Examining interspecies interactions in light of discourse analytic theory : a case study on the genre of human-goat communication at a petting farm

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Examining Interspecies Interactions in Light of Discourse Analytic Theory: A Case Study on the Genre of Human-Goat Communication at a Petting Farm

ABSTRACT

This paper investigates how linguistic research can contribute to the field of interspecies studies through an ethnographic study on human-goat communication. It addresses two research questions: whether traditional discourse analytic theory can be used to analyze non-human communication, and whether the specific concepts of communicative events, purposes, and move structure within genre theory can be applied in these contexts. The data show that genre theory can be applied, and that both the humans and the goats attempt to make their communicative goals salient to the recipients. The results illustrate the possibility of applying traditional linguistic theory to non-human contexts, and it is argued that discourse analytic theory should include interspecies interactions to gain new insights in general communicative paradigms.

Keywords: posthumanist linguistics, interspecies communication, human-goat interaction, genre theory, animal agency, discourse analysis

1 INTRODUCTION

Traditionally, the general field of applied linguistic research has predominantly been focused on human communication, although research has shown that non-human animals are, in fact, capable of language and communication to certain degrees as well (Håkansson & Westander, 2013; Martinelli, 2010; Meijer, 2016; Meijer, 2019; Tanner & Perlman, 2017). This paper therefore aims to investigate what applied linguistic research can contribute to the burgeoning field of interspecies studies (for other examples, see Cornips & van den Hengel, 2021; Milstein, 2013; Pennycook, 2018). To this end, we will address two fundamental research questions, namely (i) the broader question of whether or not traditional discourse analytic linguistic theory can be used to analyze non-human communication, and (ii) a more applied focus on whether or not the specific concepts of communicative events, communicative purposes, and move

structure within genre theory as defined by Bhatia (1993; 2002) and Swales (1990) can be applied to interspecies interactions. In order to answer these questions, the first author (henceforth: FdM) conducted an ethnographic case study on human-goat communication within the discursive context of the petting farm, more specifically during feeding time.

In Section 2, we elaborate on previous research into embodied communication among human and other animal species and its relevance within contemporary linguistic research. Subsequently, we introduce the theoretical frameworks of genre theory, discourse analysis and studies on the cognitive capabilities of goats in Section 3. This is followed by the methodology in Section 4, and the results and analysis of the data in Section 5.

2 SIGNIFICANCE OF INTERSPECIES RESEARCH

In the hegemonic conception of communication, it is often assumed that humans are the only animals capable of language. Some of the most influential (Western) philosophers such as Aristotle, Descartes, Kant and Heidegger have even claimed that it is language itself that distinguishes non-human animals from human animals, as our ability for language, communication and reflection is assumed to be unlike anything other species know or are capable of (Meijer, 2019; Pennycook, 2018). Although these arguments have been scrutinized and refuted in more recent scholarship (ibid.), the strong influence of these great thinkers nevertheless remains present in contemporary conceptions of relationships between humans and animals.

In linguistic research, language is often defined as having core structures such as syntax and grammar (Smith, 2017), rendering animal languages inherently uninteresting as they are presumed to lack these core properties, ultimately resulting in a lack of linguistic research on conceptions of language and communication that go beyond these assumptions. A look at human-animal interactions therefore requires an orientation towards posthumanist ideas (see also Cornips & van den Hengel, 2021; Pennycook, 2018) in order to explore what it means to be human, how deeply mankind's anthropocentric ideologies run, and how linguists can attempt to deconstruct them. Despite its heterogeneous currents of thought, the goal of posthumanist linguistics is to reinterpret past works on discourse and reshape the way linguists and humans in general think about communication and interaction, not only with each other, but with all living co-beings and things (Pennycook, 2018). As such, applied linguists who conduct research within this framework agree that different species should be examined within their own contexts, following for example De Waal & Ferrari (2010), rather than pitting them against the human species (Kulick, 2017). To this end, this paper takes into account the species-specific communicative characteristics of both humans and goats in their situated

context and defines interspecies interaction as communication that is embodied, embedded and distributed across humans and other animals, places and time (Pennycook, 2018, p. 51)[1]. We therefore understand communication as a process in which a communicator not only encodes a signal, which is then received and decoded by the receiver (Reboul, 2015), but in which both the sender and receiver interact flexibly with each other (Siever et al., 2017) by creating, detecting and understanding the signal (Martinelli, 2010; Siebeck, 2014). The paper then focuses on whether or not the observed communicative practices can be analyzed through the theoretical framework of discourse analysis, and more specifically genre theory, with the aim to critically engage with and to possibly expand common conceptions of communication. Specifically, it explores whether the communication between human beings and dairy goats (as caged living beings subject to the demands of industrial animal production), which involves gaze and body positioning, can be accounted for by genre theory.

3 THEORETICAL FRAMEWORK

To better understand human-animal communication specifically, research in ethology on 'Capra hircus', referred to as domesticated goats or simply goats, is a relevant starting point. This research shows that goats have long-term memory, which allows them to discriminate between visual stimuli for several weeks after they have been shown to them (Nawroth, 2017). They are also capable of remembering goat vocalizations for several months (Briefer et al., 2012). A study by Kaminski, Riedel, Call, & Tomasello (2005) also showed that goats are capable of following the gaze of other goats, but that they do not follow the non-conspecific gazes of humans. What they did find in relation to humans, however, was that goats follow other visual cues, such as tapping and pointing. Another study by Nawroth, Brett, & McElligott (2016) studied gaze in relation to the posture and direction of the humans. Their results show that goats gaze earlier and for a longer period when humans are faced towards them than when they are faced away, meaning that goats recognize humans and change their own gaze behavior to their presence.

The results from these studies provide insight into goats and their communicative modes. Taking this knowledge about cognitive capacities of the goat into account, the collected dataset is analyzed in light of genre theory. In general, genre theory deals with communicative

[1] Although we believe intraspecies animal or interspecies human-animal languages as models are possible (Meijer, 2019), the concept of communication allows for a broader application and interpretation for the purposes of this study.

events that occur in conventionalized contexts, and an analysis of genre should therefore subsume both a context and the events that often occur within that context. More specifically, genres are defined by Miller (1984) as the typification of rhetorical action based in recurrent situations, and they are characterized by "regularities of stages, goal oriented social processes" (Martin, 1993) and "consistency of communicative purposes" (Swales, 1990). Genre analysis is thus concerned with *typification* and argues that the chaotic real world of communication can be interpreted as definable sets of communicative events on the basis of recurrent situations. These events are *goal-oriented* and their goals are *consistent*. Genres are inherently dynamic and prone to change, but typified events share a consistent goal that is less prone to change than the form in which they take place.

The typification of communicative events, their goal-oriented communicative purposes, and the consistent move structure of the identified communicative events will be examined within what we assume to be the genre, namely communication between humans and goats within the specific context of the petting farm. This theoretical approach was chosen because it specifically aims to disentangle and make sense of chaotic real-life communicative situations, making it particularly apt for unstudied contexts. Although this specific genre has thus not been previously identified or studied, the context allows for an analysis of genre as it is characterized by recurrent interactions as a result of the conventionalized context of the petting farm. The three abovementioned genre-specific concepts are then used as concrete tools to examine and conceptualize this communicative context from a linguistic perspective, and the analysis will provide a further basis for the argument that this context can be analyzed as a genre.

As for the analysis, discourse is traditionally defined as *language (in) use* in applied linguistics, but it is interpreted as *interaction in use* for the purposes of this paper, with a specific focus on gaze and body positioning. Gaze has been found to be important in social interactions between humans for establishing relationships and for participation in conversations, plays a crucial role in regulating turn-taking (Auer, 2018), and can differ culturally (Rossano, 2013b). Additionally, both gaze and body posture are ways of displaying (dis)engagement in the course of action by human interactants (Rossano 2013a).

Because Nawroth et al. (2016) found that goats both recognize and react to human body positioning, and because the goats in the selected petting farm are socialized from birth onwards to other kid goats and humans (see the description of Map 1 below), we assume that they have acquired knowledge on how to establish relationships through gaze and body posture with humans. These interactions then also raise the question of agency, which has been discussed extensively in philosophical, sociological, and anthropological literature and has been attributed to non-human animals as well as to human animals (Carter & Charles, 2019). As a result, we will examine the agency of the humans and the goats in order to further

understand the interactions in question, and we follow Carter & Charles (2019) in defining non-human agency specifically as having an effect “on the social order which sustains an unequal distribution between humans and other animals” (p. 333). In doing so, we assume that observable or perceivable behavior can be interpreted as intentional or goal-directed communication, but we do not ascribe the goat any capacities to recognize the signaler’s intentions in order to understand the meaning of the communicative event (Sievers et al., 2017).

4 METHODOLOGY

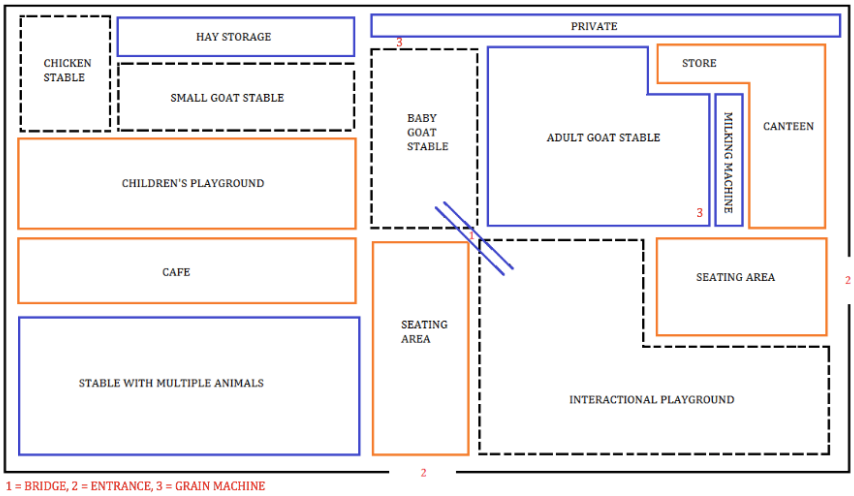
4.1 SELECTION OF THE GOAT FARM

The petting farm where the data collection took place was chosen for its large number of goats, which was estimated between 120 and 150, as a larger number of goats allows to make broader conclusions about human-goat communication in general. A petting farm is similar to a petting zoo in the sense that the visitors can touch the animals, unlike in traditional Western zoos. However, the main difference with petting zoos is that the animals in petting farms are used for economic farming purposes in addition to the educational or entertainment purposes of the petting zoo (Anderson et al., 2002). In the case of the goats, this refers to milking the goats, selling their milk, and selling goats as meat products.

The goats examined in the petting farm context are domesticated. This means that they have behaviorally adapted to respond to and depend on humans and the stimuli they provide by selective breeding over the past 10,000 years (Price, 1984). However, Anderson et al. (2002) indicate that, if goats are not given the possibility to escape from the human-filled environment of the petting farm, they can present ‘undesirable behavior’, such as stomping and charging at humans. This behavior can be considered agentive since it has an effect on the assumed social order between humans and other animals, namely that humans believe it to be undesirable because it does not align with the goal and definition of the petting farm to be in direct contact with the animals. This issue can be solved through spatial design by including a retreat space for the animals, as the animals show less undesirable behavior in petting farms where there is a retreat space available (Anderson et al., 2002). Additionally, Stachowicz, Gygax, Hillmann, Wechsler, & Keil (2018) show that goats long for an outdoor space which “provides visual, acoustical, olfactory or climatic stimuli, which are not present inside” (p. 28). As a result, it is beneficial for goats to have access to outside areas.

The setup of the petting farm where this research was conducted is visualized on Map 1 and presents the farm from the visitor’s perspective. The areas indicated with dashed lines

are accessible to both goats and visitors, whereas sections in orange indicate visitor-only areas, and blue sections are areas where visitors are not allowed. Finally, bridges between areas are marked by the number 1, entrances to the farm are marked by the number 2, and grain machines are marked by the number 3.



Map 1. Goat farm layout

This map shows that the adult goats cannot exit their stables. Additionally, humans cannot enter those stables, and so the adult goats have the possibility to walk away from humans when they are not interested in interactions. The goat kids, on the other hand, are separated from their mothers and other adult goats, and can only roam free in areas that are also freely accessible to humans, namely between their stables and on the interactional playground. As a result, kid goats are communicatively socialized with other kid goats, human adults and human children. Additionally, although they have more spatial freedom than the adult goats, they cannot escape the presence of humans, which could result in negative consequences for their well-being and welfare (Anderson et al., 2002; Stachowicz et al., 2018).

4.2 LINGUISTIC ETHNOGRAPHY

An ethnographic approach to data collection was chosen as the starting point for this project, as it allows for a broad first look at the unstudied culture and is ideal to generate first hypotheses about uncharted territory (Copland & Creese, 2015; Dörnyei, 2007). Moreover, it allows us to start to examine interspecies communication from empirical data, enabling us to understand how humans and goats include their body, in particular body movement and gaze, in the interactional production of meaning on the basis of what we can observe.

The data was collected in a multimodal manner (Dörnyei, 2007). The final dataset therefore consists of field notes detailing what FdM heard, saw, smelt, and felt, as well as video recordings and photographs. In doing so, the researcher mainly took a front-facing perspective

on interactions towards the goats, with a specific focus on their gaze and body positioning. As a result of the broad perspective at an unstudied culture, field notes became increasingly specific and included more details as time passed. A total of six visits to the goat farm were made and at the end, a total of 6000 words worth of field notes, 42 photographs, and 29 videos were collected within the genre of human-goat communication at the petting farm[2]. The six visits each consisted of multiple hours, leading up to a total of fourteen observation hours. All the visits took place during the period between 20 March 2019 and 3 April 2019. Three visits were conducted alone and three were with participants who were recruited on the basis of 'convenience sampling' (Dörnyei, 2007). This type of sampling was chosen as the farm had not given permission to ask other visitors for participate in the research on the premises of the farm, leaving us with fewer options than anticipated in terms of participant recruitment.

In total, five participants were chosen to visit the goat farm with FdM over the course of three visits.[3] The visit then started with a tour of the farm, which consisted of showing them around the different areas of the farm, so that they saw all the different stables and the animals living and working in them. After this tour, the participants were told they could do whatever they wanted and that FdM would follow them around without providing specific instructions on what they should do. When the participants were interacting with the goats, FdM would record them with the camera of her personal iPhone 6S during interactions relevant for research purposes.

4.3 FEEDING-RELATED EVENTS

A linguistic ethnographic approach entails that the focus of the research develops throughout the data collection process. As a result, the collected data focused increasingly on one type of interaction, namely feeding-related events. Feeding at the petting farm requires both humans and other animals to be present in order to succeed, as the organizational structure of the petting farm dictates that goats rely on humans to provide them with food and feeding therefore inherently requires some type of human-animal interaction. However, our focus is not that of

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[2] Although it would be insightful for the reader to gain insight into (parts of) this broader dataset, agreements that fall under GDPR legislation with both the institutions where the research took place as well as the petting farm itself and the human participants involved prohibit the researchers from sharing larger parts of the collected data.

[3] The participants signed informed consent forms after reading an information letter about the research and gave the first author written consent to record them in interaction with the goats. No (visual) variables about their identities are taken into account for the purposes of this paper.

traditional ethological research which includes competition or hierarchical organization during feeding and who eats what (see for example Despret, 2006).

The focus on feeding-related events led to a reduced dataset of 1500 words of field notes, 18 photos, and 14 videos. For in-text transcripts of the videos, the Jeffersonian transcription method is used (Hepburn & Bolden, 2013). This method accounts for both what is said and what is done, which is crucial when analyzing human-goat communication, as goats cannot communicate in human language[4].

5 RESULTS AND ANALYSIS

5.1 COMMUNICATIVE EVENTS

The communicative event is the main unit of analysis in genre analysis and examines how a text (or in this case, an interaction) functions in the social world as a recognizable event (Bhatia, 1993). Within the assumed genre of communication between goats and humans at the petting farm, the communicative event of feeding[5] is recognizable by two features, namely that there are at least two participants who partake in the event, one of whom is human and one of whom is a goat, and that there is some type of food involved in the interaction between these participants (which is sometimes carried in machines or other objects and can be indirectly given through a feeder that holds the food), which is provided by the human and intended for the goat to eat.

This communicative event takes place in different ways on the basis of the different participants that take part in it. At the farm, there is a distinction between the human visitors and the human staff, which results in different approaches from these two types of participants

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[4] Unfortunately, a gaze-specific transcription such as the one suggested by Auer (2018) is impossible for the recorded dataset, as not all participants are always visible in the film frame, resulting in unclarity regarding reciprocated gaze and the subject of a participant's gaze if it is outside of the film frame. This is a result of the ethnographic approach in an uncontrolled data collection context, because of which gaze was only considered communicatively remarkable after the dataset had been fully collected. Consequently, we acknowledge this as a limitation to our research and believe that future research should take this into consideration so that data collection processes allows for gaze-specific transcriptions.

[5] Of course, multiple communicative events besides feeding take place within the genre of human-goat communication at the petting farm, such as milking or petting, but these cannot be examined within the limits of this paper.

in regard to feeding the goats. For each of these two categories then, three types of feeding interactions were identified. The six different identified interactions can be summarized in the following way:

- Staff and goats
    - Machine filling of feeders
    - Manual filling of feeders
    - Feeding while milking
- Visitors and goats
    - Feeding milk bottles
    - Feeding grains
    - Feeding grass and hay

Although all interactions are presented as separate for the sake of clarity, they can occur simultaneously and mixed in reality. All six types of interactions will be elaborated on to explain how the genre of communication between humans and goats at the petting farm manifests itself through the communicative event of feeding in different ways.

5.1.1 STAFF AND GOATS

In staff-goat interactions, the feeders by the stables with adult goats are filled by the farm staff at regular intervals throughout the day. As explained by the notices in Figures 1 and 2, the farm only provides specific types of food for the adult goats, for example grass, herbs, and clovers. An emphasis is placed on the rationale behind biological feeding, which revolves around health concerns for the goats as well as the quality of the farmed goods.

The first recognizable feeding interaction takes place when the adult goats are fed by the staff with the aid of a machine. To do so, a staff member starts the machine, which moves from one end of the feeders to the other and fills them up. This is illustrated in Figure 3, where the staff member in question is standing on the other side of the machine and therefore not visible in the picture. In addition to the presence of a human, a goat, and food, this interaction also involves a machine, and although it is unclear whether the goats react directly to the presence of the human or to the combination of the human and the machine, the machine is always operated by a human and therefore interpreted as human-goat communication.

A second type of feeding interaction takes place when the feeders are filled manually, as recorded on video. In this interaction, a staff member walks up to the stable carrying a mixture of grains in a wheelbarrow. The goats see this and subsequently walk up to the feeders to put their heads through the fences and access the feeders. The human then stops in front

of them, takes the food out of the wheelbarrow with a rake and puts it in the feeders:

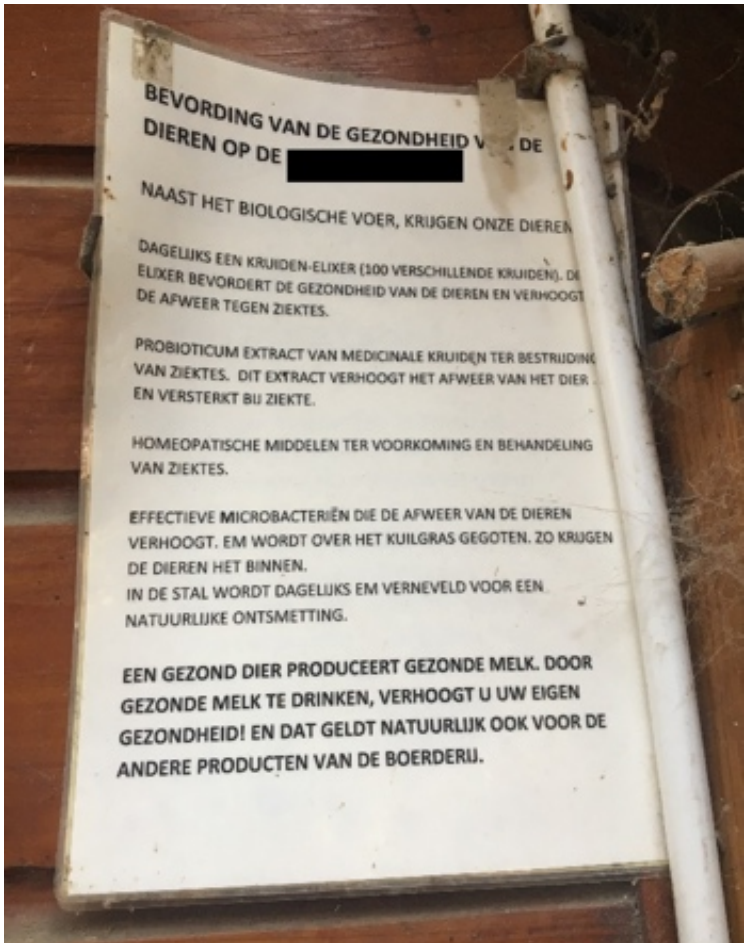

Figure 1. Signage concerning the goats' food

Figure 2. Signage concerning the goats' food

Transcript 1 (5 seconds)

1 Staff member: ((puts grains in feeders))=

2 Goats: =((look at the food and start eating it [as soon as it falls into the feeders))

3 Staff member: [((walks away))]

Figure 3. Adult goats' feeders are filled by a machine

It becomes clear from the lack of a shift in the goats' gaze in line 2 that their attention is directed at the food rather than at the human, as they do not look at him any further once the food has been put in the feeders.

Finally, a third recognizable interaction in which the staff feed the goats occurs when the goats' feeders are filled before they are milked, so that the goats can eat while they are being milked on the designated milking platform. This process is shown in Figure 4.

Figure 4. Adult goats eating while being milked

When a group of school children was at the farm, they also got the opportunity to hand-milk a goat, and a bucket of grains was put in front of the goat by a staff member while this took place. This illustrates that the staff always feed the goats when they are being milked, even when it is done manually.

5.1.2 VISITORS AND GOATS

Three different types of feeding interactions were observed between goats and visitors. The first consists of visitors feeding the goat a milk bottle that can be bought in the canteen. This is by far the most often occurring visitor-goat interaction, as it allows for close interaction with the goat kid, which was observed to be more popular than feeding the adult goats.

However, FdM observed throughout the data collection that the goat kids were not always interested in the milk bottles. This was also recorded and shown in Transcript 2 in interaction with Participant E. In this excerpt, the human participant is sitting on a bench in the interactional playground while a goat is standing on the bench next to her. She tries to lure it towards her and succeeds in lines 1 and 2, but the goat does not want to drink from her bottle, as illustrated by the participant's reaction in line 5:

Transcript 2 (7 seconds)

1	E:	Come here ((looks at and holds bottle towards goat))
		(2.4)
2	Goat:	((looks at and walks towards milk bottle [and sniffs
		it))]

3 E: [((holds goat's head up and tries to move the bottle into its mouth))]

4 Goat: ((moves head slightly to the left and directs gaze away from the bottle))

5 E: ((looking at goat)) You don't want any?

As indicated in line 5, Participant E interprets the message conveyed by the goat's shifting gaze and body movement as a lack of interest. However, in line 3 of Transcript 3, the participant goes even further by trying to force the goat kid to drink from the bottle after the goat denies her advances in line 2:

Transcript 3 (6 seconds)

1 E: ((looks at and grabs goat's [head))]

2 Goat: ((stands still while [trying to move its head away in multiple directions))]

3 E: [((tries to push the milk bottle into the goat's mouth while forcedly holding onto its head))

4 E: Come on, honey ((lets go of goat's head))

The endearing words uttered by Participant E in line 4 illustrate that the participant feels affection towards the goat and exemplifies a type of desperation for interaction, rather than intention to hurt or upset the goat by trying to force-feed it. This is emphasized by her letting go of the goat's head and accepting the goat's refusal to interact with her.

In another instance, however, FdM recorded a goat who was particularly eager to drink from a milk bottle. In Transcript 4, Participant E is sitting on the floor in the goat kid stable and holds out the new milk bottle towards a goat next to her:

Transcript 4 (21 seconds)

1 E: ((holds a bottle of milk in front of the goat))=

2 Goat: =((looks at and moves towards E and starts drinking from the bottle, emptying it in one go))

These excerpts show that the goat kids are not always as interested in interacting with humans as they are in eating.

A second visitor-goat feeding interaction takes place when the visitors feed the goats grains that are for sale at the gumball-like machines, as illustrated in Figure 5. This food is

intended for adult goats. In Transcript 5, the goats show their interest in this type of food; just from moving towards the machine, they immediately come up to the fence in line 1:

Transcript 5 (12 seconds)

1 Goat #1: ((sticks head through the fence, looking at the grain machine))

2 C: [((turns the wheel of the grain machine, making rattling sound))]

3 Goat #1: ((looks away))

4 C: ((starts taking the grains out of the machine))

5 Goat #1: ((looks at the grains being taken out of the machine))

Figure 5. Grain machines by the adult goat stables

After taking the food out of the grain machine, two goats stand by the fence and compete for the grains in Participant C's hands while she alternately offers them some:

Transcript 6 (15 seconds)

1 Goat #1: ((stares at Participant C's hand intently))

2 C: ((holds out a handful of grains to Goat #1))=

3 Goat #1: =((eats out of Participant C's hand))

4 D: Hmm, dat is precies wel lekker hé?[6]

5 C: ((pulls her hand away and [walks towards Goat #2))]=

6 Goat #1: =((continues to look at Participant C's hand as she walks away))

7 C: [Geen ruzie maken hé][7]

8 C: ((holds out a handful of [grains to Goat #2))=

9 Goat #2: [((eats out of Participant C's hand))]

In line 5, the participant exerts clear control over which goat gets to eat by actively pulling away her hand from one goat and offering the food to another. The interaction ends when the goats realize that all the grains from the human participant's hands have been eaten.

Finally, the third type of visitor-goat feeding interaction occurs when visitors choose not to pay for the food offered by the farm and try to hand-feed the goats food that is already freely accessible to them, i.e. grass or hay. This is illustrated in Figure 6, where Participant E is feeding the goat kids some hay in the goat kids' stable.

Figure 6. Participant E hand-feeds goat kids hay

[6] Our translation: "Hmm, that's tasty huh?"

[7] Our translation: "No fighting!"

An adult goat was also recorded accepting hand-feeding approaches, when Participant A offered her some hay while she was already eating from the feeders by the fences of the adult goat stable:

Transcript 7 (6 seconds)

1	Goat:	((chewing on hay, not looking at Participant A))=
2	A:	=((takes hay out of the feeder and offers it to the goat))
		(1.0)
3	Goat:	((eats hay out of Participant A's hand))

In line 3, the goat makes the choice to not eat out of the feeder anymore and focuses her attention on the participant and the food that she is offering instead. This is remarkable, as it shows that the goat prefers social behavior with humans over the possibility of not interacting with them which would have the same result, namely being fed. However, in other instances, the opposite occurs as well. For example, only minutes after the interaction in Transcript 7 took place, the same goat decides to eat from the feeder rather than Participant A's hands anyway:

Transcript 8 (14 seconds)

1	Goat:	((eats hay [out of the feeder))]
2	A:	[((takes hay out of the feeder and holds it in front of the goat))]
3	Goat:	((continues to eat hay out of the feeder))

In contrast to the interaction in Transcript 7, the action of the goat in line 3 shows that it has lost interest in the participant and the food she is offering. Similar to the goat kids who do not want to drink from the offered milk bottles, these different examples show that goats can express both interest and disinterest in interacting with humans, illustrating an effect in the supposed social order of human-goat interactions and therefore agency, highlighting the influence of human-goat interactions and human socialization on goat behavior.

5.2 COMMUNICATIVE PURPOSE

Each communicative event is goal-oriented (Martin, 1993) and the goals are relevant for analyzing the event and the general genre itself, as they provide information about why the communicative events occur and, on a broader scale, what information they can provide about the participants who take part in them (Bhatia, 1993). Within the genre of communication between humans and goats at the petting farm, three types of participants, i.e. the farm and their staff, the visitors, and the goats, interact with three different communicative purposes.

5.2.1 FARM AND STAFF

From the farm's perspective, the general purpose is represented on their mission statement poster, as illustrated in Figure 7.

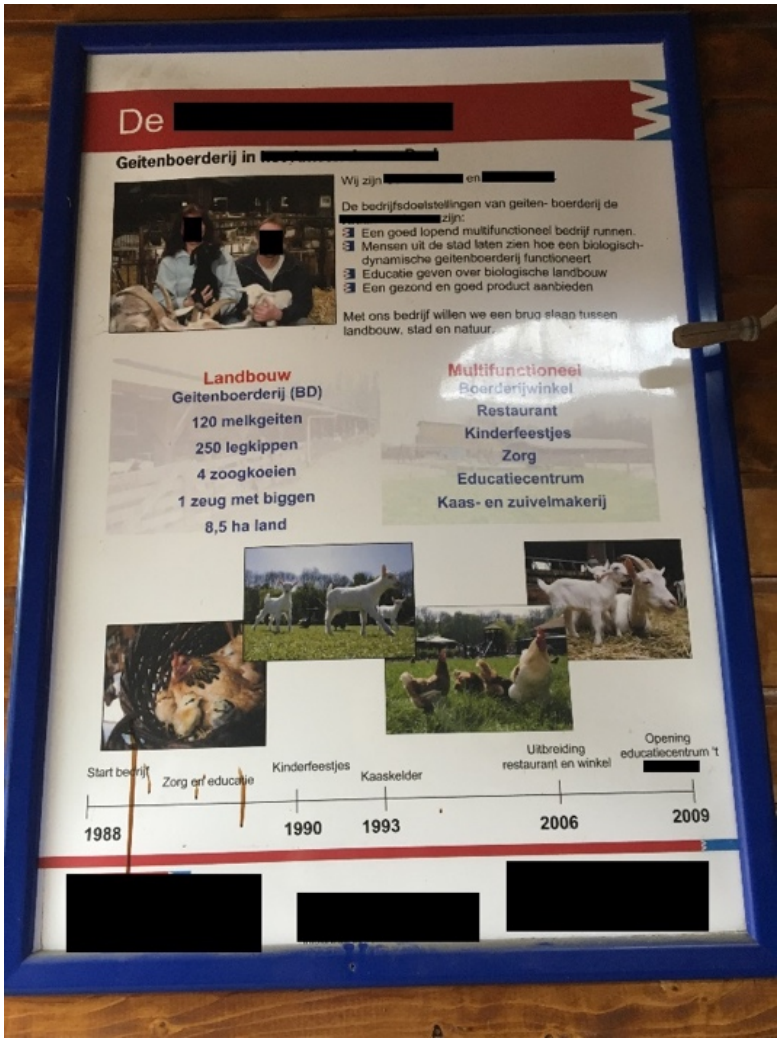

Figure 7. Signage concerning the farm's mission statement

The four main goals of the farm as explained on this poster can be translated into English as follows:

> "(1) To run a well-running multifunctional company;
>
> (2) To show people from the city how a biological-organic goat farm functions;
>
> (3) To educate people about biological farming;
>
> (4) To offer a healthy and good product."

Additionally, the poster mentions how the farm works in a multifunctional manner. For example, it is possible to throw children's birthday parties there, and there is a restaurant at the farm where visitors can have breakfast, lunch, or just a coffee.

Tying this back to the purpose of feeding interactions from the farm's perspective, the farm relies on the goats' products and presence in order to thrive, both for its farming with the economic goal of making profit, and for its defined educational and entertainment purposes. As a result, the goats are fed with the supposed aim of keeping them alive and healthy, as goats who are malnourished or not fed at all would become ill or, in the worst-case scenario, die, depriving the farm of its main source of income and threatening its survival. This can be deduced from the signage visible in Figure 1 as well, where it is explained what the goats' food consists of and emphasized that the goats receive this type of food in order to keep them healthy and to fight off diseases.

In addition to this, one of the staff members explained that 55 liters of goat milk are needed to produce one block of goat's cheese, which is why they separate the mothers from their kids as early as possible. This is done so that they cannot drink the milk that the farm needs for its dairy farming purposes. As such, the farm does not only take into consideration the health conditions of the goats, but also (and ultimately) its own economic benefits, the latter of which are secured by the feeding of goat kids with formula milk instead of their mothers' own milk, which is reserved for the production of goat cheese. Additionally, male goat kids are (often) sent to the slaughterhouse, since they cannot provide milk and as a result do not contribute to the economic purposes of the farm in that sense. Instead, their meat is sold at the farm. Therefore, the general communicative purpose of the communicative event of feeding from the farm's perspective is not only to keep the goats alive and healthy, but to do so in a way that allows them to achieve their for-profit farming purposes as best as possible. [8]

5.2.2 VISITORS

From the visitor's perspective, there seem to be two purposes behind the communicative event of feeding, namely educational and entertainment purposes. For the first purpose, a staff member tells FdM that they receive a high number of requests for school visits, as schools want to allow children to get to know animals so that they are not afraid of them at a later age. As part of these school visits, the children feed the goat kids milk bottles and the adult goats grains. Additionally, many visitors were observed to be parents who bring their children to the farm to introduce them to farm animals. As such, one communicative purpose of the (adult)

[8] As we did not speak in depth to the staff because of a lack of permission, it is not possible to elaborate on the communicative purposes of different employees specifically. Therefore, it is presumed for the purposes of this study that their communicative purposes are similar to the farm's communicative purpose, but it is possible that their personal motivations are broader or differ from the main aim of the farm itself.

visitors is to help educate (young) minds about farming and farm animals, partly through the process of feeding them, as this allows them to interact with the animals directly.

Next to the educational purpose, the second communicative purpose of feeding from the visitor's perspective is entertainment. In a broad sense, this corresponds with the farm's general mission statement in Figure 7, as part of the multifunctional approach of the farm consists of children's parties and a restaurant, elements that correspond with entertainment and fun, similar to the purposes of a traditional Western zoo (Milstein, 2009).

In the case of feeding specifically, the visitors seemingly use the food as a way to establish a connection and interact with the goats. For example, FdM observed two people sitting on a bench, trying to lure some goats with a bottle of milk. After some hesitation, the goats finally decide to jump onto the bench with the visitors. In doing so, the visitors used food that the goats cannot get elsewhere to lure them into interacting and communicating with them.

This entertainment purpose is also reflected in multiple disappointed reactions from visitors when the goats do not want to be fed. An example of this is recorded when Participant A squats down to the floor and tries to hand-feed a goat kid some grass:

Transcript 9 (16 seconds)

1	Goat:	[((eats grass from the ground))]
2	A:	[((pulls out a handful of grass] and [holds it in front of the goat))]
3	Goat:	[((sniffs the grass that Participant A offers but continues to eat from the ground))]
4	A:	((looks up at researcher and Participant B disappointedly))
5	A:	((looks back at the goat and throws the grass away))

In this example, the participant tries to get the goat's attention by offering it grass in line 2, but the goat is not interested the participant and continues eating grass from the ground, illustrated in line 3. As a reaction to this, the participant looks at both FdM and Participant B in a disappointed manner in line 4, as can also be seen in Figure 8. The participant's facial expression shows that she is not pleased by the fact that the goat refuses to pay her any attention, despite her clear invitation. This disappointment is emphasized by her action of throwing the grass away in line 5, making it clear that she has given up on establishing a communicative event with the goat.

Figure 8. Participant A looks disappointed

This disappointed reaction is also illustrated in Transcript 3, when Participant E tries to force-feed some goat kids when they seem uninterested in drinking from her milk bottle. All of these examples show that many visitors at the farm seem to take part in the communicative event of feeding with the communicative purpose of entertainment, and they use the food to establish a connection with the goats. This clearly differs from the staff, as the visitors do not seem interested in whether or not the goats are hungry, an aspect that can be deduced from their disappointed reactions when the goats reject their attempts to communicate and interact.

The visitors struggle to cope if the goat refuses to connect, which can be linked to their anthropocentric point of view. When interacting with animals, the humans expect to be in hierarchic control over the interaction, and the goats' refusal to connect does not match these expectations, leading to a situation in which a message is conveyed that influences the goat's agency and that is not accepted by the human participant. In the context of the dairy goat farm as shaped by wider structures of power, witnessing the force-feeding and disappointments among the human visitors shows that the goats are capable of affecting and modifying humans in their relational existence with humans and food (see also Carter & Charles, 2019; Cornips & van den Hengel, 2021).

5.2.3 GOATS

Feeding has two communicative purposes from the perspective of the goat. Since they cannot be at pasture, they often do not have a choice other than to interact and communicate with humans to be able to eat. At pasture, the feed choice of the goat kid would be influenced by

the mother goat (Orve, 2010), but this is not possible at the farm, as the goat kids and their mothers are separated soon after birth. Therefore, the first communicative purpose for the goats is to be fed. This focus on being fed is clear in Transcript 1, where it is illustrated that the goats seemingly get excited when they see the human, but that this excitement stems from associating him with food, and not from the presence of the staff member himself. This example shows that, especially in interaction with the staff, the goats' focus during feeding is simply to be able to eat.

In addition to being fed, the goats are sometimes interested in and curious towards interaction with the visitors. Transcript 7 for example shows that goats actively choose to interact with humans during feeding even when there is a possibility not to, underlining their capacity to socially interact with humans during feeding time. Additionally, FdM observed multiple instances where both adult and goat kids nibble, i.e. moving their mouths, lips, or teeth on objects (Stachowicz et al., 2018, p. 26) that are non-food items. The objects range from FdM's notebook to her headphone cable to hair, jackets, scarves, and shoelaces, as represented in the photographic data. In Figure 9, an adult goat tries to nibble on FdM's notebook when she is writing in it on the stable fence. In Figure 10 and Figure 11, which were taken only a few minutes apart, goat kids are nibbling on FdM's scarf and even untying her shoelaces. Finally, Figure 12 shows a goat kid nibbling on Participant E's hair.

All of the abovementioned examples beg the question what the goats' communicative purpose of this type of interaction is. One possible interpretation comes from biological studies, which illustrate that goats nibble and chew on each other's fur as a way of mutual grooming (Andersen,Tønnesen, Estevez, Cronin, & Bøe, 2011). This could indicate that the goats at the petting farm had social or affiliative purposes towards humans in their nibbling interactions. However, their behavior may also be an indicator of compromised animal welfare among intensively housed goats, as they are routinely deprived of the freedom to pursue more natural patterns of behavior outside of their stables (see Moran & Doyle, 2015 for indoor cattle; Stachowicz et al., 2018). Taking these insights into consideration, it becomes clear that the goats have a communicative purpose to nibbling on the non-food items, but it remains unclear if it is social or affiliative, or a result of intensive domestication within the specific context of the petting farm, or both.

Figure 9. Adult goat nibbles on notebook

Figure 10. Goat kids nibble on scarf

Figure 11. Goat kid nibbles on shoelace

Figure 12. Goat kid nibbles on Participant E's hair

5.3 MOVE STRUCTURE

Each communicative event consists of different moves, i.e. actions within the communicative event that build up the event as a recognizable interaction. Within one event, multiple actions take place, and they occur in a particular order, making up the move structure of that event.

These moves occur in a specific order, and the move structure often determines how well the communicative purpose of the event can be fulfilled (Swales, 1990).

Within the genre of human-goat communication at the petting farm, every feeding interaction consists of three recurrent steps that occur in the following specific order:

(1) Approach

(2) Acceptance / rejection / ignoring

(3) Exit

In theory, the first step could be initiated by both a human and a goat. In practice, however, the goats have to rely on humans to be fed within the goat farm context, as they can provide food that the goats cannot gain access to themselves. Therefore, the approach to feed is initiated by a human participant, underlining the power dynamics of the communicative context.

Within these power dynamics, a goat can then react in three ways. First, it can accept the food. This is illustrated in Transcript 10. In this example, Participant E is sitting on the floor with multiple goats already surrounding her. FdM then starts recording when she has taken some hay from the floor and is holding it in front of them:

Transcript 10 (11 seconds)

1	E:	((holds hay out in front of the goats))=
2	Goat #1 & #2:	=((look at hay and eat it out of Participant E's hands while standing next to her))

In line 2, the goats choose to eat from the participant's hand rather than eating from the hay on the stable floor. A similar act of acceptance can be found in Transcript 1. In this interaction, a staff member walks up to the goat stables with a wheelbarrow full of food, to which the goats react by walking and bustling towards the feeders. He then fills the feeders with a rake, and the goats respond in an accepting way by eating the hay from the feeders. The response of acceptance is one that is considered desirable by the humans, as the communicative goals of both the visitors and the staff involve the goats eating the food that is presented to them.

In contrast to acceptance, the second option for the goats is to reject the food, and this response is considered undesirable by the humans participants, as it does not allow them to achieve their communicative purpose. This is illustrated in Transcript 3, when Participant E tries to force-feed a goat, displaying her anthropocentric conception of wanting to be in control of this interaction. She eventually gives up and lets go of the goat's head. In this example, the goat rejects the feeding attempt, exerting animal agency by turning its head away from the bottle that the participant tries to put into its mouth.

The third option is to ignore the human's attempt, and in addition to rejection, this response is also considered undesirable by the human participants, as it blocks them from achieving their communicative purpose. An example of this is illustrated in Transcript 9, where Participant A squats down to the floor to offer a goat some grass, but the goat is not interested and continues to graze instead. In this interaction, the goat simply does not react to the human's attempt to feed it, resulting in a disappointed reaction from the human participant because her communicative purpose of establishing an interaction with the goat was not reached.

The communicative event finally ends when one of the parties involved leaves or stops feeding, referred to as the exit. Both parties can initiate an exit. In the example of Transcript 1, the staff member ends the feeding event by leaving. In Transcript 3, it can be argued that the exit is initiated by the goat by turning its head away, and Participant E complies by letting go of the goat's head. In Transcript 9, Participant A gives up her attempt and exits by throwing away the grass. After the exit, it is possible for the humans to immediately initiate a new communicative event by approaching the goat once more, to which the goat can then react again, creating a cycle of subsequent communicative events of feeding.

6 CONCLUSIONS

We have attempted to answer two questions, namely (i) whether or not traditional discourse analytic theory can be applied to interspecies communication in which not all participants are human, and (ii) whether or not the specific concepts of communicative events, communicative purposes, and move structure within genre theory can be applied to an analysis of non-human communication.

It becomes clear from this analysis that human-goat communication at the petting farm can be considered a genre, and that the different key concepts of genre theory as defined by Bhatia (1993; 2002) and Swales (1990) affect this genre in ways that are similar to how they affect human-human communication. This illustrates that genre analysis and its key concepts are suitable for the analysis of interspecies communication, broadening the scope of this theory beyond the human realm. Although the concepts set forth in genre theory were previously believed to be applicable only to human communication, this study has shown that the theory's relevance can be taken a step further and that the concepts can be applied to non-human communication, strengthening the universality of the theory as a whole. Additionally, this study has shown that genre theory can provide researchers with tools to conceptualize human-animal communication from an applied linguistic point of view. In a broader posthumanist linguistic framework, this case study also provided extra insight into the inclusion of

interspecies interaction within traditional linguistic theory. We found that how the visitors speak to the goats does not seem to differ significantly from how humans speak to other human participants[9], showing that they do not adapt the messages they are trying to convey to the other participant. However, both the human visitors and the goats do appear to communicate in a way that reveals "a purposive, organized and mutually recognizable process in which (the) individuals actively interconnect with each other" (Finnegan, 2014, p. 47). Although this project is small-scale, it therefore provides new proof that animals and their communicative modes are worth studying outside of the fields of ethology and biology, and that there is much left to be discovered within the field of (posthumanist) linguistics. In continuing this type of research, new insights into general communicative paradigms can be gained and the scope of what defines the fields of linguistics can be broadened.

This paper also provided more insight into goat and human agency in human-goat interactions, revealing that humans interact with goats in a strongly anthropocentric way. While multiple examples show that goats have adapted their behavior to humans as a result of socialization, for example when they choose to eat out of a human's hand rather than from a feeder, a similar adaptation to goats cannot be found in the humans' behavior. This is reflected for example in the power structure of the initiation of the feeding event, the fact that humans address goats in human language, some humans' attempts to force-feed the goats, and in the disappointment that humans express when do not respond to feeding attempts. The data also emphasized the goats' agency, even though the power relations observed in the data showed that the human participants do not expect or want them to do so. It may even be argued that both the human participants and the goats displayed intentional communication, as they both attempted to make their communicative goals salient to one another by means of changes in body orientation and gaze (Sievers et al., 2017). However, the human participants would not always accept the messages conveyed by the goats when their expectations were not met. The project therefore strengthens the idea for an *animal turn in linguistics* (Cornips, in press). By decentering the human, both theoretically and in terms of human interests, the paper provides further proof that a reconsideration of current linguistic theories is necessary and should include examinations of animal and human-animal interactions and their power dynamics. Moreover, the paper has also shown that ethnographic methodology can be successfully used in or adapted to studying human-animal or animal interactions. As such,

[9] Although it remains unclear whether or not and to what extent goats could possibly understand human language, we know for sure that goats cannot reply to humans in human language, making it clear that the humans address goats in a way that cannot be reciprocated.

ethnography can also guide the way in exploring which *new* concepts are needed in linguistics to take animals, animal agency and international animal communication into account.

Because of the novelty of this field of research, this paper functions as a first descriptive overview that could possibly form the basis of future research projects. The research could be repeated with other domesticated petting farm animals, such as pigs or cows. Taking it a step further, interspecies research could also leave out humans completely and focus on communication between two different animal species within existing traditional discourse analytic paradigms. In any case, these types of research would be able to provide an overview of the differences and similarities of communication between humans, goats, and all types of other non-human animals or objects. Finally, no matter which direction further research unfolds in, it is clear that linguistic research can broaden and explore new possibilities beyond human communication, and as such could contribute further to the welfare and understanding of (farm) animals.

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