindeer (see also Turunen and Vuojala-Magga, 2014), in addition to its classical use as bait and reward in training (Zeder, 2012, 2015).

The training has become a systematically planned practice for tourism over the last couple of decades. The herders in our study, from different parts of Lapland, train their reindeer rather similarly; they start training with calves, and continue training three to four subsequent winters. The training methods and their stepwise implementation reported in this study mainly agree with those described by Vuojala-Magga (2010) among Saami in Finnish Lapland. Long training has probably become necessary due to a need for reliable reindeer that can safely work with tourists.

Today, draught reindeer are castrated when they are fully trained (see also Soppela et al. 2022) and not before, like in the last century (Itkonen, 1948; Paine, 1994; Kortesalmi, 2008), in line with previous reports (Nieminen and Pietilä, 1999; Korhonen, 2008). The castration is done to prevent males from damaging each other and getting into bad condition during the rutting-time battles in autumn. It probably had the same purpose in the past, although it may also have been done to ease training (Itkonen, 1948; Paine, 1994; Kortesalmi, 2008). Today it is possible to habituate and tame draught reindeer to become used to the presence

of humans and to learn to collaborate for longer than in the past because they are kept on farms in the winter, where they get used to human contact, regular feeding, and handling. Regular, long-term feeding generates care and comfort and results in close bonding between herders and reindeer.

The selection of the draught reindeer with desired qualities requires frequent contact and familiarization with reindeer. There was some personal variation between herders in their preferences, but strong similarities appeared in what was emphasized as the desired traits of draught reindeer for working in tourism. Draught reindeer are expected to be docile and calm when they work in tourism, whereas lively personalities are preferred in self-driven and racing reindeer, which is reminiscent of the last century's driving reindeer (Itkonen, 1948; Kortesalmi, 2008). Draught reindeer working in tourism are chosen to be safe and kind to work with herders and guests (Vuojala-Magga, 2010; Hoarau-Heemstra, 2018; García-Rosell and Tallberg, 2021).

Selection and training are simultaneous, dynamic processes that depend on the learning progress of the reindeer and of the trainer. The herders emphasized the importance of trust in the establishment of a relationship with reindeer. They pointed out important turning points in the behaviour of reindeer when trust was realized, as when they sought human protection. Their detailed accounts indicate that herder-reindeer collaboration—training, working, and other interactions—is based on reciprocal communication and learning, where both parties learn from each other, as mentioned also by Vuojala-Magga (2010) and García-Rosell and Tallberg (2021). These considerations of mutual interspecies learning and co-operation are visible in the training and working practices and agree with current understandings of meaningful human-animal relations in which animals are acknowledged to possess personality, sentience, and agency (Orton, 2010; Vuojala-Magga, 2010; Anderson et al., 2017), have mutual relationships, and undergo dynamic mutual adaptations with people (Istomin and Dwyer, 2010; Oma, 2010; Ingold, 2013; Stépanoff, 2017; Nyyssönen and Salmi, 2013).

In our study, the interaction of a herder and a draught reindeer in tourism appeared more as partnership rather than human dominance over reindeer. The herders emphasized that it is impossible to train reindeer against their will. Many stories suggested that the relationship was close, and negotiation was used when challenging situations appeared. There were few references about the nature of the interaction from the last century. However, it seems reasonable to suppose that the same principles of mutual learning and collaboration existed in the past as they do today, otherwise the training and use of reindeer would not have been successful. The fact that the reindeer is a highly social species, accustomed to structured organization and division of labour in a group, has probably been helpful when humans have trained them as draught animals. Reindeer herding would not have been possible without a human-reindeer relationship that is based on mutual learning and behavioural adaptation and that benefits both parties (Istomin and Dwyer, 2010; Stépanoff, 2017).

The role of draught reindeer today is different than it was at the beginning of the 1900s. Draught reindeer in tourism are trained for specific tasks and have a seasonal working contract, in the sense that they work regularly in the winter (Bohn et al., 2018; Maijala, 2018). They are trained for different purposes, such as sledding tourists alone, working in draught teams, and even for a certain position in the team. They have working shifts and breaks, and their feeding is carefully planned (Maijala, 2018). The tours are probably not more demanding today than they were in the transport, freight, and forestry work in the last century (Itkonen 1948; Kortesalmi, 2008; Turunen et al., 2018). Draught reindeer in tourism travel at a peaceful pace, as their task is to provide pleasant drives and encounters with tourists. The well-being of reindeer is highly important to the herders who see reindeer as their workmates and companions and care for them in many ways. It is also noteworthy that herders are constantly aware of and greatly value the wild side of reindeer. When reindeer return to the forest after the season, they need to find their food and be alert to predators and other threats in nature. They would not survive if they were too tame. The role of reindeer working in tourism is thus dynamic, and co-operation with humans starts anew every winter, based on relationships built in the previous winter.

The use of draught reindeer in tourism can be seen as contractual care, where reindeer have instrumental value and are cared for in exchange for the service they provide, as interpreted by García-Rosell and Tallberg (2021) in their stakeholder study. We looked at the practice from a different perspective, that of the interaction between herder and reindeer. We could see that the reindeer is highly respected as a subject, and that reindeer herders and reindeer work together in a way that benefits both parties—it is not just instrumental but rather a mutually meaningful relationship. We argue that our results show, in line with other studies (e.g., Vitebsky, 2005; Vuojala-Magga, 2010; Helander-Renvall, 2010; Stépanoff, 2017), that reindeer herders' knowledge combined with their long experience of interacting with reindeer enables them to take reindeer into account both as individual subjects and as a species and respect their interests and modes of actions while working together. The interviewees in our study identified themselves primarily as reindeer herders rather than tourism agents. They saw the use of draught reindeer in tourism as part of reindeer herding and as their way of living their lives together with reindeer. Draught reindeer tourism was seen as a continuation of the tradition and long partnership with reindeer.

The deep traditional and experiential knowledge of the herders of reindeer is a key element of their skills and of reindeer herding as a whole. The training and use of working reindeer keeps that knowledge and close relationship with reindeer alive. The importance of this

close knowledge of individual reindeer and their behaviour, in addition to traditional knowledge of reindeer herding and herd behaviour, has been highlighted, for example, by Saijets and Helander-Renvall (2009) in their study with Saami herders. They were concerned about the effects of digital technology on younger reindeer herders and considered whether it could make it unnecessary for them to identify and know reindeer as individuals (Saijets and Helander-Renvall, 2009), which is a skill that can be learned only in close and continuous contact with reindeer, such as in draught reindeer training. Delightfully, there are more and more young herders nowadays involved in training for both reindeer farm tourism and racing.

Draught reindeer tourism, as a nature-based livelihood and similarly to tourism in general, is sensitive to changes in climate and environment, economy, and volume of visitors, and also, as we have recently seen, to global pandemics. Although there are also bigger safari companies in the business, the majority of draught reindeer enterprises in Lapland are still relatively small family companies that herd and train their own reindeer (Bohn et al., 2018). The fact that draught reindeer tourism is an integral part of a reindeer herding livelihood makes it culturally but also economically more resilient to changes such as volume-related fluctuations and hardships in tourism compared to other forms of tourism that are not based on local culture. During such hardships, draught reindeer herders can turn to reindeer herding as their basic livelihood and use the waiting time to develop other activities. It is from reindeer herding that they also draw on their knowledge of draught reindeer use and are able to take care of its continuation into the future.

Draught reindeer use has its contemporary manifestation in reindeer tourism rides and racing. Draught reindeer use, and traditional knowledge and the mental and material culture associated with it may have disappeared without these new forms in reindeer tourism and racing.

CONCLUSIONS

The use of reindeer for travel and transportation is a long tradition stemming back centuries, even a thousand years, and is based on close interaction between humans and reindeer. Taming and keeping draught reindeer is thought to have played an important role in the domestication and practice of reindeer herding; a process that remains ongoing. The trust, mutual learning, and interaction between humans and reindeer is still the basis of the draught reindeer culture.

Draught reindeer use in tourism is a practice that has preserved traditional knowhow of training and collaboration with reindeer and adopted modern techniques and training methods. The survival of the practice from the distant past to the present—despite changes in circumstances, environment, and purpose—demonstrates remarkable adaptability, based on long-term human-reindeer co-operation and its underlying knowledge system.

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