UiT The Arctic University of Norway

Faculty of Humanities, Social Sciences and Education, Department of Language and Culture

The roles role play plays

The form and function of bilectal codeswitching in North Norwegian pre-school children's role play

Bror-Magnus S. Strand

A dissertation for the degree of Philosophiae Doctor – April 2022

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Abstract

It is well known that Norwegian children code-switch from their native dialect to something resembling Central or Standard East Norwegian in their in-character role utterances during role play. Despite this, the structural aspects of the phenomenon are not exhaustively studied and understood, and the function of this *role-play register* as a tool for communication in role play deserves further exploration. This thesis represents a contribution to both of these research topics. Based on video recordings of seven children from Tromsø who participate in spontaneous and free play, I answer questions such as: (i) for which linguistic variables children use the East Norwegian variant and (ii) whether some variables are used more consistently in their East Norwegian variant than others, and, lastly, (iii) what the communicative function of the role play register is in the role play setting and how this may relate to its form. The thesis consists of three papers that investigate the use of East Norwegian in the morphology (free morphemes, i.e. pronouns, and bound morphemes, i.e. inflection) in the role play register (Paper 1), the form and use of Norwegian tonal accents in the role play register (Paper 2), and the creative use and manipulation of voice and its communicative function in role play (Paper 3).

In the study, I find, among other things, that there is variation (i) in the variables when it comes to whether they use the East Norwegian variant and (ii) how consistent children are in the use of the East Norwegian variant. In addition, they appear to become more consistent in the use of the East Norwegian variants with age. I also argue that (iii) the function of the role play register is to mark the role-expressions as *performances*. I take a view of

performance where potentially involves several communicative functions, a view that fits well with the form of the role the utterances which can vary in how many features they are marked with, linguistically or para-linguistically (with the use of East Norwegian, voice pitch and quality, the use of song, etc.).

The Summary article discusses the results based on previous findings and relevant theories in light of three topics or *aspects* of language: the functional, the structural and the social aspect. I also discuss what the possible sources for the East Norwegian that children use in role play may be, and how the East Norwegian they use can and should inform our discussion of the whether there is a standard spoken variety of Norwegian ("Standard East Norwegian") and if so, which variety this is.

Samandrag

Det har lenge vore eit kjent fenomen at ungar som veks opp utanfor det sentrale austlandsområdet byter til noko som høyrest ut som sentral- eller standard austnorsk i rolleleik. Likevel er dei strukturelle sidene ved fenomenet i liten grad undersøkte og forstått, og funksjonen til dette *rolleleik-registeret* som kommunikasjonsverktøy fortener ytterlegare utforsking. Denne avhandlinga er eit bidrag til begge desse forskingsemna. Med utgangspunkt i video-opptak av sju ungar frå Tromsø som deltar i spontan og fri leik, svarar eg på spørsmål som (i) for kva språklege variablar ungar brukar den austnorske varianten og (ii) om det er austnorske variablar der ungar brukar austnorske variantar meir konsekvent enn andre, og (iii) kva funksjonen til rolleleikregistret i rolleleiken er og korleis det heng saman med forma på rolleleikregisteret. Avhandlinga består av tre artiklar som ser høvesvis på bruken av morfologi (frie morfem – pronomen – og bundne morfem – bøyingsendingar) i rolleleikregisteret (Artikkel 1), formen på tonelaga i rolleleikregisteret (Artikkel 2) og kreativ stemmebruk og den kommunikative funksjonen det har i rolleleiken (Artikkel 3).

I studien finn eg mellom anna at det er variasjon (i) mellom dei ulike variablane når det kjem til om dei brukar den austnorske varianten og (ii) kor konsekvente dei er i bruken av den austnorske varianten. I tillegg ser dei ut til å bli meir konsekvente i bruken av den austnorske variabelen med alder. Eg argumenterer også for at (iii) funksjonen til rolleleik-registeret er å markera rolle-ytringane som *performansar.* Eg legg til grunn ei forståing av performans som potensielt inneber fleire kommunikative funksjonar, noko som passar god overeins med forma på rolle-ytringane, som kan variera i kor

markerte dei er (med bruk av austnorsk, stemmehøgd og -kvalitet, song, osb.).

Kappa samanfattar og diskuterer resultata med bakgrunn i tidlegare funn og relevante teoriar i lys av tre tema eller *aspekt* ved språk: Det funksjonelle, det strukturelle og det sosiale. Eg diskuterer mellom anna også kva som kan vera moglege kjelder for den standard austnorsken ungar brukar i rolleleik, og korleis den austnorsken dei brukar, kan og bør påverka korleis me forheld oss til konseptet «standard austnorsk», og diskusjonen om noko slikt i det heile tatt finst.

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List of abbreviations

AP	Accent phrase
CC	(Functional) correlation coefficient
c-dialect	Dialect with a designated tonal accent for all compounds
CDS	Child directed speech
D1	First dialect
D2	Second dialect
d-dialect	Dialect with differential tonal accent marking in compounds
EV	Expansive (Oslo) variety
F0	Fundamental frequency (voice pitch)
FDA	Functional data analysis
HL	Heritage language
IDS	Infant directed speech
L1	First language
L2	Second language
RPR	Role play register
SEN	Standard East Norwegian
UEN	Urban East Norewegian

List of papers

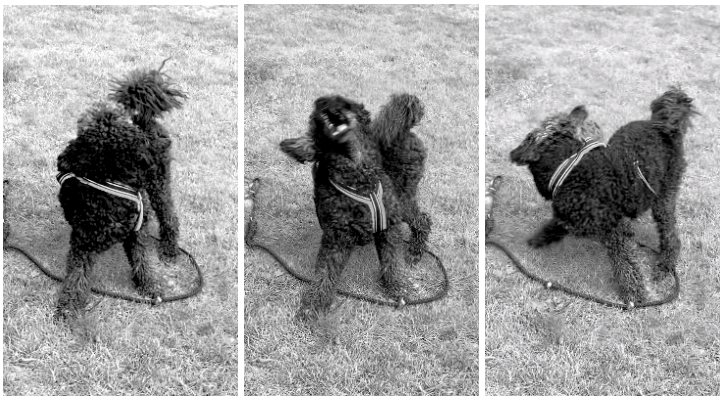
Strand, Bror-Magnus S. 2020. Morphological variation and development in a Northern Norwegian role play register. *Nordic Journal of Linguistics* 43(3). 289–321. doi:10.1017/S0332586520000219.

Strand, Bror-Magnus S. under revision. Playing with fire compounds: The compound accent tone in (North) Norwegian pre-school children's role play register.

Strand, Bror-Magnus S. & Ragni V. Johnsen. under review. A song of voice and fire: Performance in North Norwegian pre-school children's role play. Manuscript.

Foreword

Throughout the first years of the work on this thesis, I was sometimes intrigued by how significant play researchers seemed to think their field was, and felt that they overrated it somewhat. It took me about five years to realise just *how* insignificant it is, and that it is precisely this insignificance that makes it so important.



(a) (b) (c)

Figure i: *Elli the poodle*

Let me elaborate with an example: Figure i shows three snapshots from a movie of Elli the poodle. In the movie, she entertains herself by playing a game of her own invention in which she takes any object (in this particular case a ball, but it could have been almost anything e.g. a bottle or a sock), lays it on her back (frame a), swiftly turning her head (frame b) in order to keep the object from falling down on the other side (frame c), and then back again, repeating the same motion, as long as the object stays on her back. The 'goal'

of this game seems to be to get the object to stay on her back for as long as possible (a kind of 'dog juggling'). This is not a trick she does for treats. She initiates the game by herself. No one has taught it to her.

Unlike play fighting or running ('tag') with other dogs, this juggling seems to have no evolutionary basis: the skills associated with it seem highly specific and not transferrable to real life situations 'in the wild'. It seems evolutionarily insignificant.

Although researchers have tried, as far as I can tell playing has not yet been proven to be developmentally necessary for any particular skill. It also seems to me that one could always find examples of play (in humans or dogs or other animals) that serve no other purpose than the playing itself – that serves no other purpose than having fun. And if you ask me, few things are more important than having fun.

Although writing this thesis has also been fun, it has been tough, stressful, and, at times, lonely. I am indebted to a number of people who have contributed in making it possible and less troublesome, directly or indirectly. None are forgotten, but some deserve a special mention:

My deepmost gratitude to UiT The Arctic University of Norway, the Department for Language and Culture, and the LAVA/AcqVA Aurora research group for the opportunity to take a PhD. Things have really transformed here in the seven years since I arrived in Tromsø.

My supervisors, Merete Anderssen and Øystein Vangsnes. Your insights and feedback were crucial in shaping and finishing the work herein. I have enjoyed working with you, and look forward to continue doing so. A special thanks to Øystein for suggesting the topic in the first place.

The kindergarten employees and parents for their assistance and consent to collect data, and the children for having fun while being recorded.

The PhD students and postdocs that I have enjoyed the company of in PhD courses, office hallways, and lunches, my colleagues in the research group, and

my Phavourite Phonologists.

My three transcription assistants, Trond, Ulrikke and Karoline. Your contributions are larger than you might be aware of.

Some of my good friends from UiO: Morten Aase Løver, Aili Røtterud Løchen, André Nilsson Dannevig, Teodor Ekblad Aagaard, and Solveig Aspelund.

My competent and helpful colleagues at the university library (UB), who helped me in uploading the replication files to the Tromsø Repository for Linguistics (TROLLing).

My choir, Det Norske Mannskor av 1995 – Tromsøs studentsangere (DNM95), and the Puzzled Pint teams My Little Phonies (I and II) and Nederlaget Jens, for keeping my mind busy with other kinds of fun.

Section 93 of the Norwegian Civil Servants Union (NTL) and its members and representatives for giving me the mandate and opportunity to contribute.

My parents and grandparents, for making *me* – and, in consequence, this work – possible. A special thanks to my grandparents, who let me borrow *Hjelmeland* for a private writing retreat.

My friend and neighbour, Åge, for walking Elli the poodle, and thereby freeing up time.

And last but not least, my lovely little family: Ragni, Jone, and Elli the poodle, for all the patience, all the love, and all the fun.

All the shortcomings of this work are entirely my own.

Bror-Magnus Sviland Strand,
Tromsø, April 2022

Part I

Summary article

O, O, O,
ein liten ring
om ingenting
— — —
Ord, ord, ord
med ord
kan du laga
himmel og jord,
fuglar og dyr
og alt som kryr
kom skal me laga eit eventyr!
Olav H. Hauge – O

1 Introduction

Engaging in pretend play or role play means conjuring up a separate pretence reality that exists in parallel with the experienced 'here and now' reality (henceforth 'baseline' reality) and switching between these two realities: at one moment referring to events and objects in the baseline reality, and at the next to their corresponding events and objects in the pretence reality. The papers of this thesis investigate the linguistic and paralinguistic resources a group of North Norwegian pre-schoolers make use of in pretend play in a longitudinal corpus of spontaneous peer interaction. In particular, the papers pay special attention to the code-switching between their native dialect and another variety of Norwegian that Norwegian children make use of during role play. This summary article and the discussion of the papers will be structured around three aspects of language: (i) the functional aspect of language: as it is used communicatively in role play, (ii) the structural aspect of language: as a linguistic variety with a set of variants which is acquired and makes up a part of the individual's mental language capacity, and (iii) the social aspect of language: as shared between individuals in a speech community. Both the research questions of this work and the three papers relate to and shed light on one or more of these aspects in ways which will be made clearer below. Before that, we must introduce some fundamental properties of role play.

1.1 The metaphysics of pretend play

The nature of pretence has been discussed and theorised by several scholars working on (language in) role play (Ariel, 2002; Fein, 1975; Leslie, 1987; McCune-Nicolich, 1981; Piaget, 1999 [1951]; Strømqvist, 1984). Metaphysically, role play embodies a duality in which an object or action has an existence in two spaces or realities. As an example, consider the type of play in which seashells are used as farm animals, which the children of coastal Norway have immersed themselves in since times immemorial (Stemshaug & Stemshaug, 2004, p. 21), and, specifically, the cockle, a species of *cardidae* (see fig. 1.1), filling the role of sheep (Sortland, 2020; Bratrein, 1978). In the baseline reality, the cockle is a cockle, and not a sheep. In the pretence reality, however, the opposite holds: here, the cockle is unambiguously a sheep. The cockle therefore has a dual state: simultaneously a cockle in one world and a sheep in another. As pointed out by (McCune-Nicolich, 1981, p. 792); and further elaborated by e.g. (Leslie, 1987) this relation is *metarepresentational* in similar ways to that of the Saussurean sign (Saussure, 1983 [1916]), in the same way as the referential meaning of a word (the *signifier*) is decoupled from specific referents (the *signified*) and the former *stands for* the latter, the sheep in our example is decoupled from its *cockle-existence*, in the sense that it symbolically *represents* the sheep. Therefore, both language and role play can be viewed as functions "of the underlying capacity for mental representation" (McCune, 1995, p. 204), and it is not unusual to use the terms *signifier* and *signified* for the pretence representation (here, cockle and sheep, respectively, see for instance Ariel, 2002; McCune, 1995; Piaget, 1999 [1951]). Piaget (1999 [1951], pp. 280f) coins the *ludic symbol* for the pretence metarepresentational relation, and uses the terms 'ludic signifier' for the baseline reality action or object (the cockle), and 'ludic signified' for the pretence reality action or object (the sheep). Although one should be careful in coining new terms, I find the use of signifier-signified pairs across both the pretence and the semiotic dimension untenable. To avoid confusion with the

signifier and signified of the Saussurean sign (Saussure, 1983 [1916]), I will introduce specific terms for the pretence metarepresentational relation, and call the baseline reality action or object (the cockle) the *aestheseme*[1] and the pretence reality action or object (the sheep) the *phantaseme*.[2] This semiotic relation can be termed *phantasemy*, so that the concepts of cockle and sheep stand in a *phantasemic* relation (see Figure 1.1).

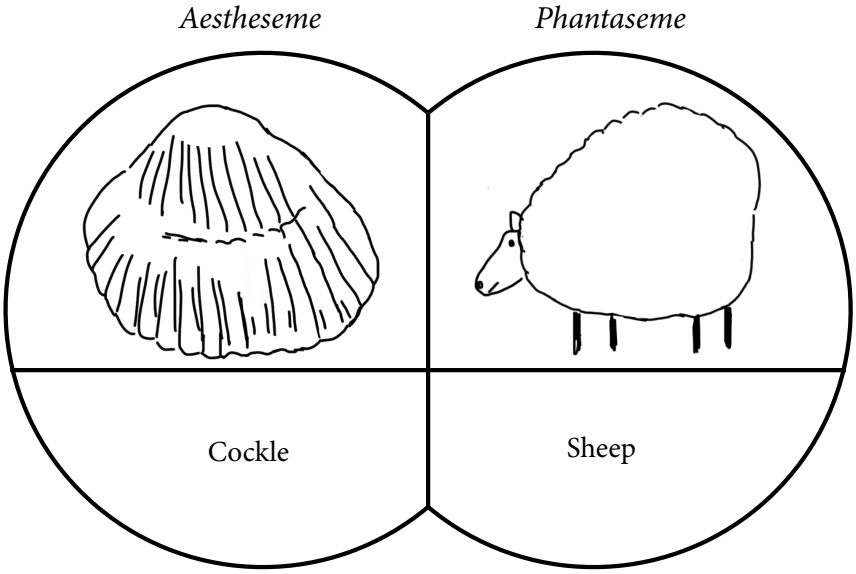


Figure 1.1: *The (phantasemic) representational relation of the ludic symbol between the (real world) cockle and the (pretence) sheep.*

When children interact in joint role play, they have to navigate the phantasemic relation of actions and objects in and outside of pretence. To this end, children have to frame and encode their (linguistic) actions in a way that conveys what Bateson (1976 [1955], p. 68) calls 'the message *this is play*', which entails that the "actions in which we now engage do not denote what those actions *for which they stand* would denote" (1976 [1955],

[1] Ancient Greek *aesthesis*, 'perception' and *sema*, 'sign'.
[2] Ancient Greek *phantasis* 'apparition' and *sema*, 'sign'.

p. 69, emphasis original). The message 'this is play' is communicated through the *metacommunicative code* in role play – the ways in which communication *about* communication is encoded – through a *role play register*, which is the subject of this thesis.

1.2 Presentation of the thesis and the 'three aspects of language'

In the Norwegian context, children growing up anywhere in Norway outside Central Eastern Norway around the capital Oslo have been reported to code-switch to something resembling the Oslo dialect or Standard East Norwegian (SEN) as a part of their ludic metacommunicative code, or role play register (RPR). Although the code-switching to SEN is well known and has been mentioned in a range of contexts (see for instance Allern, 1995; Åm, 1989; Bjørlykke, 1996; Brekken & Helleland, 1974; Bugge et al., 2017; Eliassen, 1998; Guldal, 1997; Høigård, 1999; Kleemann, 2013, 2015; Larson, 1985; Mæhlum, 1992; Meek, 2000; Røyneland, 2009; Venås, 1979, 1983), its structural properties have barely been studied and, to my knowledge, its attainment has hitherto not been studied at all to date. When it comes to questions such as what features are generally included in the RPR – from SEN or otherwise – and in what order they are acquired, we have barely scratched the surface.

This thesis is by and large an explorative endeavour. Therefore I have sought to approach the subject matter from different angles, rather than concentrating on one narrow perspective. This is evident in the three papers that make up the thesis, which cover morphology (Paper 1), phonology and phonetics (Paper 2), and paralinguistic features and text linguistics (Paper 3).

In what follows in this summary article, I will draw a connection between the three papers, showing how they jointly contribute to decreasing the knowledge gap. To structure the theoretical discussion, I will approach the role play register from three different aspects of languages (henceforth *topics*):

the (i) functional, (ii) structural, and (iii) social aspects. An elaboration of the three and their interconnectedness is in order.

The first topic, the functional aspect of language, relates to the (semiotic) role that RPR plays in the role play setting. Although this has already been hinted at in the previous section, the topic clearly needs to be explored further, and specifically in light of data from the Norwegian context.

The RPR seems to have a highly limited function and domain, which may influence its development and cognitive organisation. This connects topics (i) function and (ii) structure.

The second topic, the structural aspect of language, relates to the *form* of the (North) Norwegian RPR and how it develops. That is, for which variables do children adopt the SEN variant (or variants from other 'alien' varieties), and to what extent? Is there an order in which the different variants from SEN are adopted in children's RPR? However preliminary the answers may be, we can start to speculate on what role the Norwegian RPR plays, cognitively, among the other linguistic varieties the child knows, and the extent to which they are conceptually separated or organised as a single variable entity.

The third topic, the social aspect of language, explores the relation between the RPR and SEN: what role does our (new) knowledge of the RPR play for our conception of SEN, and, in particular, for the discussion of whether there is such a thing as a standard spoken variety of Norwegian at all. Although it is the most speculative of the three, I find it fruitful to include it as a central tenet of the summary article because of its obvious connection to the first two topics: although the function of the RPR is rooted in the play itself, we must assume that the RPR's precise (para-)linguistic features are connected to the speech community in the same way that the role play takes its themes and tropes from (adult) society (cf. the shells acting as farm animals above). In the Norwegian context, it involves a variety whose status is subject to controversy among scholars in Norwegian linguistics (cf. Bull, 2009; Jahr & Mæhlum, 2009; Røyneland, 2009, i.e. 'Is there such a thing as standard spoken Norwegian'). I would therefore be remiss not to include a

discussion of it: there is no doubt that children use (variants from) a specific variety (i.e. SEN) as an RPR. Adults are aware of this fact through memories from their own childhood and/or interaction with children. We can expect this to have an effect on language ideology and beliefs regarding that specific variety in the speech community.

1.3 Structure of the summary article

The structure of this summary article is as follows: Section 2 provides a detailed background of the relevant aspects of play, pretence, and linguistic theory, and outlines the knowledge gaps that the thesis is meant to fill. Section 3 introduces the participants and gives an overview and discussion of the procedures of data collection, coding, and analysis, in addition to a discussion of the research ethical and methodological considerations underlying the methodological choices. Section 4 gives a short introduction to each of the papers, their central research questions, results, and conclusions. Section 5 ties together the three papers, reviewing their findings in light of the three aspects presented above and the theoretical background from Section 2. Finally, Section 6 concludes the summary article.

2 Background

The subject of role play registers can be approached from several angles, and this is indeed what the three papers of this thesis do. It is therefore also necessary to provide a broad background of the subject matter before we move on to the central research questions and discussion of the findings in the papers.

2.1 Role play

Playing is an important part of children's life, so much so that it is included as a human right in the United Nations Convention on the Rights of the Child (1989):

> States Parties recognize the right of the child to rest and leisure, *to engage in play* and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts (article 31, emphasis added).

Although its importance is indisputable, trying to pinpoint a definition of play would be a laborious, if not impossible task (Fein, 1981) which we will not indulge in here (but see Sutton-Smith, 1997, for a thorough exploration of its different meanings). This has not discouraged scholars from studying it: Throughout the 20th century, the topic has been covered by renowned behavioural scientists, such as Piaget (1999 [1951]) and Vygotsky (1966), and in her comprehensive treatise into the anthropology of play, Schwartzman (1978) lists over 800 references, a fact that may give an indication of how popular the subject was already some forty years ago. As Bower (1980) writes:

> It emerges in all the behavioral sciences in different forms and processes, much like the elephant being felt by the blind men. Play is studied by anthropologists, economists, biologists, ethologists, historians, mathematicians, sociologists, psycholinguists; by clinical, experimental, social, educational, and developmental psychologists; by educators, community psychiatrists, zoologists, toy manufacturers, black-jack players, and adversaries of the one-armed bandit (Bower, 1980, p. 171).

Fortunately, the subject of this thesis is easier to define and delimit than play in its most general sense, namely role play, or social pretend play between children, and in particular the speech of children when they enact a role during such play. By pretend play, I mean an activity in which something is used and/or conceptualised as something which it is not. That is, it is in some way and to some degree *transformed* (Fein, 1975, 1981), as with the seashells used as farm animals. By social pretend play (role play) I mean the cooperative pretend play between children. Children make use of their language in different ways to organise and cooperate in pretend play, and particularly in the in-character role utterances which are the focus here: the utterances spoken *as though* they are uttered by the role character (e.g. fireman) they are playing, i.e. the *role utterances*. I will elaborate on the reported features of role utterances in Section 2.1.3. First, however, I will widen the scientific backdrop of role play, and present certain (alleged) developmental properties of pretend play in Section 2.1.1, and explore the wider ecology of utterance types in role play in Section 2.1.2.

2.1.1 Role play and development

Although the onset of social role play has been reported to take place during the third year of life (Fein, 1981; Nicolopoulou, 2018), it has its precursors in earlier child development. What one may call 'pretend gestures' are reported to appear around 12 months of age (Fein, 1981, p. 1098). These include

simple transformations, such as when "[t]he child tilts his head back as he drinks out of an empty cup, or closes his eyes pretending to sleep without actually doing so" (Fein, 1975, p. 291). These simple transformations often include regular household objects. Around 18 months of age, the pretence often includes other entities that are the target of the pretend gestures, such as feeding a doll or brushing the fur of a toy puppy (cf. Fein, 1975; Garvey, 1979 [1977]). Around 20–26 months, the transformations become more extensive: inanimate objects get more animate features, and children can engage in pretence where the symbolic link between the phantaseme and the aestheseme needs to be less and less iconic, meaning that that the need for the former to physically mimic the latter decreases, e.g. a shell can be a cow, etc. (Fein, 1975; Garvey, 1979 [1977]). Towards the onset of social role play around 30 months, the play is still solitary, but it may be 'parallel' in that children are playing alongside, being aware of, and maybe even mirroring each other, without engaging in a joint pretence (Ariel, 2002, p. 75; Johannesen, 2013).

Scholars have argued that playing, and role playing in particular, has an important impact on cognitive development (Sutton-Smith, 1997, pp. 38 ff.; see Fein, 1981; Nicolopoulou, 2018; Sutton-Smith, 2000 for overviews), including linguistic and related abilities. It is said to be important for the development of theory of mind (the epistemological awareness of the fact that your interlocutors do not necessarily know everything you know, and vice versa) (Leslie, 1987; McCune, 1993; Taylor & Carlson, 1997), literacy (see Roskos & Christie, 2001, for a critical review), and mental representations, which in turn are important for language learning (McCune-Nicolich, 1981; McCune, 1995; Piaget, 1999 [1951]). A second group of researchers, with Brian Sutton-Smith and Peter K. Smith in the forefront, have argued against what Smith calls 'the play ethos' (Smith, 2000) and Sutton-Smith the 'rhetorics of animal progress' (Sutton-Smith, 2000). Instead, they argue, play should be regarded as 'children's folklore' and in and of itself worthy of being studied, not simply a means to some other cognitive trait (Beresin et al., 2018;

Butler, 2008). In addition the connection between role play and other cognitive abilities does not turn out to be as strong as often suggested when tested in replication studies (Lillard et al., 2013).

Of greater relevance here are the effects of role play on the development of more specific linguistic and socio-linguistic phenomena, or their correlation. This includes the development of vocabulary (Ervin-Tripp, 1991, p. 92). English-speaking children have also been reported to increase their use of temporal conjunction in joint play earlier than other contexts (Ervin-Tripp & Bocaz, 1989). Children also display their metalinguistic and socio-linguistic knowledge in role play: when children act in roles as babies or toddlers, they reportedly simplify their language in consistent ways (Gleason, 1973; Sachs & Devin, 1976; Ervin-Tripp, 1973), and when playing mothers or with a baby doll, they use intonation patterns also found in the child-directed speech of adults (Ervin-Tripp, 1964, p. 93; Sachs & Devin, 1976).

Role play also represents a setting where children can try out power relations of the society at large, including linguistic ones, without facing consequences. Scholars have therefore pointed to the function of role play in forming a linguistic and cultural identity and socialising children into the language ideology and diglossia in society at large (Andersen, 1986, 2014 [1990]; García-Sánchez, 2010; Kyratzis, 2004, 2010; Minks, 2010; Paugh, 2005). In Japanese, where politeness is marked lexically and morphologically, children have been reported to use try out these registers in role play (Nakamura, 1997, 2001). It is difficult to determine the degree to which the children gain crucial training through role play in these abilities, or whether they simply use the language and replicate the social structures they already know and master. More attention should be paid to this crucial distinction in future research.

2.1.2 Levels of pretence

For social role play to work, there must be a shared and coherent imaginary universe in which the transformed objects and actions can remain simultaneously and interact: "in order to play, one must have a grasp of what is not play – of what is and is not 'for real'" (Garvey, 1974, pp. 169–170). Skolnick Weisberg (2016) and Skolnick Weisberg and Bloom (2009) have demonstrated experimentally that children build pretence worlds that are not only clearly separated from the baseline reality, but also clearly separated from other pretence worlds (Skolnick Weisberg & Bloom, 2009). This multiplicity of realities opens for interesting referentiality, and since the shared pretence reality exists in separate minds in social role play, a certain degree of negotiation about phantasemic entities and events is necessary. These facts make the communication in role play an interesting object of study for scholars from different fields, including linguistics, anthropology, sociology, and developmental psychology. As a result of the intricacy of the subject matter, there are a variety of ways in which the different communicative utterances in role play can be categorised. In certain approaches, the transition between the two realities has been at the core of studies of language use in role play, with two 'codes' or 'registers' in role play, one for the baseline reality and one for the pretence reality, i.e. the ludic metacommunicative code or the RPR (e.g. Halmari & Smith, 1994). Other approaches have assumed an additional utterance type, with 'planning,' 'stage directions' (Høigård, 1999) or 'narrator speech' (Cook-Gumperz, 1986), that children engage in prior to role play and as intermezzos for negotiating the narrative of the role play. This type of utterance has been reported to have certain characteristics, such as the use of the past tense in English (Lodge, 1979; Kaper, 1980), Norwegian (Høigård, 1999), Swedish (Strømqvist, 1984), and Turkish (Goncu, 1993, cited in Aronsson, 2011), and subjunctive mood in German (Auwärter, 1986; Kaper, 1980). In addition, it has been reported that certain utterances in role play have an illocutionary force: by their mere utterance, often a singsongy or

monotonous chanting of a repeated infinitive or truncated verb stem, they constitute an action or an event in the pretence reality ('ludic speech acts', in Strømqvist, 1981, 1984 or 'magic utterances' in Høigård, 1999; Kleemann, 2013, 2015; see also Aronsson, 2011). Examples from the material of the 'planning' utterances are given in (1)[3] and of the 'ludic speech acts' in (2).

(1) a. *dokker sa ja at det va brann hos dokk* Celice (3;11)
you.pl said yes that it was fire at you.pl
'you said, yes, your place was on fire'

b. *i_sant # selv_om eh* Lars-Lars (3;11)
not_true even_though er
brannalarmen gikk no # så va det ikke brann
fire_alarm.def went now so was it not fire
'even though the fire alarm went off there wasn't really a fire, right?'

c. *ikke_sannt # nu så du at æ sova fortsatt* Hedda (4;1)
not_true now said you.sg that I slept still
'now you saw that I was asleep still, right?'

d. *i_sant at det_her va brannhuset?* Morten (3;10)
not_true that this_here was fire_house.def
'this was the fire house, right?'

(2) a. *træne træne træn # træn træn træn …* Hedda (3;6)
work.out work.out …

b. *bæsj bæsj bæsj bæsj # bæsj bæsj* Lars-Lars (3;6)
poop poop …

[3] The phrase *ikke sant* (short, *i'sant* or *sant*), literally 'not true,' is a hedging discursive particle (Svennevig, 2007), which I have transcribed as a final 'right?' in the free translations of the examples.

c. *vaske hendern vaske hendern # tørk tørk tørk tørk* Inga (3;7)
wash hands.def wash hands.def dry dry …

d. *bade bade bade …* Morten (3;6)
bathe bathe …

Although the tendency to mark the 'planning' with a special, albeit language specific, tense/aspect/mood marker seem to be common cross-linguistically, it is not clear from the literature whether the distribution of the 'ludic speech act' extends to outside of Scandinavia. This may be a case in which role play is culture specific, which is not unusual. In more anthropologically oriented studies of play, these culture-specific utterance types are a key element, often in terms of (Goffmanian) communicative frames (Goffman, 1974), and the discussion of alternate realities is sometimes bypassed altogether (e.g. Goldman, 1998). In such models, the number and types of communicative levels in role play are seen as culture specific, dependent on their function or linguistic form. Examples of such studies are Goldman's (1998) and Goldman and Smith's (1998) studies of pretend play among Huli children, and Lytra's (2007) study of playful talk in Greek primary school children.

As an alternative to dissecting role play in terms of realities or (functional or structural) utterance types, one can assume different *identities* (keeping the different role characters out of the equation for now): Auwärter (1986) analyses his data with spontaneous role play in terms of three 'Speaker Identities' ('Everyday Person,' 'Neutral Observer,' 'Role, Character') and three 'Scopes of Validity – for which reality(-ies) the truth value of the utterance is meant to be relevant, with three possible settings ('Everyday Reality,' 'Staged Reality,' and 'Transition from Reality to Fiction,' cf. 'planning' or 'directing'). This yields nine (three by three) logically possible 'levels of reality' with two (practically) 'impossible' corners of the resulting three by three grid.[4] He goes on to demonstrate how all the remaining seven levels are marked with their

[4]The two impossible corners were 'Everyday Reality Identity' in the 'Staged Reality' and 'Role Identity' in the 'Everyday Reality'

own specific constellations of linguistic and paralinguistic features in his data of spontaneous social play with dolls among five-year-old German-speaking girls. The features he identifies range from stylistic markers and voice quality to verb forms.

2.1.3 Role utterances and role play registers

Of all the utterance types used in role play mentioned in the previous section, the one of most interest to the current work is the in-character role utterances. It is in these utterances that the metacommunicative competence of the children does the most work and where they have to convey the message 'this is play' (Bateson, 1976 [1955]), often through the use of linguistic or paralinguistic markers that together make up an RPR. In this section I will briefly discuss some general characteristics of RPRs, before we circle in on the Norwegian situation.

Changes in prosody, voice quality and/or pitch are examples of a metacommunicative code used in RPR, well-documented cross-linguistically in several studies (Andersen, 1986, 2014 [1990]; Auwärter, 1986; Cook-Gumperz, 1986; Eliassen, 1998; Guldal, 1997, p. 94; Halmari & Smith, 1994; Hoyle, 1998; Kleemann, 2013, 2015; Meek, 2000, p. 14; Sawyer, 1994, p. 233; Strømqvist, 1984, pp. 52–54; Vedeler, 1987, p. 120). Andersen (1986) notes shifts in prosody, pitch, and voice quality in her experimental elicitation studies, both in relation to the children's everyday speech, and between roles: for "[f]athers' speech […] they all used deep voices and showed a marked tendency to produce […] backed and lowered vowels" (p. 154), whereas when playing mothers, "their speech was qualified and softer. They spoke with higher pitch than fathers and often used exaggerated intonation" (p. 155). Children adopt speech patterns according to the social category of the role character (Ervin-Tripp, 1973, p. 273) on many levels of the language system: "[c]hildren talk in high pitch when they are playing babies and in low pitch when they are playing daddy or doctor" (Ervin-Tripp, 1991, p. 92). This is

especially evident when children play the role of infant or 'baby,' which is often accompanied by formulaic babbling ('goo-goo, ga-ga', etc.) and high pitch (extreme, at times) and phonological substitutes (/w/ for /r/, etc., Andersen, 1986, 2014 [1990]), but also simplified language, with a shorter mean length of utterance and 'telegraphic' speech (Ervin-Tripp, 1973; Gleason, 1973; Sachs, 1984; Sachs & Devin, 1976). In similar ways, children also tend to adapt their role utterances to the imagined addressee, so that when the children are playing mothers speaking to children, they tend to use features found in infant-directed speech (Andersen, 1986; Ervin-Tripp, 1964; Sachs, 1984; Sachs & Devin, 1976; see also Warren-Leubecker & Bohannon III, 1983). Upon close inspection, other stylistic nuances may also be found in RPRs. Gee and Savasir (1985) found, for instance, that English-speaking children used 'gonna' for reference to future events in planning utterances, but the auxiliary 'will' for future reference in role utterances (cited in Ervin-Tripp, 1991), a feature which could be interpreted as belonging to a more formal register.

In general, children make use of their linguistic repertoire in role play. This includes bilingual children, who have been reported to alternate between their languages in role play (as long as the variants in question are shared within the play group). The earliest report I have been able to find of this is McClure (1977), who reports that Mexican-American adolescents use language alternation to mark a change between modes, for instance narration versus commentary, in story-telling, or in other words that the same holds for code-switching in role play, that is the changing from one language to another corresponds to the switching between the everyday utterances and role utterances: "Children at play […] switch from Spanish to English when switching from a peer relationship to a teacher-pupil relationship" (McClure, 1977, p. 105). Halmari and Smith (1994), studying Finnish-English bilingual siblings in USA, report that role utterances were predominantly in English, whereas negotiating utterances were predominantly in Finnish. Similarly, Green-Väntinen (1996) reports that Swedish-Finnish bilinguals growing up

in Finland use Swedish in their planning utterances and Finnish as their RPR. García-Sánchez's (2010) subjects, Moroccan immigrant girls in Spain, used Moroccan Arabic for planning utterances, and Spanish as their RPR. Kleemann's (2015) Sámi informants predominantly used Standard East Norwegian in their role utterances and North Sámi or the local Norwegian dialect in their planning utterances. She argues that it is not the language alternation *per se* as much as verb tense, pitch, and intonation, and the alternation between features of a standard and a local Norwegian variety that mark the transition between the different codes (p. 121). Guldal (1997), on the other hand, argues that both language alternation (between English and Norwegian), together with changes in voice quality, mark the switching to role utterance (p. 221).

A related phenomenon is the use of a standard variety or more standard variants or features in the RPR. Katerbow (2013) looks at several phonological variables in a Moselle Franconian dialect in Germany, and finds that children tend to use more Standard German-like variants in their role utterances than otherwise. Furthermore, it has been reported that children switch from Swiss and Austrian dialects to Hochdeutsch (Buhofer & Burger, 1998, pp. 18–20; Kasperger & Kaiser, 2019, p. 333) and from Cypriot Greek to Modern Standard Greek in role play (Sophocleous, 2013). In Scania (Southern Sweden), children sometimes use Standard Swedish in their role utterances (Lindstrøm, 2002). I have encountered anecdotes that the use of (more) standard (variants) also holds for Japanese dialects (see also Allern, 1995) and Spanish in rural Argentina. The Norwegian situation, where Standard East Norwegian (SEN) is used in role utterances in the whole of Norway, including Svalbard, is well known and have been mentioned in a number of contexts (Allern, 1995; Åm, 1989; Bjørlykke, 1996; Brekken & Helleland, 1974; Bugge et al., 2017; Eliassen, 1998; Guldal, 1997; Høigård, 1999; Kleemann, 2013, 2015; Larson, 1985; Meek, 2000; Mæhlum, 1992; Røyneland, 2009; Venås, 1979, 1983).

In the different linguistic and paralinguistic devices children use to mark

their RPR, the ludic metacommunicative function is clearly visible: to differentiate the role utterances from other utterances in the discourse, and also to differentiate the role persona(e) from the child's everyday persona(e). This reflexive process has been noted by scholars, and referred to as marking of 'otherhood' (cf. Bjørlykke, 1996, p. 99 and Høigård, 1999, p. 84).

The use of (variants from) a standard variety in the RPR is reminiscent of the process of 'accommodation' and 'dialect convergence' described in variationist sociolinguistics, where the speaker alters his or her speech to be more similar to that of the interlocutor, often towards a variety of higher status, for instance a standard variety. However, in the case of standardisation in RPR, the main driving force does not seem to be the interlocutor, but rather the children's need to mark a difference from themselves ('otherhood'). A more fitting term for the RPR in a variationist perspective would therefore be 'divergence', but from oneself: *auto-divergence* (Strand, 2020a).

2.1.4 Socialisation through play

The critique of the instrumental view of play and the movement towards viewing play as worthy of study in its own right (Smith, 2000; Sutton-Smith, 2000) are mirrored in a move in the academic study of child development (in particular in sociology) away from regarding children as 'incomplete adults' and passive participants in a development and socialisation driven solely by their caretakers, towards a view where children are seen as having their own agency and where socialisation takes place reciprocally between the child and its caretakers and peers (human *beings*, not human *becommings*; e.g. MacKay, 1973; Sommer et al., 2010. See Butler, 2008, pp. 2–18, for an overview). Harris (1995) examines the available evidence and argues that children's personalities are formed by peer social interaction outside the home, and that caretakers' influence (apart from their genetic inheritance) is little or non-existent. Further, she argues that this group socialisation starts precisely in peer play groups (Harris, 1995, p. 482, but see e.g. Lowe Vandell, 2000, for

a nuancing review).

Regardless of whether Harris' (1995) hypotheses hold in their strongest form, it is clear that much socialisation occurs reciprocally between peers, for instance in role play (cf. Aronsson, 2011; Goodwin & Kyratzis, 2011), and children are instrumental in the socialising of each other into the language ideology and diglossia in the speech community through role play (Aronsson, 2011; García-Sánchez, 2010; Kyratzis, 2004, 2010; Minks, 2010; Paugh, 2005). Children's proficiency in the codes of role play also has an immediate impact on their social lives: being competent at role play gives the children social capital which they can exchange for access to popular toys and role characters in popular play groups (Vedeler, 1987), and the participation in and mastering of play has a large effect on children's self-esteem and wellbeing (Lillemyr, 2011). Schwartzman (1978) reports from one of her ethnographic studies that "the role of pet […] was generally assumed by one of the more unpopular children in the group" (Schwartzman, 1978, p. 239). Thus, the social hierarchies between children are interwoven with their social capital as role players. Put in other words, children socialise each other into the culture and conventions of (role) play. The way role play is practised is therefore dependent on the participants of the play groups. For instance, Kleemann (2015, p. 193) reports that children adapt the language (Sámi/Norwegian) they use in role play to the (assumed) linguistic competence and/or preference of their playmates.

2.2 On language acquisition

Depending on the age at which a variant or language is acquired (age of acquisition), the attainment process is either described as involving first (L1) or second (L2) language acquisition. This difference has been based, among other things, on the difference in ultimate attainment and the observation that the acquisition of a language after a certain age often differs in the degree of 'nativeness' the learner is able to achieve. The traditional cut-off point is

often set at puberty in the literature. This so-called 'critical period' of language acquisition (Lenneberg, 1967) has often been attributed to losing 'access' to what Chomsky (1965) termed the language acquisition device – the cognitive endowment specialised for language acquisition – and/or reduced cerebral plasticity (cf. Guasti, 2016). The same critical period has been proposed for second *dialect* acquisition (Chambers, 1992; Siegel, 2010): "[t]he optimal age for acquiring lexical and morphological features of the D2 [second dialect] is the mid teens or younger, while for phonological features it is 7 years or younger" (Siegel, 2010, p. 92). We can assume that this would also hold for acquiring (variants from) a non-native variety such as an RPR.

A logical conclusion regarding the critical period is that if the child has exposure to two (or more) languages prior to the critical period, she would inevitably attain native-like fluency in both (or all) (Meisel et al., 2013). However, recent advances in heritage language acquisition, as well as L2 acquisition, have called this into question: in many situations in which children acquire two languages before the alleged critical period, this occurs in a situation where one of the languages is a heritage language (HL) spoken mainly or only at home, often due to migration, and the other is the (majority) language in the community. In such cases, the attainment of the HL often differs from the monolingual attainment of that same language (Montrul, 2008; Slabakova, 2013), and it seems that availability of the language acquisition device and/or cortical plasticity is not a sufficient condition for attainment at the same level as native monolinguals for many variables. Rothman (2009) sums it up elegantly:

> [This] questions the position that child and adult acquisition must be fundamentally different. After all, if child naturalistic acquisition can result in comparative differences from the established monolingual norms without raising questions about the extent to which these learners had accessibility to inborn linguistic mechanisms, then why should the presence of L1-adult

> L2 differences necessarily mean a fundamental difference? (Rothman, 2009, p. 647).

Also in second language acquisition, the conception of the critical period has evolved since Lenneberg (1967). Although most L2 researchers would agree that global native-like attainment of an L2 is very unusual or even impossible after a certain age, there seem to be parts of the grammar where this *is* achievable, even after puberty. Therefore, it makes more sense to talk about *several* periods of *sensitivity* for different areas of the grammar, rather than a global, critical cut-off point for language acquisition (Slabakova, 2016).

These insights from HL and L2 acquisition highlight the importance of the quality and quantity of input, even in early language acquisition. Indeed, as Hart and Risley (1995) show, the amount of input affects both language acquisition and reading ability later in life, even in monolinguals. Returning to the present case, the presence of a native speaker of SEN in the children's immediate environment is not a prerequisite for them to use SEN variants in their RPR. This makes the context of acquisition of RPR unusual, which suggests that it might be a good idea to scrutinise what the possible sources of input to SEN might be. This will be done in the ensuing subsections.

Regarding second dialect acquisition, Siegel (2010) notes that in addition to age of acquisition and the linguistic domain of the feature in question (whether it is lexical, morphological, or phonological), the complexity of its rules also plays a role. For instance, one-to-one correspondences between the D1 and D2 variants (e.g. a phonetic difference) are easier to acquire than one-to-many correspondences between the variants (e.g. a phonemic difference).

In their books on convergence and accommodation, both Trudgill (1986) and Kerswill (1994, on second dialect acquisition in Bergen, Norway) use the notion of *salience* as an analytical and explanatory concept for the order and felicity of the acquisition (or accommodation) of different variables in a second dialect.

In addition to acquiring the languages and dialects of their environment, children also have to acquire the sociolinguistic variability of their first language. The acquisition of such variation has also been suggested to be constrained by age, linguistic domain, rule complexity, and salience. According to Smith and Durham's (2019) comprehensive synthesis of (their own and other) studies into the (L1) acquisition of sociolinguistic variation, socio-linguistic variability is acquired between two and four years of age, depending on the variable. As Kerswill (1996, p. 199) notes, "[e]xactly when a child acquires a feature of his or her first dialect depends on the linguistic level [and] the complexity of the conditioning," and as Chevrot et al. (2000, p. 296) suggest, "the age at which the sociolinguistic patterns for one phonological variable are established probably depends on the perceptual salience of the variants in question, their articulatory complexity, and their sociolinguistic value in a given community."[5]

2.2.1 Learning language through television

Television has been used to explain the use of Standard Norwegian in role-play (Brekken & Helleland, 1974; Høigård, 1999; Larson, 1985; Venås, 1979, 1983). The television narrative is supported by the anecdotal reports that children in South-Eastern Norway used to use Swedish as an RPR at the time when the Norwegian public broadcaster was the sole distributor of children's television (Høigård, 1999, p. 83). The folk-linguistic explanation I have heard for this is the following: in South-Eastern Norway, it was possible to receive Swedish broadcasting signals over the border. As a result of this, the children in South-Eastern Norway had the possibility of watching thrice as much children's television as the rest of the country (the 30-minutes children's programmes started at 18:00 in Norway, while children's programmes on Swedish television were aired from 17:00 to 18:00).[6] With the emergence of

[5] Both citations are taken from Smith and Durham (2019).

[6] I wish to extend my gratitude to Anita Killi for a particularly helpful anecdote and for clearing up some details.

international commercial broadcasters with only children's programmes with 100% dubbed material through the whole day (e.g. Nickelodeon, Cartoon Network, and Disney Channel), children have stopped role playing in Swedish. Further anecdotal reports indicate that SEN is starting to lose its hegemony as the role-playing variety in favour of other dialects as the public broadcaster has changed its policy and drastically increased the dialectal variation in their programmes for children, both in Norwegian and dubbed productions. In a news report from 2021, preschool Norwegian children have even been reported to use English as an RPR (NRK Møre og Romsdal, 2021).[7]

Children's broadcasting cannot be the whole picture however: there are anecdotes of standardisation far preceding modern day children's television (Høigård, 1999, p. 84; Kleemann, 2015, p. 63; Mæhlum, 1992, p. 169; Helge Sandøy, p.c.; Øystein Vangsnes, p.c.). It is also mentioned in a literary source dating back to the 1930s, in a story set in the 1880s (Undset, 1994 [1934],

[7] I have not encountered other varieties or languages than the native dialect and SEN in the present data (with the exception of the odd English word from the English-Norwegian bilingual girls, Hedda and Inga, undoubtedly cases of unintended cross-linguistic influence). I can therefore only speculate on the use of other dialects and foreign languages as an RPR. My hunch would be that this could be a feature among somewhat older children, perhaps as a supplement to the baseline role play register, SEN, for particular play frames: in the news report, the children were older than the children in the present data, and they stated that they used "English when we play mother and baby" (my translation). In addition, they reported having several English-Norwegian bilingual children in the kindergarten, which may be a contributing factor in the choice of language.

Although not a regional variety, Kristin Melum Eide (p.c.) has informed me of an interesting example of domain-specific registers in role play: her sons would monophthongise all original diphthongs in their speech during role play to such an extent that even proper names were monophthongised (e.g. 'Heine' becoming 'Hene'). But this only happened when playing parking guards with a garage, and not in other play frames.

These reports undoubtedly call for further investigations into Norwegian monolingual children's use of English and/or other varieties of Norwegian than SEN as an RPR: the level of proficiency, the extent to which they are used alone or alongside SEN, as well as the onset of the different languages/varieties and whether they are indeed connected to particular play frames. As these are all based on anecdotal observations, I will refrain from further speculation here.

p. 84, first cited in Høigård, 1999, p. 83).[8]

In addition, a large body of research indicates that children's learning from pure audio-visual stimuli is inferior to learning that includes interpersonal interaction. This phenomenon – the 'video deficit' (Anderson & Pempek, 2005) – has been identified and extensively replicated for a range of domains, including language (Anderson & Pempek, 2005; Gola et al., 2012; Myers et al., 2017). There seems to be a difference that depends on the linguistic domain in question: in a review of the available studies, Gola et al. (2012, p 143) conclude that: "there is little indication that children are learning much phonology or grammar from television viewing, whereas they can learn vocabulary (nouns and verbs)." That children can acquire lexis through viewing television is evident from all the mentions of 'Fireman Sam' in the present corpus. However, a recent case study of a Norwegian four-year-old acquiring English allegedly solely through YouTube videos (Kalstad, 2019, master's thesis) brings this into perspective, possibly indicating an effect of aptitude or motivation, or possibly even a division between first and (early) second language acquisition, where the children already have a first language in the latter case. That being said, it is hard to imagine how a child of three, four or even five could be able to tease out the meanings of words in a language completely unfamiliar to them just from videos, without superior motivation and/or disposition, given what we know about the video deficit. Experimental studies on phoneme distinctions in a

[8] Before children's television, the national broadcaster sent half-hour children's programmes on radio every Saturday ("Barnetimen" – *the children's hour*), which are said to 'with few exceptions be spoken in East Norwegian' (as one listener wrote to me after my appearance in the national broadcaster's language programme). However, the first children's programme I have been able to find a record of is from 1937, and thus does not predate the earliest reports. Also, most of the earliest programmes include interviews with someone speaking a distinct dialect (e.g. NRK, 1937), and even a reporter speaking Nynorsk (e.g. NRK, 1938). Also, it is worth noting that these programmes were sent only once a week, each 30 minutes long. Hence, the claim that *Barnetimen* would have been a substantive and stable input for SEN for children is dubious at best.

foreign language with very young children (9 months) also confirm that social interaction is a prerequisite (Kuhl et al., 2003; Lytle et al., 2018). Furthermore, acquiring a second language is not a precise comparison to acquiring a closely related variety, which would be the case with SEN. To my knowledge, the research on children's second dialect acquisition through media is scarce or non-existent.[9] Regarding adults, Nycz (2019) argues:

> while certain salient and simple features – lexical items, mostly [...] – can be explicitly borrowed by anyone with the limited exposure to a source dialect (say, via television), vowel chain shifts and other more complex aspects of phonological and syntactic structure seem to require sustained local contact in the right social networks if they are to be learned (Nycz, 2019, p. 154).

Despite Nycz' statement being based on a review of the literature, in light of adults' ability to parody dialects they have not encountered in real life, it seems somewhat too strong.

Stuart-Smith et al. (2013) found that their Glaswegian subjects' emotional engagement with (but not simply watching of) the soap opera *East Enders* was one of the most contributing extralinguistic factors in the spread of *th* fronting and *l* vocalisation. However, the authors argue that television engagement only "accelerate[s] the innovations because they are already present in Glaswegian" (Stuart-Smith et al., 2013, p. 530), through an implicit alignment with the social meanings the variants already hold. Similarly, Kristiansen (2014) points out that whether or not linguistic structures are adopted through media, beliefs and ideology regarding language variability probably are.

A more important question than whether children have the ability to acquire language by watching television is what the largest source of input of

[9] There are however anecdotal reports of American children adopting a British accent from viewing the television show 'Peppa Pig' ((Nycz, 2019; New York Post, 2019)).

SEN/RPR for children really *is*. In a survey from 2018, only 12% of the parents of 3- to 4-year-olds reported that their children had spent more than two hours watching television on the day before. However, when asked how many hours had been spent on meeting a friend or spending time with their family, 21% and 87% respectively reported that more than two hours had been spent (Medietilsynet, 2018). This comes in addition to the time spent in daycare institutions. Although self-reported data should be taken with a grain of salt, this is an indication that regardless of whether children are able to extract morphology or phonology from television, their main source of the register they use in role play is, by far, role play itself.

2.2.2 Input from caretakers

Caretakers are the most important source of input for children in their first years of life. In an introduction to a special volume on acquisition of sociolinguistic variation, Labov (2013, p. 249) writes: "[s]tylistic variation that reflects social variation found in the wider society is learned in parent-to-child interaction." A large body of research has been devoted to the ways in which caretakers modify their speech to children (e.g. Snow, 1972): child- or infant-directed speech (CDS/IDS). For instance, Smith and Durham (2019) suggest, based on their own previous research, that the variation present in CDS is constrained by the perceptual salience of the variables in question, such that "only those variables that are above the level of consciousness in the speech community […] are adopted in CDS." (Smith & Durham, 2019, p. 12).

There are reports in the literature that parents use more standard like variants in their CDS than in their adult-directed speech (Foulkes et al., 2005; Smith & Durham, 2019): "many parents are reluctant to speak dialect to their (young) children, and prefer a standard-like variety, even if they would speak dialect toward each other" (De Vogelaer et al., 2017, p. 10). To my knowledge, standardisation is not a prominent feature of Norwegian CDS. The lack of

mention of any type of standardisation in studies of Norwegian CDS, even in studies where the participants are stated to speak a non-standard native dialect (Englund & Behne, 2005; Steen, 2019; Steen & Englund, 2022), indicates that this is neither a widespread nor particularly pervasive phenomenon among Norwegian caretakers. This is supported by the fact that dialects have a high status in Norway (Vikør, 1993).

Although standardisation in CDS could play a part in the levelling of children's native dialect towards a standard (De Vogelaer et al., 2017), it should have no bearing on children's use of standard variants in their RPR. It should be remembered that CDS is the children's primary input for their *native* dialect, which is the variety which children auto-diverge from when they use standard variants in their RPR. CDS comes with no kind of indexing of which variants belong to the dialect and which belong to the standard. In addition, children are sensitive to the fact that CDS is a specific register: they have been found to use speech characteristics related to CDS or IDS when speaking to younger children (Warren-Leubecker & Bohannon III, 1983; Weppelman et al., 2003), and during role play when their role character is interacting with infant role characters (cf. the above). Regardless of whether Norwegian parents use standard-like variants in their CDS, Norwegians children's input in SEN must be found elsewhere.

Eliassen (1998) has proposed that reading of children's books by caretakers may also be a source of the standard variety. The background for this suggestion is the fact that SEN can be regarded as a spoken exponent of the majority written standard, Bokmål, in which most children's books are written. The linguistic form of caretakers' and kindergarten teachers' reading of children's books in Norway is understudied. An interesting question in this regard, is the extent to which parents also use East Norwegian intonation when reading, or, if they read in the standard, use the intonation of their native dialect (or something completely different), as intonation is one of the features of SEN first mastered by children in their role-play (Strand, under revision). My impression, from my own experience and my communication

with other parents, is that it is most normal to read with one's own intonation or even by translating to one's own native dialect, but this is ultimately an empirical question.

What is most definitely the case is that some Norwegian adults code-switch to SEN when they engage in role play with children.[10] It is unknown how widespread this is, and adults' proficiency in SEN is an empirical question outside the scope of this thesis. In any event, it seems that some children are socialised into using (features of) SEN as an RPR also by their caretakers, and caretakers engaging in role play may represent an additional input source of SEN variants.

2.3 Role play as performance

It seems probable that the conventions of role play, such as the use of (variants from) SEN as an RPR, are transmitted from peers, older children and, in some cases, caretakers within role play itself. The acquisition of SEN variants may also occur in the same domain, at least to a certain extent. This kind of transmission is reminiscent of that of folklore (cf. McDowel, 1999).

Although the different games or frames of role play (e.g. 'burning house', 'family', etc.) follow certain schemes, the schemes are quite wide and open to improvisation (cf. Sawyer, 1994, 1996; Lytra, 2007). Thus, rather than being a cultural item passed down between generations, the specific cultural conventions of role play of each community are created and re-created by and within instances of role play itself. In this sense, role play utterances can be analysed as *performances* (Cook-Gumperz, 1992; Lytra, 2007; Reynolds, 2010; Sawyer, 1994, 1996), in the sense of Bauman (1975, and subsequent work). That is, as:

> a mode of spoken verbal communication [that] consists in the assumption of responsibility to an audience for a display of

[10] For instance, one of the employees at the kindergarten where the data were collected code-switched to SEN when playing with the children.

> communicative competence. This competence rests on the knowledge and ability to speak in socially appropriate ways. Performance involves […] accountability to an audience for the way in which communication is carried out, *above and beyond its referential content* (Bauman, 1975, p. 293, emphasis added).

Bauman's performance theory[11] originates in folklore studies and speech anthropology, and represents a movement away from being "restricted to the residue of a specific cultural or historical period" (Bauman, 1975, p. 306) and in the direction of viewing folklore and speech culture as an emergent phenomenon, created "within the context of particular situations […] structured by the situated and creative exercises of [communicative] competence" (Bauman & Sherzer, 1989 [1974], p. 7). The term 'performance' was allegedly chosen as a reaction to Chomsky's (1965) generative research programme with its demotion of 'performance' (speech) in favour of 'competence' (innate grammar) (Bauman, 1986).

A central communicative function of performances is the act of making speech "framed as display, objectified, lifted out to a degree from its contextual surroundings" (Bauman, 1986, p. 133), decoupling the verbal text from its immediate context, in the process of *entextualisation* (Bauman & Briggs, 1990; Briggs, 1993). This is necessary in order to make the verbal text – in our case the role utterance(s) – an object for 'display of communicative competence.' This is in essence what RPR does in role play: it decouples it

[11] The terms 'performance' and 'performance theory' have been and are still used in a wide range of different, albeit overlapping meanings across different (sub)disciplines (cf. Schechner, 1988; Shepherd, 2016). The conception of performance used in this thesis is narrowed down to the treatises given by Richard Bauman and colleagues (Bauman, 1975, 1986, 1992; Bauman & Briggs, 1990; Bauman & Sherzer, 1989 [1974]; Briggs, 1993), which in turn draw on Goffman's (1974) *frame analysis* and Bateson's (1976 [1955]) metacommunicative codes, and have become authoritative in studies in variationist sociolinguistics and related linguistic sub-disciplines (e.g. Bauman, 2000, 2011; Bell & Gibson, 2011; Coupland, 2007; Jaffe et al., 2015; see also Shepherd, 2016, ch. 3, for an overview of Bauman's theory of performances in relation to other 'performance theories').

from the everyday reality context in which it is uttered, in order to metacommunicatively convey that its truth value is meant to hold in the role play reality (cf. *phantasemy*). Thus, one of the most central semiotic functions of the RPR is encompassed in a core performative function.

The specific cues[12] of performance are "culturally conventionalized and culture specific" (Bauman, 1975, p. 295). Bauman (1975) gives a list of typical 'communicative means' by which performance is cued, including "special codes, for instance archaic or esoteric language," stylistic devices, and "special paralinguistic patterns of voice quality and vocalization" (p. 295). It is already established from the literature that children use pitch and voice quality, stylistics, and/or a special register to cue role utterances by making them stand out from the flow of speech uttered by them *as themselves* (cf. *auto-divergence*). Thus, the cues by which the process of auto-divergence takes place have a counterpart in what we may call the *entextualisation cues* of performance theory (cf. *contextualisation cues* in Gumperz, 1982).

Another relevant side of Bauman's performance theory is the focus on the immersive and artful properties of performances: "it is offered for the enhancement of experience, through the present appreciation of the intrinsic qualities of the act of expression itself" (Bauman, 1986). This bears relevance to Smith's (2000) and Sutton-Smith's (2000) opposition to reductionist views of play, without alluding to specific (developmental) goals outside of play itself, apart from immersion and having fun. Children's successful participation in play is important for their well-being, and their access to popular play groups and toys is dependent on their competence as players. In this sense, it is easy to see the possible effects of the scrutinising of the children's role play performances by their peers and their motivation to draw on tropes and stereotypes from children's worlds outside of role play to make their role play performances as realistic, immersive, and entertaining as possible through the 'artful display of speech.'

[12] Bauman (1975) uses the term *keying* instead of *cueing*, following Goffman (1974).

2.4 On language variability

Speakers vary their speech based on their identity, the context in which it is uttered, the addressee of the utterance, as well as the speaker's stances or sentiments towards the subject of the utterances and the addressee. Thus, the systematic variability of children's RPR is placed within a larger system of variable language use: the different *styles* (Hymes, 1989[1974]) or *speech genres* (Bakhtin, 1986[1979]) speakers know and use, which can be categorised in different ways. According to Hymes' (1989[1974]) ontology, *varieties* are styles that are associated with specific social groups and *registers* are styles that are associated with recurring contexts. If we were to place (any child's) RPR within Hymes' ontology, we would be on safe ground in categorising it as a register. The same would apply if we were to call SEN a variety.

Although the terminological categorisation of the Norwegian RPR is not the subject of this thesis, it is interesting to note that it does not quite fit into Hymes' ontology: the speech community seems to recognise the Norwegian RPR as SEN to the extent that it is common to hear, both colloquially and in scientific reports, that 'children play in East/South Norwegian' or 'Oslo dialect' or 'Bokmål,' i.e. one specific variety of Norwegian. One can make the following thought experiment: if a child who uses SEN in her RPR on a regular basis, uses her same knowledge of SEN to mimic a person who speaks the Oslo dialect, is the child's speech an example of a register in the first instance and a variety in the next? Or could it be both at the same time?

We will not pursue this terminological discussion further, but only note that the 'style' Norwegian children use in their RPR is perceived as different from their native dialect to such an extent that it is viewed as a different geographical speech variety altogether by caretakers and other adults. This prompts us to discuss how the scientific literature has treated the nature of the speaker's knowledge of language internal variability and structurally overlapping varieties.

The common ancestry of two varieties or registers of the same language is indisputable. The nuts and bolts of the process of bifurcation following language change into separate varieties or dialects has attracted some scientific attention. This includes the role of intra-speaker variability in the spread of the change, and thereby the new variety, through the population, socially and/or geographically. As Bickerton (1971) writes: "it would be ridiculous to suppose that a speaker went to bed using morph x in all tokens of a given environment and got up the next morning using only morph y" (p. 475). In other words, as a linguistic change spreads (geographically, socially, and/or through time) from variant x to variant y in a range of environments, there will be a point, synchronically, for a given speaker and linguistic environment, where there is 'free' variability between x and y (keeping social and indexical variation out of the equation for now). In these instances, where the variants exist in free variation in a speaker, the speaker can be said to possess two different 'varieties' along the relevant dimension (variable), one containing variant X and the other variant Y ('isolects' in Bailey, 1973).

When such a variability is available to the agents in a speech community over single variables or complete variants, one important question pertains to how this variability is represented in the speaker's mental linguistic repertoire. In the onset of generative, transformational grammar as a research programme 'the ideal speaker-listener in a completely homogeneous speech-community' (Chomsky, 1965) was assumed. This left little room for variation and gradience of the kind discussed here. First, inherent, free variation in the grammar would not be available: utterances would 'fall out' in a deterministic way from different parameters or settings in the generative module when sentences were constructed. Second, the fact that language in everyday use exists in different styles was overlooked. However, scholars operating within a generative framework are now to an increasing extent studying variation (cf. Eide & Åfarli, 2020, for an overview), particularly in studies of L2 acquisition and interlanguage. The following passage, from Noam Chomsky himself from the Q&A section of "The Managua lectures"

(Chomsky, 1988), is revealing:[13]

> [Q:] A child can learn two languages simultaneously, one in the house and the other in the street. Does this mean that the child relates the position of the [language parameter] switches to the environment?
>
> [A:] Well, this is a very important question which I have been pretending all along does not arise. [… I]n fact the problem is really more general, because every human being speaks a variety of languages. We sometimes call them different styles or different dialects, but they are really different languages, and somehow we know when to use them, one in one place and another in another place. Now each of these different languages involves a different switch setting. In the case of Spanish/English it is a rather dramatically different switch setting, more so than in the case of different styles of Spanish that each of you master. (Chomsky, 1988, pp. 187–188)

In a similar vein, Roeper (1999, 2016) has proposed a theory of 'universal multilingualism' or 'multiple grammars:' "a speaker has a set of mini-grammars for different domains so that, in effect, every speaker is bilingual" (Roeper, 1999, p. 169), and further, "a person has numerous grammars: every lexical class with rules that are incompatible with another class should constitute a separate grammar" (Roeper, 1999, p. 170, cf. also Amaral & Roeper, 2014 and Bailey's isolects). In the multiple grammars theory, language internal variation and multilingualism are two sides of the same coin. Here, instances of variability are conceived of as instances of code-switching between different grammars.[14]

[13] Thanks to Kristin Melum Eide for pointing me in the direction of this quote.

[14] The discussion of internalised competence in closely related varieties has gained interest in the study of 'bilingual advantages' and their effect on general cognition (see e.g. Grundy, 2020;

An alternative to a multiple grammar approach is to assume *variable rules* of the grammar (cf. Labov, 1977, 1978). Regardless of whether variability is represented at the level of the mental grammar or the specific variable (or *rule*) in question, the probabilistic and/or socially governed variation between the variants has to be accounted for. In some approaches, it is outsourced to a different part of cognition: "the choice of grammar can be linked to social register, and [...] the social register feature varies independently of the grammatical structure" (Roeper, 1999, p. 173). In other approaches, it is baked into the linguistic 'machinery' itself (e.g. Adger, 2006). In any event, the speaker's choice of one variant over the other in any particular situation may not always be random and probabilistic. Rather, it may be governed by the non-denotational, 'social' meaning of the variant in question. The latter certainly seems to be the case for the use of SEN variants in RPR. Eckert (2019) suggests that *any* variability is governed by social meaning and that linguistic change is driven by the social meaning ascribed to variables. This social meaning is often construed as *indexical* meaning. In the next section, we will take a closer look at indexicality.

van den Noort et al., 2019; Ware et al., 2020, for recent reviews, and Paap et al., 2015; Lehtonen et al., 2018; Bak, 2016; Leivada et al., 2021, for discussions of the difficulties in reproducing the original findings and possible remediation strategies), which has also been found in the context of closely related varieties (Antoniou et al., 2016; Blom et al., 2017; Costa et al., 2009; Poarch et al., 2019, but see Kirk et al., 2014, and Scaltritti et al., 2017, for contradicting results). In the Norwegian context this has been made particularly relevant by Vangsnes et al. (2017) who report that pupils who write the minority written standard, Nynorsk, outperform their Bokmål peers when socio-economic factors are controlled for, and argue that this may be due to the advantage of being proficient in both written standards (see also Blekesaune & Øystein A. Vangsnes, 2020). They further argue that the use of SEN in RPR, and thereby training in a spoken exponent of the Bokmål variety prior to literacy training, may be a contributing factor to this effect.

2.4.1 Indexicality

When children make use of RPR in phantasemy, or alter their voice or pitch to take on different role character personae, it is semiosis (meaning making) that goes "above and beyond its referential content" (Bauman, 1975, p. 293). This kind of meaning making can be construed as *indexical* meaning.[15]

In principle, any level of language capable of displaying variability is prone to indexicality (Acton, 2019; Pharao & Maegaard, 2017; Zhan, 2005), including paralinguistic features (pitch, voice quality, gestures, etc., e.g. Podesva, 2013; Podesva & Callier, 2015). Indexical meaning often displays a certain degree of iconicity to its linguistic material (Eckert, 2010; Podesva, 2013, see also Ohala, 1995 on 'the frequency code'). For instance, we can analyse utterances where the tongue has been displaced unnaturally forwards and backwards as indexing 'big-ness' and 'small-ness' respectively: displacing the tongue backwards will make the vocal cavity bigger, whereas displacing it forwards will make it smaller (Laver, 1980), in both cases affecting the formant values and overall vowel quality or timbre, making them either lower in pitch, as in the former case, or higher, as in the latter. In the former case,

[15] *Indexical meaning* builds on Peirce's (1998 [1894], et subs.) tripartite division of linguistic signs into *icons, indices,* and *symbols*. Icons denote something by physical resemblance (e.g. a portrait). Indices mark "the junction between two portions of experience" (p. 8) (e.g the direction of the wind or vertical direction as indicated by a weathervane or a spirit level respectively (Peirce, 1998 [1895], p. 14)). In symbols, the relation between the sign and what it denotes is arbitrary and conventional (cf. *the Saussurean sign,* Saussure, 1983 [1916]). The latter categories of signs contain the former, but not the other way around (Peirce, 1998 [1903]), such that a symbol has an iconic mode (the word form itself) and an indexical mode (the association between the word form and what it denotes as established through exposure in the speaker-listener). In Peirce's theory, then, in linguistic (i.e. symbolic) signs, it is the indexical mode that is the interface to the context through use (Gurdin, 1994). In that way the sign can take on social, cultural, and pragmatic meanings, independent of its referential meaning. Since this point was made in Silverstein's (1976) seminal paper, the notion of indexicality has become an analytical concept in the study of style and stylistics in sociolinguistics and linguistic anthropology (see e.g. Ochs, 1992) where the term refers to the social, cultural, and pragmatic meanings any sign (linguistic or otherwise) conveys independent of its referential content.

we can construe this as mimicking persons or beings with a large vocal cavity and thus, prototypically, of large stature, or a small vocal cavity and small stature in the latter. The association between the acoustic and physical (size) variables is not directly available to the speaker, but indirectly through experience with speakers of different sizes.

Indexical meaning is not only a one-to-one relationship between different signs and specific indexical meaning(s). Rather, it can be construed as a number of related indexical meanings that a sign can index, dependent on the speaker and the context (an *indexical field*, Eckert, 2008; cf. Silverstein, 2003, and *the indexical order*). To take an example: harsh voice is much more perceptible in darker phonation, and thereby more perceptible from male than female speakers (Laver, 1980). Thus, harsh voice may index masculinity (in addition to or alternating with other indexical meanings, such as 'anger,' Laver, 1980, and 'aggression,' Moisik, 2013). From there it may take on indexical meanings culturally and stereotypically related to (the indexical field of) masculinity, for instance 'strength,' 'roughness,' or 'decisiveness in action' (cf. Eckert & Labov, 2017).[16]

Conversely, one can conjecture that by the same mechanism, signs can take on new indices from an indexical field, based on other signs that co-index one or more of the indices within that particular indexical field. By this reverse mechanism, several variants get bundled together to make up more or less coherent styles through the process of indexation (cf. Hymes, 1989[1974] and *rules of co-occurrence*): "Sociolinguistic variables combine into speech styles, and these styles in turn combine with other semiotic systems (e.g. clothing, movement, demeanor) in the construction of personae" (Eckert, 2019, p. 4), as a 'bricolage' (Eckert, 2018).

Note that different genres and communicational frames can embody a multitude of internal styles themselves. This is the case with so called *role languages* in Japanese manga and sci-fi genres (cf. Kinsui, 2017; Teshigawara

[16]These are intended as examples of possible, culturally dependent, and stereotyped features, not as the author's personal or normative view of the differences between the genders.

& Kinsui, 2012), where stereotyped styles (for instance 'doctor's language') take on a life of their own within the genre (Kinsui, 2017), and thus come to index both the role characters' personae *and* the specific genre. Thus, within specific genres and communicational frames, such as role play, the styles used may be only indirectly connected to the real world, and may also index the context as conventionalised registers as well as the participants' personae.

Briefly summed up, indexicality is the way in which stylistic features become loaded with social, cultural, or pragmatic meaning. An important part of speakers' communicative competence is the correct use and interpretation of these stylistic features. This is the competence children display when they use stylistic features to ascribe different personae to their role characters ('father,' 'mother,' 'baby,' etc.) in their role play performances, based on learned stereotypes. Even code-switching in RPR (to SEN or any variety) can be construed as indexicality, in that pragmatic meaning overlays the referential content of speech.

2.5 A standard spoken variety?

To fully grasp the place of Norwegian children's role play register in the speech community at large, it is important to understand the relationship between dialects and 'standard:' the two codified written standards (*Nynorsk* and *Bokmål*) are seldom spoken outside of theatre stages and national news broadcasting (Vikør, 1993), and even in these contexts, they are used alongside regional dialects, which are generally accepted in all parts of society (Vikør, 1993; Kerswill, 1994). Because of this situation, the question is whether Norwegian has a standard spoken variety at all, and, if so, which variety should count as the standard. This question is very much up for debate, and I will try to summarise the discussion using the terms *codification* and *prestige*.[17]

[17] These two notions serve as a heuristic to categorise the different viewpoints in the debate, and are not necessarily the terms the scholars under discussion would use.

Norway does not officially have a codified spoken standard, but the written standards can of course be read out loud, for instance in news broadcasting and literary training, as well as spoken by actors. As with most written languages, there is a discrepancy between Norwegian written standards and their pronunciation, due to simplification of the phonetic and phonemic inventory in the codification process, as well as development in the spoken language. Despite this, there is, in most regards, an implicit agreement on how *Bokmål* (to take the most relevant case here) is pronounced. For instance, there is general agreement that the letter strings <regn> ('rain') and <huset> ('the house') should be pronounced something like [ræin] and [hʉːsə] in *Bokmål,* and not with a [g] and [t], respectively, despite what the string of graphemes may indicate (Vikør, 2009). As such, both written standards have socially agreed upon spoken varieties, and can thus be argued to be spoken standard varieties (Sandøy, 2009; Vikør, 2009).

Prestige is not easy to define in this context, and it has to be regarded in relation to a range of sociolinguistic facts pertaining to Oslo and the surrounding areas. First, the Oslo dialect has traditionally been stratified into two main sociolects. Somewhat simplified, one for the higher socio-economic classes in the 'West End' areas, which has been structurally close to the written standard, and one for the lower socio-economic strata of society in the 'East End' areas, with more features from the surrounding 'rural' varieties, in addition to certain innovations (e.g. Johannessen, 2015; Stjernholm, 2014). Secondly, there is an ongoing dialect levelling taking place in South-Eastern Norway, around Oslo. The source and motivation for this levelling is and has been a subject of much research (see Heide, 2020 for a recent overview).

Scholars have argued that the 'West End' variety of the Oslo dialect is the most prestigious, due to its speakers' socio-economic prestige, and/or because of its similarity to the *Bokmål* written standard (Bull, 2009; Mæhlum, 2009; Opsahl & Røyneland, 2009, p. 99). As a result of this, this variety may be what drives the dialect levelling processes in the surrounding areas and elsewhere. However, as Stausland Johnsen (2015) argues in a meta-study, it is in fact

variants from the 'East End' variety that are spreading to the surrounding areas. Whether the spreading features stem from the 'East End' variety, or whether they stem from a new 'middle variety' (a compromise between East End and West End variety, henceforth 'expansive variety') that has evolved in Oslo (Opsahl & Røyneland, 2009), is up for debate. What is clear, however, is that the expansive variety is not the 'West End' variety (Heide, 2020). Nor is it a spoken variety of the *Bokmål* written standard, as is evident from the features in Table 2.1 (see Heide, 2020 and Stausland Johnsen, 2015).

	Expansive variety	Bokmål
definite plural masculine	-a	-ene
	bila	*bilene*
definite with -l(e)	[-ɳ]	[-ln]
	sykkærn	*sykkeln*
unstressed reflexive pronoun	*sæ*	*sæi*

Table 2.1: *Examples of features that differ between the expansive Oslo variety and Bokmål*

A possible further assumption could be that the expansive variety should be regarded as the more prestigious (at least for the speakers in question, whose spoken variety is being levelled towards it). This would be a circular definition ('variety X spreads because it is the more prestigious, and it is the most prestigious one because it spreads'), unless one can come up with independent evidence for this hypothesis. Stausland Johnsen (2015) does this by showing that there are pejorative attitudes towards the 'West End' variety, as it is described as '"pretentious', 'snobbish', 'affected', 'hoity-toity"' and so on (Stausland Johnsen, 2015, p. 623, see sources cited there). Although this hypothesis supports Stausland Johnsen's (2015) model, it does not settle the discussion of standard varieties (which in all fairness is not the goal of the paper). In fact, Bull (2009) and Heide (2020) argue *against* using the term *standard* for the expansive variety (*pace* Opsahl & Røyneland, 2009), as it

does not meet the criteria of connection to the written language and the high society and elite, nor the perception of being 'the most correct' (Heide, 2020, p. 250). Thus, the development away from the socio-economically, culturally prestigious 'West End' variety should rather be seen as an example of *destandardisation* rather than standardisation (Bull, 2009).

A third option, as an alternative to abandoning the term 'standard' altogether, is to assume *two* standards (Røyneland, 2009), where one is the 'West End,' which is losing ground, and the other is the expansive variant ("conservative" and "urban" respectively, in Røyneland, 2009).

The RPR has rarely been discussed in the recent debate on the spoken standard. One exception to this is Røyneland (2009, p. 12), who argues that "children all over the country tend to use [SEN] when involved in role play (cf. Eliassen, 1998)," and that "[t]his indicates that the East Norwegian spoken standard functions as an operative norm." In Section 2.1.3, I referred to reports of the use of standard varieties or variants as role play registers. *Mutatis mutandis*, this gives increased credibility to the argument that the use of a variety as a role play register is an indication that there is such a thing as a spoken standard of Norwegian. Although prestige is a much used notion in the discussion of what should count as the standard variety, Kleemann (2015, p. 63) disputes its relevance in the discussion of the RPR, as "even the refuse collector also speaks 'posh' in the role play, if one regards the Standard East Norwegian as 'posh'" (my translation), arguing instead that it expresses *otherhood* (cf. *auto-divergence*). However, it is not necessarily fruitful to conflate prestige in the speech society and prestige between roles in role play.

2.6 Intermediate summary

In the previous sections I sketched out the object of study (the role play register, RPR) against the wide theoretical backdrop of children's play. I have also discussed questions of children's acquisition of their first language, of subsequent dialects, and of sociolinguistic variation. Based on the literature, I

have argued that the children are socialised into using (variants from) SEN as the basis of RPR through the role play itself, and further that it is probable that much of the acquisition of SEN variants also takes place between peers in role play as well. In light of this emergent property of the Norwegian RPR, I argued that children's role utterances could be seen as *performances* and gave an introduction to Bauman's performance theory.

2.7 Knowledge gaps and aims

In this section I outline the overarching research questions and relate them to the gaps in our knowledge about the Norwegian role play register. The answers to these questions, and the discussion of how they shed light on the three central topics of this work will be given in Section 5. The first two research questions, approached in Paper 1 and Paper 2, are primarily related to the second topic: the structural aspect.

RQ 1: What features of SEN do children use in the RPR?

RQ 2: How does the RPR develop in the individual?

Much of the Norwegian population grows up *bilectally*, with proficiency not only in their local dialect, but also to a certain extent in SEN, in part through their RPR. It is of theoretical and practical interest to ascertain how far-reaching children's proficiency in SEN *is*. It can shed light on how closely related varieties might affect one another. Furthermore, it is a variety that is that is not passed on from caretaker to children, as the native first language is, whether closely related or not; nor is it acquired in the way we are used to think of second languages being attained: through immersion and/or through instruction in a society with native speakers. Rather, it seems to percolate from society at large into children's culture, presumably in and between play groups, as a kind of children's folklore.

Since the *form* and *function* of the RPR are so tightly connected, probably more so than many other forms of language variation, a proper answer to

research questions 1 and 2 requires a thorough discussion of its function. To shed light on research questions 1 and 2 qua the function of the RPR, a suitable framework should be chosen in answering research the last research question:

RQ 3: What is the communicative function of the role play register?

The specific theoretical framework chosen to answer this question is performance theory, as outlined in Section 2.3.

These questions are necessarily very general, and cannot be answered definitively in the course of a single PhD thesis, but they represent overarching goals for the specific research questions of the individual papers.

3 Methodological considerations

The data in this thesis are drawn from a corpus of spontaneous play in a day care institution (kindergarten) in Tromsø, Northern Norway. In this chapter, I will detail how the data were collected (Section 3.1), present the participants (Section 3.2), and present the methods used to transcribe and code the recordings (Section 3.3) and the kinds of analyses used in the papers (Section 3.4). Thereafter, I will present a discussion of the methods in light of generalisability and validity, ethics and openness and reproducibility in Section 3.5.

3.1 Data collection

A total of 44 recordings were made over a period of two and a half years in a day care institution in Tromsø, Northern Norway. In order to protect the children's age and identity, but still give information about the period in which the recordings were made, I will limit myself to stating that the first recording was made some time in the period 2014-2018. The recording sessions were made at varying intervals for the following two and a half years, with the exception of longer breaks during the summer. The sessions were approximately bi-weekly in the first year, then monthly in the next one and a half years. During the sessions, a separate room in the kindergarten was used, where the children for whom I had obtained parental consent were allowed to play at will. However, a general rule was enforced that a maximum of three children should be present at the same time to increase the probability that all children participated in collective play, and in addition reduce the number of children talking at the same time, in the interest of easing the transcription

work. However, it was a higher priority that children should enjoy playing in the room and want to take part, so the rule would often be broken, and more than three children would sometimes be in the room at the same time. In this way, it was possible to ensure a pleasant, playful atmosphere where the children were keen to participate. This provided data of high ecological validity. Each session usually lasted between one and one and a half hours.

In the room, the children were allowed to use toys provided by the researcher that would only be available to them during the recording sessions. These included a doll family and a furnished doll's house (from session 1), a fire engine and two firemen (from session 5), a fire station (from session 19), and a garage with cars and a helicopter (from session X). All the toys were produced by Hape© and they were mainly made of wood or fabric, including the dolls and the furniture and appliances.

Both audio and video recordings of the sessions were made. Two different types of audio recordings were used: in sessions 1–19, two condenser microphones (Samson© C02) were hanging from the ceiling by their cords, and connected to a recording device (Zoom© H4n pro). From session 20, the built-in condenser microphones of the recording device were used instead. In each case the audio was captured in two channels (stereo, one microphone in each channel). The change in microphones was due to a change in rooms as the new room was not suitable for hanging the microphones from the ceiling. In order to aid the transcription process, the stereophony of the recording was 'aligned' with the video recording (so that speech from children on the left side of the video would be perceived as also being on the left side of the audio recording, giving an additional clue as to which one of the children was talking). Audio was recorded in WAV audio format with a sample rate of 44.1 kHz.

Video was recorded with a wide angle camera (GoPro© HERO Session), mounted on the wall with a magnet on a ventilation cap. The video recordings were in MPEG-4 file format and H.264 encoding. As the main data are the audio files, and the visual data were mainly used to disambiguate

Session no.	Time since 1st session	Session no.	Time since 1st session
1	0.0	23	10.4
2	0.7	24	10.17
3	0.14	25	11.9
4	0.28	26	11.23
5	1.10	27	1;0.6
6	1.20	28	1;0.27
7	2.6	29	1;1.18
8	2.13	30	1;2.18
9	2.25	31	1;3.8
10	3.8	32	1;3.28
11	3.17	33	1;4.12
12	3.29	34	1;6.21
13	4.6	35	1;8.0
14	4.27	36	1;9.1
15	5.3	37	1;9.22
16	6.22	38	1;10.17
17	7.5	39	1;11.15
18	7.19	40	1;11.29
19	8.3	41	2;1.3
20	8.17	42	2;2.4
21	9.2	43	2;3.11
22	9.14	44	2;4.11

Table 3.1: *Overview of recording sessions, with the distance in time in reference to the first session ((years;)months.days). Greyed out sessions are used in this work.*

between speakers, the choice of camera was made based on three parameters: (i) its size, as a small camera would be less likely to distract the children from playing as naturally as possible, (ii) its ability to record with a wide angle, and thus capture the whole room in one frame, and (iii) its low price compared to more professional recording equipment. An additional and unforeseen advantage was that the GoPro camera also produces relatively small video files with more than sufficient details for the purpose, which meant that they were easier to handle and store than videos with higher fidelity and a larger frame rate and resolution, and therefore file size.

On two occasions the audio recording on the Zoom recording device was lost due to human error. On these two occasions, the audio was still recorded, but only through the suboptimal microphone in the camera. The two recordings in question have not been transcribed, and do not represent any possible source of error for the current investigation.

From the 44 sessions, a subset of 18 recordings was chosen for further analysis to limit the workload to a realistic size. The choice of specific recordings was based on the timing between them, the children participating, and the audio quality. The 18 recordings span one year, with shorter intervals between the first recordings. The initial short intervals were chosen since the ages of the children at the first recordings were close to the age at which role play is typically reported to start. I therefore expected there to be more development in the beginning of the first year than towards the end. All the recording sessions are listed in Table 3.1, with the difference in time from the first session given in years, months and days, and the 18 recordings for this study greyed out.

3.2 Participants

Name	Age at session 1,	session 16,	and session 44
Teodor (m)		2;11.23	4;9.12
Klara (f)	2;7.1	3;1.23	4;11.12
Kimbo (m)	2;10.23	3;5.14	5;3.3
Lars-Lars (m)	2;11.16	3;6.7	5;3.27
Inga (f)	2;11.20	3;6.11	5;4.0
Celice (f)	2;11.27	3;6.18	5;4.7
André (m)	3;0.16	3;7.7	5;4.27
Hedda (f)	3;1.20	3;8.11	5;6.0
Aili (f)		3;9.30	5;7.19
Morten (m)	3;3.24	3;10.15	5;8.4
Y (f)		3;10.26	5;8.15
X (f)		4;0.30	5;10.19
Z (f)		4;1.28	5;11.17

Table 3.2: *Pseudonyms and ages (years;months.days) of each of the 13 participants, in order from youngest to oldest. Data from the greyed-out participants were used in this work.*

Parental consent was collected for 13 children: seven children (five girls) from the first session, one boy from the third session, and another five children (four girls) from session 16 (after the first half year, cf. Table 3.2). The changes in the number of participants were because of a merger of two of the children's groups in the kindergarten.

Seven of the children were chosen for further analysis (four girls and three boys), all from the first group of children, before the merger. One of the participants, André, was excluded from the current investigation despite being part of the initial group: in general, he was less interested in being present in the play room than the others, and when he was there, he barely participated in

role play. As a result, his contribution to the corpus was very limited, at least in the subset of 18 recordings used in this investigation. The same holds for the last five children to join the group after session 16: their contribution in the final 18 files was too limited to be considered in the current investigation. However, as with the remaining 26 files, steps have been taken to ensure that all the remaining six children can be included in the corpus at a later stage, so their role play and language production can be subject to further investigation.

All the parents were asked to state their dialectal/linguistic background on the consent form. Two of the children, Hedda and Inga, have fathers with English as their first language (American and British English, respectively). Otherwise all parents had Norwegian as their first language, and the self-reporting on the consent forms gave no indication that any of the parents of the seven children spoke anything that could be characterised as SEN.

3.3 Transcription and coding

The data were transcribed in ELAN (Brugman & Russel, 2004) using a transcription protocol that has been used in a series of corpora with Norwegian dialects as well as Norwegian heritage language in America (Hagen et al., 2018; LIA, n.d.). The granularity of description of the 'LIA'-norm lies somewhere between phonemic and phonetic transcription, and is designed to capture the differences between dialects, but without the use of special characters or diacritics.

The transcriptions were mainly performed by the author, but some were also done by one of three transcription assistants. In the latter case, the transcription was always checked by the author afterwards.

The transcriptions were coded by the author for 'level of pretence,' borrowing the ontology of Høigård (1999), but also distinguishing between firemen and other roles: (i-a) role utterances as a non-fireman, (i-b) role utterances as a fireman, (ii) planning or directing utterances, (iii) magic utterances, and (iv) out of play utterances. Of most importance here, are the role utterances. For

an utterance to be coded as a role utterance, it had to comply with at least one of the following criteria (verbatim from Paper 1):

1. The utterance was clearly referring to something not happening in the 'baseline reality' (e.g. "I am peeing" or "there's a fire!"), and/or

2. The utterance was uttered with a voice quality or intonation that was clearly manipulated in a creative way as to indicate role utterances, and/or

3. The utterance was uttered while holding and animating a doll [or a toy fireman], and/or

4. The utterance was uttered as an answer to or in a conversation together with an utterance with the characteristics in 1–3.

For it to count as i-b (fireman utterance) the child had to hold and/or manipulate one of the toy firemen, or make utterances that were clearly intended as uttered by a fireman (e.g. 'we are the firemen', or 'climb down the ladder'), in addition to the general criteria for role utterances. For most analyses (Papers 1 and 2), (i-a) and (i-b) were conflated.

The planning utterances are the utterances that relate to the play, but are not uttered in character. These include role assignment and negotiations about the character (see examples 1 in Section 2.1.2). The magic utterances are prototypically the ludic speech acts (see examples 2 in Section 2.1.2), but onomatopoeia (i.e. the chime of the doorbell, typically 'ding-dong,' or the siren of the fire engine, typically 'baa-boo') were also counted in this category, as they are illocutionary in a way similar to the ludic speech act: by their uttering, the sound is created in the imagined reality. (Or: the phonetic string 'baa-boo' is the *aestheseme,* whereas the sound of sirens is the *phantaseme*.)

The out of play utterances are those which children utter as themselves, which do not directly refer to the game. There are grey zones between all utterance types. For instance, it is not immediately clear whether the

argument between children on whose turn it is to play with the fire engine or whether the roof of the doll's house should be on or off should count as planning utterances or out of play utterances (they are coded as out of play utterances here). In this kind of coding, the interpretation of the researcher is a possible source of error. To rectify this, the transcriptions with the coding have been made available together with the other replication files (see Strand, 2020b). The plan is to make the complete de-identified audio files available in addition.

3.4 Analysis

The empirical investigations which form the basis for this thesis use both quantitative and qualitative analysis. In the quantitative analysis, both inferential and descriptive statistics are utilised.

The qualitative analysis includes a description of some of the morphological variation found in the data in Paper 1, and the presentation of qualitative pitch contours in Paper 2. This is necessary to gauge the possible variation, and to identify which features of SEN (or potentially other varieties) are used in the RPR.

Paper 3 also includes an interactional analysis of selected sections of the data. Since the intended communicative function of the RPR is not directly available to us, we have to study it indirectly, through the investigation of the texts children produce in role play. To approach the problem, we have to use some *heuristic* – a theoretical framework – through which we can interpret the text. In this case, Bauman's (1975) notion of *performance* is a suitable theoretical framework.

Both Paper 1 and Paper 3 employ inferential statistics to test specific scientific predictions. In Paper 1, the variant (SEN/Tromsø dialect) of two variables are fitted in a binomial generalised mixed effects analysis, using the package `lme4` (Bates et al., 2015) in `R` (R Core Team, 2019). Age is modelled as a fixed effect (predictor) and language variety as a dependent variable. By-sub-

ject intercepts and slopes for the effect of age are included as random effects. The same class of test is used in Paper 3: a linear mixed effects model is fitted with utterance type (role utterance/not role utterance) as the predictor and mean pitch per utterance as the dependent variable. By-subject intercepts and slopes are included as random effects.

Paper 2 uses a great deal of descriptive statistics. These descriptive statistics draw on a family of quantitative analyses known as functional data analysis (FDA, Ramsay & Silverman, 2002, 2005; Ramsay et al., 2009; Ramsay, n.d.). FDA is presented at length in the paper, but the main idea is that instead of analysing data as discrete points, the dependent variables are analysed as a continuous functions of the independent variable(s). This is particularly used in the field of biomechanics, and especially on gait data, i.e. the movement of different joints in walking (e.g. Kadaba et al., 1989; Røislien et al., 2012a,b). As speech can be described in terms of the movement of the speech organs or production of audible sound along the time dimension, FDA is also amenable to the study of speech (Gubian et al., 2015, 2019a,b; Gubian, n.d.; Ramsay & Silverman, 2002, pp. 145–156; Turco & Gubian, 2012). Michele Gubian and colleagues have revolutionised the use of FDA in the study of speech data.[18]

The reason not to include any inferential statistics in Paper 2 is mainly due to the kind of data it explores: curves. It is difficult to establish confidence intervals for curves. It is easy enough to measure and describe the descriptive difference between two curves, but measuring whether one curve is *significantly* different from another curve is a different story altogether, let alone the problem of correlating the difference to linguistic categories, such as tonal accents.

[18] Most of the R scripts in Strand (2021) builds on the tutorial of Gubian et al. (2015).

3.5 Methodological discussion

Methodological choices are not only made on the basis of research questions. They will also be influenced by more general, scientific methodological and ethical considerations. Here, ethical or moral considerations pertain both to the privacy and integrity of the subjects and the place of science as an endeavour shared within the research community and its role in society at large. In the ensuing sections, I will discuss a few of these considerations in relation to this thesis.

3.5.1 Generalisability and validity

Due to the empirical standing of the subject matter, an explorative group case study was the obvious choice of research design to inductively begin to answer many of the questions. A disadvantage of such studies, however, is that the statistical inferences and generalisations to the larger population are not as straightforward as experimental studies. On the other hand, there are aspects of the chosen research design that make the conclusions *more* generalisable than those of experimental studies.

I will start this discussion of generalisability and validity by stating what this work can *definitively and unquestionably* say something about: the seven Tromsø children's role play register, used in one specific room, at 18 specific instances across one year. Above and beyond that, we can conjecture about the RPR of larger populations, since this is far from the first report of children using SEN as an RPR. This is unproblematic, as long as we keep in mind that they are precisely that: conjectures, and, more importantly, as long as these conjectures are *falsifiable*. However, it is not true that case studies can only be hypothesis generating and that no generalisations can be drawn from them. As Flyvbjerg (2006) correctly points out, case studies are ideal for (Popperian positivist) falsificationism: it only takes one case (one "black swan") to reject a strong hypothesis (e.g. "all swans are white").

Critics of the predominance of purely quantitative hypothesis testing

experiments (especially in branches of psychology), have argued that it is rather the experimental paradigms that are not easily generalisable, talking in favour of more descriptive studies (Rozin, 2001; Yarkoni, 2020): operationalising complex phenomena and verbal theories, and reducing them to experimental paradigms and statistical models is no easy feat. It often renders results that take no or little account of the external factors that the experimental paradigm and simplified statistical models do not (or even cannot) control for in a meaningful way. All of this results in generalisations that "bear only the most tenuous of connections to authors' sweeping verbal conclusions" (Yarkoni, 2020, p. 15). By adopting the current research design, I have bypassed many of the pitfalls associated with experimental studies, and thereby ensured this study's *ecological validity* (Brunswik et al., 1949) and reduced problems such as *demand characteristics* of an experimental situation (Orne, 1962). After all, what we want to generalise over is children's use of and competence in RPR in a natural setting, not in an experiment, and the use of RPR is highly context dependent.[19]

This being said, the current section should not be taken as a general argument *against* experimental, quantitative, and hypothesis testing research designs. Both have their drawbacks and they supplement each other.

[19] A relevant case that gives an example of this is an experiment I conducted on the children that participated in the current study, together with additional children. In the experiment, hand puppets were used to elicit RPR in controlled utterances (*wh* questions, the 'anthropophobic puppet paradigm,' see the discussion section of Paper 2). The research design ended up eliciting RPR from about a third of the subjects, whereas the others two thirds used their native dialect in the RPR condition. For instance, Celice, who was otherwise one of the most avid users of RPR in the recorded sessions of spontaneous play, only used her local dialect in the experiment. The results of the experiment would clearly have led to the wrong generalisation about children's use of RPR, for Celice and the remaining two thirds of the subjects. Due to the low use of RPR among the participants, the experiment was discontinued.

3.5.2 Ethical considerations and consent

According to Eckert (2013, p. 14), obtaining free, prior, and informed consent from the participants is "the cornerstone of ethical research practices." There are, however, cases in which it is not straightforward to fulfil these criteria. One such case is data collected with or from children, where the ability to understand the ramifications of participation in research (cf. be 'informed') may be underdeveloped, depending on the age of the subject. Up to a certain age, children cannot legally consent to their own participation in research, and their caretakers have to consent on their behalf. In addition, children have the right to be heard and participate in research, and these practical drawbacks should not rob children of the opportunity to participate (Backe-Hansen, 2016).

Children and toddlers are regarded as a vulnerable group, with a special right to protection (Backe-Hansen, 2016, p. 20; Council for International Organizations of Medical Sciences (CIOMS), 2016, pp. 57, 66). The potential benefit and/or harm of the research should be considered particularly carefully. Children's consent to participate cannot be *de jure*, but *informal* consent should be collected. The informal consent should be prior, free, and informed, to the extent possible, dependent on the subject's cognitive capacity: the extent to which information regarding a scientific study will be understood by a child will vary depending on age.

For this thesis, the consent on the children's behalf was obtained from the caretakers (Appendix A.1), who were duly informed about the aim of the study and the process of data collection, storage, and dissemination (Appendix A.2). The consent form and information letter were distributed to the caretakers by the kindergarten staff. Regarding the children, who were aged 2–5 at the time, it is difficult to assess their awareness and knowledge. But the children were often present while the camera and microphones were rigged up. Furthermore, the staff would talk about the researcher's presence at the kindergarten in terms of 'filming' ('Bror is coming to film today,' 'Bror is

filming in the room,' etc.). Among the children for whom consent had been contained, the room with recording equipment was open to whoever wanted to participate. This meant that the children's right to freely opt out was maintained. To avoid making the children aware of their speech during role play, they were not informed of the aim of the study.

The kindergarten staff were an important part of the data collection. Not only did they aid in getting the information out to the parents and in returning the signed consent forms, they also helped to find a suitable location in the kindergarten for the recordings and were often in the room during recordings, keeping an eye on the children while they were playing (see consent form and information letter to *barnehager* employees, in Appendices A.3 and A.4).

Lastly, the assistants aiding in the transcription and data collection were asked to sign a non-disclosure agreement (see Appendix A.5).

3.5.3 Open and reproducible science

In recent years we have witnessed increased efforts towards openness in science. The most recent result of this enhanced awareness was a meeting held in May 2021 at the United Nations' Educational, Scientific and Cultural Organisation (UNESCO), discussing a draft of recommendations on open science (UNESCO, 2021). The draft states:

> that more *open,* transparent, collaborative and inclusive scientific practices, coupled with more accessible and verifiable scientific knowledge subject to scrutiny and critique, is a more efficient enterprise that improves the quality, the *reproducibility* and impact of science and thereby the reliability of the evidence needed for robust decision-making and policy and increased trust in science (UNESCO, 2021, p. 1, emphases added)

These suggested recommendations have not come into existence in a vacuum, but have been advocated for a long time through a large and diverse movement for open science which has taken on many forms and agendas.

The quest for openness lies at the very heart of science as a means towards a greater good for all of humanity, and it has at least two sides: open science and open data. Many scientific endeavours are disseminated through paywalled channels, where other researchers or the general population have to pay commercial publishing houses to gain access to research. At the same time, those contributing with their work – the authors, editors, and reviewers – are not compensated by the publishing houses. Thus, the work towards "open access," where science should be disseminated freely to the population, also has an ethical imperative: scientific production should be open to those who pay for it, i.e. the general tax paying population.

The need for research to be reproducible, where the use of the same method on the same data yields the same results, is a requirement for it to be *reliable* (Open Science Collaboration, 2012). It is, however, not always the case that research is replicated, and this in itself is not necessarily a problem: in fact, in the most frequently used branch of statistical testing, *null hypothesis significance testing,* there will always be a small number of false positive (type I) or false negative (type II) errors, due to its theoretical underpinnings.[20] However, it becomes a real issue when the underlying assumptions for null hypothesis testing are not met due to methodological malpractices (e.g. increasing the number of participants during an experiment until a significant result is achieved; using several different tests on the same data, and reporting the ones that yield a significant result without correcting for the number of tests run *(p-hacking),* and making the hypotheses after knowing the results of a study ('hypothesizing after results are known,' or *HARKing*,

[20]There is a trade-off effect related to the so called alpha (α) level, the level below which the p-value is considered significant, typically the probability that the observed result is due to random variation (i.e. that H_0 is confirmed). One of the most used alpha levels in this field of research, .05, ensures that overall around one in twenty significant results are type I errors, theoretically (one per hundred in .01, and one per thousand for .001). That means that we expect each twentieth significant result to be a false positive (or hundredth or thousandth, depending on the alpha level). However, as there is a trade-off effect, when the chance of type I errors decreases, the chance of type II errors increases correspondingly.

Kerr, 1998)). All such malpractices can inflate the rate of type I errors, increasing the number of irreproducible findings. Such methodological malpractices have happened (and are still happening) in the scientific community, although often in good faith.

A number of measures have been suggested to amend the effect of biases and malpractices.[21] One of them is the use of open data and code available upon submission to a journal. This ensures that the whole scientific process is open to more scrutiny from reviewers and other researchers (who no longer only have to take the author's words for it that the analysis holds up but can actually test it themselves), and it also enables the greater scientific community to use the data and code for further studies.

The developments in the scientific community set in motion by the open research community have progressed at great speed and spread like wildfire through different disciplines, at least from the viewpoint of an early career researcher. I can only speculate how it would have affected the current study and its design if I had started today. Nevertheless, I have taken steps all the way to ensure transparency and openness, and to make sure that my research is open to critical scrutiny and that I give something back to the public and scientific community: the three papers and this summary article are or will be published under an open access licence, the replication data (transcriptions, scripts, etc.) for all the three papers have been uploaded to the Tromsø Repository for Language and Linguistics (TROLLing, Strand, 2020b, 2021; Strand & Johnsen, Under preparation), and I have taken steps to make anonymised transcriptions and de-identified sound files and video files

[21] For instance, increasing researchers' and reviewers' awareness of the underlying assumptions for statistical testing, changing the approach to statistical inference, either by abandoning the term 'statistical significance,' (Lakens et al., 2018), abandoning null hypothesis significance testing altogether in favour of other frameworks (such as Bayesian statistic) that do not rely on the same assumptions (Etz et al., 2018), and/or making the review process more open through publishing openly on pre-print servers before submitting to a journal, and getting a conceptual peer review and acceptance of a study prior to carrying it out through pre-registration, (Roettger, 2019).

available to the scientific community (see Appendix A.1). I have also been cautious not to draw unwarranted conclusions based on the data and have been careful with regard to the statistical inferences I make.

4 Overview of the papers

Since they cover central subjects of the thesis from independent angles, the three papers that make up this thesis are ordered and numbered chronologically, not thematically. In this section, I will summarise in brief the research questions, methods, results, and conclusions of the three articles.

4.1 Paper 1: Strand (2020a)

Paper 1 (Strand, 2020a) is an explorative study of the morphology of the North Norwegian RPR and an investigation into whether the children use more SEN variants in their RPR over time in the data (i.e. whether they become more 'proficient' or 'consistent' in their use of SEN variants). The explorative inquiry includes a qualitative and quantitative overview of the pronominal system and the present tense of the copular verb *er* ('is'), and a qualitative overview of the nominal plural inflection (both definite and indefinite).

Children's consistency in use of SEN variants was tested statistically by using a binomial mixed effects model on the most frequent variables: first person singular subject pronouns, *æ* ('I'), and the copula *er* ('is'). The specifics of the test are presented both in the paper and in Section 3.4. For both variables, the model explained the data within the threshold of statistical significance ($p < .001$; Strand, 2020a, p. 308). In other words, consistency in the use of SEN variants increases with age. Most of the other variables that were investigated quantitatively also seemed to increase in consistency, although this was not tested statistically due to scarcity of data.

This result may seem obvious, but note that the structure and acquisition of the (North) Norwegian RPR have not been studied longitudinally before. There is already good reason to believe that most of children's peer role play is the locus for language socialisation into the form and function of RPR. Although a certain development would seem probable *a priori*, it would not have been unimaginable that children would continually negotiate the linguistic structures of the register from play situation to play situation, depending on the play frame and the participants, resulting in variability without a specific direction. Alternatively, one could have made the argument that they settle on a limited choice of highly emblematic variables (e.g. *jeg*, 'I') throughout childhood. Neither of these seems to be the case: the results indicate direction towards more consistent use of SEN variants, although its endpoint remains to be investigated.

In addition, the qualitative, quantitative, and statistic analyses, indicates that the starting point of the (North) Norwegian RPR's morphology is the children's native dialect. This sheds some light on the representation of the different varieties in children's linguistic repertoire: they must be connected in some way.

The replication data (transcriptions and `R` scripts) for Paper 1 are available in Strand (2020b).

4.2 Paper 2: Strand (under revision)

Paper 2 (Strand, under revision) has been revised and resubmitted. The paper looks at suprasegmental phonology/prosody, specifically the Scandinavian system of tonal accents. Several unsubstantiated reports have been made in the literature that Norwegian children use Urban East Norwegian (UEN) prosody in their role utterances (Eliassen, 1998 being an honourable exception). Paper 2 investigates this empirically, and specifically gauges the depth of the children's competence in UEN prosody by looking more closely at their attainment of the system of tonal accents in compounds.

Both analyses make use of tools from functional data analysis to norm and smooth the tonal accent contours. This technique has not been used on tonal accent data in Norwegian before. The aim of the smoothing and norming of the contours was to make them comparable across different occurrences and speakers, as their rate can vary depending on rhythmic properties and the speech rate of the utterance, and the segmental phonetic material can produce *microprosodic* perturbations in the value of the fundamental frequency (F0). These perturbations are not a part of the tonal accents' supra-segmental representation and should be levelled out before further analysis.

The paper gives a qualitative analysis of the tonal accents of (phrases with) simplex words. The curves are discussed in light of the available descriptions of the UEN tonal accents (e.g. Kristoffersen, 2000). The qualitative analysis was a prerequisite for the quantitative analysis of the compound accents, which is the main point of the paper: it would make little sense to investigate whether children have attained the distribution of tonal accent in UEN in compounds, if they never use UEN tonal accents, even with simplex words.

The discussion of the quantitative investigation of compound accents warrants some background: many North Norwegian varieties, as well as most varieties of Swedish, have a so-called compound accent, meaning that all compounds have accent 2 by default. Most Southern Norwegian varieties, as well as some varieties of Swedish, use both accents in compounds (called *differential compound accents* in Paper 2). The distribution of the two depends on the first stem of the compound. The quantitative investigation looks at the extent to which children from Tromsø who use SEN/UEN in their RPR have attained the system of differential compound accents from that variety, or whether they overgeneralise the North Norwegian system, using the (UEN) accent 2 in compounds which are expected to have accent 1 in UEN. This was tested by comparing a subset of compounds from the material (those starting with *brann-*, 'fire;' accent 1 in UEN) to comparable compounds of accent 1 and accent 2 elicited in carrier sentences from adult speakers of UEN (compounds with *brann-*, 'fire', accent 1, and *vann-*, 'water,'

accent 2). The adult speakers' data were either the same compounds as those of the children (e.g. *brann-/vann-bil*, 'fire engine/water lorry) or controlled for rhythmically in terms of the placement of stressed syllables as well as vowel length (e.g. *brann-/vann- /'bi:len/* were compared to *brann/vann-/'sti:gen/*). The quantitative investigation showed that children tended to overgeneralise the UEN accent 2 in 'fire' compounds, indicating that they had not mastered the differential compound accents of UEN. Note, however, that no inferential statistics were used, due to the descriptive nature of the investigation, as well as the difficulty of applying inferential statistics to those types of data (as discussed above in this summary article, as well as in the paper). In its concluding section, the paper gives a specific proposal for how the results can be corroborated with more controlled data.

The paper concludes that the differential compound accents are not a part of the children's RPR, and suggests that their scarcity in the available input is a viable explanation for this.

The replication data for Paper 1, including scripts for R and Praat, can be found in Strand (2021).

4.2.1 A terminological note on *urban* vs. *standard*

Before we move on to Paper 3, there is a terminological matter that needs to be addressed. In Papers 1 and 3, we consistently use the term *Standard* East Norwegian, whereas Paper 2 uses the term *Urban* East Norwegian (UEN). There are two reasons for this. The first is the fact that all three papers belong in different traditions with different terminologies, and in the prosodic literature on Norwegian, Urban East Norwegian seems to be the term most often used (following Kristoffersen, 2000 and others). The second and more important reason is that the term Standard East Norwegian is primarily used in reference to a spoken exponent of the majority written standard. Since there is nothing in the orthography that indicates the f0 contour of individual words, one can assume that SEN is underspecified when it comes to accent tones.

4.3 Paper 3: Strand and Johnsen (under review)

Paper 3 is a submitted manuscript. The aim of the paper is to analyse the metacommunicative code of RPR in light of performance theory, with particular emphasis on the processes of *entextualisation*, and also how these processes draw on tropes from outside role play. It presents both a quantitative and a qualitative analysis. The quantitative analysis examines mean fundamental frequency of children's utterances in and outside role play, whereas the qualitative analysis investigates excerpts from role play interactions in light of the theoretical framework.

The quantitative analysis shows how the children, on average, increase the fundamental frequency of their utterances in RPR as opposed to their utterances outside of role play. We argue that this is a semiotic tool children use to dissociate the utterance from the specific context (i.e. entextualisation). The qualitative analysis uses techniques from text linguistics to analyse sequences of role play which illustrate the use of semiotic resources, especially acoustic vocal features, such as changes in pitch and voice quality, in addition to spontaneous song and the use of themes and tropes from popular children's media.

We argue that the framework of performance theory is particularly apt to explore and explain the semiosis in role play. Performance theory brings to the table the framing of children's creative textual, linguistic, and paralinguistic language use as verbal art. For instance, we show how the concept of entextualisation makes added sense in relation to role play and RPR if one considers not only the *temporal* displacement of text from its context, but the multidimensional *spatio-temporal* displacement, where a text – a role utterance – is decoupled from its immediate (aesthesemic) context of the speech act, and *re*contextualised in the phantasemic context of the role play reality. Thus, the resulting verbal texts show an intricate and complex intertextuality, as well as the use of genre-adequate semiotic features, which should be considered as an example *par excellence* of early literacy.

5 Discussion

In Section 1, I presented three topics: three aspects of language that form the basis for the approach taken in this investigation into the North Norwegian role play register. In Section 2.7 I presented the three central research questions of the three papers. The research questions are not evenly distributed across the topics. Rather, the three topics and research questions can be listed as follows:

(i) **The functional aspect of language:** the role play register as it is used communicatively in role play

- **RQ3:** What is the communicative function of the role play register?

(ii) **The structural aspect of language:** the role play register as an acquired linguistic system that makes up part of the individual's mental language capacity, and relates to the individual's other linguistic systems.

- **RQ1:** What features of SEN/UEN do children use?
- **RQ2:** How does the RPR develop in the individual?

(iii) **The social aspect of language:** as shared between individuals in a speech community.

In this chapter I will discuss each of these topics in light of the three papers and the discussion above: the functional aspect of the RPR as discussed in Paper 3, and the structural aspects in Papers 1 and 2. As the observant reader will notice, there is no research question directly connected to the third topic (the

social aspect). This is because it was not addressed directly in any of the three papers (although it is briefly discussed in Paper 1). Rather, it is an attempt to connect the findings of the current study of the RPR to the bigger question of the status and existence of a Norwegian standard spoken variety.

5.1 The functional aspect

Throughout this work, several theoretical concepts have been used in describing the functional aspect of children's role play register: the somewhat pre-theoretical notion of *otherhood,* (Bjørlykke, 1996; Høigård, 1999), i.e. the children's need to signal that they are speaking as someone else than themselves, the variationist inspired term *auto-divergence,* coined by the author, as the child's need to diverge, linguistically, and thus distance herself from her 'every-day self,' and the notion of a metacommunicative code, giving the message *'this is play'* to the playmates (Bateson, 1976 [1955]); All of these concepts cover different functional aspects of the RPR. However, all of them fail to fully take into account the *phantasemic* aspect of role play: children need to keep track of different realities at the same time. Thus, I have presented Bauman's concept of performance as a viable framework for analysing the function of RPR.

In the framework of performance or *performance theory,* the RPR can be seen as improvised verbal art (cf. Sawyer, 1996). The use of a particular register can then be seen as a stylistic resource (cf. Coupland, 2007), both connecting it to and, by its performance, reinforcing the use of SEN variants as part of child culture/child folklore, through the reiterative process of *entextualisation* and *recontextualisation* (cf. Bauman, 1975; Bauman & Briggs, 1990). In light of this, the use of SEN variants can be seen as an *entextualisation cue*.

All the above follows from 'classical' performance theory. In Paper 3, however, we also present a possible innovation of performance theory, in which recontextualisation is not regarded as necessarily pertaining only to the time dimension. Rather than seing recontextualisation as the repetition of

texts as performances at different situations in time, it would make sense to conceptualise it as something that can also be displaced in the space dimension. Opening up this second dimension, and viewing recontextualisation as able to occur in different trajectories through the combined space-time multi-dimension, opens for new insights into modes and functions of recontextualisation. In the case of the RPR, we can view recontextualisation as transgressing the different realities of role play. Using the RPR as an entextualisation cue, the utterances are lifted out of the everyday baseline (aesthesemic) reality, and recontextualised in the (phantasemic) role play reality. The use of indexical features, such as changes in pitch depending on role, positions the utterance within the role play context – as spoken in a specific role – and can be regarded as *recontextualisation cues*.

Following this analysis, the answer to RQ 3 ("What is the communicative function of the role play register?") is the entextualisation of a part of a verbal text as performative speech, and its recontextualisation into the role play reality. It can ultimately be viewed both as a text-structuring device that children use to keep separate realities apart, and, in the specific Norwegian context, as a part of child culture/child folklore, kept alive through its reiterative use.

What we can infer from this, is that young children demonstrably show abilities in the process of and cooperation around quite complex text production, involving separate realities and several roles that need to be kept apart. Therefore, it should not be surprising that play has been found to have a positive influence on literacy (e.g. Roskos & Christie, 2001).

5.2 The structural aspect

In this work, the structural aspect of the role play register encompasses both its linguistic structure *vis-à-vis* the children's native dialect and the development of that linguistic structure in the individual. Although there is still some ground to be covered for others on what the *target* form of the RPR

is, this work has contributed towards enlightening this question. In endnote 2 in Paper 1 (Strand, 2020a, p. 313), the acquisition or development of the RPR is construed as a cline from A to B, where A is a variety with only variants from the child's native dialect, and B is a variety with only 'alien' (i.e. SEN) variants. Development in or acquisition of RPR can be construed as the movement of the child's recorded production on the cline. Since the rate of alien variants will vary from situation to situation (for instance due to specific play frames, play groups, and other factors opaque to us), the 'movement' of the recorded speech will not necessarily go in only one direction, but wobble up and down on the cline. One of the central questions of Paper 1 is whether there is a trend in the development of children on the said cline from A to B over many recordings, for instance over one year. This seemed to be the case, both after studying the raw numbers (see the appendices of Paper 1) and looking closely at the graphs, and as indicated by the statistical model applied on two of the variables.

There is both practical and theoretical interest in children's competence in SEN. The practical interest stems from the fact that SEN in many regards is a spoken variant of the majority written standard, Bokmål, which all Norwegian children will learn sooner or later. Gauging children's knowledge of the written standard before literacy training starts is therefore of pedagogical interest.

There are at least three points of theoretical interest on which the acquisition and structure of RPR can shed some light, at least indirectly. The first is in the mental representation of closely related varieties: as discussed in Section 2.4, there is a theoretical discussion of how closely related varieties and the internal variability of varieties are best represented (see discussion and examples in Eide & Åfarli, 2020): whether variability should be seen as a kind of code-switching between minimally different varieties (Roeper, 1999), or whether code-switching between closely related varieties should be seen as some kind of indexing within one and the same grammar (Labov, 1978).

The second strand of theoretical interest relates to how the speaker's competence in closely related varieties affects their other cognitive capacities:

whether the same bilingual effect can be found with closely related varieties as with typologically more different languages. A case of particular relevance here is discussed by Øystein Vangsnes and colleagues (Blekesaune & Øystein A. Vangsnes, 2020; Vangsnes et al., 2017), where the central question is whether there is a bilingual effect of being proficient in both the Norwegian written standards (bilectal literacy, see also footnote 14). If Nynorsk, which is based on the Norwegian dialects and has clear similarities with the dialects in most municipalities whose official language is Nynorsk, is construed in the speaker as the written modality of their dialect and Bokmål is construed as the written modality of the variety children are already acquainted with through their RPR, this would make bilingual advantages more probable. Suffice to say that more research is needed in this area.

The third and last strand of theoretical interest I will discuss here is the interest relating to acquisition with what we may call *sub-native* input, i.e. input that is not typical of first language acquisition. In this sense, the RPR bears a resemblance to many heritage language situations, in which cross-linguistic influence and/or the quality and quantity of input result in a situation where the speakers competence in the heritage language is unlike that of monolingual speakers of the same language. It is obvious that children's input in SEN is sub-native, and its onset is before the critical period (but see the discussion in Section 2.2 about sensitive periods and the role of age). Thus, if it is the case that SEN is the target variety, its ultimate attainment would be informative to the field of incomplete first language acquisition.

In light of this discussion, we can now review the results from the paper as they partly answer the two remaining overarching research questions:

1 What features of SEN/UEN do children use?

In Paper 1, children's use of nominal plural inflection, the pronominal system (including possessive determiners), and the present tense copular verb *er* in their RPR was explored, and in Paper 2 their accent tones. Qualitatively, the findings are clear: the children use the SEN variant of all variables that are

sufficiently attested (the features that are only attested in the Tromsø dialect variant in Paper 1 all have an n lower than 3), and use of accent tones with recognisable features from UEN is attested for all seven children in Paper 2. However, none of the morphological variables are consistently used in their SEN variant, and some variables are much more frequently attested in their SEN variant than others. The latter observations were connected to different kinds of salience, among them frequency (see Paper 1 for the discussion). In Paper 2, another finding is that the children did not master the differential compound marking found in UEN, a finding that was also explained in terms of availability in the input. This inconsistency in the rate of SEN features, as well as the argued effects of salience in the input of the different variables, speak directly to the discussion of dominance and cross-linguistic influence in early L2 acquisition. The children were aged 3–4 in most of the recordings, which is an age when children are already very proficient in their native dialect variety (cf. Ribu et al., 2019). If neuroplasticity and/or access to the innate language learning mechanisms were sufficient for acquisition of a language before the onset of the critical period, it seems strange that the children's production of RPR should show so much variability. This could therefore be taken as an argument in favour of the importance of input and the effect of cross-linguistic influence from a typologically very (even extremely) close variety in first or early second language acquisition.

In terms of languages in the bilectal mind, it would be difficult to argue, based on the data, that the two varieties are separately organised, since variants from both varieties (Tromsø dialect and SEN) are used interchangeably. However, we *can* argue from first principles, based on the function of the RPR, that there *must* be some separation at some conceptual level between the two varieties: if children were unable to tell the varieties apart, as either pertaining to role play or not, both productively and perceptually, the performance would fall on deaf ears: why would the RPR even exist? There must therefore be some separation, at least in terms of indexing the SEN variants as pertaining to a special style or register. Otherwise the communicative function of entex-

tualisation would fall apart.

2 How does the RPR develop in the individual?

Only the morphological varieties were investigated longitudinally. As already hinted at above, the rate of SEN variants increases through time in the RPR and the Tromsø dialect variants decrease correspondingly. This indicates at least two things: there is a direction to the development, and they become 'better' at SEN. The direction of development is an indication that the RPR starts out as largely overlapping with, or perhaps being identical to, the children's local dialect. The common outset in the individual speaker makes it even harder to argue for separation in the internal grammar, at least initially, although this may be an effect of cross-linguistic influence found in second language acquisition and may wear off with time. Regarding the 'target,' it is hard to imagine the kind of directionality seen here without there being a coherent target variety of sorts. The fact that the children's competence in SEN improves is a remediating factor for the hypothesis of bilingual effects of bilectal literacy.

It would be interesting to see how the development in the (North) Norwegian RPR develops after the age of 4, and to know its potential final attainment. That would be the most obvious next step of research into the subject matter.

5.3 The social aspect

By the social aspect, I particularly refer to the relation between RPR and the (elusive or real) standard spoken variety of Norwegian. Rather than giving a clear conclusion to any question, this discussion points to aspects of the RPR that need to be taken into account in any discussion of a Norwegian standard spoken variety.

Children's use of linguistic material in role play does not exist in a vacuum. Take as an example the phantasemic relation between the cockle and the sheep introduced in Section 1.1: in many Norwegian dialects, the

cockle is colloquially known as *saueskjell,* 'sheep shell.' In this case, the phantaseme has influenced the aestheseme and the every-day nomenclature. The fact that the phantasemic relations in role play sometimes percolate into the speech community in this way is inevitable. The same holds for the register used in auto-divergence in role play. Many, if not most, Norwegians who have grown up outside the greater Oslo region, will remember that they used a variety different from their own dialect when they engaged in role play (or, in rarer cases, specifically remember that they did not, as opposed to their peers). This will have some bearing on how that variety (i.e. SEN) is perceived in relation to all other varieties of Norwegian in terms of prestige and status, consciously or subconsciously.

Conversely, children's play is not impervious to society at large. The shells children (used to) play with were not random, but mimicked the farm animals of their daily life. However, the mirroring of culture in children's play seems to encompass phenomena and practices from everyday life from several decades past. As an example, children's game of playing shops involved an order counter long after most or all grocery stores had check-out counters (Selmer-Olsen, 1990, even witnessed by the author during data collection). What we can take home from this is that although the variants used in RPR have to originate from *somewhere* outside of role play itself, it is not necessarily the case that this mirrors the sociolinguistic environment children are growing up in *today*. It is already well known that children's folklore and games (nursery rhymes, hopscotch, etc.) have a historical dimension and are handed down through generations (Schulte, 2020, p. 98 gives a good example of this when he convincingly argues that the nursery rhyme *"tisle, misle, du er en fisle"* (untranslatable) is a remnant of an Old Norse formula, used for charms and riddles, *thistle-mistle*, dating back to late the Nordic Viking Age). This again may bear witness to an *esotericism* or *archaism* in language use, which references one of the features Bauman (1975) mentions as typical of performance, and the use of SEN in particular can be seen as a kind of stylisation (see e.g. Coupland, 2007 and Section 5.1).

	EV	Bokmål	RPR	Tromsø dialect
definite plural masculine	-a	-ene	-ene	-an
	bila	*bilene*	*bilene*	*bilan*
definite with -l(e)	[-ɳ]	[-ln]	[-ln]	[-ln]
	sykkærn	*sykkeln*	*sykkeln*	*sykkeln*
unstressed reflexive pronoun	*sæ*	*sæi*	*sæi*	*sæ*

Table 5.1: *The examples of features that differ between the expansive Oslo variety (EV) and Bokmål compared to RPR and Tromsø*

In any event, it is by now demonstrated beyond doubt that children use variants from one specific variety, and as pointed out in Paper 1, "[t]he choice of specifically SEN as the source of these emblematic forms indicates that it holds some special status above other Norwegian varieties" (Strand, 2020a, p. 311), possibly relating to both status and availability of input.

Another trait that may demonstrate the existence of a variety with special status is the apparent clear increase in the rate of SEN morphological features noted in Paper 1. This directionality is difficult to explain without some end point (of which the children may or may not be conscious), where only SEN variants, at least of a subset of the grammar, are used in RPR, as opposed to variability between SEN variants and native dialect variants. This end point, then, must necessarily be a coherent variant, as opposed to a set of emblematic features used sporadically in different proportions as an auto-diverging tool.

If, for the sake of the argument, we assume that there *is* a Norwegian standard spoken variety, it may be recalled from the discussion in Section 2.5 that the question of *which variant* of South-East Norwegian should be regarded as the standard is debated. As a consequence, the variety children draw variants from in their RPR, while no doubt being ignorant of this variation in South-East Norwegian varieties, may inform that debate. As mentioned, the two most prominent candidates for a spoken standard in the literature are the West End variety (e.g. Mæhlum, 2009), close to the majority

written standard Bokmål, and a new variety with features from both the West End and East End varieties spreading in South-Eastern Norway, referred to as 'the expansive Oslo variety' here (e.g. Opsahl & Røyneland, 2009; Røyneland, 2009). Three of the features that differed between the two were summarised in Table 2.1, repeated here as Table 5.1 but with two extra columns. In the extra columns, I have filled in the RPR variants as reported in Paper 1 (definite plural masculine, unstressed reflexive pronoun) and as present (or absent) in the transcriptions (freely available in Strand, 2020b), and the (traditional) Tromsø dialect variants. At first glance at the table, the RPR may seem to align better with Bokmål than the expansive variety. However, the expansive Oslo variety overlaps with the Tromsø dialect on the unstressed reflexive pronoun, and children use the variant *sæ* 4 out of 13 times in the corpus. In addition, the definite plural masculine variant in the expanding Oslo variety is identical to the indefinite plural masculine variant in the Tromsø dialect. In the corpus, there are examples of the plural of *mann* ('man') in the compound *brannmann* ('fireman') with the form *-manna*, which are ambiguous as to whether they are definite or indefinite. Examples are given in 3.

(3) a. *vi e redningsmanna* Lars-Lars (2;11)
we are rescuer-man.pl
'we are (?the) rescuers'

b. *brannmanna kommer!* Lars-Lars (3;8)
fire-man.pl comes
'(?the) firemen are coming!'

From this brief exposition, we cannot call it a clear victory for either of the 'competitors' in this round, but it would seem, based on the data, that the North Norwegian RPR either takes its features only from Bokmål or from both Bokmål *and* the expansive Oslo variety, but not the expansive Oslo variety alone.[22] In any event, it points towards possible further studies of this

[22]Note also that there is probably also variation within the expansive Oslo variety that this

question.

Although the points above are highly insufficient to confirm or disconfirm the existence of a spoken standard variety of Norwegian, they illustrate the point I want to make: any discussion of whether Norwegian has a spoken standard variety or not should take the role play register into account.

simple exposition cannot include.

6 Concluding remarks

In this summary article, I have discussed the different roles that the Norwegian role play register plays: (i) semiotically in social role play (the functional aspect), (ii) as a linguistic register among other registers in the speaker's linguistic, multilectal resources (the structural aspect), and (iii) for Standard East Norwegian and how it is construed in the scientific community and in the speech community (the social aspect). The discussion has been based on a synthesis of the available literature and the empirical findings in the present study. Some of the central points are the following:

Role utterances in role play may best be construed as performances in the sense laid out in Bauman (1975) and later work. The linguistic and paralinguistic marking of the role utterances, including the use of SEN, must in this framework be regarded as bearing the communicative function of cueing entextualisation; they indicate that the utterance, a piece of text, is raised from its immediate (aesthesemic) context.

Although children do indeed use variants from SEN in their RPR, these are used alongside their native Tromsø dialect in seemingly free variation within the register. The rate of SEN variants varies from variable to variable: for instance, some pronouns (e.g. 'I' and 'me') are predominantly used in the SEN variant, whereas others (e.g. the plural 'you') dominate in the Tromsø variant in the RPR. In fact, the differential accent marking of compounds found in UEN (but not in the Tromsø dialect) is not mastered by the subjects at all, judging by the compounds with 'fire-' in the data. Furthermore, the rate of SEN seems to increase with age. This may indicate a certain telicity of the

development: there is some coherent variety with consistent use of (a subset of) SEN variants towards which the children's RPR is developing.

The overlap of the RPR and their native, every-day dialect may be an indication that they are connected in the bilectal mind. However, some conceptual differentiation has to apply, otherwise its function in role play would fall apart.

The recognition of RPR as a geographical variety of Norwegian in the general population and the apparent developmental directionality in the consistency with which SEN variants are used in RPR suggest that children orient their RPR towards a variety existing outside of role play itself, consciously or subconsciously. If this is the case, it is an argument for the existence of a functional spoken standard. Thus, in any discussion of whether Norwegian has a spoken standard and, if so, which variety it is, the RPR and its structure should be taken into account.

The aim of this summary article has been to view the findings and results of the empirical investigations against a larger theoretical backdrop than is possible within the scope of journal articles. A thesis will always have its limitations, and this bird's-eye view enables us to scout the terrain and suggests some plausible paths to follow. Some of the more promising are the following:

The discussion of the structural aspect of the RPR would profit greatly from larger and better controlled studies into the matter. These could include studies that involving older children, and studies with more data or better controlled data (for instance experimental studies, such as the anthropophobic puppet design mentioned in footnote 19 and in the end of Paper 2). This would have the potential of identifying the limits to children's attainment of SEN, both in terms of development and in terms of domains of language and grammar. Studies in different areas of Norway, as well as abroad, such as in Cyprus, Austria, and Japan, where similar situations are reported, are also warranted to complete the picture.

Much of Section 2 dealt with the possible source of SEN as the RPR. This matter can be divided into two questions which it is imperative to keep apart:

the answer to the question of *why* Norwegian children use SEN as a role play register need not be the same as the answer to the question of *how* they acquire the linguistic variants in question. For instance, Norwegian children may acquire some SEN from, say, watching children's television. That does not necessarily mean that the use of SEN in children's television is the reason why Norwegian children use SEN as an RPR in the first place.

The answer to the question of *why* Norwegian children use specifically SEN as an RPR is difficult to arrive at scientifically. The question of *how* children acquire SEN variants is more approachable: an obvious path would be to empirically explore the available input in SEN in children's environment. A crucial part of this would be to examine the structure of Norwegian caretakers' and kindergarten employees' speech when reading books to children. Children's ability to pick up and use variants and linguistic variability they hear through different channels should also be investigated.

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ARTICLE

Morphological variation and development in a Northern Norwegian role play register

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Abstract

This paper investigates the variation in and development of a set of morphological variables in a register known to be used by Norwegian children when engaging in role play. In this register they code-switch to something resembling the standard or Oslo variety for their in-character role utterances. The variation across variables, subjects, and age is demonstrated and discussed, and although most variables are used in the standard variants, their rates vary. A fitted binomial generalised mixed effect analysis on the most frequent variables shows that the rate of standard variants increases significantly as an effect of age.

Keywords: Child Language; Register Variation; Morphology; Role Play; Norwegian

1. Introduction and background[1]

When children engage in role play, they alternate between different roles and layers of reality, switching between utterances *as themselves* and *as their role character*. Children have been found to draw on their linguistic repertoire and use linguistic and paralinguistic reflexes to mark roles and layers of reality in role play (Ervin-Tripp 1973; Gleason 1973; Auwärter 1986, *i.a.*), henceforth *role play registers* (RPR).[2] In Norway, children code-switch from their native dialect into something resembling Oslo dialect or Standard East Norwegian (henceforth SEN) for their in-character role utterances in role play (Gravir 1983; Larson 1985; Guldal 1997; Kleemann 2013, *i.a.*). This paper reports a longitudinal multiple case study of function words and morphological features in the RPR of 7 Northern Norwegian 3–4 year olds. More specifically, the study investigates (i) the extent to which the morphology of children's RPR corresponds to SEN, (ii) the rate at which children use the SEN variants, and (iii) the extent to which RPR is a linguistic register that develops over time, rather than sporadic use of emblematic features from SEN that show no development throughout the sampling period. To answer the research questions, both qualitative and quantitative methods are used, including a linear mixed effects model analysis. The findings are indeed that (i) SEN variants are used in the RPR,

but that (ii) there is a great deal of variation in the rate of SEN in the variables, and (iii) a significant increase in the use of SEN variants over time.

This study brings insights into children's acquisition of socio-linguistic register variation and the ontogenesis of competence in two closely related varieties in the individual.

1.1. Role play and code-switching

Children start engaging in role play during or at the end of their third year of life (Fein 1981; Nicolopoulou 2018), and its linguistic reflexes develop around the same time (Söderbergh 1980). What these linguistic reflexes are varies individually and culturally, and they range from paralinguistic features, such as alteration in pitch or voice quality (Auwärter 1986; Vedeler 1987; Andersen 2014 [1990]; Ervin-Tripp 1991), to code-switching between different languages in bilingual populations (Halmari & Smith 1994; Green-Väntinen 1996; Guldal 1997; Cromdal & Aronsson 2000; García-Sánchez 2010; Kleemann 2013). With the exception of the dialect area of the capital city Oslo, children growing up in Norway are reported by the layman to code-switch in their RPR to something resembling the Oslo dialect or Standard East Norwegian.

This can be traced back at least several decades in anecdotal reports (Høigård 1999).[3] The phenomenon has been reported on in passing in the literature (e.g. Venås 1983; Åm 1989; Mæhlum 1992; Allern 1995; Bugge et al. 2017), and in conversation analytical or sociolinguistic studies of code-switching in role play in a Norwegian setting (Larson 1985; Guldal 1997; Kleemann 2013). The structural features of the RPR of Norwegian children have not been studied, with the exception of an MA dissertation (Eliassen 1998) that we will return to below.

Norwegian children's use of standard variants in their RPR lies at the crossroads of macro- and micro-social processes. On the one hand, the form of the RPR should be expected to be subject to fluctuations due to negotiation and children's agency in the specific play constellations: The RPR is used to mark or index the role characters in play, and it should vary along with changes in choices of roles and play frame. On the other hand, it appears to be a part of an established children's culture or folklore:[4] RPR with SEN features has been reported from several parts of Norway (Larson 1985; Mæhlum 1992; Bjørlykke 1996; Guldal 1997; Eliassen 1998; Kleemann 2013). Most Norwegian children can thus be said to possess a certain bidialectal competence.

The motivation behind this kind of code-switching has often been attributed to children's need to signal 'otherhood' in the literature (Bjørlykke 1996; Høigård 1999), i.e. to index the child's role personae as distinct from the child's everyday persona(e).[5] Much of child socialisation happens reciprocally between peers (Harris 1995), in activities such as imaginary play (Aronsson 2011; Goodwin & Kyratzis 2011), and we can assume that this also holds for the codes used in role play. It is negotiated within the micro-social setting of the play itself. Indeed, Kleemann (2015:193) reports that children adapt the code they use in role play to the (assumed) linguistic competence (in Norwegian/Saami) and/or preference of their playmates. But if the structuring of RPR only happened within the micro-social setting, we would not expect the same directionality towards SEN

across children and regions. Rather, the peer groups should have converged on a set of forms that may vary depending on combinations of children and instantiation of role play, and which could have been drawn from any variety/language in their repertoire.

We can also assume that features of RPR are transferred across age groups, through siblings and older children in the kindergarten, much in the same way as other parts of children's culture are, such as nursery rhymes and games (e.g. hopscotch).[6] In summary, there seem to be two possible forces driving normalisation of the RPR, one macro-social and one micro-social. On the one hand, the fact that the phenomenon has been reported repeatedly over such a long time and so geographically spread out within Norway may be an indication of a variety existing as part of (a national) children's culture. On the other hand, there is reason to believe that child socialisation happens reciprocally in interaction.

1.2. Role play and language acquisition

A relevant question regarding RPR is its status in relation to the child's native dialect (see Eide & Åfarli (this issue) and their discussion of register specific syntax). Linguistic change and development, in the individual and/or the language society, involves some kind of variation (Bailey 1973; Hickman et al. 2018). As a linguistic variable transitions from one variant (A) to another (B), it happens incrementally, resulting in a period in which both variants are used alongside each other (AB) at various ratios. To the extent there is an age dependent development in the Norwegian RPR in the individual, it can be expected that its linguistic variables develop in the same way, on top of the register's inherent variability mentioned above. One can then ask whether the 'varieties' – RPR and the child's native dialect – exist as separate linguistic subsystems or 'languages' within the individual, and, if so, at which point in time during the incremental separation the split(s) occur(s). Does every instance of variability include multiple grammars, as in the strongest interpretation of the universal bilingualism hypothesis (Roeper 1999), or are separate linguistic subsystems limited to where the differences lie in language competence and not performance only, in the traditional sense of the dichotomy (Chomsky 1965)?

In second language (L2) acquisition, such an incremental development does not spring to mind. In the normal turn of events of L2 acquisition, equivalent variants (of e.g. lexemes and morphemes) of the L1 and L2 are not used alongside each other, and the claim of separate subsystems becomes immediately reasonable. However, as studies in cross linguistic transfer have shown us, this is obviously not the case for all parts of the linguistic system, and states in which two variants of underlying structures – in the case of structural transfer – or phonological systems – in the case of learner accents – exist alongside each other probably exist (see Eide & Åfarli (this issue) and their discussion of interlanguages). Thus, although one can not refer to RPR as an L2 in the present case, there are clear similarities, especially in that it is a variant that is acquired in addition to the L1 or native dialect.

If we look away for a second from the structural properties of the different varieties in question to view it from a functional perspective, it is clear that whatever linguistic material is used to index role play has to be cognitively 'indexed' as

belonging to a specific register: For RPR to be able to mark 'otherhood', the child must be able to identify linguistic features as belonging to RPR or the native dialect, consciously or otherwise. This cognitive indexing of variants into *functional* subsystems is a clear indicator that the child's native dialect and the child's RPR are two separate subsystems within the child's competence in language, at least functionally. The qualitative ways in which this differs from traditional bilingualism and bi(dia)lectalism is a field of study worthy of further investigation, that I hope this paper can contribute to.

1.3. Linguistic background

In the context of Norway and Norwegian, the term 'Standard East Norwegian' deserves further discussion. Although Norwegian has two codified written standards (*Nynorsk* and *Bokmål*), these are officially seldom spoken outside of theatre stages and national news broadcasting (Vikør 1993), and as opposed to many other parts of Europe, there is a high acceptance of regional speech variation in all parts of society (Vikør 1993; Kerswill 1994). The diglossic situation often found elsewhere, where speakers code-switch to a standard in certain (formal) situations is not the norm in Norway. Despite this, there are examples of dialect levelling in the direction of SEN, together with regionalisation (Mæhlum 2009, Røyneland 2009, see also Lundquist et al. this issue for examples in the Tromsø dialect). For these reasons, among others, it is a matter of debate whether Norwegian has a standard spoken variety at all (Jahr & Mæhlum 2009; Bull 2009), and, if so, which one(s) should be regarded as (the) standard (see e.g. Sandøy 2009). A reason for considering Standard East Norwegian the standard spoken variety is that the varieties spoken by socioculturally prestigious groups in the Oslo area strongly resemble the Bokmål written standard, and that this is conceived as a norm ideal (Mæhlum 2009). In any event, the term 'Standard East Norwegian' will be used here (short SEN), and Bokmål orthography and the pronunciation of SEN given in Vanvik (1985)[7] will function as a proxy.

Although the choice of the term 'Standard East Norwegian' does not in itself represent a stance in the aforementioned debate of whether Norwegian has a spoken standard variety, surely, the use of SEN variants in role play across generations and locations could be used as an argument in that discussion. However, the input source(s) of the RPR is *pro tem* unknown, and so is the target variety for children's RPR. The choice of SEN as a term, with the proxies mentioned above, is first and foremost pragmatic: It is a *spoken* variety – as opposed to for instance the written *Bokmål* standard – and it does not encompass the variation found in South Eastern Norwegian dialects, and even the Oslo dialect. It is used purely as a scaffold for describing the RPR and its variation and development, informed by previous literature, and the RPR, may – but crucially does not need to – be equal to SEN (see also endnote 2).

This paper investigates both free and bound morphemes in the children's role play register, and to what extent they coincide with the SEN variety. In order to do this, it is first necessary to determine how SEN differs from the children's local dialect. The study is situated in Tromsø, a city with approximately 76,000 inhabitants located in Northern Norway. The Tromsø dialect has features share with

Table 1. Personal and indefinite pronouns and possessive determiners in TTD and SEN (the gloss indicates possessee (p.-ee) and possessor (p.-or) marking, where relevant)

	Variable	TTD *semi- orthographic*	SEN *orthographic*	Gloss
Pronouns	I	*æ*	*jeg*	*'I'*
	ME	*mæ*	*meg*	*'me'*
	YOU.SG	*dæ*	*deg*	*'you* (sg. obl.)
	SHE	*ho*	*hun*	*'she'*
	HER	*ho*	*henne*	*'her'*
	REFL	*sæ*	*seg*	*'him-/herself, themselves'*
	THEY	*dem*	*de*	*'they'*
	THEM	*dem*	*dem*	*'them'*
	YOU.PL	*dokker*	*dere*	*'you'* (pl.)
Possessives	HIS	*hannes*	*hans*	*'his'*
	OUR	*vårres/vårs*	*vår*	*'our'* (m./f. p.-ee)
			vårt	*'our'* (n. p.-ee)
			våre	*'our'* (pl. p.-ee)
	YOUR	*dokkers*	*deres*	*'your'* (pl. p.-or)
	THEIR	*demmes*	*deres*	*'their'*
Ind.	SOME	*nokken/nån*	*noen*	*'some(one)'*
	SOMETHING	*nokka*	*noe*	*'something'*

speakers in other Northern Norwegian towns, such as Bodø, Harstad, and Narvik (Bull 1990; Nesse & Sollid 2010). The differences between SEN and the traditional Tromsø dialect (TTD) as reported in the literature (Iversen 1918; Bull 1990) are summarised in Tables 1 for pronouns and possessives, and 2 for nominal morphology.[8] As with SEN, TTD is not meant as an accurate description of a variety encompassing its variation, but is used as a point of reference: In conjunct, SEN and TTD are meant to outline the space of variation within which we expect the the children's output to take place.

Starting with the pronouns, there is a great deal of variation in the pronominal systems across Norwegian dialects (Sjekkeland 2005: 106–108). Although about half of the pronouns have the same form in TTD and SEN, and are excluded from the overview in Table 1,[9] there are still a number of pronouns that differ between the varieties, some of which merit further discussion:

First, there is a parallelism in the pronouns I, ME, YOU.SG (i.e. non-subject), and REFL,[10] in that the TTD variants end in a long, open [æ:] ([æ:], [mæ:], [dæ:], and [sæ:], respectively), whereas the SEN variants end in a diphtong [æi] ([jæi], [mæi], [dæi], and [sæi], respectively). Second, the use of number/gender and case marking is unevenly distributed between the varieties. For instance, TTD, but not SEN, has

Table 2. Nominal inflection (inflected for definiteness ((in)definite) and number (singular/plural))

		TTD Indef.	Def.	SEN Indef.	Def.	gloss
m.	sg.	*bil*	*bilen*	*bil*	*bilen*	*(the) car*
	pl.	***bila***	***bilan***	***biler***	***bilene***	*(the) cars*
	sg.	*mann*	*mannen*	*mann*	*mannen*	*(the) man*
	pl.	*menn/**manna***	***mennern***	*menn*	***mennene***	*(the) men*
f.	sg.	*geit*	*geita*	*geit*	*geita*	*(the) goat*
	pl.	***geite***	***geiten***	***geiter***	***geitene***	*(the) goats*
	sg.	*bok*	*boka*	*bok*	*boka*	*(the) book*
	pl.	*bøker*	***bøkern***	*bøker*	***bøkene***	*(the) books*
n.	sg.	*tak*	*taket*	*tak*	*taket*	*(the) roof*
	pl.	*tak*	***takan***	*tak*	***takene/taka***	*(the) roofs*
		'N(s)'	'the N(s)'	'N(s)'	'the N(s)'	

syncretism in SHE/HER,[11] THEY/THEM,[12] and the number/gender agreement in OUR.[13]

Finally, two indefinite pronouns or determiners, SOMETHING and SOME, have been included in the analysis.[14]

There are two differences between the two variants of the present tense form of copular 'be' (orthographically *er*, henceforth BE). First, the SEN variant has a word final /r/, which is absent in TTD. Second, there is a difference in vowel quality between the two, where SEN has a saliently more open vowel ([æːr]), than the TTD variant ([eː]). Since word final /r/s in SEN often are elided in certain contexts (i.a. before labial and velar consonants), in addition to the fact that /r/ is a consonant mastered late by Norwegian children (Tetzchner, Stephen von et al. 1993: 114), for every case, the vowel quality is the main diagnostic to determine the variant used in this study.

Lastly, nominal inflection (given in Table 2) differs in the two varieties both in the form of the form of the inflectional suffixes, but also in that TTD has different declension classes for masculine and feminine also in plural forms for the non-umlauted paradigms (m:-*an*, f:-*en*, versus SEN f/m:-*ene*).

1.4. Previous findings

Although previous research has labeled the variety used as RPR as 'East Norwegian' (e.g. Mæhlum 1992; Bugge et al. 2017), 'Standard' (e.g. Guldal 1997), 'Bokmål' (name of written standard), 'West-side Oslo dialect', or 'Southerner' (Kleemann 2015, my translation), the specific grammatical or phonological features this pertains to are seldom and scarcely discussed. In the cases where the form of the variety is mentioned, pronouns (Guldal 1997) and intonation (Kleemann 2015) are recurring features. In describing RPR Kleemann (2015) also mentions, without

specifying, lexical and inflectional differences, (over)use of the SEN HER variant *henne*, also in subject position, and the use of the SEN BE variant *er* (cf. Section 1.3).

As mentioned above, Eliassen (1998) is the only study in which the focus is primarily on the structural properties of the variety used in Norwegian children's role play register. Based on recordings of spontaneous speech from four children from Meløy in Northern Norway, a rural island almost 400 km – or a ten hour drive – south of Tromsø, Eliassen gives a qualitative overview of the differences between the language used in role utterances and the language used in directing/planning in four different domains: lexicon, morphology, phonology and intonation/prosody (p. 52). At all levels she finds variation. No feature is used consistently in the standard variant, and the rate at which the standard variant is used varies across feature and child. Beginning with the pronouns, all children used the SEN variants of I, ME, YOU.SG, and REFL (to the extent the variables were attested in the material), whereas the SEN variant of SHE and YOU.PL were only attested in two and one of the children respectively, and to a lesser extent than the four other pronouns. In addition, she attested the hybrid form *æi* of the variable I.

In verb morphology, Eliassen (1998) found instances of suffixed (SEN) variants of strong verbs in all four children. In addition, the children tended to use the long, standard variant of other morphemes as well, instead of the short local version with apocope (a more pronounced dialect feature in southern parts of Northern Norway, and not relevant for the present data). Lastly, of the morphological features, standard versions of plural inflection of nouns were also attested from all children.

Similar to the Tromsø dialect, the Meløy dialect traditionally also has palatalisation of traditional alveolars/dentals and has undergone 'lowering' (cf. endnote 12). Children 'reversed' these sound changes in their role utterances, producing alveolars/dentals and more closed vowels instead.

Eliassen (1998) gives a good first overview of Northern Norwegian Children's RPR. The present study will expand on Eliassen's findings, both by increasing the amount of data and by adding the longitudinal dimension. This makes it possible not only to revisit Eliassen's qualitative findings, but add quantitative and developmental investigations, looking at the actual ratios between SEN and TTD variants in the most frequent variables and across time.

2. Aim of the study

This study investigates Northern Norwegian children's use of certain morphological features of SEN, both qualitatively and quantitatively. Given the small number of previous studies of this phenomenon, the present study is necessarily explorative in nature. Therefore, this study sets out to answer the following research questions. For the variables under investigation:

1. To what extent do the children use SEN variants or other variants alien to the local dialect in their RPR?
2. What is the rate at which the SEN (or other) variants are used in RPR?
3. Is there a change or development over time in the extent or consistency that children use these variants in their RPR?

As mentioned, this paper does not take a stance as to whether there is a Norwegian spoken standard variety. Rather, with the first question this study investigates, qualitatively, the extent to which forms from a postulated variety are used in role utterances by Norwegian children (cf. the discussion in Section 1.3 on SEN and in endnote 2). RPR lies at the crossroads of macro- and micro-social processes which is addressed by research question three. Any influence of RPR as a national children's folklore should be visible through a clear direction towards SEN in the variants used in RPR, across children and over time. The micro-social structuring should be visible through fluctuations in the variants used between constellations of children and instances of role play. These are not mutually exclusive. There can be minor fluctuations while still being an overall direction.

3. Method

The present paper reports a longitudinal multiple case study of 7 Northern Norwegian 3–4 year olds. The study uses a corpus of 18 audio-visual recordings of spontaneous play made over the course of approximately one year. The current section gives an overview of the recruitment and recording procedures (Section 3.1) and the procedures for transcription and coding (Section 3.2).

3.1 Data collection

The data in this study are based on a series of audiovisual recordings made over a year (27 sessions) in a kindergarten in Tromsø, with 13 children (8 from session 1, and an additional 5 from session 16).[15] 18 of these and 7 children were selected for further analysis and transcribed.

The audio recordings were made using a handy recording device (Zoom® H4n pro) and two condenser microphones (Samson® C02) hanging from the ceiling (sessions 1–19) or the built in microphones in the recording device (from session 20).[16] With the exception of two recordings, all audio was recorded in stereo WAV Audio format with a sample rate of 44.1 kHz. Video recordings were made with a wall mounted camera (GoPro® HERO Session), in MPEG-4 file format and H.264 encoding.[17] The recording sessions were held between seven and 21 days apart, with the exception of the summer break where there were 49 days between two recordings. The video recordings lasted on average around 1h 20min. The sessions consisted of placing toys (a doll's house with furniture and a doll family (session 1 and onwards), a fire truck engine and two firefighters, (session 5 and onwards), and a fire station (from session 19)) in a designated room in the kindergarten, and allowing all children for whom parental consent had been obtained to come into the room and play. The researcher and the staff would try to make sure that the room was not too crowded, and a general rule was enforced where a maximum of three children could be in the room at once. This was done in order to achieve a good dynamic in the role play, i.e. that all participated in the same 'game', and to facilitate transcription, i.e. not too many children talking at the same time. As the children were given the freedom to enter and exit the room at will, they were eager and motivated to play, but this also meant that the children were not recorded consistently,

resulting in differences between the children both in regard to the amount of speech and the number of sessions recorded from each of them.

Five of the children did not participate in the study before recording 16, and one of the original eight children participated in barely any role play during the recording sessions. To ensure comparability between the children, those six were excluded from the study, resulting in the final seven. All the children are monolingual Norwegian, except for Hedda and Inga, who are bilingual English-Norwegian. From the information given by the parents regarding their language background, there is no indication that any of the seven children's parents speak a variety that could be regarded as SEN at home. Recall from Section 1.3 that Norwegian speakers generally use their own dialect in all parts of society, so the parents will not be an input source of SEN, with the possible exception of role play. All the children have been anonymised, and names have been substituted.

3.2 Transcription and coding

18 recordings were selected for further analysis based on the composition of children and their relative distance in recording date. There is a higher concentration in the selection in the first half of the period than the second, in the anticipation of a faster development closer to the onset of role play in or towards the end of their third year of life (Fein 1981; Nicolopoulou 2018). The distance in months from the first recording and the children's ages of each recording are given in Appendix A.

The recordings were transcribed in ELAN (Brugman & Russel 2004).[18] The transcriptions were made using the transcription standard used in the LIA corpus (see the manual in Hagen et al. 2018), a phonetic transcription based on Norwegian orthography, using the Norwegian alphabet and no diacritics, ensuring both efficiency and fidelity.

Utterances were coded for level of pretence, i.e. everyday utterances, planning utterances (meta comments and 'setting the stage'), magical utterances (onomatopoeia and 'ludic speech acts', see Strömqvist 1981, 1984; Høigård 1999), and role utterances. Utterances were coded as role utterances only if they fulfilled one of the following criteria:

1. The utterance was clearly referring to something not happening in the 'baseline reality' (e.g. 'I am peeing' or 'there's a fire!'), and/or
2. The utterance was uttered with a voice quality or intonation that was clearly manipulated in a creative way as to indicate role utterances, and/or
3. The utterance was uttered while holding and animating a doll, and/or
4. The utterance was uttered as an answer to or in a conversation together with an utterance with the characteristics in 1–3.

In cases where there was doubt, the utterances were coded as undecided.

As with all verbal text, and especially as unmonitored and referentially complex as the type in question here, the researcher's interpretation of the text is always a possible source of error. To nevertheless ensure reproducibility, replication data

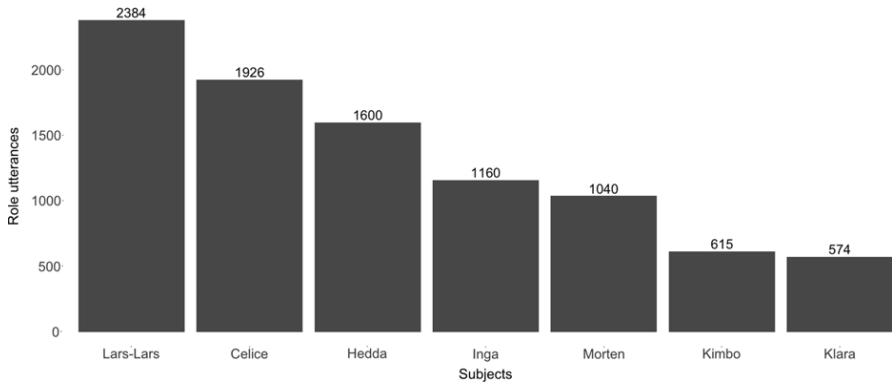

Figure 1. Role utterances per subject.

have been uploaded to The Tromsø Repository of Language and Linguistics (TROLLing).[19]

4. Results

This section presents the results of the study, variable by variable (nouns, pronouns, possessive determiners, and copular *be* (BE)). For each (group of) variable(s), a qualitative overview is first given, where the extent to which the variables under consideration are attested in the SEN (or any other) variant in the data are presented, accompanied by examples from the corpus. This is meant to answer research question 1 and can be seen in comparison to the findings in Eliassen (1998, see Section 1.4).

Secondly, the ratio of SEN to TTD variants is given for each variable, giving us insight into the children's performance and use of the different variables. As we will see, for some variables the SEN variant is used more consistently, whereas others barely are. This answers research question 2.

Since looking at the collapsed rates of SEN in different variables may give a distorted picture that may cover up individual differences between subjects and/or recordings, thirdly the ratios of SEN to TTD variants are given across time for the variables with more than 126 observations:[20] I, ME, YOU.SG, YOU.PL, and BE. This should uncover the different kinds of variation and answer research question 3.

Lastly in a separate section, generalised mixed effects model analyses on the two most frequent variables, I and BE, are given.

The results are based on 9,299 role utterances from the 18 recordings, divided between the seven children as shown in Figure 1.

Throughout, the result from children's RPR will be compared to children's utterances in their native dialect as present in the data (out-of-play or planning-utterances, henceforth Children's Tromsø Dialect, CTD).

Before moving on it should be mentioned that no evidence was found of other dialects being used as RPR in the group.

Table 3. Variants of *mann* ('man') attested in the material: in the children's out-of-role utterances (CTD) and in children's utterances in role play (RPR). Boldface in CTD indicates divergence from TTD. Boldface in RPR indicates divergence from SEN

	TTD	CTD	RPR	SEN	gloss
indef.	*menn/manna*	*manna*	***manna***	*menn*	*men*
			menner		
			manner		
def.	*mennern*	*mennern*	*mennene*	*mennene*	*the men*
		mennene	*mennern*		
		mannan	***mannan***		
		mennan	***mennen***		

4.1 Nominal inflection

Plural nouns are far from frequent in the material. From the scarce data we have, it seems that children use the SEN variant of both the definite and indefinite plural suffix (see examples (1) and (2)). The most frequent nominal lexeme found in plural was *mann* ('man'), but always in the compounds *brannmann* ('fireman') and *redningsmann* ('saviour', lit. 'saving man'). This is an irregular noun with ablaut (see Table 2 in Section 1.3). As is to be expected from children three years of age, they do not inflect nouns consistently, and seem to overgeneralise the regular masculine paradigm onto this noun. Thus, the only indefinite variant found in CTD, is the overgeneralised *manna* (the un-ablauted stem *mann* with the TTD regular masculine indefinite plural ending *-a*), which is also attested in children's RPR. In addition, we find examples of the SEN plural ending *-er* in this noun, with or without an ablauted stem, giving the three variants *mann-er*, *menn-er*, and *manna* (see Table 3). We find no examples of the SEN/TTD variant *menn* in either register.

In the plural definite variant, four variants are found in CTD; *mennern* (the TTD variant), one instance of *mennene* (the SEN variant), *mannan*, and *mennan* (the TTD regular masculine definite plural ending on an un-ablauted and ablauted stem respectively). In the children's RPR, we also find *mennene* (SEN), *mennern* (TTD), *mannan*, and a variant with ablaut but without the retroflex ending, *mennen*. What we can take away from this is that the children seem to relate the SEN suffix *-er* as a RPR variant, applying it to nouns to mark role play, albeit sometimes incorrectly.

(1) a. vil du ha mere **pannekake-r** lillesøster? ((3)Morten, 3;4)
will you have more pancake-PL little.sister?
'do you want more pancakes little sister?'

b. jeg har tatt på **skøyte-r** ((15)Hedda, 3;6)
I have taken on **ice.skate**-PL
'I have put on ice skates'

c. æ har mange **kaffe-r** i kjøleskapet mitt ((21)Kimbo, 3;7)
I have many coffee-PL in refrigerator my
'I have many coffees in my refrigerator'

(2) a. her e **stig-ene** ((5)Selfridia, 3;1)
here is.TTD ladder-PL.DEF
'here are the ladders'

b. va det kke fint hos **brannmenn-ene**? ((27)Lars-Lars, 3;8)
was it not nice at firefighter.PL.DEF
'wasn't it nice at the firefighters' place?'

Unfortunately, the infrequency and inconsistency of plural forms in the corpus cuts the presentation of the nominal results short here, without any quantitative ratio analysis.

4.2 Pronouns and possessive determiners

Starting with the qualitative overview, all pronouns were attested in their TTD variant, and all, except HER, were attested in their SEN variant in RPR (see Table 4). Examples of some of the pronouns used in their SEN variant (I, ME, YOU.SG, SHE, YOU.PL, THEY, SOME, and SOMETHING) are given in (3).

(3) a. **jeg** får **meg** ikke ned ((5)Elias, 3;5)
I get **me** Not down
'I can't get myself down'

b. **Jeg** ska hjelpe **deg** ((5)Celice, 3;1)
I will help **you**

c. **hun** har så veldig vondt i kneet ((9)Celice, 3;2)
she has so very pain in knee.def
'her knee is hurting so very badly'

d. han må skamme **seg** ((16)Celice, 3;6)
he must be.ashamed **him.self**
'he should be ashamed of himself'

e. **jeg** har **nåkka** til å si **dere** ((16)Hedda, 3;8)
I have **something** to.PREP to.INF say **you.PL**
'I have something to tell you'

f. **de** faller ned ((14)Hedda, 3;6)
they fall down
'they are falling down'

g. **æ** har **noen** i kjøleskapet ((1)Inga, 2;11)
I have **some** in refrigerator.DEF
'I have some in the refrigerator'

h. er det **noen** her? ((7)Celice, 3;2)
is it **someone** here?
'is there someone here?'

i. okay # da ska **jeg** hente **noe** ((9)Hedda, 3;4)
okay # then will **I** bring **something**
'then I will go and get something'

Table 4. Overview of pronouns in the material: in the children's out-of-role utterances (CTD) and in children utterances in role play (RPR). Boldface in CTD indicate divergence from TTD. Boldface in RPR indicate divergence from SEN. N marks the number of role utterances with any variant of the variables

	Variable	TTD	CTD	RPR	SEN	Gloss	In N role utterances
Pronouns	I	*æ*	*æ*	*jeg/***[æi]**	*jeg*	*'I'*	2,805
	ME	*mæ*	*mæ*	*meg*	*meg*	*'me'*	354
	YOU.SG	*dæ*	*dæ*	*deg*	*deg*	*'you'* (sg. obl.)	239
	SHE	*ho*	*ho*	*hun* ***(henne)***	*hun*	*'she'*	58
	HER			***ho (hun)***	*henne*	*'her'* (obl.)	18
	REFL	*sæ*	*sæ*	*seg*	*seg*	*'-self'* (3rd)	13
	THEY	*dem*	*dem/**de***	*de*	*de*	*'they'*	34
	THEM			*dem* ***(de)***	*dem*	*'them'*	13
	YOU.PL	*dokker*	*dokker*	*dere*	*dere*	*'you'* (pl.)	181
Possessives	HIS	*hannes*	*hannes*	***hannes***	*hans*	*'his'*	1
	OUR	*vårres/vårs*	*vårres*	*vår*	*vår*	*'our'* (m./f.)	34
				vårt	*vårt*	*'our'* (n.)	27
				vårres	*våre*	*'our'* (pl.)	2
	YOUR	*dokkers*	*dokkers*	*deres*	*deres*	*'your'*	19
	THEIR	*demmes*	*demmes*	***demmes***	*deres*	*'their'*	3
Ind.	SOME	*nokken/nån*	*nån/noen*	*noen*	*noen*	*'some(one)'*	40
	SOMETHING	*nokka*	*nokka/noe*	*noe*	*noe*	*'something'*	50

For some pronoun variables, the SEN variant is also attested in the Tromsø dialect of the children (CTD): THEY, SOME, and SOMETHING. The situation is more complex with THEY since SEN marks subject and oblique arguments differently (*de* and *dem* respectively). This is not the case for CTD, where *de* and *dem* are used for subjects and oblique arguments in seemingly free variation (examples (4) and (4), from out-of-play utterances). This also holds for the RPR, where *de* is also attested in oblique arguments (examples (6)).

(4) a. **æ** e ferdig med **de** ((2)Inga 2;11)
I am done with **they**
'I am done with them'

b. no har **æ** **de** [Inga] ((5)Celice, 3;1)
now have **I** **they** I.
'I have them now, Inga'

(5) a. korfor tok **dem** av den? ((5)Inga 3;1)
why took **them** off that.one?
'why did they take that one off?'

b. si at **dem** e slem ((21)Lars-Lars, 3;8)
say.IMP that **them** are mean
'tell them that they are mean!'

(6) a. du må ta **de** ned ((1)Lars-Lars 2;11)
you must take **they** down
'you have to take them down'

b. **jeg** ska bare steike **de** ((5)Celice, 3;1)
I will just fry **they**
'I just have to fry them'

As mentioned, there are no instances of the SEN variant of HER (*henne*) in non-subject position in the data. Instead, the TTD variant or the SEN variant of SHE was used. The children varied between the TTD and the SEN variant of SHE in contexts where HER would be expected (examples (7)).[21] In addition, there are two examples of the SEN HER variant *henne* used in subject positions, both from Kimbo in file 14 (as reported by Kleemann 2015, see endnote 11).

(7) a. **jeg** hjelpa **ho** ((9)Lars-Lars, 3;2)
I *helped her
'I helped her'

b. **jeg** sir bra te **ho** ((5)Celice, 3;1)
I say good to **her**
'I say 'good' to her'

(8) a. **henne** må inn i brannbil ((14)Kimbo 3;3)
her must in in fire.engine
'she has to go inside the fire engine'

b. **henne** må jo også være . . . ((14)Kimbo, 3;3)
her must well also be . . .
'she also has to be . . . '

We also find instances of an intermediate variant [æɪ] of I:

(9) a. **[æɪ]** skyta **deg** ((7)Morten 3;5)
I *shot **you**
'I shot you'

b. **[æɪ]** så brann Her ((14)Celice, 3;4)
I saw fire here
'I saw fire here'

Moving on to the possessive determiners, there are no instances of the SEN variant of the variables HIS, THEIR, and the plural agreeing form of OUR. These variables are however barely attested in RPR in the present study (once, thrice, and twice respectively, see Table 4). Both masculine/feminine and neuter agreeing forms of OUR are attested in the SEN variant (examples (10a) and (10b)) as well as YOUR (10c), which are also much more frequent in the data.

(10) a. hvor er lille stakkar'n **vår?** ((25)Celice 3;11)
where is little poor.guy.DEF.(M) **our.**(M/F)**?**
'where is our little poor guy?'

b. hjelp! det er brann i huset **vårt** ((5)Inga, 3;1)
help.IMP it is fire in house.DEF.(N) **our.**(N)
'help! our house is on fire!'

c. **æ** fant putene **deres** ((21)Kimbo, 3;7)
I found pillow.PL.DEF **your**
'I found your pillows'

In summary, the children in the current study use the SEN variants of all pronouns, with the exception of HER. For the sufficiently attested variants in the possessive determiners, children use the SEN variant of these as well. This is in concordance with the findings in Eliassen (1998), except that SEN variants are attested in even more variables here. This is probably related to the amount of data available.

Before looking at the rate of SEN in pronouns and possessive determiners in the children's RPR, it would be useful to gauge the relevant quantitative variation existing in CTD for some of the more frequent pronouns where this is relevant (Table 5). As mentioned above, the pronominal system seems to be undergoing some levelling in some of the variables, in particular THEY, THEM, SOME, and SOMETHING. This is evident in Table 5, where THEY, SOME and SOMETHING are used in the SEN variant 68.9%, 43.5%, and 10.4% respectively. In addition, the SEN variant of THEY, *de*, are used in 60% of the places where THEM *(dem)* would traditionally be expected, being indicative of the seemingly free variation between the two in CTD mentioned and exemplified above. A search in a speech corpus (Nordic Dialect Corpus, Johannessen et al. 2009) also bolsters this suspicion: Among young

Table 5. Rates of SEN variants in pronouns in CTD

Variable	SEN(%)	Variable	SEN(%)	Variable	SEN(%)
I	1.4%	SHE	2.9%	THEY	68.9%
ME	1.3%	HER	0%	SOME	43.5%
YOU.SG	4.9%	YOU.PL	0%	SOMETH.	10.4%

Tromsø dialect speakers, we find tendencies of the same variation: *de* (THEY) is sporadically used in both subject and oblique positions, and the SEN variant of SOME (*noen*) is found.

The low rate of SEN variants of I, ME, YOU.SG, and SHE in CTD indicates that this should not be attributed to levelling or other factors not pertaining to role play. Rather, it could be the case that the play situations that prompts code-switching is not completely covered by the researcher's categories of coding. It may also be the case that the children are still in the process of mastering this code-switching, and that variants may sporadically 'bleed' or 'spill over' into the children's out-of-play utterances in situations where they are engaging in role play (see the discussion of *linguistic contamination* in Eide & Åfarli (this issue)).

Returning to RPR and looking at the rate of SEN in pronouns and possessive determiners, we find considerable variation (Table 6). The pronouns can be categorised into four groups. In the first group, we find the pronouns that have separate oblique forms in SEN but are syncretic in TTD, i.e. HER and THEM, just discussed above. In the second group, we find pronouns that have the same variability as CTD or have been completely levelled in the CTD (cf. Table 4 above). This group consists of THEY (82.3% SEN variants), SOME (92.5%) and has a high percentage of SEN variants. In the third and fourth categories, we find the remaining pronouns, that neither have subject-marking differences nor are levelled in the children's dialect. These either have a quite low rate of SEN variants in the corpus – the third group, consisting of SHE (32.8% SEN variants), YOU.PL (14.3%), and SOMETHING (14%) – or a quite high rate of SEN variants in the corpus – the fourth group, consisting of I (74.5% SEN variants), ME (69.5%), YOU.SG (65.7%), and REFL (69.2%).

Moving on to the variation between recordings, and limiting the discussion to the variables with more than 126 observations, we can start with the most frequent variable, I: Figure 2 shows that some children have a high rate already from the earliest recordings (Celice and Morten), whereas others display a clear change toward a higher rate of SEN variants. Except for a strange dip in the end we see the same general tendency for ME in Figure 3, with an increase in rate of SEN variants from around 50% to around 70% averaged. For YOU.SG, in Figure 4, the pattern is less clear than for I and ME, perhaps due to a lower N. As with ME, it starts out around 50%, and ends up at around 70% averaged. There is also a larger variability in the recordings, and those with the largest excursions in the rate of SEN variants, are also the with the least number of observations (Klara and Kimbo, see Table A4 in Appendix B). The variation in YOU.PL, however, (presented in Figure 5), does not show the same variation as the previous three, but displays a completely different pattern. This is the least frequent of the variables for which the variation in rates

Table 6. Number and rate of variants of pronouns in the children's RPR

Variable	n	SEN	TTD	other	SEN(%)	Gloss
I	2,805	2,092	707	6 (*æi*)	74.5%	*'I'*
ME	354	246	106	2 (I)	69.5%	*'me/myself'*
YOU.SG	239	157	82		65.7%	*'you/yourself'*
REFL	13	9	4		69.2%	*'-self' (3rd person)*
SHE	58	19	37	2 (*henne*)	32.8%	*'she'*
HER	18	0	15	3	0%	*'her'*
YOU.PL	181	26	155		14.3%	*'you (pl)/yourselves'*
THEY	34	6	28		82.3%	*'they'*
THEM	13	(4)	(4)	9 (*de*)	–	*'them'*
HIS	1	0	1		0%	*'his'*
OUR.F/M	34	7	27		20.6%	*'our'* (m./f.)
OUR.N	27	5	22		18.5%	*'our'* (n.)
OUR.PL		0	2		0%	*'our'* (pl.)
YOUR	19	2	17		10.5%	*'your'* (pl.)
THEIR	3	0	3		0%	*'their'*
SOME	40	37	3		92.5%	*'some(one)'*
SOMETH.	50	7	43		14%	*'some(thing)'*

are presented (N=181). This limits how much we can say about potential development.

(Numbers and rates for I, ME, YOU.SG, and YOU.PL broken down for subjects and groups of recordings are found in Tables A2, A3, A4, A5 respectively, in Appendix B.)

4.3 BE

BE is attested in both its SEN and TTD variant in RPR. Examples are given in (11).

(11) a. Det **er** brann ((27)Hedda, 4;1)
It **is.**SEN fire
'there's a fire!'

b. her **er** jeg bestemor ((3)Morten, 3;4)
here **is.**SEN I grandma
'here I am, grandma'

The rate of SEN variants in CTD of BE is 2.2%. It is reasonable to assume that the explanation of the 2.2% lies along the same lines as I, ME, YOU.SG, and SHE above:

Table 7. Number and rate of BE variants in RPR

lemma/variable	n	SEN	TTD	SEN(%)	gloss
(BE:) *være*	1,343	436	907	32.4%	'be'

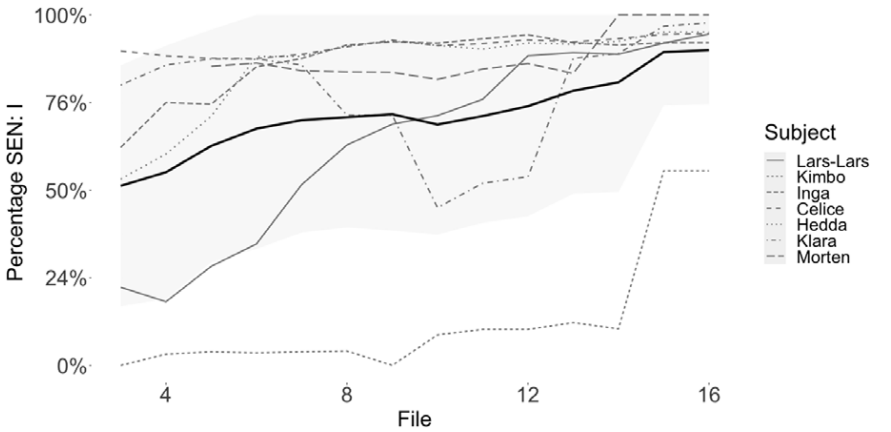

Figure 2. Rolling sums of five recordings (grey lines), mean and standard deviation of rolling sums of five recordings (black line and shaded area) of I.

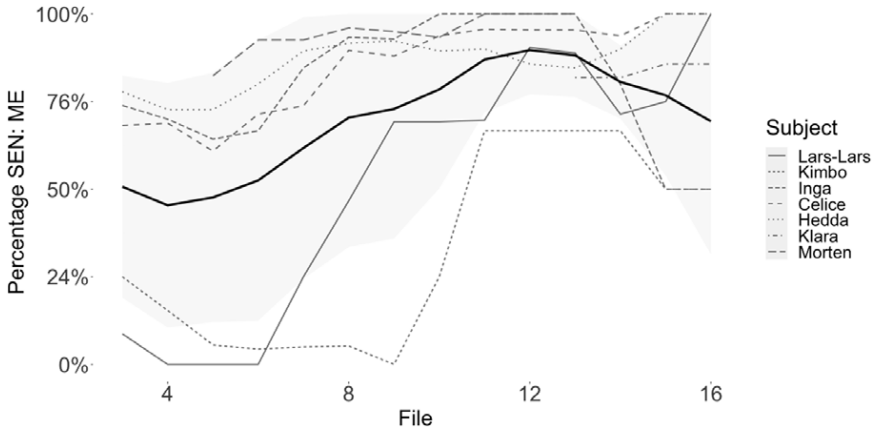

Figure 3. Rolling sums of five recordings (grey lines), mean and standard deviation of rolling sums of five recordings (black line and shaded area) of ME.

Coding mismatches and/or 'bleed'. Returning to RPR, the SEN variant of BE is used is used in overall a third of the time. If we look at the development across recordings and subject (Figure 6), it tells a somewhat different story from the one observed with the three most frequent pronouns, I, ME, and YOU.SG. In the figure, we see a clear development in the mean value, but also on an individual level (*e.g.* Lars-Lars).

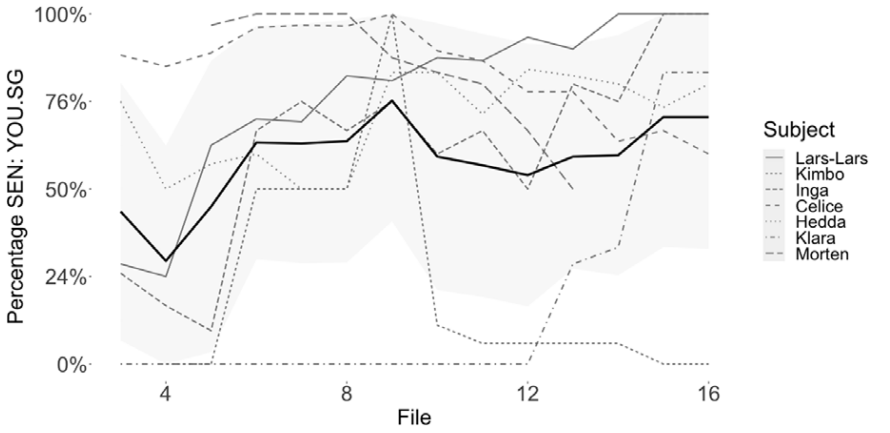

Figure 4. Rolling sums of five recordings (grey lines), mean and standard deviation of rolling sums of five recordings (black line and shaded area) of YOU.SG.

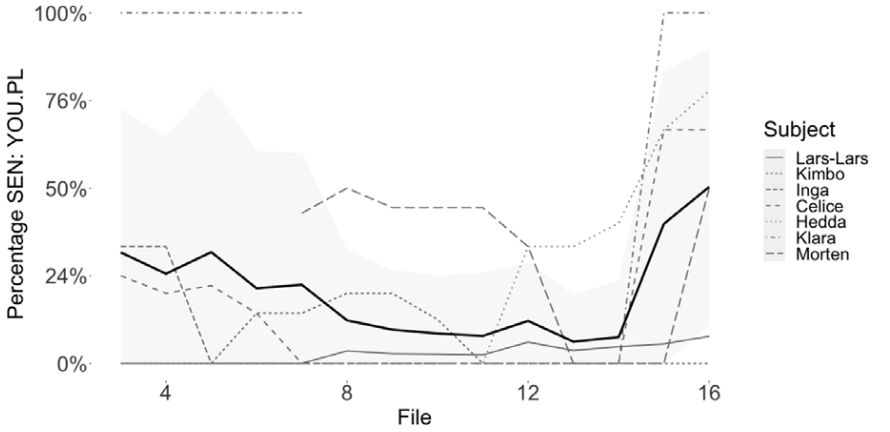

Figure 5. Rolling sums of five recordings (grey lines), mean and standard deviation of rolling sums of five recordings (black line and shaded area) of YOU.PL.

4.4 Mixed effect analysis

The seeming development (or lack thereof) in the figures above may be an effect of skewed-ness in that the instances are not distributed evenly across subjects and recordings. In addition, recording number is only an indirect measure of age. To ascertain whether there is a real effect of development, a binomial regression analysis was run on the data to test whether rate of SEN variants in the data increases as an effect of age in the two most frequent variables, I and BE. To do this, age was converted to a decimal (number of months).

Using the programme R (R Core Team 2019) and the package *lme4* (Bates et al. 2015), a binomial generalised mixed effect analysis was fitted on all data points (i.e.

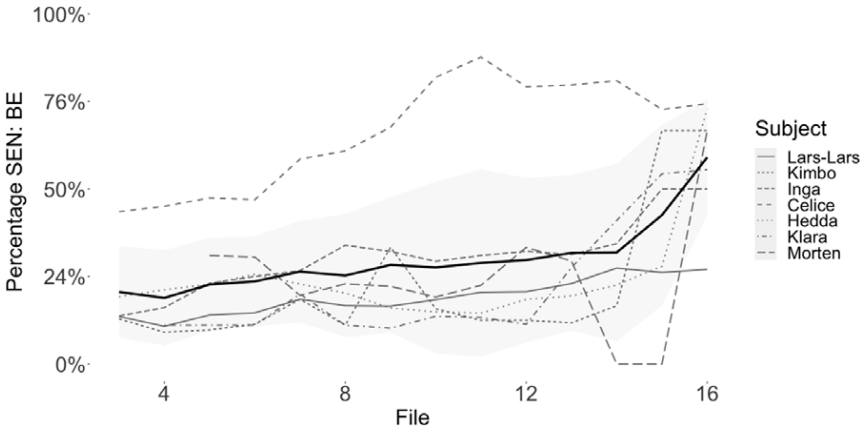

Figure 6. Rolling sums of five recordings (grey lines), mean and standard deviation of rolling sums of five recordings (black line and shaded area) of BE.

all instances as a binary measure as either SEN (1) or not SEN (0), with instances of 'other' left out), with age as a fixed effect and by-subject random slopes for the effect of age to control for different developmental trajectories. In both variables, the effect of age turned out to be significant: I ($\beta = 0.26702$, $SE = 0.06224$, $p < .001$) and BE ($\beta = 0.22505$, $SE = 0.04785$, $p < .001$). In other words, it is unlikely that the changes in the rate of SEN in these two variables are due to random variation. This should however not be a surprise, when we look at the development in Figures 2 and 6.

5 Discussion

Having seen the result, we can revisit the three research questions:

1. To what extent do the children use SEN variants or other variants alien to the local dialect in their RPR?

The children in this study use the SEN variant of all the variables of which we had sufficient instances to conclude in this regard, with a few exceptions. This includes most of the pronominal system (Table 1), nominal inflection (Table 2), and present tense of copular *be* (Table 7). The few exceptions were the forms in which SEN has differential argument marking and TTD has syncretism (SHE/HER and THEY/THEM). The children never used the non-subject SEN-variant of HER (i.e. *henne*) in a non-subject position, but they did use it in subject position (see Kleemann 2015). Regarding THEY/THEM, the children used the forms seemingly in free variation with no regard to subject-hood. In many ways, this study goes a long way in confirming the findings in Eliassen (1998), and bolsters the numerous reports that children use SEN variants in their RPR with empirical data.

Furthermore, the results could shed light on the debate about the existence of a standard variety in Norway.

2. What is the rate at which the SEN (or other) variants are used in RPR?

The consistency with which the children used the SEN variants varied greatly between the variables and between children and recordings, even within the pronominal system. Above we divided the pronouns into four groups, where the first two are the ones where argument marking pattern differently between SEN and TTD, and the ones where we see indications of levelling in CTD.

The third and fourth groups are the groups where there is no or little levelling in the children's dialect, and the rate of SEN is relatively low – the third group – or high – the fourth group. The third group consists of SHE (32.8% SEN), HER (0%), YOU.PL (14.3%), and, possibly, SOMETHING (14%, but see Section 4.2). The fourth group consists of I (74.5% SEN), ME (69.5%), YOU.SG (65.7%) and REFL (69.2%). Compared to the first two groups, it is not as obvious why these groups have a high or low rate of SEN variants in the data. Three possible explanations are suggested.

The first possible explanation is rooted in the pragmatics of 1st and 2nd person pronouns. As proposed by Errington (1985), morphemes have a *relative pragmatic salience*: The more pragmatically salient a morpheme is, the more likely it is to be used to index social relations in the discourse (Woolard 2008). Personal pronouns are among the most pragmatically salient groups of morphemes, as they index *subjective interactional stances* (Woolard 2008: 443). Keep in mind that the role of RPR can be regarded as staging the child's role persona as different from her every-day persona (cf. *auto-divergence*, endnote 5). Both first and second person pronouns are ideal nuclei for such stance-taking. The first person singular pronouns (I/ME) refer to the speaker herself, and should be obvious in this regard.

The second person singular pronoun indexes the relation between the speaker and the addressee (as evident in honorifics, Silverstein 2003), and the use of the SEN variant of this can be interpreted as including the addressee in the pretence of the role play and/or indexing the speaker's role persona in relation to the addressee. A problem with this explanation is the fact that the REFL variable also has a high rate of SEN, and that the second person plural pronoun YOU.PL has a low rate of SEN as opposed to its singular counterpart. The former can be explained by the fact that it may be a random effect of the low numbers of instances of the variable in total, and the latter with the fact that second person plural pronouns (often) include someone who is not directly part of the speaker/addressee dyad. The need for these additional assumptions speak against this explanation.

The second possible explanation may be the most obvious one: It depends on frequency alone. The most frequent ones are the ones that they pick up on quickest. In turn, there may be a number of explanations for this, the most promising being the fact that the output represented in the material reflects the children's input (cf. the discussion in Section 1.1). The variables most frequently produced in role play are necessarily the same variables most frequently heard in role play. This gives a reinforcing effect, speeding up the consolidation towards agreed-upon role play variants. This does however not explain why there is such a steep decline in the rate of

SEN from the third most frequent pronoun, YOU.SG with 240 instances and 70% SEN, to the fourth most frequent, YOU.PL with 181 instances and 16% SEN. In addition, as with the previous explanation, in order for the frequency explanation to work we would have to assume that the high rate of SEN variant in REFL is a fluke due to its low frequency in the material, and that the rate would decrease drastically, should there be more instances of it.

This is a segue into the third possible explanation. All the pronouns in the fourth group end in [-æ:] in the Tromsø dialect, and in [-æi] in SEN (see Section 1.3). These parallel patterns are easily generalised upon, which makes them conceptually grouped together. Indeed, to 'transform' from [æ:] to [jæi], [mæ:] to [mæi], etc. requires relatively few permutations, at least compared to the other pronouns (e.g. *dokker* to *dere*, *ho* to *hun*, etc.). The attested hybrid form [æi] may also be indicative of this. The conceptual grouping may give a feedback effect which the other variables in the group feed upon.

Disentangling which of these explanations plays the most important role, either alone or in synergy with one another, would need a triangulation of ethnomethodological and quantitative approaches which would be beyond the scope of this paper. Indeed, there may be a combination of all explanations at play: It is not improbable that the pragmatic qualities of I and ME have an impact on their frequency in role play, which start the feedback effect mentioned above, increasing the rate of SEN in I and ME. Subsequently, YOU.SG and REFL piggyback on the development of I and ME due to their phonological similarity, resulting in the high rate of SEN variants in the third group. The members of the second group (SHE, HER, YOU.PL, SOMETHING) either do not have the same pragmatic qualities, (n)or the phonological resemblance to pronouns that do, and lag behind in relation to the rate of SEN variants.

Regarding BE, the other variable analysed quantitatively, the rate of SEN variants averaged on 32.4%, and can thus be regarded as quite emblematic (salient), although not in the same league as the group of highly salient pronouns discussed above (I, ME, YOU.SG, REFL).

To sum up this discussion, all the three possible explanations feature some sort of salience – pragmatic, phonological and/or in the input (i.e. frequency) – as an explanatory concept. Without taking the space to elaborate on the definition of salience, we can note that the use of this notion is a tip of the hat to the variationist-inspired definition of RPR as auto-divergence, i.e. dialect divergence from oneself (see endnote 5), as it is an often used explanatory concept in studies of convergence and divergence.

3. Is there a change or development over time in the extent or consistency that children use these variants in their RPR?

Lastly, we saw that across multiple variables, there was a development in the rate of SEN variants used in RPR (tested statistically for I and BE). This clearly indicates a development over time. Although any type of language acquisition necessarily will develop incrementally, as discussed in Section 1.2, there is an important difference between this case and second language acquisition. Whereas both cases are instances of language acquisition which happens on top of and beyond the first language, the

case of the Northern Norwegian RPR, as attested in the present subjects, seem to bifurcate with the first language (the local dialect), i.e. very incrementally diverge, in ways and to degrees second language acquisition does not (but see the discussion in Section 1.2).

The difference in development is one manner in which the RPR differs from other situations of bilingualism and bidialectalism, and it may have ramification for its cognitive status *vis a vis* the local dialects it builds on. This study has only looked at the difference in surface forms, and an obvious way ahead would be to investigate whether there are also syntactical differences or differences in the phonological systems between an RPR and its local dialect. It may be the case that the RPR only entails a shift in the surface (phonetic) form of lexical and morphological material, in which case it would be substantially different from other forms of bidialectalism.

A second way RPR may differ from other situations of bidialectalism as portrayed in this issue is in the priming of the cognitive index of the register (see Section 1.2): It is exclusively pragmatic, relating to real world events only. This is opposed to the system of universal multilingualism as proposed by Roeper (1999), which is conditioned upon lexical material (see also the discussion in Eide & Åfarli (this issue) on how word order in interrogatives is primed by the choice of *wh*-word). However, the choice of lexical material can similarly be primed by pragmatic factors (such as the choice of a 'standard' or 'dialect' *wh*-word). The snake bites its tail: Roeperian bidialectalism may also be cases of pragmatically conditioned register variation, indirectly. A relevant question pertaining to RPR would then be whether the use of a lexeme, for example a *wh*-word, would trigger SEN *syntax*, for example in interrogative clauses (see Lundquist et al. (this issue) on syntactic variation in the Tromsø dialect compared to SEN), or whether the child would produce TTD syntax with the SEN variant. (Or rather whether the child would eventually pick up on the SEN syntax.) This is connected to the question of the status of the RPR *vis a vis* SEN, which again is connected to the discussion of a standard spoken variety of Norwegian and whether there is one (see Section 1.3): It depends on whether the RPR is only stored as a collection of emblematic features used to signal role play, or whether it is represented as a coherent variety corresponding to SEN (to some degree) in the child's linguistic competence. It may not be the one or the other for all children, and it may develop from the former to the latter. In any event, if the latter is the case, for all or some children, then it would represent a very strong argument in favour of SEN as a *de facto* standard variety. If the former is the only case, the argument holds, although weaker: The choice of specifically SEN as the source of these emblematic forms indicates that it holds some special status above other Norwegian varieties. The apparent directionality and development toward more SEN variants may indicate that SEN, or some version of it, is a target variety of sorts, possibly transferred across age groups from older to younger children as a part of child folklore, as discussed in the background section. If this is the case, it could be argued, speculatively, that the situation is closer to a 'coherent variety' (the latter case above) than sporadic emblematic features.

6 Conclusion

This paper reports a multiple case study of seven Northern Norwegian children's use of Standard East Norwegian (SEN) variants of morphological variables in their role play register (RPR). The paper set out to answer the extent to which i) SEN variants were used in the RPR, ii) they were used consistently, and iii) whether there was a development in the rate of SEN variants.

In accordance with previous research, children were found to use the SEN variant of most of the variables alongside the local dialect variants. The rate at which they do so varies across variable, subject and time. Within the pronominal system, a number of pronouns seem to be adjunctly highly emblematic in RPR, and therefore more frequent than others in their SEN variant. These were the equivalents of *I, me, you* and *him-/herself*. I discussed whether this may be due to the pragmatic salience of the singular first person pronouns in being the locus for subjective interactional stances, especially in role play where the child signals the taking-on of another persona, frequency, or the phonological similarity between the four forms. I concluded that the latter was intuitively the most promising explanation, as it explains the data without relying on any auxiliary hypotheses, although possibly at work in combination with the other two.

By fitting a binomial mixed effect analysis on the two most frequent variables (present tense of the copular and the pronoun *I*), a significant effect of age on the rate of SEN variants was found. The interpretation of this was that SEN features in RPR develops over time and that the children's native dialect and the RPR overlap, at least initially, but diverge over time, and furthermore that there is a directionality in the form of the RPR which may indicate that (at least some variables of) SEN functions as a target variety of sorts.

Notes

1 List of abbreviations and variable names: BE: Present tense of copular 'be' variable *(e/er)*; CTD: (The) Children (of this study)'s Tromsø Dialect; DEF/def.: Definite; F/f.: Feminine; HER: Third person singular feminine non-subject pronoun variable *(ho/henne)*; HIS: Third person masculine possessive variable *(hannes/hans)*; I: First person singular subject pronoun variable *(æ/jeg)*; indef.: Indefinite; M/m.: Masculine; ME: First person singular non-subject pronoun variable *(mæ/meg)*; N/n.: Neuter; obl.: Oblique/non-subject; OUR: First person plural possessive variable *(vårres, vårs/vår(-t, -e))*; p.-ee: Possessee; PL/pl.: Plural; p.-or: Possessor; PRES.: Present tense; REFL: Third person reflexive pronoun variable *(sæ/seg)*; RPR: Role play register; SEN: Standard East Norwegian; SG/sg.: Singular; SHE: Third person singular feminine subject pronoun variable *(ho/hun)*; SOME: Indefinite pronoun/determiner variable *(nokken, nån/noen)*; SOMETHING: Indefinite pronoun/determiner variable *(nokka/noe)*; THEIR: Third person plural possessive variable *(demmes/deres)*; THEM: Third person plural non-subject pronoun variable *(dem/dem)*; THEY: Third person plural subject pronoun variable *(dem/de)*; TTD: Traditional Tromsø Dialect; YOU.PL: Second person plural pronoun variable *(dokker/dere)*; YOUR: Second person plural possessive variable *(dokkers/deres)*; YOU.SG: Second person singular non-subject pronoun variable *(dæ/deg)*.

2 There is a discussion to be had about the proper definition of 'role play register', and how it relates to notions such as 'development' and 'competence'. Since this terminological specification is not vital for the interpretation of the result, it will be cleared up in this endnote so as not to inflate the paper. First and foremost, the term 'role play register' is understood to be functional, i.e. 'whatever linguistic and paralinguistic features any child uses at any time to signal role utterances', and it is per definition individual and variable. Secondly, one can look at the socially agreed upon norms for characteristics of role play registers within a population (play group, kindergarten, region, country, etc.), itself also containing variation. This

could have been termed the 'role play *variety*'. To the extent the notions 'development' and 'competence' are used in this paper, they are not to be understood as more or less complete acquisition of SEN or the role play register *per se*. (The latter would be self-contradictory given the definition above.) Rather, for the sake of argument, we can view the role play register (i.e. 'variety'), as a cline with the features of the child's every day speech in the one end, and 'alien features' in the other, where 'development' – to the extent it is encountered – is to be construed as the movement of the *recorded* role play register (i.e. 'variety') from one end to the other of this cline, i.e. from less to more 'alien features'.

3 The first written source I have been able to find of the phenomenon is in an autobiographical novel by Sigrid Undset (referred to in Høigård 1999), set in the 1880's, where children engaging in role play are described as 'speaking [. . .] in a sort of book language' in their role utterances (Undset 1994 [1934]: 84, my translation) (the term 'book language' (*bogsprog*) here is not a reference to the written standard *bokmål*).

4 Folk-linguistically, the source of SEN as a RPR has been attributed to television (discussed in Høigård 1999), and in particular children's television. Although many sources predate the introduction of television to Norway, we cannot exclude that it has some influence on the form of the RPR of children of today. However, the time children use playing and interacting with each other by far eclipses the time children spend watching television (Medietilsynet 2018). In addition, the extent to which children can acquire language through television is highly disputed (Gola et al. 2012), although a recent case study of a Norwegian four year old acquiring English allegedly solely through YouTube (Kalstad 2019) brings this into perspective, possibly indicating a division between first and second language acquisition.

5 In dialect-sociological accounts, this process must be regarded as a kind of dialect divergence, where the child's RPR represents a divergence from her own native dialect; we can call this auto-divergence.

6 Thanks to an anonymous reviewer for pointing this out.

7 Vanvik (1985: 13) uses the term 'Standard East Norwegian' for the variety prescribed in his pronouncing dictionary.

8 All forms will be given in orthographic (for SEN) and semi-orthographic (for TTD) transcript. The semi-orthographic transcript uses the Norwegian alphabet and orthography to approximate the pronunciation of TTD. Phonetic transcriptions will be given in the main text where it is relevant. The variables will be referred to by all capital letter terms of English equivalents (e.g. ME for first person singular non-subject pronoun *meg* or *mæ* and YOU.SG for second person singular non-subject pronoun *deg* or *dæ*). These are added in the tables, see the list of abbreviations in endnote 1.

9 Of the pronouns in Table 1, SHE and THEY can be used as demonstratives as well (see Vindenes 2018: 18). In demonstrative uses, they are always stressed and have the same form even in oblique positions, and these have been counted with the subject variants, even in oblique positions (i.e. SHE and THEY, not HER and THEM).

(i)	jeg	har	gløm**t**	**de**	her		(Lars-Lars, 3;2)
	I	have	forgotten	they	here		
	'I have forgotten these'						

In addition, some Norwegian dialects, and Northern Norwegian in particular, have a *proprial article* (see Johannessen & Garbacz 2014), which is isomorphic with the personal pronouns *he* and *she*, and which SEN does not have.

(ii)	jeg	kan	leke	meg	med	**ho**	Celice	(Celice, 2;11)
	I.SEN	can	play	me.SEN	with	she.TTD		
	'I can play with C.'							

This morpheme is left out of the analysis here.

10 YOU.SG is the non-subject equivalent of *you*. REFL is the 3rd person reflexive pronoun, both singular (him-/herself) and plural (themselves).

11 Children and adolescents growing up speaking the Oslo dialect, which is close to or identical to SEN, tend to not mark subjects and oblique arguments differently for 3rd person pronouns. This includes feminine, (*hun* and *henne*), masculine (*han* and *ham*, but see endnote 3), and plural (*de* and *dem*). A quick corpus search in a speech corpus from Oslo (NoTa Corpus) confirms this.

12 There is a subtle phonological difference between SEN and TTD variant of the THEM whereby the vowel is more open in the latter ([dem] vs. [dæm], respectively). This is connected to a general vowel shift in northern dialects whereby all originally short front vowels in certain contexts have become more open (*lågning,* lit. 'lowering', Iversen 1913; Skånlund 1933). This means that if children use a closed vowel in this variable, we cannot ascertain whether she is adopting SEN morphology or SEN phonology. I.e. it is impossible to decipher whether she uses the SEN morpheme [dem] or whether she uses the TTD morpheme [dæm] but adopts SEN phonology, reverses 'lowering' and raises the vowel to [e]. Crucially, the other differences between SEN and TTD mentioned here cannot be explained by such general phonological differences between Norwegian dialects alone.
13 Traditionally, SEN has marked the masculine singular third person pronoun differently in subject and oblique position, as in English 'he' and 'him' (*han* and *ham* respectively), but a syncretic paradigm (*han, han*) has been codified in the written standard since 1917 (Språkrådet 2008). Since this gives an overlap between SEN and TTD in this variable, it is not investigated further in this study.
14 According to Bull (1990: 220), the Tromsø dialect has the forms *nåkka* and *nåkken*, but in the speech corpus (LIA Corpus), we find the form *nån* as well.
15 The addition of five children after recording 16 was due to an expansion of one of the kindergarten's groups.
16 The change in recording equipment was due to a change of rooms and thereby the loss of possibility to hang the microphones from the ceiling.
17 For two recordings the audio recording from the recording device was lost due to human error. Audio from the session was still recorded through the visual recording device, although in a much inferior quality. The two files in question have not been included in this study.
18 The transcriptions were made over an extensive period of time, and a series of versions of ELAN were used, spanning from 4.9.4 to 5.7-AVFX.
19 Digital Object ID for replication data: https://doi.org/10.18710/TU1GSY
20 The rationale behind this number is the number of subject times the number of recordings (7 x 18 = 126), i.e. the variables are observed *on average* at least once for every child for every recording.
21 The asterisk in examples (7) and (9) indicates that the verb form is unconventional, both in relation to SEN and TTD. In these cases it is an example of regularisation of the past tense form of an originally strong paradigm (semi-orthographic: *hjalp – *hjelp-a, skøyt/skaut* (TTD) or *skjøt* (SEN) – **skyt-a*).

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Appendix A. Age of children at each recording session

Table A.1. Recordings/Session number and ages (years;months.days). Missing ages indicate absence from the recordings. The reference values indicate the time since the first recording

Ssn. no.	Ref.	Lars-Lars	Celice	Morten	Inga	Hedda	Kimbo	Klara
1	-	2;11.16	2;11.27		2;11.20	3;1.20	2;10.23	2;7.1
2	0.7	2;11.23	3;0.3		2;11.27	3;1.27	2;10.30	2;7.8
3	0.14	2;11.30	3;0.10	3;4.7	3;0.3	3;2.3		
4	0.28	3;0.13	3;0.24	3;4.21	3;0.17		2;11.20	2;7.29
5	1.10	3;0.26	3;1.6	3;5.6	3;1.2	3;3.2	3;0.5	2;8.11
6	1.20		3;1.16	3;5.16	3;1.12	3;3.12	3;0.15	2;8.21
7	2.6	3;1.22	3;2.2	3;5.30	3;1.26	3;3.26		2;9.7
8	2.13	3;1.29	3;2.9	3;6.6	3;2.2	3;4.2	3;1.5	2;9.14
9	2.25	3;2.10	3;2.21	3;6.18	3;2.14	3;4.14		2;9.26
11	3.17	3;3.3	3;3.13	3;7.11	3;3.7	3;5.7		2;10.18
12	3.29	3;3.15	3;3.25	3;7.23	3;3.19	3;5.19		2;11.0
14	4.27	3;4.12	3;4.23		3;4.16	3;6.16	3;3.19	2;11.28
15	5.3	3;4.19		3;8.27		3;6.23		3;0.4
16	6.22	3;6.7	3;6.18	3;10.15		3;8.11		3;1.23
18	7.19		3;7.15		3;7.8		3;6.11	3;2.20
21	9.2	3;8.18	3;8.28		3;8.22	3;10.22	3;7.25	3;4.3
25	11.9	3;10.1	3;11.5			4;0.29	3;9.10	3;6.10
27	1;0.6	3;11.22	4;0.2	4;3.30		4;1.26		3;7.7

Appendix B. Variables across subject and group of recordings

Table A.2. Rate of SEN in I across subject and group of recordings

name	recordings						total	
	1-6		7-9, 11-12, 14		15-16, 18, 21, 25, 27			
Lars-Lars	17.4%	(84/482)	51.6%	(276/535)	69.6%	(105/111)	59.8%	(453/758)
Celice	89.4%	(340/380)	92.7%	(164/177)	94.7%	(71/75)	91.0%	(575/632)
Morten	83.1%	(103/124)	83.6%	(179/214)	100%	(4/4)	83.6%	(286/342)
Inga	54%	(164/192)	87%	(90/104)	90%	(37/41)	79.4%	(332/418)
Hedda	24%	(5/21)	89%	(86/98)	91%	(125/137)	86.7%	(320/369)
Kimbo	3.1%	(3/97)	8.7%	(4/46)	55.6%	(10/18)	10.6%	(17/161)
Klara	94.1%	(6/7)	47.6%	(10/21)	96.8%	(91/94)	87.7%	(107/122)
total	60.2%	(675/1,121)	80.5%	(942/1,170)	92.4%	(475/514)	74.6%	(2,092/2,805)

Table A.3. Rate of SEN in ME across subject and group of recordings

name	recordings						total	
	1-6		7-9, 11-12, 14		15-16, 18, 21, 25, 27			
Lars-Lars	8.7%	(2/23)	69.2%	(15/26)	75%	(6/8)	45.6%	(26/57)
Celice	72.3%	(55/76)	89.7%	(35/39)	100%	(3/3)	78.8%	(93/118)
Morten	79.3%	(23/29)	95%	(19/20)	0%	(0/1)	84%	(42/50)
Inga	75%	(18/24)	94.1%	(16/17)	50%	(1/2)	81.4%	(35/43)
Hedda	72.7%	(8/11)	89.5%	(17/19)	100%	(6/6)	86.1%	(31/36)
Kimbo	15.4%	(4/26)	25%	(2/8)	50%	(1/2)	19.4%	(7/36)
Klara					86%	(12/14)		
total	58.2%	(110/189)	82.9%	(107/129)	80.6%	(29/36)	69.5%	(246/354)

Table A.4. Rate of SEN in YOU.SG across subject and group of recordings

name	recordings						total	
	1-6		7-9, 11-12		16, 18, 21, 25, 27			
Lars-Lars	28.6%	(4/14)	82.6%	(19/23)	100%	(4/4)	65.9%	(27/41)
Celice	85.7%	(18/21)	93.8%	(30/32)	60%	(6/10)	85.7%	(54/63)
Morten	96.6%	(28/29)	87.5%	(7/8)			94.6%	(35/37)
Inga	25.9%	(7/27)	60%	(3/5)	100%	(3/3)	37.1%	(13/35)
Hedda	50%	(3/6)	85.7%	(6/7)	75%	(12/16)	72.4%	(21/29)
Kimbo	0%	(0/1)	11%	(2/18)	0%	(0/1)	10%	(2/20)
Klara	0%	(0/1)	0%	(0/7)	83.3%	(5/6)	36.7%	(5/14)
total	60.1%	(60/99)	67%	(67/100)	75%	(30/40)	65.7%	(157/239)

Table A.5. Rate of SEN variant in YOU.PL across subject and group of recordings

name	recordings						total	
	1-6		7-9, 11-12, 14		15-16, 18, 21, 25, 27			
Lars-Lars	0%	(0/32)	2.6%	(1/30)	4.5%	(1/22)	2.2%	(2/84)
Celice	16.7%	(2/12)	0%	(0/4)	66.7%	(4/6)	27.2%	(6/22)
Morten	100%	(1/1)	44.4%	(4/9)	50%	(1/2)	50%	(6/12)
Inga	33%	(1/3)	100%	(0/3)			16.7%	(1/6)
Hedda	0%	(0/2)	0%	(0/12)	70%	(7/10)	29.2%	(7/24)
Kimbo	0%	(0/2)	12.5%	(1/8)	0%	(0/4)	7.1%	(1/14)
Klara	100%	(1/1)	0%	(0/7)	100%	(2/2)	30%	(3/10)
total	9.4%	(5/53)	7.3%	(6/82)	32.6%	(15/46)	14.4%	(26/181)

Table A.6. Rate of SEN in BE.PL across subject and group of recordings

name	recordings						total	
	1-6		7-9, 11-12, 14		15-16, 21, 25, 27			
Lars-Lars	7.1%	(2/28)	6.7%	(6/89)	31.4%	(11/35)	12.5%	(19/152)
Celice	15.1%	(8/53)	31.6%	(13/19)	40%	(6/15)	23%	(20/87)
Morten	13.3%	(10/75)	27.1%	(26/96)	25%	(1/4)	21.1%	(37/175)
Inga	55.8%	(24/43)	22.2%	(8/36)	50%	(6/12)	41.8%	(38/91)
Hedda	13.6%	(9/66)	18.1%	(13/72)	32.1%	(9/28)	18.7%	(31/166)
Kimbo	7%	(6/86)	16%	(4/25)	16.7%	(1/6)	7%	(7/95)
Klara	0%	(0/15)	30.8%	(4/13)	25%	(3/12)	9.4%	(11/117)
total	16.1%	(59/366)	19.4%	(68/351)	33%	(37/112)	18.7%	(155/829)

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Playing with fire compounds: The tonal accents of compounds in (North) Norwegian pre-schoolers' role play register

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Abstract

Prosodic features are some of the most salient features of dialect variation in Norway. It is therefore no wonder that the switch in prosodic systems is what is first recognized by caretakers and scholars when Norwegian children code-switch to something resembling the dialect of the capital (henceforth Urban East Norwegian, UEN) in role play. With focus on the system of lexical tonal accents, this paper investigates the spontaneous speech of North Norwegian children engaging in peer social role play. By investigating F0 contours extracted from a corpus of spontaneous peer play, and comparing them to elicited baseline reference contours, this paper makes the case that children fail to apply the target tonal accent consistent with UEN in compounds in role play, although the production of tonal accents otherwise seems to be phonetically target like UEN. Put in other words, they perform in accordance with UEN phonetics, but not UEN morpho-phonology.

1 Introduction and background

That children standardize their language in role play is not uncommon (Buhofer & Burger, 1998; Kasperger & Kaiser, 2019; Katerbow, 2013; Sophocleous, 2013). This also holds for the Norwegian context, where children code-switch to something resembling the Oslo dialect (or Standard or Urban East Norwegian, UEN) in their 'in character' role utterances (e.g. Røyneland, 2009, with the exception of children with that variety as their native dialect). This paper investigates tonal accents in the role play register (RPR) of seven children (2;7–4;3) in the North Norwegian city of Tromsø, and, in particular, whether the children transfer the compound accent of their native dialect into their RPR or whether they master UEN's system of differential accent marking in compounds.

Most varieties of Norwegian (and Swedish) have a prosodic system with tonal accents. The distribution of the two tonal accents are similar across varieties when it comes to the interface between morphology and phonology and the marking of morphological material through tonal accents, with certain local differences (Kristoffersen, 2000). One difference is that most Swedish and North Norwegian varieties have a compound accent, where all compounds are assigned accent 2 by default, as opposed to most Norwegian varieties and some South Swedish varieties (e.g. Strandberg, 2014) where the first stem of the compound governs the tonal accent (Bye, 2004; Lorentz, 1981). In addition, the phonetic/acoustic features of the tonal accents, i.e. their F0 contours, vary a great deal across varieties (Gårding, 1977). The phonetic differences between dialects are highly salient, and in line with the many references of RPR in UEN, children could be expected to master the UEN tonal accent contours to some degree. This paper backs up the these reports with examples of actual F0 contours from excerpts of children's speech during spontaneous play. Building on that, the paper goes on to answer the question of whether the children have picked up on the distributional

differences in compounds between UEN and their native dialect variety.

In the remainder of this section, an introduction to the Norwegian tonal accent system and the Norwegian role play register will be provided.

1.1 Tonal accents and prosody

The Scandinavian tonal system is a system with lexical tonal or pitch accents (see e.g. Hulst & Smith, 1988; Kelly & Smiljanić, 2018). Similar systems are found across a number of languages, such as Lithuanian (Kardelis, 2017), Latvian (Karins, 1996) and Japanese (Ota et al., 2018), as well as in varieties of Basque (Hualde, 2012) Korean (Cho et al., 2019; Jun et al., 2006; Lee & Zhang, 2014) Serbian and Croatian (Inkelas & Zec, 1988; Zsiga & Zec, 2013), in the Netherlands (Ramachers et al., 2017) and Franconian German (Köhnlein, 2016). In such systems, the contrasts are linked to the prosodic foot, rather than the mora or syllable, as in lexical tone languages (see e.g. Hulst & Smith, 1988; Kelly & Smiljanić, 2018). For the Scandinavian tonal accent, the accent domain spans from the syllable with primary stress to the next, often across word boundaries. Most varieties of Swedish and Norwegian have a lexical tonal accent system in which all feet with primary stress are obligatorily assigned one of two accent contours. This means that there are minimal pairs of segmentally identical words or phrases that are distinguished from each other by tonal accent only, as in *1leken* ('the game', tonal accent one, as indicated by the number) and *2leken* ('the toy' or 'playful', tonal accent two).[1]

The phonetic differences between Scandinavian dialects are often described in terms of the distribution of contour peaks (high tone, H) and valleys (low tone, L) across syllables and/or morae. The variation has been classified in various ways. Traditionally, Norwegian dialects have been grouped together based on whether the first stressed syllable in accent 1

[1] Scholars disagree about the basis for the distribution of the accents across words, and this is not of importance to the present study (but see e.g. Kristoffersen, 2006, 2009; Lahiri et al., 2005; Wetterlin, 2010, for recent discussions).

words (also referred to as 'acute') are associated with a high tone (high tone dialects, e.g. the Tromsø dialect) or a low tone (low tone dialects, e.g. UEN). Another common division criterion is whether accent 2 words (also referred to as 'grave') have one or two peaks (Gårding, 1977). Both criteria are relevant for the differences between UEN and the Tromsø dialect, which are schematically represented in Table 1 and illustrated in Figure 1. The distinction between accent 1 and 2 in the Tromsø dialect is mainly the placement of the H: in the first (stressed) syllable in accent 1, and across or on the syllable boundary in accent 2 (see Bye, 2004). In UEN, the distinction between accent 1 and 2 depends on the absence (accent 1) or presence (accent 2) of an H in the first syllable (the 'lexical tone'), in addition to the H in the second syllable. (The F0 contours of UEN accent 1 and 2 are also given in Figure 2.) Note that the F0 contours of UEN and the Tromsø dialect are virtually opposites in terms of the distribution of Hs and Ls.

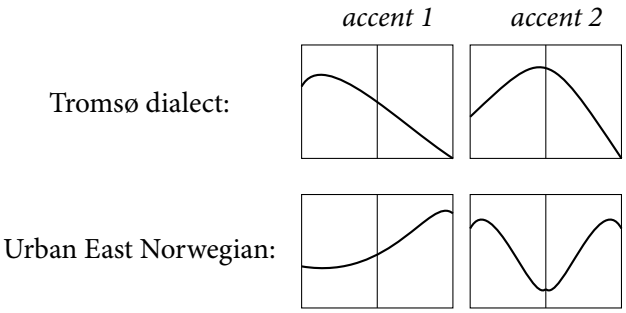

Figure 1: *Schematic illustration of pitch contours of accent 1 and 2 in Tromsø dialect and Urban East Norwegian. Based on Bye (2004, p. 6).*

Another difference across Mainland Scandinavian varieties is whether all compounds get the same tonal accent (henceforth 'compound accent dialects', or 'c-dialects'), or whether the tonal accent of the first constituent is retained in the compound (henceforth 'compound distinction dialects', or 'd-dialects'). Most Swedish and North Norwegian dialects are c-dialects, where compounds

	Accent 1	Accent 2	Compound Accent
UEN	L* H	HL* H	
Tromsø dialect	H* L	LH* L	LH* L*

Table 1: *Schematic tonal accent contours in Urban East Norwegian and the Tromsø Dialect in bisyllabic feet. High (H) or low (L) tones marked with '*' are associated with the stressed syllable.*

are assigned accent 2 by default. (Bye, 2004; Lahiri et al., 2004; Lorentz, 1981; Myrberg & Riad, 2015). Therefore, the word pairs in (1)Mahler-huset ("the house of Mahler") and (2)maler-huset ("the painter house"), and (1)ball-rom ("ballroom") and (2)ball-rom ("ball pit") have different accents in the d-dialects, as indicated by the parenthesised numbers, whereas they all have accent 2 in the c-dialects, as do all compound words, making the the word pairs above minimal (disregarding any segmental dialectal differences). In the d-dialects, the accent of the compound is dependent on the first stem. Precisely how the accent maps onto the compound word from the first stem is at times opaque and does not always follow from the segmental properties of the roots (as in the *ball-rom* example above). A thorough analysis of the system in UEN is given in Wetterlin and Lahiri (2012, see Kristoffersen, 2000 and Kaldhol and Köhnlein, 2021 for alternative accounts). Main stress is always on the first word in compounds in UEN and the Tromsø dialect.

There has traditionally been variation within UEN, as well as other dialects in South-Eastern and Middle Norway, where latinate and Greek loanwords, originally with (pen)ultimate stress, get initial stress, for instance *poli'ti* vs. *'pol(i)ti* ('police') (see Tengesdal & Lundquist, 2021). However, these variants have been in decline in UEN, and they do not seem to appear in the North Norwegian RPR. This has never been a feature of the Tromsø dialect.

This paper has an empirical focus and the findings should be translatable into any theoretical framework for prosodic analysis. The formalism adopted for the annotation and description is the Trondheim model of prosodic ana-

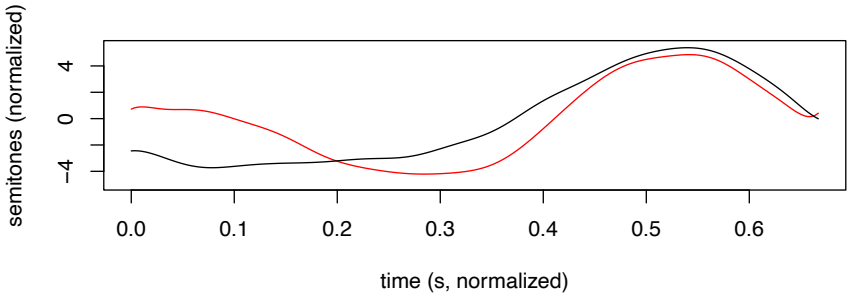

Figure 2: *Example of F0 contours of two compounds,* 2vann-mann *'aquarious' (red line) and* 1brann-mann *'fire-fighter' (black line), in UEN, a d-dialect. The contours were smoothed and normalized according to the procedure outlined in section 3.3*

lysis (Fretheim, 1981). Some important assumptions of this approach are the following: The domain of tonal accent is the Accent Phrase (AP), which encompasses the phonetic material from one stressed syllable (specifically, the onset of its nucleus) to, but not including, the next stressed syllable (the onset of its nucleus). As in other prosodic models (Nespor & Vogel, 2012 [1986]; Selkirk, 1984, e.g), the Trondheim model also suppose a prosodic hierarchy, where the AP is situated below the Intonational Phrase (IP) and above the prosodic word (ω).

The contours of the tonal accents vary in complex but predictable ways according to the position and function of the AP/tonal feet in the IP (e.g. Gårding & Stenberg, 1990). This makes comparisons between tonal accents or variants difficult unless a number of other prosodic variables are controlled for. For instance, as has been described thoroughly in Fretheim, 1987, low tone feet can appear similar to high tone feet in compressed declines, as often found post focally. Since this investigation depends on precisely the

difference between high tone and low tone F0 contours, compressed APs are uninformative to this analysis, and will not be included in the analysis.

1.1.1 Acquistion of lexical tone and tonal accents

Most studies of acquisition of tonal languages have been done on Mandarin, Cantonese, and Thai (and, in some cases, Yoruba). These tone system are of course very different to the tonal accent (or pitch accent) system of Scandinavian, both in terms of number of tones (4,5 and 6, for Mandarin, Thai, and Cantonese respectively) and in how they interface with the overall prosodic system (as I have laid out above). This means that the results from these studies cannot automatically be taken to hold also for the acquisition of Scandinavian tonal accents. However, it is of theoretical and practical value to discuss them here nevertheless.

Compared to the ability to discriminate between non-native vowels and consonants, the time window during which children are sensitive to and can discriminate between lexical tones in other languages than their native one seems to close earlier. However, it is also reported to open again, thus indicating a U-shape: the ability of learners of a non-tone language to discriminate tones has been reported to decline around 8 months, and then increase again around 12 months, which stands in contrast to vowel and consonant discrimination, which is reported to decline at 10–12 months (Singh & Fu, 2016). For native acquisition, children seem to "show primitive lexical tone categories …as early as 4 months" (Singh & Fu, 2016, p. 840), in general earlier than the acquisition of vowel and consonant categories. A possible explanation for this can be the 'periodicity bias.' That is, the that infants are particularly attuned to voiced sounds. Indeed, suprasegmental features are the only area of grammar where acquisition is demonstrated to happen even prenatally e.g. Moon et al., 2013. The window seems to close again for non-tone language learners after 19–24 months, where informants will accept "tone variants as differing real-

izations of the same word" (Singh & Fu, 2016, p. 841). Conversely, bilingual tone language learners are able to disregard tone when parsing words in their non-tone language from around 11-12 months.(Singh & Fu, 2016; Singh et al., 2016). The salience of the contrast between two tones, seems to be determine how well and how early young tone language learners are able to use them in word detection.(Singh & Fu, 2016).

As for production, in studies where adult raters have been used, children have been reported to display very few tone errors, after 1,5 or 2 years, for Mandarin and Cantonese respectively. However, when digital speech analysis and manipulations are used, researchers have found that even at three years of age, Mandarin and Cantonese learning children perform both quantitatively and qualitatively different to adults (Wong, 2013; Wong et al., 2005). However, these studies only analyzed F0, and not any of the secondary cues to tone (Singh & Fu, 2016). Keep also in mind that these systems are quantitatively and qualitatively different than the of Scandinavian one.

A system that is much more similar to the Scandinavian tonal accent, is the Japanese system of pitch accents. Based on a study with a preferential looking design investigating 17 months old infants learning Tokyo Japanese, Ota et al. (2018, p. 10) argue that children at 17 months "are still in a nascent state when it comes to" pitch accents, although children are found to be able to discriminate the same contrast at 4 months (Sato et al., 2010). They further argue that this delay is due to very variable realization of the pitch accent across different contexts. In an a novel word learning task with Dutch toddlers, Ramachers et al. (2017) found that both toddlers acquiring a Dutch dialect *with* tonal accent (Limburgian) and *without* tonal accents (Standard Dutch) payed attention to the accent cues in the novel word learning task, as assessed through eye-tracking.

Lastly, we can review the relevant Scandinavian studies: children are reported to have a high command of the tonal accents in their native variety. Romøren (2011, Master's thesis) reports that Norwegian children between 29

and 36 months produce the correct tonal accent around 90% of the time. Kadin and Engström (2007, p. 70) report that "most Swedish children at 24 months of age have established a productive command of the word accent contrast."

1.1.2 Imitation and metalinguistic awareness

Since the current study investigates the adaptation of features of a capital, arguably 'standard,' variety (see e.g. Røyneland, 2009), it bears reminiscence to socio-linguistic end variationist concepts such as accommodation and convergence. Although the role play register will be discussed below, an assessment of the relevant parameters of prosody and tone in accommodation and imitation can aid us in the discussion of the results.

The terms accommodation, shadowing, and imitation overlap in the literature, and all refer to ways in which speakers adapt their speech as an effect of spoken stimuli, either from an interlocutor or experimental stimuli. In phonetic accommodation and imitation, one of the variables that seems to influence whether a feature becomes imitated, is the distance between the dialect of the imitator and the model speaker: the longer the distance (up until a certain point), the more imitation (Lin et al., 2021). D'Imperio and German (2015) find an effect of exposure to the shadowed variety in prosodic imitation of American English by Singapore English speakers. There is also a discussion of whether imitation is constrained by native phonological contrasts in prosodic imitation, but the results here are mixed (Braun et al., 2006; D'Imperio et al., 2014; D'Imperio et al., 2015; German, 2012). Interestingly, metalinguistic awareness of the feature in question does not seem to be a necessary condition for imitation to happen (Lin et al., 2021). Furthermore, Petrone et al. (2021, p. 1) found that "speakers with higher working memory capacities were more accurate in phonological imitation," whereas no such effect was found for phonetic imitation. To my knoweldge, Lin et al. (2021) is the only example to date of a study of imitation of lexical tones. In their shadowing study

in Hong Kong Cantonese, they found that shadowers with an ongoing but not complete merger between two tones reversed the merger when shadowing a speaker with a clear distinction between the tones in question.

As far as I am aware, no-one has looked at imitation or shadowing of tone Scandinavian tonal accents or any kind of prosodic or suprasegmental phonology in Norwegian. A study that bears some resemblance is van Ommeren and Kveen (2019): with data from a corpus of sociolinguistic interviews of Norwegian bilectals, they investigate speakers' examples and meta-linguistic descriptions of the supra-segmental phonological features of their different dialects to identify the lay or folk-linguistic concept of *"tonefall,"* (which loosely translates into 'intonation') and which part(s) of supra-segmental phonology the term seems to refer to. They argue that the informants have the ability to exemplify and pinpoint prosodic features and know the geographic distribution of these. Indeed, prosody is often considered the most salient dialect feature when distinguishing between Norwegian dialects (Mæhlum and Røyneland, 2012; van Ommeren and Kveen, 2019; Kerswill, 1994).[2]. For instance, in an experimental perception study, Fintoft (1970) finds that citizens from five Norwegian locations[3] are able to identify the correct tonal accent (accent 1 as 1 and 2 as 2) in each others dialects (and their own) to degrees between 83.9% to 97%, and that the tonal accents in the 'Oslo dialect' (i.e. UEN) were always correctly identified by all groups. This indicates that Norwegians have a good perceptual knowledge of the tonal accents in UEN. Despite its alleged salience Van Ommeren and Kveen (2019) point out that very little interest has been devoted to the study of Norwegian prosody in a variationist or sociolinguistic perspective, at least compared to the number of studies looking at the variation in segmental and morphological features.

To sum up this section, tonal accents and other prosodic features are highly

[2] Although the notion of salience merits further discussion, we will not indulge in that here.
[3] Oslo, Stavanger, Bergen, Ålesund, and Trondheim (Fintoft, 1970).

salient features of Norwegian language variation, which speakers seem to have a meta-linguistic awareness of. However, looking at studies in imitation and accommodation, meta-linguistic awareness does not seem to be an important factor, as opposed to exposure and linguistic distance, as well as the imitators' working memory capacities. That being said, keep in mind that the role play register is not direct immitation in the strict sense: children are not accommodating or immitating annyone or anything present in the role play.

1.2 Role play registers (RPR)

There are several reports that children standardize their language or code-switch to a standard variety during in character role utterances. The phenomenon is reported in the literature from Germany (Katerbow, 2013, on Franconian dialects), Austrian (Kasperger & Kaiser, 2019, p. 333), Switzerland (Buhofer & Burger, 1998), Scania in Sweden (Lindström, 2002) and among Swedish speaking children in Ostrobothnia, Finland (Östman & Mattfolk, 2011, pp. 89–90), and in Cyprus (Sophocleous, 2013). In addition, I have encountered anecdotal reports of similar phenomena from both Japan and rural Argentina. Several of the relevant dialects areas do also have tonal or pitch accent systems, at least Swedish, Japanese, and Franconian dialects in Germany. Thus, the methodology and findings from this study should have direct relevance for other situations. Norwegian children have been known to code-switch to something resembling Urban East Norwegian (Allern, 1995; Åm, 1989; Bugge et al., 2017; Røyneland, 2009; Venås, 1983). We know that the RPR involves all or most domains of language, but there are many aspects of this variety that still need to be explored.The reason why children code-switch to a different dialect is subject to speculation. One recurring hypothesis is the need to signal 'otherhood' (Bjørlykke, 1996; Høigård, 1999; cf. *metacommunication* in e.g. Bateson, 1976 [1955]).

Although Norwegian children's RPR is widely and colloquially recognized

as UEN in Norway, also in popular literature, there are few studies looking into its structural properties (but see Eliassen, 1998; Strand, 2020a). The register seems to be acquired with little to no input of the kind often argued to be necessary for natural first language acquisition to take place. The presence of a speaker of the standard variety in the immediate daily environment is no prerequisite. As there is no codified spoken standard in Norway (Vikør, 1993), no formal instruction is given either, and the onset of the UEN-like RPR precedes literacy training in school (Strand, 2020a). Television and caretakers' reading of books have been suggested as possible input sources. However, in addition to being scarce, non-ideal input sources of language, TV cannot explain the anecdotal and literary reports of UEN as an RPR that pre-dates broadcasting (e.g. Høigård, 1999), and reading of books to children cannot explain the reported use of UEN prosody. Children's main source of input for this register seems to be peers in play groups, although the original source of the linguistic material must be something else (see Strand, submitted, for a longer discussion).

Most descriptions or reports of Norwegian children's role play register do not mention specific domains of the language system but often limit themselves to reporting that children code switch to Urban East Norwegian (or an equivalent term). If prosody is mentioned at all, it is in passing (Kleemann, 2015) without specifying the extent to which this behavior is target-like or which part(s) of the prosodic hierarchy it holds for, or backing this up with linguistic data. As their focus of investigation has lain elsewhere, this is no wonder. An exception is Eliassen (1998, master's thesis) who includes relevant examples in her qualitative study of the Norwegian RPR. (Eliassen, 1998, p. 143) notes that children tend to use "low tone" – the contour of UEN, among other varieties – (see section 1.1) in their role play utterances but that some utterances can start in East Norwegian intonation and end in Northern Norwegian intonation. In the case study of one of the recordings, she illustrates these observations with F0 contours (p. 93–97).

Even though the consistency with which and degree to which children code-switch in role play seems to vary (Strand, 2020a), the children have a certain bilectal competence. The nature of this bilectal competence is of theoretical relevance, as it informs us of children's ability to acquire a second language variety with non-typical language input. Furthermore, it can potentially inform us about how closely related varieties are organized in the mind. UEN is in many regards a spoken equivalent of the majority written standard. Thus, the investigation of children's competence in UEN prior to any literacy training has a practical relevance.

To the author's knowledge, the only study looking at the structural linguistic competence in children's RPR and linking it to language acquisition in this way, is Strand (2020a), which looks at verb morphology and pronouns, based on the same corpus as this study. Strand (2020a) reports variability in the use of UEN (referred to as 'Standard East Norwegian' in Strand, 2020a), but with an increase towards more UEN variants as an effect of age. Furthermore, Strand (2020a) reports that some variables are used more consistently in the UEN variant than others. Salience is argued to be a possible reason for this, either conceptual (semiotics) or statistical (frequency) or a combination of the two.

Adult Norwegian speakers have a high metalinguistic awareness of prosodic features, perhaps unmatched by most other linguistic features. It is therefore no wonder that care-takers and scholars pick up on the prosodic features of the RPR more readily than other features.

If children use the RPR to signal 'otherhood,' their code-switching from their local dialect variety to something different can be seen, in variationist terms, as the children diverging from their normal self, or *auto-divergence*. This is a good fit with the postulates of 'third wave' sociolinguistics (Eckert, 2018), where speakers are viewed as using semiotic resources, such as language, actively in identity-construction and -maintenance, in taking on and embodying different personae. Since salience has proven to have some ex-

planatory power in studies of language convergence and divergence (Kerswill, 1994; Trudgill, 1986), one should expect prosody, including tonal accents, to be one of the features first adopted by children when auto-diverging in role play, although it has hitherto not yet been tested empirically or experimentally.

2 Aim of the Study

From the reports of UEN prosody in RPR of Norwegian children, we can conjecture the following underlying Hypothesis A.

- Hypothesis A: The UEN prosody in children's RPR is 'target-like'.

The suprasegmental features that can broadly be defined as encompassed in the term 'prosody' have (i) acoustic features and (ii) variation governed by the interface with other parts of the language system (morphology, syntax, pragmatics, etc.), which all in theory can be measured by the extent to which they match the UEN target. In this study, Hypothesis A is put to the test at the interface between morphology and prosody, and specifically the variation between compounds and simplex words that distinguish the c-dialects from the d-dialects. This is summed up in the following RQ:

- Research question: To what extent is the morpho-phonological distribution in children's role play register 'target like' Urban East Norwegian?

This can be investigated by comparing the F0 contours of APs with compounds in the children's spontaneous production in peer role play to that of a relevant baseline reference.

For this investigation to be valid, the children's production should be investigated to ascertain that they use (both of the) UEN pitch accent contours in their RPR. In other words, the reports of children's use of UEN prosody should be put to the test by inspecting their produced F0 contours in role play. Based

on the literature reviewed above, we would expect them to have a certain command of the phonetic/acoustic features of the UEN dialect. Given the degree to which Norwegian speakers have (implicit) perceptive knowledge of the UEN variety (Fintoft, 1970), and the fact that they seem to have metalinguistic awareness of some of its relevant features (van Ommeren & Kveen, 2019), it would be remarkable if the RPR prosody, which has been reported to sound like UEN, turned out to be nothing like it upon closer inspection.

Regarding the morpho-phonological distribution, it is not as easy to try to predict the degree to which children's production will be target like. On the one hand, children do have an early command of the tonal accent in their native dialect (although dialect differences may play a role here). On the other hand, it is not clear how much exposure the children have to UEN, especially from native speakers, and there is a question of whether the children will have had the necessary input available to pick up the differential marking in UEN. An additional question is whether UEN is the 'target' for the RPR (in its entirety). The RPR, as a metacommunicative code used to auto-diverge in role play, may be a collection of features sufficiently emblematic and salient to signal 'otherhood' which includes the phonetic/acoustic features, but not the morpho-phonological distribution. This opens up for the possibility that children 'know' the system and have the ability to process and produce the tonal accents correctly, and do not produce it in role play because it is not part of that code. As this study only looks at production in RPR, it cannot inform us about this question, but section 6 points to some possible roads ahead.

Since RPR is inherently creative and variable, quantifying the degree to which the average of APs in the corpus compare with the 'target' UEN tonal accents would not be very informative, and it is not straightforward how this could be measured. Children's competence in play is dependent on the specific role, play setting, and utterance type. Even within groups of utterances that can be coded as 'in-character role play', an overall average of the APs would not inform us of their competence in RPR or UEN. In this study, the question is not

whether the children perform target like UEN in all APs (or the extent to which they do so), but rather if those APs that are perceived as UEN upon closer inspection sound (or look, according to F0 contours) target like, i.e. certifying that the reports hold up. After that is established, the compound APs can be investigated. Only the compound APs that are perceptively uttered in UEN prosody are investigated, since there is no point in comparing compound APs that are uttered in the native North Norwegian dialect prosody, albeit in a role play setting: The APs uttered in children's native (c-)dialect are not expected to show differential compound marking, and it would not make any sense to investigate their correlation with the UEN baseline reference APs. In summary, it would not inform us about the research question. For practical reasons of analysis that will be elaborated in the next section, only compounds starting with *brann* ('fire') will be subject to analysis.

3 Participants and method

In this study, excerpts from a corpus of spontaneous role play among preschool North Norwegian children are investigated and compared to elicited speech from adult UEN speakers. In this section, the corpus data and the transcription, coding, and analysis procedure are presented.

3.1 Corpus data

The data are obtained from a corpus of recordings of free play and interaction between 7 typically developing children. The recordings are conducted over a year in a kindergarten in Tromsø, North Norway. The data on compound accents are excerpted from the whole corpus (ages 2;7 – 4;3, see Table 6 in Appendix A), whereas the data on APs with simplex words are gathered from a smaller subset of the corpus where the children were around 42 months old (see Table 2), in order to limit the amount of data.

The data were transcribed by the author and/or a research assistant in

Subject:	Celice	Lars-Lars	Inga	Morten	Hedda	Kimbo	Klara
File No:	16	16	18	9	16	21	25
Months:	42	42	43	42	44	43	42
Utterances:	199	252	316	364	381	112	208
Role utterances:	139	168	73	200	255	34	66

Table 2: *Files and ages for simplex data.*

ELAN (Brugman & Russel, 2004; Sloetjes & Wittenburg, 2008) using a semi-phonetic transcription system developed for a group of corpora in the LIA project (Hagen et al., 2018; Johannessen et al., 2018). The transcriptions were then coded for level of pretence (i.e. 'role utterance', 'planning utterance', 'everyday utterance', etc.). For an utterance to be labeled as role utterance one of the following criteria had to apply (see also Strand, 2020a):

1. The utterance is clearly referring to something not happening in the 'baseline' reality, (e.g. "I am peeing" or "the …is on fire!"), and/or

2. The utterance is uttered with a voice quality or intonation that was clearly manipulated in a creative way so as to indicate role utterances, and/or

3. The utterance is uttered while holding or animating a doll, and/or

4. The utterance is uttered as an answer to or in a conversation together with an utterance with the characteristics in 1–3.

In unclear cases, the utterances were coded as uncertain. The coding procedure involves a certain amount of interpretation on the part of the coder which is a possible source of error. To amend this, the anonymized transcription files are available in Strand (2020b) – the replication data for Strand (2020a) – and anonymized excerpted sound files, with transcriptions, are available in Strand (2021), the replication data for the present paper.

As there were a toy fire tank engine, toy firefighters and a toy fire station present in most of the recording sessions, compounds with 'fire-' (*brann-*) are

relatively frequent in the corpus. Compounds with 'fire-' (henceforth 'fire-compounds') are given accent 1 in d-dialects. Compounds with water (*vann-*, henceforth 'water- compounds') are given accent 2 in d-dialects, and 'fire' and 'water' have identical rhymes, and have accent 1 in both dialects, as do all monosyllabic words. Thus, the fire- compounds are ideal testing grounds for the present RQ, as they can easily be compared with both fire- and water-compounds as uttered by native speakers of UEN, due to their shared segmental properties.[4]

The language in role play is highly creative and varied, as it is used both indexically, to mark the identity, stance, and sentiment of role characters (Andersen, 2014 [1990]; Auwärter, 1986; Sachs & Devin, 1976), with illocutionary force, to call items, characters, actions, and events into existence when setting the narrative (Kaper, 1980; Lodge, 1979; Strömqvist, 1984), and metacommunicatively, in conveying for which reality ('baseline' or 'pretense') the truth value of the utterance is meant to hold (Bateson, 1976 [1955]). This creativity in language influences the prosody, for instance in agitated shouting in panic (e.g. from a doll house ablaze) and in sing-songy utterances ("ludic speech acts", see Strömqvist, 1981). Utterances with such characteristics do not inform the research question and are left out of the analysis.

[4]One anonymous reviewer suggested investigating compounds starting with *poli'ti* 'police' instead. The background for this suggestion is that compounds with roots like *poli'ti*, which have anacrusis/-es and final stress, *always* get accent 1 in compounds in UEN, as opposed to monosyllabic and trochaic words, where it varies, and that this may be more transparent to the children. However, apart from the fact that there are not by far as many compounds starting with *poli'ti* as there are compounds starting with *brann* in the corpus, the fire- compounds are an area in the grammar where the Tromsø dialect and UEN differ, and thus these structures represent a good way of exploring the (limits of) attainment of the UEN variety by children from Tromsø, even though it may pose a more difficult challenge than compounds with other words.

3.2 Reference baseline data

As a reference baseline for the comparison of F0 contours of the children's role play register to UEN, utterances with fire-and water-compounds were elicited from 5 participants (2 women and 3 men) from in or around the Oslo area who all agreed that their native dialect variety could be characterized as UEN. These speakers all had some or extensive training in linguistics. The recordings were made using the participants own cell phones and coded and analyzed in the same manner as the children's utterances.

The accent phrases were extracted from sentences of the type "No, it was a FIREMAN, that I saw in the firetruck, I said!"/"No, it was a WATERMAN, that I saw in the watertruck, I said!" (see table 7 in Appendix B) alternating between contrastive (focal) and no focus (non-focal). Six pairs of different inflections of three fire-and water-compound words were excerpted, in order to cover the properties of as many APs from the corpus as possible, regarding number of syllables, stress patterns, and distribution of long and short vowels. The different word forms are given in Table 3. This sums up to a total of 24 categories (6 word forms * 2 (fire-and water-) * 2 (focal, non-focal))

compound	meaning	phonological properties
brann-/vann-mann	'fireman/'water-man, Aquarius'	ˈV ˈV
brann-/vann-mannen	'the fireman'/'the water-man, Aquarius'	ˈV ˈVV
brann-/vann-mennene	'the firemen'/'the water-men'	ˈV ˈVVV
brann-/vann-bil	'firetruck'/'water-truck'	ˈV ˈV:
brann-/vann-bilen	'the firetruck'/'the water-truck'	ˈV ˈV:V
brann-/vann-stasjonen	'the fire-station'/'the water-station'	ˈV V′V:V

Table 3: *Different word forms in the reference baseline data. 'V' and 'V:' indicate syllables with short and long vowels respectively, ˈ' indicate original stress possition in the roots.*

In utterance final vocative expressions, the noun (phrase) tends to lose its primary stress. As a result, it gets embedded in an AP together with the preceding primary stress, becoming a part of a new, larger accent contour instead

of getting its own (compare *du er* (2)[*dårlig, brannmann*]AP ('you're bad, fireman') vs. *du er en* (2)[*dårlig*]AP (1)[*brannmann*]AP ('you're a bad fireman') see Fretheim, 1988, p. 64). This means that the utterance final vocative fire-compounds will not inform our research question and are left out of the analysis.

3.3 Coding and analysis

Both the excerpts from the corpus and the reference baseline data were analyzed in Praat (Boersma & Weenink, 2020). Based on a trial and error approach, the voicing threshold was set somewhat lower than the standard setup (0.35 rather than 0.45), as it gave more reliable data and reduced the need for manual corrections (more on this below). The sampling rate was set to 0.01 second (i.e. 100 measure points per second). The F0 contours were subject to minor manual corrections (correcting errors made by the algorithm, where it had chosen an incorrect harmonic, or devoicing where unvoiced segments were analyzed as voiced, e.g. due to the reverb of the room or mechanical noise with periodic features). The syllable boundaries of the accent phrases were coded based on visual and aural inspection in Praat, and based on the theoretical framework in Kristoffersen (2000) (onset maximization and geminates divided across syllable boundaries).[5] The accent phrases were analyzed for prosodic features (e.g. terminal contours, decline, focality).

For the fire- compound APs from the corpus to qualify for analysis, they had to meet the following criteria: (i) they had to be in UEN i.e. not their native dialect or agitated screaming, coded by the researcher),[6] (ii) their F0 data had to

[5] This is a possible source of error, as human alignment cannot perform with the same consistency, or at least unbiased automaticity, as for instance a forced alignment algorithm, especially in the cases where syllable boundaries are liquids or hiati. For geminates, a script were made in Praat to pinpoint the exact middle of a selection. This is in essence the same method undertaken by Hognestad (2012).

[6] In fact, it was not uncommon for the children to use their native dialect intonation instead of UEN in role utterances, or a combination of the two, starting in one and ending in the other. Others still were hard to categorize as one or the other at all, in particular in cases with agitated

be salvageable (i.e. modal voice and not too much background noise or other children speaking at the same time), (iii) they could not be in a compressed prosodic decline or (iv) in an utterance final vocative (see above), and (v) they had to have the same number of syllables as one of the six baseline reference APs. Terminal contours (high or low) were not taken into account, assuming discrepancies in relation to the baseline data would be equally penalized in comparison to both fire- and water- compound contours and have no effect on the result. Criteria (ii) and (iii) also hold for the baseline reference data.

To make the quantitative analysis of F0 values of tonal accent contours valid, the contours have to be normalized so that the onset, offset, and syllable boundaries of the individual AP are aligned to amend for differences in speech rate and segmental features in the AP not relevant for the investigation. In this study, a set of tools from a class of statistical analysis known as *functional data analysis* (FDA, J. Ramsay and Silverman, 2005) have been used to this end. As some readers may be unfamiliar with this class of statistical analyses, it warrants a short introduction here. Values (e.g. F0) distributed along some dimension (e.g. time) can be analyzed as (wave or bi- or poly-nomial) functions. These functions in turn, can be subjected to statistical analyses that better take into account the functional aspects of the signal. By analyzing F0 contours, such as tonal accents, in terms of functions instead of (post)theoretic constructs such as the timing of a peak or value in relation to some independent time domain (start/end of foot or syllable), differences and similarities between the accent contours can be analyzed in a pre-theoretic manner. For the current FDA analysis, basis-splines (B-splines) were used. B-splines can be characterized as an array of polynomials, each spanning overlapping points (knots), where the sum of the polynomials approximates the signal. The degree of fit to the signal depends on the degree (quadratic, cubic, etc.) and density of the polynomial

screaming. This intrasentential prosodic code-switching and, at times, ambiguity, makes it difficult to establish a meaningful estimate of the ratio of UEN prosody to Tromsø dialect prosody in the data.

bases, as well as a linear differential operator controlling the flexibility of the curves. In Figure 3, the basis (red) and knots (dots) as well as the smoothed signal (black) of an tonal accent contour is given.

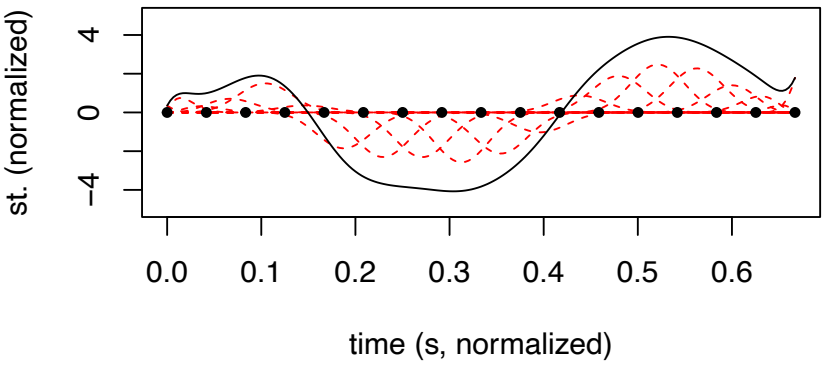

Figure 3: *Example of F0 contour (black line) with b-spline basis (red lines), and b-spline knots (black dots), given in semitones (st.)*

Gubian and colleagues (Gubian, n.d.; Gubian et al., 2015) have pioneered the use of functional data analysis on acoustic measures in phonetic research. Rather than explorative statistical procedures applied in the cited papers (e.g. Principal Components analysis), a functional correlation coefficient (CC) equivalent to Pearson's product-moment correlation coefficient (Li & Chow, 2005) is used to compare the children's accent phrases to those in the baseline reference data.[7] The CC ranges from -1.0 to 1.0, 1.0 being a perfect

[7] The equation for the correlation coefficient from Li and Chow (2005) is as follows:

$$\rho(X,Y) = \frac{\langle\langle X-E(X), Y-E(Y)\rangle\rangle}{\|X-E(X)\|\|Y-E(Y)\|}$$

where

correlation. There is a certain tradition for using correlation coefficients in research on prosody, e.g. in reading prosody research (Benjamin & Schwanenflugel, 2010; Miller & Schwanenflugel, 2008; Schwanenflugel et al., 2004). The rationale for using correlation coefficients in the present study is that if the child uses a target-like tonal accent, the accent's CC with the target baseline contour (fire- compound, accent 1) should be higher than the CC with the non-target baseline contour (water- compound, accent 2), and *vice versa* if the child overgeneralize the contour tonal accent (≈ accent 2).

In this study, smoothing and timing algorithms from functional data analysis were used, specifically from the package `fda` (J. Ramsay et al., 2009; Ramsey et al., 2020) in R (R Core Team, 2019), building on the procedure in Gubian et al. (2015). The Praat and R scripts are available in the replication data repository (Strand, 2021).

Although FDA in principle is capable of handling data that are unevenly sampled, the placement of knots of the B-spline basis (start and end of each spline, see Figure 3) is fragile to missing data points. In order to retain comparability across APs with and without unvoiced segments, the B-spline knots were placed evenly across syllables rather than outside of unvoiced sections. To amend for the missing data points at the knots at unvoiced segments, the F0 signal was interpolated (linear) across unvoiced segments, done automatically in the R script.

$\langle\langle X, Y\rangle\rangle = \int_a^b X(t)Y(t)dt$

is the euclidean inner product and

$\|X\| = \sqrt{\langle\langle X, X\rangle\rangle} = \sqrt{\int_a^b x^2(t)dt}$

is the euclidean norm (Li and Chow, 2005, p. 85, cf. Dubin and Müller, 2005, p. 874; Pini et al., 2019, p. 6; J. O. Ramsay and Dalzell, 1991, p. 546; Sangalli et al., 2009, p. 40). For the equation, a modified version of the function `inprod.bspline` from the `fda` package in R was used. It uses numerical integration by the trapezoidal rule with Richardson extrapolation as the approximation method, see the package documentation (Ramsey et al., 2020) and the R scripts in the replication data repository (Strand, 2021).

No statistical inferences are made in this paper, and only descriptive statistics are reported for the following reasons: It is difficult to establish a confidence interval (CI), i.e. the threshold beyond which the null hypothesis (e.g. 'the children's compound F0 contours are (not) target like UEN') would be considered falsified. It is not sufficient to test the statistical correlation (or lack thereof) of two sets of data points, each representing an F0 contour. A scientifically meaningful comparison can only be made in terms of the connection to linguistic structure, i.e. accent 1 and 2, and speakers' recognition of them. This is not a sraightforward connection to make. In addition, the paper is primarily exploratory, which is known to inflate the possibility of false positives (type I errors) in null hypothesis significance testing (Roettger, 2021).

4 Results

In this section we illustrate the use of UEN-like tonal accents in the children's RPR, as has frequently been reported in the literature (see section 1.2), before we review the baseline reference data, and give the analysis of the compound data from the corpus. Keep in mind that the inspection of the simplex (non-compound) words and investigation of the compounds regard different linguistic levels. For the simplex words, we inspect whether children's tonal accents in their RPR *phonetically* resemble UEN tonal accents. Here, we place confidence in the literature, and examples of F0 contours of APs from the child informants are deemed sufficient to illustrate the fact that children have some command over a register with tonal accent contours that differ from their native dialect and share properties with UEN. This prepares the ground for the subsequent analysis of the *morpho-phonological* properties of the fire-compounds. Being a specific subset of the utterances makes the compounds eo ipso a more controlled setting amenable to quantitative analysis and discus-

sion.[8]

4.1 Simplex words

The values of the contours were normalized (i.e. the mean pitch in semitones has been subtracted to center the contours around 0). The contours were smoothed and their timing was normalized according to the procedure outlined in section 3.3, so that the total duration and placement of syllables have been synchronized within groups (based on subject, accent, and number of syllables). In Figure 4, examples of F0 contours from the seven children are given. The figure presents all UEN contours for each speaker and accent with a certain number of syllables, so it is not exhaustive. For some of the children, examples of APs in their native Tromsø dialect are given as well for comparison. The total durations have been synchronized across groups for exposition.

The acoustic manifestation of the tonal accent contours varies between Scandinavian varieties: there is a difference in whether the second/last syllable is a peak (for instance UEN, see 2) or a valley (for instance the Tromsø dialect), and whether accent 2 has two peaks (for instance UEN) or one peak (for instance the Tromsø dialect). Even to linguistically untrained Norwegian ears, most of the role utterances will be recognized as something resembling UEN, and not as Tromsø dialect. The contours presented in 4

[8] An anonymous reviewer pointed out that if the question was whether children's RPR was morpho-phonological target-like UEN, then it would be more obvious to start by investigating the distribution of tonal accents in simplex words rather than in compounds. This is true, and I welcome any such attempts. The reason I have not included such an endeavor in this paper is because it would be methodologically risky on spontaneous data: tonal accent in (simplex) word interact with many other factors, especially morphological, but probably also segmental, that may affect how felicitous children are in acquiring the tonal accent of any word (e.g. vowel length and presence of unvoiced stops). Finding and choosing words that would be comparable across both accents in order to test children's attainment of both is not straight-forward (not to mention the job of collecting adult UEN reference baseline data). The range of possible choices would have introduced increased researcher degrees of freedom, making the result less reliable (cf. Roettger, 2019).

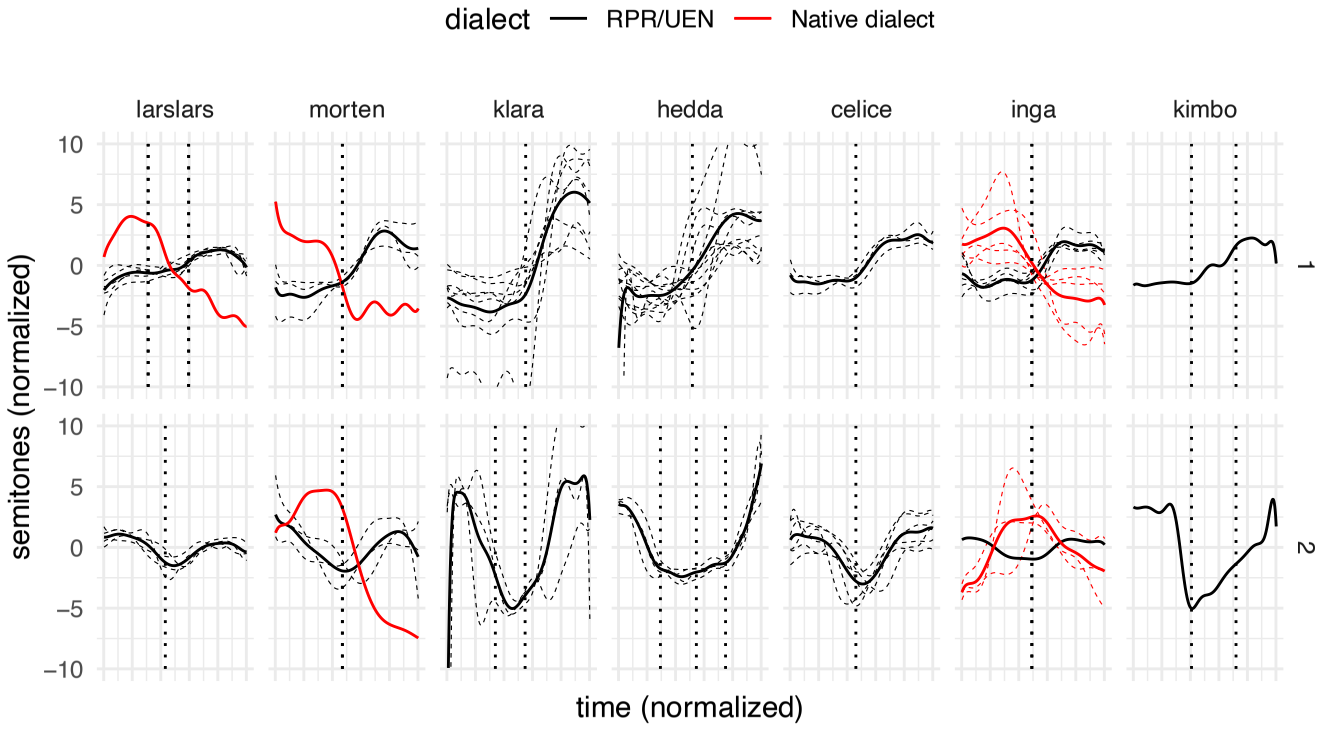

Figure 4: *Examples of contours in RPR (black lines), with syllable boundaries (dotted vertical lines), with syllable boundaries (dotted vertical lines), accent 1 in top row, and accent 2 in bottom row. The mean F0 for each AP group is given (solid lines) alongside individual contours (dashed lines). As an illustration of the clear difference between the UEN and Tromsø dialect tonal accents, and thus the degree of code switch between the two, contours from their native dialect out-of-play utterances have also been included for some of the children (red lines).*

show features of UEN tonal accent prosody, with a single peak in the last syllable in accent 1 (first row), and two peaks, in the first and last syllables, in accent 2 (second row).

The examples of F0 contours given in Figure 4 do not serve justice to the variation and creativity in the children's production. Although the main impression is that the children use UEN prosodic features, there are examples of switching in prosodic systems within role play. The switching includes transitions within utterances (as reported in Eliassen, 1998), and code-switching that can be interpreted as communicative. An example of the latter is a passage from File 16, where the narrative frame of the role play changes from dolls and a doll's house, to imagined events within the kindergarten itself, where the children 'act' themselves, and correspondingly change from UEN prosody to that of their native Tromsø dialect. (The main antagonist, a lurking thief, remains the same throughout both frames.)

	CC FIRE (brann-)	CC WATER (vann-)	CC FIRE/WATER	difference
-bil (focal)	0.91	0.85	0.66	0.24
-bil	0.82	0.87	0.29	0.54
-bilen (focal)	0.87	0.74	0.54	0.33
-bilen	0.83	0.82	0.35	0.48
-mann (focal)	0.95	0.82	0.69	0.25
-mann	0.77	0.67	0.31	0.46
-mannen (focal)	0.92	0.86	0.65	0.27
-mannen	0.96	0.85	0.54	0.41
-mennene (focal)	0.89	0.87	0.62	0.28
-mennene	0.81	0.87	0.32	0.49
-stasjonen (focal)	0.86	0.83	0.59	0.27

Table 4: *From the reference baseline data: Internal CC means for FIRE (col. 1) and WATER (col. 2) compounds, CC means of FIRE and corresponding WATER compounds (col. 3), and the difference between col. 1 - col. 3 (col. 4)*

4.2 Compounds – reference baseline data

The APs that satisfied the criteria in section 3.3 were pitch normalized (centered around 0). The contours were smoothed and their timing were normalized so that the total duration and the syllables in every contour within the same group (e.g. 'fire-/waterman (focal)') were synchronized.

The mean of the CC across all possible pairs within each category in the baseline reference data was calculated as a test for internal consistency (i.e. to which extent the F0 contours correlate with each other). Averaging the internal consistency of all categories, gave a CC of 0.85, ranging from 0.67 for *vannmann* (non-focal) to 0.96 *brannmannen* (non-focal) (see column 1 and 2 in Table 4).

In the following section, the fire- compounds from the corpus data will be compared to the average baseline reference fire- and water- compounds, and the respective CCs will be calculated. To give an idea of what a UEN target situation may look like, the mean internal CC of each category of fire- compound has been compared to the mean CC between each fire- compound contour and every corresponding water- compound contour (e.g. the CC for each contour of 'firetruck (focal)' and every 'watertruck (focal)' has been calculated and averaged, column 3 in Table 4). These CCs are plotted alongside the internal CC of every fire- compound in Figure 5. Since they share the peak in the last syllable (compare the two contours in Figure 5), it is expected that the F0 contour of the fire- compounds is somewhat correlated with the water- compound contours (between 0.29 and 0.69, x's in Figure 5, column 3 in Table 4). Bearing in mind that the children's production is uncontrolled as opposed to the baseline reference data, one should still expect the contours to be more correlated with the corresponding baseline fire- compounds than the corresponding baseline water- compounds if the production is target like. In summary, the correlation coefficient of children's fire- compounds and the baseline fire- compound (henceforth 'fire- CC') should be higher than the correlation coefficient of children's fire- compounds and the baseline water- compounds (henceforth

'water- CC'). It follows from this that when the water- CC is subtracted from the fire- compound, the difference should be positive if the production is target like (as in in Table 4, column 4, for the baseline reference data, where the differences range from 0.49 to 0.24). If the children have generalized the c-dialect pattern to the RPR, the opposite should hold, and the difference should be negative.

The actual F0 of the baseline reference contours, along with mean F0 contours fore each category, are given in Figure 6.

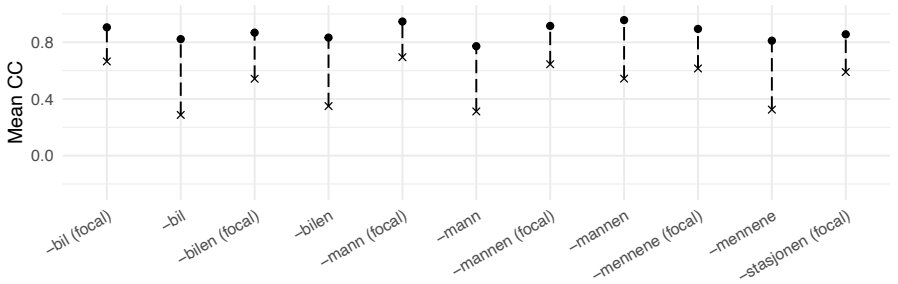

Figure 5: *Difference in correlation coefficients for reference contours. Internal concistency CC for* fire- *compounds (dot), and averaged CC between* fire- *compounds for every* water- *compounds of the same category (x), and difference between the two (dashed line).*

4.3 Compounds – corpus data

A total of 90 fire- compound APs satisfied the criteria outlined in section 3.3. The 90 F0 contours were compared to the corresponding fire- and water-compounds (means) in the baseline reference data, based on focal/non-focal and the number of syllables, and distribution of long and short vowels (*brannst*[i:]*gen*, 'ladder', and *brannsl*[a]*ngen*, 'hose', were compared to *brannb*[i:]*len* and *brannm*[a]*nnen* respectively). An exception was APs with an additional unstressed word (for instance *brannbil nå*, 'firetruck now'), where the length of the vowel of the additional word was not taken into

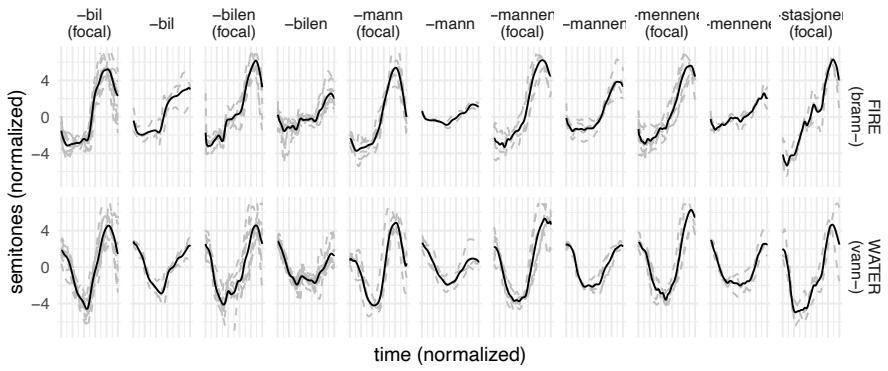

Figure 6: *F0 contours of reference values, with mean (black solid) and individual (grey dashed) contours.*

account and counted as short regardless.

The value of the F0 contours were normalized (centered around 0). The contours were smoothed and their timing was normalized and synchronized using the same parameters as the corresponding fire- and water- baseline reference contours to make the calculation of the CC possible.

The functional CCs were calculated and are given in Figure 7, and tabulated for each child in Table 5 (median, interquartile range, and difference between medians). The F0 contours are given in Figure 7, along with the baseline reference contours (in bold for ease of exposition) and pointwise median and interquartile range for the corpus data in cases with four or more contours. The contours with higher water- CC than fire- CC have been plotted alongside the baseline reference water- compound contours, and vice versa.

As shown in Figure 7 and Table 5, and visualized in Figure 8, the majority of the F0 contours from the corpus data have a higher water- CC than fire- CC and can therefore not be characterized as target like UEN. Likewise, the production of all the children was, on median, not target like, except for Klara, whose production can be characterized as chance level, and Inga, from whom only a single AP (which happened to be not target like) satisfied the above cri-

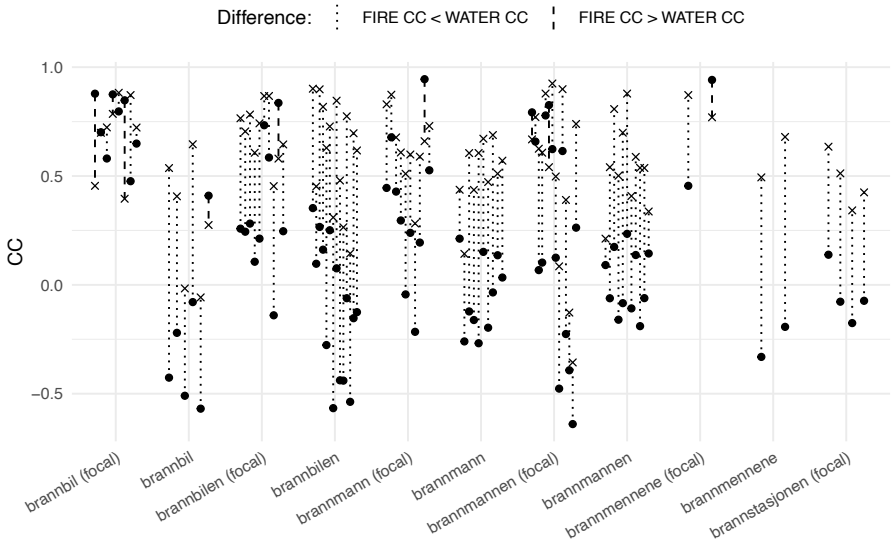

Figure 7: *Correlation coefficients (CC) between individual F0 contours from the corpus and corresponding reference baseline contours. The cases where the* fire- *CC (dot) is higher than the* water- *CC (x) are indicated by a dashed lines (more target like). The opposite cases are indicated by dotted lines (less target like).*

teria .

5 Discussion

The phonetic contours of the auto-divergent register had clear features of UEN, phonetically. The extent to which they appear target like varies, both sporadically and creatively, and is a subject for further investigations. What this investigation has confirmed with acoustic data is that these children use phonetic/acoustic features from UEN prosody as a metacommunicative code to signal in-character role utterances. The reports mentioned in section 1.2 above have thus been demonstrated to hold.

This was the foundation for the research question, which asked, for the

	subj	median.vann	iqr.vann	median.brann	iqr.brann	diff
1	celice	0.632	0.305	0.089	0.381	-0.543
2	hedda	0.775	0.233	0.405	0.472	-0.371
3	inga	0.677	0.000	0.429	0.000	-0.249
4	kimbo	0.541	0.093	0.085	0.316	-0.456
5	klara	0.560	0.245	0.522	0.594	-0.039
6	larslars	0.541	0.299	0.024	0.662	-0.517
7	morten	0.710	0.209	0.178	0.568	-0.531

Table 5: *Correlation coefficient medians and interquartile range for fire- (target) and water- (non-target) compounds, with differences (positive = more target like).*

domain of tonal accents in compounds:

- RQ: To which extent is the morpho-phonological distribution in children's role play register 'target like' Urban East Norwegian?

Although the results are somewhat mixed, there is no indication that any of the children had command of the UEN (d-dialect) tonal accent differences in compounds. On the contrary, five of the six children who produced any data to speak of, seemed to overgeneralize from their native c-dialect's compound accent (accent 2), whereas the last (Klara) performed at something that could at best be characterized as chance level. Note that the F0 contour of accent 2 in UEN and the Tromsø dialect are almost opposites (see Figure 1 above). It is very obvious that they have code-switched to a different dialect, phonetically, and that they use the 'correct' F0 contour but on the 'wrong' words.

Although more controlled investigations are warranted, we can put forward two possible explanations for the data: (i) North Norwegian children's role play register has a compound accent (like the Tromsø dialect), and/or (ii) differential tonal accent marking on compounds needs more positive input to be acquired, than that available to North Norwegian children.

To be clear, the first explanation does not exclude the possibility that

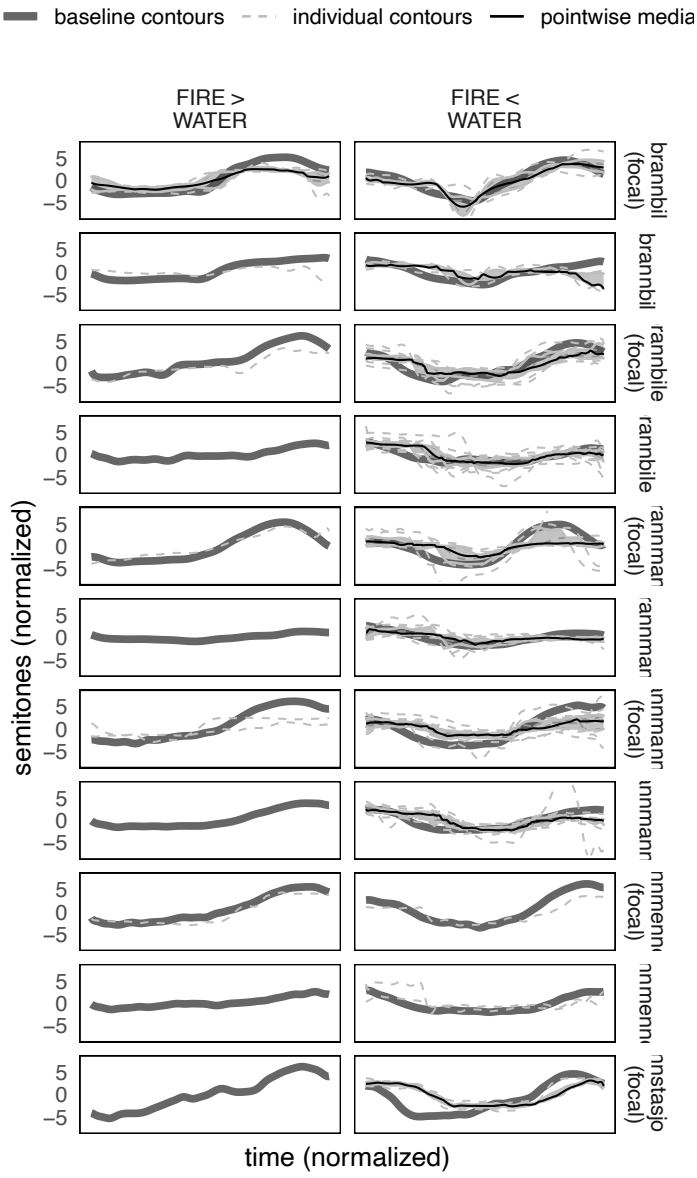

Figure 8: *Individual F0 contours of* fire- *compounds from the corpus (light grey) compared to mean baseline contours (dark grey). Contours with higher* fire-/water- *CC are compared to baseline* fire-/water- *compounds respectively (compare Figure 7). Pointwise median (black solid) and pointwise interquartile range (IQR, shaded area) are given where n contours* > 3.

children do have the differential tonal accent marking in compounds as a part of their linguistic competence, but that RPR, as a register, differs from UEN in this regard. Put differently, the target of children's RPR may not be UEN for this part of grammar, or rather: the grammar of their RPR is *phonetically* but not *morpho-phonologically* like UEN. Given the auto-diverging aspect of RPR, this is not a very unreasonable assumption, as one could make the case that the phonetic features (the F0 contours) are more salient than the morpho-phonological distribution of those contours::[9] First, the acoustic features are manifested in almost every prosodic foot, whereas the differences in morpho-phonological distribution are manifested only in a subset (e.g. in compound). Second, the acoustic features could be seen in light of 'the periodicity bias:' the bias that infants' attention is drawn more towards voiced than unvoiced sounds (Cutler & Mehler, 1993), which has often been used to explain the correlation between prosodic awareness and reading measures (see for instance Wood & Terrell, 1998). For the metacommunicative code to be useful to the interlocutors, it should be easily picked up on, in which case more salient features with a wide distribution would rank over less salient ones. And third, the acoustic difference between the tonal accents of the Tromsø dialect and UEN may also make them easier to imitate than if they were more closely related, as demonstrated in studies of shadowing and imitation (Babel, 2012; Walker & Campbell-Kibler, 2015). These factors may also be arguments for the second, stronger explanation: less salient features, like accent marking in compounds, probably need more total positive input to be acquired, and the children's input of UEN is, for most, atypical and sparse compared to that of their native variety. It may well be the case that the d-dialects' differential accent marking of compounds remains unavailable to most speakers of a dialects with a compound accent throughout adulthood. It could also be a developmental phenomenon: Petrone et al., 2021 found a

[9] I would argue that most Norwegian speakers, including speakers of North Norwegian varieties, are unaware of the difference between c- and d-dialects.

correlation between working memory and phonological prosodic differences in their study, and cognitive development could also play a role, alongside input frequency.

(i) and (ii) may also be two sides of the same coin: most of the input in RPR happens in role play. If RPR is perceived or categorized *as* UEN by the children (consciously or not, i.e. RPR *is*, in the children's ears, the variety they hear in television etc., and not something different), the input in RPR/UEN during role-play will be piled together with the input in *real* UEN from other sources, thus deteriorating the quality of the total positive input in UEN by diminishing the relative amount of compounds with differential accent marking.

6 Conclusions and further research

This exploratory multiple case study has demonstrated that children from North Norway between the ages 3–4 have some command of the tonal accents of the Urban East Norwegian dialect (UEN), which they use in role utterances in role play. This command, however, seems to be limited to the phonetic/acoustic properties of the tonal accent, and not so much the morpho-phonological properties, at least as far as tonal accents in compounds are concerned. This is evident from the non-target like overgeneralisation of the compound accent ($\approx$ accent 2) from the prosodic system of their own dialect (c-dialect), to the fire- compounds (tonal accent 1 in UEN, a d-dialect, where the tone accent in compounds vary) in their role utterances, as these were higher correlated with the UEN adult reference contours of tonal accent 2 (water- compounds) than tonal accent 1.

Two possible explanations for this were put forward and discussed: first, that the differential tone marking system of UEN, unlike the phonetic/acoustic properties of the variety's prosody, is not a part of the North Norwegian role play register (RPR); second, that the differential tone marking system is unavailable to most Norwegian speakers of a c-dialect due to the low salience of

the features, which is connected to the restricted distribution and thereby low frequency in the input.

As this study is explorative, its conclusions should be tested and attempted replicated in a more controlled (experimental) study. This could be done, for instance, by combining the methodology from Andersen's (2014 [1990]) use of hand puppets to elicit sociolinguistic registers in spontaneous role play utterances, with the more controlled environment of the shy puppet paradigm (e.g. Guasti et al., 1995): We can coin this 'the anthropophobic puppet' paradigm, where children themselves have to use a hand puppet to interrogate the experimenter's hand puppet who is afraid of, and therefore do not want to talk to humans. This methodology has been piloted by the present author, and it has yielded mixed but encouraging results for eliciting role play register and should be tested further.

The results of the present paper also open up for several other questions. First, there is the question of the native(like-)ness of the children's use of UEN, which could be tested by playing excerpts of children's role utterances to native raters. Of major importance here, is the selection of excerpts in terms of controlling for (lexical, morphological, phonological, etc.) features that differ between the varieties, and making sure the selection is representative, which solicits a longer discussion and consideration.

Second is the question of development. The fire- compounds in this study were elicited from 3- to 4- years of age, approximately. Will they have acquired the differential accent marking later, and what kinds of and/or amounts of input are required for them to do so?

Third, only the children's production has been gauged. To what degree will Northern Norwegian children, who do not make tonal accent distinctions in compounds, be able to exploit UEN tonal accent to distinguish minimal pairs such as 2ballrom ('ball pit') and 1ballrom ('ball room')?

Another tenet of this paper is the use of functional data analysis in empirical questions of Scandinavian tonal accents, which should be explored further,

and with the more exploratory statistical procedures which are made possible within that framework of statistical analyses. This could yield new insights into the phonetics and phonology of the Scandinavian tonal accents.

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A Age of children at each recording session

Ssn.no.	Ref.	Lars-Lars	Celice	Morten	Inga	Hedda	Kimbo	Klara
1	–	2;11.16	2;11.27		2;11.20	3;1.20	2;10.23	2;7.1
2	0.7	2;11.23	3;0.3		2;11.27	3;1.27	2;10.30	2;7.8
3	0.14	2;11.30	3;0.10	3;4.7	3;0.3	3;2.3		
4	0.28	3;0.13	3;0.24	3;4.21	3;0.17		2;11.20	2;7.29
5	1.10	3;0.26	3;1.6	3;5.6	3;1.2	3;3.2	3;0.5	2;8.11
6	1.20		3;1.16	3;5.16	3;1.12	3;3.12	3;0.15	2;8.21
7	2.6	3;1.22	3;2.2	3;5.30	3;1.26	3;3.26		2;9.7
8	2.13	3;1.29	3;2.9	3;6.6	3;2.2	3;4.2	3;1.5	2;9.14
9	2.25	3;2.10	3;2.21	3;6.18	3;2.14	3;4.14		2;9.26
11	3.17	3;3.3	3;3.13	3;7.11	3;3.7	3;5.7		2;10.18
12	3.29	3;3.15	3;3.25	3;7.23	3;3.19	3;5.19		2;11.0
14	4.27	3;4.12	3;4.23		3;4.16	3;6.16	3;3.19	2;11.28
15	5.3	3;4.19		3;8.27		3;6.23		3;0.4
16	6.22	3;6.7	3;6.18	3;10.15		3;8.11		3;1.23
18	7.19		3;7.15		3;7.8		3;6.11	3;2.20
21	9.2	3;8.18	3;8.28		3;8.22	3;10.22	3;7.25	3;4.3
25	11.9	3;10.1	3;11.5			4;0.29	3;9.10	3;6.10
27	1;0.6	3;11.22	4;0.2	4;3.30		4;1.26		3;7.7

Table 6: *Recordings/Session number and ages (years;months.days). Missing ages indicate absence from the recordings. The reference values indicate the time since the first recording.*

B Baseline reference data sentences

Nei, det var en	*BRANNMANN,* *VANNMANN* *BRANNBIL* *VANNBIL*	*det jeg så i*	*brannbilen,* *vannbilen* *brannstasjonen* *vannstasjonen*	*sa jeg!*
'no it was a	…	what I saw in	…,	I said'
Nei, det var i en	*BRANNBIL* *VANNBIL*	*jeg så en*	*brannmann, sa jeg!* *vannmann*	
'no it was in a	…	I saw a	…	I said!'
Nei,	*en brannbil* *en vannbil* *BRANNMENNENE* *VANNMENNENE* *brannmennene* *vannmennene* *BRANNMANNEN* *VANNMANNEN* *brannmannen* *vannmannen*	*så jeg i*	*BRANNSTASJONEN,* *VANNSTASJONEN* *brannbilen* *vannbilen* *BRANNBILEN* *VANNBILEN* *brannbilen* *vannbilen* *BRANNBILEN* *VANNBILEN*	*sa jeg!*
'no	…	I saw in	…,	I said!'

Table 7: *Sentences for baseline reference data recording.*

A song of voice and fire: Performance in North Norwegian pre-school children's role play

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Abstract

In this article, we explore language use among preschool children during their role play with peers in a kindergarten in Northern Norway. Drawing on a corpus of spontaneous play among North Norwegian pre-schoolers (N=7), we triangulate quantitative and qualitative methods to investigate how the children make use of paralinguistic features to organize their social pretend play. Through a quantitative analysis we demonstrate that children use a slightly higher pitch in their role utterances than in their out-of-play utterances on average, a result that is statistically significant. Building on performance theory (Bauman, 1975), the qualitative analysis sheds light on how paralinguistic features are used to fulfil performative communicative functions: we show how the children creatively use pitch and voice quality manipulations, as well as pop cultural references, to ascribe stereotyped identities to their role character.

1 Introduction and background

When children engage in social pretend play (role play) they jump between the every-day reality of 'here and now' and the fantastic reality of the play (Ariel, 2002). Utterances during role play must be encoded in such a way that the interlocutor understands for which reality it holds (Bateson, 1976 [1955]; Goffman, 1974). This paper investigates the codes used in role play utterances that convey that an utterance is meant to hold in the fantastic reality: the metacommunicative code 'this is play' (Bateson, 1976 [1955]) or the children's 'role play register' (RPR). RPR has been studied extensively under different monikers and in several disciplines for several decades (see section 1.1) In this paper, we analyse the RPR in light of performance theory (Bauman, 1975, and subsequent) and stylistics (cf. Coupland, 2007), and view the children's role play utterances as instances of performance, i.e.: "instances of language which stand out from the ordinary, marked and reframed in some explicit way as 'performed'" (Bell & Gibson, 2011, p. 556). Investigating role play utterances as performances brings to the forefront questions of how children use semiotic resources (i) to dissociate their speech from the utterance context (cf. Ariel, 2002; Leslie, 1987; McCune-Nicolich, 1981; Piaget, 1999 [1951]) (ii) to construct and sustain their play characters' identities (cf. e.g. Andersen, 1986, 2014 [1990]; Ervin-Tripp, 1973; Reynolds, 2010), (iii) to engage in creative and playful language with peers (cf. e.g. Lytra, 2007; Sawyer, 1996), (iv) to "show-off" of their role playing skills and their mastering of the cues and codes of role play, in order to present themselves as proficient players, and (v) to construct, reconstruct and maintain role play as a ritualized genre as a manifestation and reproduction of (a part of) children's culture (cf. Reynolds, 2010). Thus, the framework of performance theory suggests itself as a particularly suitable framework for the analysis of children's role play.

The central question of this paper is how the children use and manipulate their voices in role play performances, with special emphasis on the five

communicative functions just mentioned in (i–v). To answer this question, we investigate a corpus of recorded spontaneous role play between 3-4 year old North-Norwegian preschool children and triangulate quantitative and qualitative methods. In the quantitative analysis we look at differences in pitch between in-play role utterances and out-of-play everyday utterances. In the qualitative analysis we look at the children´s interactions in excerpts of a recurring play frame we have called 'burning house,' which involves both firefighters and 'fire victims.' The study lies in the crossroads of, and contributes to, articulatory phonetics, sociolinguistics, and applied linguistics and anthropology (following in the footsteps of e.g. Moisik, 2013 and Podesva, 2013). In the linking of (para)linguistic measures to non-referential semiosis in real time language use, it is also in line with 'third wave sociolinguistics' (Eckert, 2018).

Although aspects of performance and performance theory have been applied in studies of children's role play (Cook-Gumperz, 1986, 1992; de León, 2019; Lytra, 2007; Reynolds, 2010; Sawyer, 1996), to our knowledge, all the different aspects of Bauman and colleagues' notion of performance have not been applied analytically to the same extent as in the present study. We show how the analysis explain all the communicative functions of the linguistic and paralinguistic variation found in role play. To this end we combine a qualitative analyses with quantitative measures. Furthermore, to our knowledge previous studies have not investigated performances in play of children as young as in this study (3 years old). Studying children's performances in role play this close to onset of social pretend play (≈2;6–3, cf. Fein, 1975; Nicolopoulou, 2018) may yield valuable insights into emergent meta- and socio-linguistic awareness.

The article is structured as follows: sections 1.1 and 1.2 provide a review of children's (role) play, including its (para)linguistic features, and an introduction to performance theory. Next, a presentation of the case study as well as the method and participants are laid out in sections 2 and 3, before qualitative and quantitative results are given in sections 4 and 5. A discussion and analysis

of the result in light of performance theory ensues in section 6, before section 7 concludes the paper.

1.1 Children, language, pretence, and play

Role play is a result of children's fantasy reality creation (Ariel, 2002; Singer & Singer, 1990; Strömqvist, 1984; Skolnick Weisberg & Bloom, 2009; Skolnick Weisberg, 2016) and decontextualization of behaviour (Fein, 1981; Fein & Moorin, 2014 [1985]). The role play reality is not subject to real-life needs and demands, nor restricted by real life physical laws or social norms: "[p]lay […] transform(s) reality in its own manner without submitting that transformation to the criterion of objective fact" (Piaget, 1966, p. 111). Such play realities constitute a space in which children can explore social identities, power dynamics, rules and roles that are not readily accessible to them outside of the play context (cf. Andersen, 1986, 2014 [1990]; Aronsson, 2011; Cook-Gumperz, 1992; Goldman & Smith, 1998; Paugh, 2005) and let children transgress, challenge, or oppose adult culture and norms (Kyratzis, 2004, 2010; García-Sánchez), all without consequences. In this way, one can argue, peer play may offer a context of language learning and socialization into various social and cultural norms, and may provide insight into "their emergent understandings of linguistic variation and multilingualism, language attitudes, and the links between language and social identities" (Paugh, 2005, p. 64). Such emergent understandings permeate through their use of tropic or stereotyped indexical features when constructing role characters' personae in role play performances (cf. Andersen, 1986).

The fantasy reality creations and transformations which takes place in role play (Bretherton, 1989; Fein, 1975; Goffman, 1974) impose demands on the children's communication to convey whether their utterances refer to the baseline or the fantasy reality, actions, or objects, i.e. 'the message *this is play*' (Bateson, 1976 [1955]). The specific features used to signal this metacommunicative code will vary depending on the cultural, social, and

linguistic context, as well as within specific play group settings. For instance, multilingual children have been reported to code switch between the languages they speak to signal which reality the utterences are meant to hold (García-Sánchez; Kleemann, 2013, 2015; Kyratzis, 2004, 2010; de León, 2019; Paugh, 2005). There are also several reports that children growing up in an environment where a non-standard variety is used code-switch to the standard variety as 'role utterances' (Buhofer & Burger, 1998; Kasperger & Kaiser, 2019; Katerbow, 2013; Sophocleous, 2013). As we will return to below, this also holds for the North Norwegian situation.

Children's communicative competence in role play has profound impacts on their social lives and participation: mastering the codes of pretend play is a prerequisite for in-group membership in the play situation. A good command of the play code provides the children with social capital that in turn can be exchanged for access to the popular peer play groups, and the popular toys and role characters (Vedeler, 1987). The impact of interpersonal hierarchies on role play is apparent for instance in Schwartzman's ethnographic studies: "the role of pet […] was generally assumed by one of the more unpopular children in the group" (Schwartzman, 1978, p. 239). In other words, children are socialized into appropriate play behaviour and culture by peers, and the particular codes associated with play seem to be transmitted between children of different age groups (cf. Butler, 2008; Minks, 2010).

1.1.1 Pitch and voice quality

Work within the field of developmental sociolinguistics has primarily focused on sociophonetic variation, with less focus on styles and performance as sociolinguistic skills in itself (Nardy et al., 2013), or the full range of children's registers and voices (Reynolds, 2010). However, paralinguistic features, such as overal pitch register and voice quality are reported to be particularly present in children's role play (Andersen, 1986, 2014 [1990]; Auwärter, 1986; Cook-Gumperz, 1986; Halmari & Smith, 1994; Hoyle, 1998; Kleemann, 2013;

Meek, 2000; Reynolds, 2010; Sawyer, 1994; Strömqvist, 1984; Vedeler, 1987). Kleemann (2015) reports, without any acoustic data, that Sámi Norwegian bilinguals use a higher pitch in their role utterances than their out-of-play utterances (in addition to other cues).

Since paralinguistic features lie *on top of* the linguistic material, they are a particularly suitable domain for additive semiosis such as indexicality: "voice quality, as a major vehicle of information about physical, psychological and social characteristics of the speaker, has a vital semiotic role to play in spoken interaction" (Laver, 1980, p. 2). The terms 'voice quality' and 'pitch/prosody' cover diverse phenomena (cf. Laver, 1980; Esling et al., 2019). For the purpose of this article, we focus primarily on pitch (f0), manipulations of the lips (rounding or protrusion Laver, 1980, p. 32), displacement of the tongue (Laver, 1980, p. 44) on top of or beyond that of neutral, unmarked speech, as well as certain laryngeal manipulations, such as harsh voice and creak,[1] in addition to marked prosody (e.g. monotony) and singing. The voice can be manipulated to sound darker both through decreasing the frequency of the vocal fold's vibration (F0), and by manipulating the vocal tract in a manner that diverts more energy to the lower end of the acoustic spectrum and/or *from* the higher end of the acoustic spectrum. In the discussion, we refer to the latter as 'timbre,' and the former (F0) as 'pitch.'

1.1.2 The Norwegian role play register

In Norway, children speaking a non-standard variety have been reported to code-switch to something resembling Standard East Norwegian (SEN) or the

[1] We assume harsh voice to be created by friction induced by the ventricular folds as a result of a narrowing of epiglottis ("aryepiglottic stricture" Esling et al., 2019), creating aperiodic noise dispersed throughout the spectrum (Esling et al., 2019, p. 67; Laver, 1980, p. 127), although the investigations needed to discern exactly the setting of the speech apparatus in any case is both beyond reach in the material and beyond the scope of this investigations. It is the audible result rather than the physiological settings of the speech apparatus that is available to the interlocutors and is subject to semiosis, and therefore of most interest here.

Oslo (capital) dialect for their in-character role utterances (Røyneland, 2009).[2] This code-switching has been mentioned in numerous sources (see Strand, 2020a, for a review), and a certain amount of standardization in role utterances is not a unique situation across languages and cultures.

The origin of SEN as a role play register is debated, and the use of SEN in (especially dubbed) children's television has been a common folk-linguistic explanation. However, literary and anecdotal sources clearly predates modern time television (Høigård, 1999).

Exactly what features are adopted from SEN in children's role utterances and to which extent have barely been investigated (but see Eliassen, 1998; Strand, 2020a, under revision), and many questions remain largely unanswered. From the few studies to date, it seems that children use variants of SEN (pronominal, nominal, and verbal) morphology to varying extent (Eliassen, 1998; Strand, 2020a), and salient aspects of SEN prosody (Strand, under revision).

1.2 Performance theory and child cultures

According to performance theory, as outlined in e.g. Bauman (1975, 1986, 1992, 2000, 2011), Bauman & Briggs (1990), and Bauman & Sherzer (1989 [1974]), a *performance* is a mode of communication that is "put on display, objectified, lifted out to a degree from its contextual surroundings, and opened to scrutiny by an audience" (Bauman, 1992, p. 45). Performance theory originated within folklore studies as a move towards viewing culture as an *emergent* phenomenon, with performance as the 'cornerstone' (Bauman, 1975, p. 306). Performance is considered "an interplay between [cultural and linguistic] resources and individual [communicative] competence," and something created "within the context of particular situations […] structured by the situated and creative exercise of [communicative] competence" (Bauman & Sherzer, 1989 [1974], p. 7). Central to performance is the concept

[2] This does not hold for children with the Oslo dialect as their native variety.

of *entextualization*: "the process of rendering discourse extractable" from the context, making it "a unit – a *text* – that can be lifted out of its interactional setting" (Bauman & Briggs, 1990, p. 73).[3] The devices the performer has to this end – the metapragmatic and metacommunicative marking of speech as entextualized (Bauman, 1992, p. 46) – are motivated "by their placement in larger linguistic, social and political-economic processes" (Briggs, 1993, p. 180), or, simplified, the culture of the participants (Bauman, 1975, p. 295). In turn, the process of entextualization serves to reproduce the group's particular genres and interactional rituals (Bauman & Briggs, 1990; see also McDowel, 1999). Bauman (1975) gives a list of eight commonly observed metapragmatic or metacommunicative means for entextualization, many of which can be characterized as *styles* or instances of *stylization*. Among these are the use of "special codes, e.g. archaic or esoteric language, reserved for and diagnostic of performance […] special formulae that signal performance, […] special prosodic patterns of tempo, stress, pitch […and], special paralinguistic patterns of voice qualitiy and vocalization" (Bauman, 1975, p. 295). As several scholars of stylization have argued (Rampton, 2009; Coupland, 2001, 2007), stylized utterances tend to be highly reflexive and aware of the audience, invoking known stereotypes and ideological values and attitudes associated with particular speakers or situations: "[s]peakers perform identities, targeted at themselves or others, when they have some awareness of how the relevant *personas* constructed are likely to be perceived through their designs" (Coupland, 2007, p. 146). This makes the young children in the present study particularly interesting cases, as we can assume their identities to be 'unsettled' and 'in flux' to a larger degree than adults and older children, and their awareness of social and linguistic stereotypes still developing.

[3] We have intentionally left the connected processes of *decontextualization* and *recontextualization* – *detaching* from and *(re)attaching* to the speech context, respectively – out of the discussion for simplicity. See Bauman & Briggs (1990) or Briggs (1993) for in-depth discussions.

From Briggs (1993) and Bauman & Briggs (1990), the straightforward interpretation of entextualization would be that it pertains to the temporal dimension. Temporal, because it describes the way in which cultural texts have an existence outside their specific iteration (*recontextualizations,* Briggs, 1993), where the connection between the specific iterations resulting in Coupland's (2007) *cultural continuity*. We argue, however, that there is also a spatial dimension to the process of entextualization, but that its prime function is not that of spatio-temporal displacement nor the specific axis of displacement in the space-time multidimension, but rather the detachment from the specific space and time of the utterance context. For role play and role utterances to work, we can assume already from first principles that such a detachment, i.e. the detachment from the here-and-now reality where the utterances are *not* meant to hold, is a necessary condition.

Any communicative act has the potential of being performative as one of several communicative functions (Bauman, 1992), and the performativity of a communicative act is not a binary 'on/off' property, but rather a gradual quality. The graduality is an effect of the relative salience of the performative function among the other communicative functions of the act, as well as its continuous longevity. For example, compare the 'in and out' of performative utterances found in role play – Cook-Gumperz (1992) calls it the 'frizzy edges' of performance – to the "sustained, full performance […] as when an operatic diva sings at La Scala" (Bauman, 1992, p. 46). Coupland (2007) suggests a gradual scale of performativity that runs from what he calls *mundane* performances to *high* performances. The latter are "scheduled, […] typically planned, and therefore programmed" events, that are "temporally and spatially bounded […] marked off from the routine flow of communicative practice" in which the performers and the audience members act in their participant roles (Coupland, 2007, p. 147). We would lastly like to add that it seems intuitive to consider graduality in performativity also as an effect of the metapragmatic and metacommunicative *markedness* of the communicative act. Taking the present case as an example: compared to a

role utterance uttered in SEN, an utterance uttered in SEN *and* with an unnaturally high pitch would be more performed, and an utterance *sung* in SEN even more so, and so on.

As opposed to Coupland's (2007) notion of high performances, children's performances in role play are unscheduled and improvised, and the participants act as both performers and audience at once and interchangeably. When the text is improvised, as in role play, and therefore not in itself a cultural expression, it follows that the performer, the child, must lean more heavily on metapragmatic and metacommunicative entextualization cues, since the text itself bears less of the performative function as opposed to for example reciting a poem or telling a joke. The connection to entextualization in improvisation is also necessary for the communicative act to be situated within and recognized as a part of a genre or interactional ritual pertaining to a particular group or culture (cf. Lytra, 2007, p. 18).

Duranti & Black (2011), in discussing *improvisation as performance*, argue that the creativity and innovation in improvisation is not just a means to an end (cf. *improvisation as flexibility*), but an end in itself. The 'artfulness' of the improvised performance, both in terms of the text and its metacommunicative embellishments (such as voice and pitch manipulations) and their juxtaposition with the norms of the specific genre, may therefore serve functions above and beyond the metacommunicative function of entextualization cues. Specifically, they may have additional intrinsic value in making the play more immersive and 'fun.' Being a good 'improviser' in role play performances may also have value in the linguistic marketplace of the peer group. An important part of the performative function is precisely the audience' scrutiny of the artistic quality of the performance, and a good performance in play can be exchanged into access to popular play groups, role characters, and toys.

2 Presentation of the case study

To answer the central question of how children use and manipulate their voices in role play, we apply the theoretical notion of performance on a case of seven North Norwegian children, and recordings of them engaging in free, spontaneous play. The study is structured as a triangulation of a quantitative and a qualitative analysis. The quantitative analysis looks at differences in acoustic measures of fundamental frequency between role utterances and out-of-play utterances in one recording from each child, where the child is approximately 42 months old, and thus the overall difference on a coarse time scale of one whole play session. Other studies of children's pretence play suggest that fundamental frequency is part of a cluster of entextualization cues (cf. Guldal, 1997; Kleemann, 2013; Lytra, 2007). Building on this, we hypothesize that differences in the fundamental frequency between role utterances and out-of-play utterances should be possible to detect on the averaged signal over a large time scale of one play session, despite the fact that deviations in pitch from the mean (both upwards and downwards) are found in the immediate play context.

The qualitative investigation examines metacommunicative cues and paralinguistic features in selected excerpts where the children engage in the play frame we call 'burning house,' with firefighters and 'fire victims' ('rescuees'). The excerpts are taken from the complete corpus spanning one whole year.

In the analysis, we focus on pitch, in addition to lingual and labial displacement, and some laryngeal features (creak, harsh voice; cf. section 1.1.1), as well as instances of marked prosody and song. We investigate these features in light of the chosen analytical framework, and pay attention to the communicative, and in particular *performative* functions of the different features (cf. 1.2). The qualitative analysis is based on auditory investigation by the authors, and not quantitative acoustic measures, but some acoustic measures are given where relevant. In the auditory analysis, both authors listened to and analyzed the excerpts individually, and the excerpts was then

compared and listened to together. There were no cases of disagreement in the analyses of paralinguistic features between the authors.

3 Participants, data and method of analysis

The data for this project is based on a corpus of semi-dense (≈ biweekly) audio and video recordings of 8 preschool children engaging in spontaneous and free play, collected by the first author (see Strand, 2020a, under revision). Hedda and Inga are bilingual (Norwegian and English),[4] the remaining 6 are monolingual Norwegian speakers. The recordings were made in the kindergarten, using a separate room the children could enter and exit as they wanted. For the first sessions (1 – 19), condenser microphones were hung from from the ceiling (Samson© C02). Due to a change of room of recording, the recording gear was changed to the internal microphones of the recording device (from session 20, Zoom© H4n pro), because the new room did not support suspending the microphones. Visual data was also obtained using small wide-angle camera (GoPro© HERO Session), mounted on the wall. The choice of size and aperture of the camera was not to distract the children in their play, and to capture the whole room in one frame.

The room was equipped with a doll's house and a fire station, both fully equipped with furniture, a doll family consisting of child dolls and three adults, two firefighters, a fire truck (from session 5), and a fire station (from session 19). Some dolls (e.g. the dolls resembling children) had characteristics associated with femininity (such as braids and long hair), while others, such as the firefighters, had few explicit gender markers.

The recordings were transcribed either by the first author or a student assistant. All transcriptions were made in ELAN (Brugman & Russel, 2004). The

[4] there were no instances in the data material where these two children employed English (rather than SEN) to signal play, although there were a handful of cases of intra-sentential code-switching in the whole material. These were taken to be tokens of cross-linguistic influence rather than socially meaningful code-switching.

transcriptions are available in Strand (2020b).

Utterances were interpreted and coded for 'level of pretence' by the first author. For the utterance to count as a 'role utterance' it had to comply with at least one of the following chriteria (verbatim from Strand, 2020a):

1. The utterance was clearly referring to something not happening in the 'baseline reality' (e.g. "I am peeing" or "there's a fire!"), and/or

2. The utterance was uttered with a voice quality or intonation that was clearly manipulated in a creative way as to indicate role utterances, and/or

3. The utterance was uttered while holding and animating a doll, and/or

4. The utterance was uttered as an answer to or in a conversation together with an utterance with the characteristics in 1–3.

The role utterances were coded as 'fireman' or 'non-fireman' role play utterances. For it to count as fireman utterance the child had to hold and/or manipulate one of the fireman doll's, or make utterances that were clearly intended as uttered from the fireman (e.g. 'we are the firemen', or 'climb down the latter'), in addition to the general criteria for role utterances.

The coding into the different categories are based on the coder's interpretation, and it is not necessarily the case that the coders interpretation coincides with the intended role categories of the child in the act. The coding into the different categories are based on the coder's interpretation, and it is not necessarily the case that the coders interpretation coincides with the intended role categories of the child in the act.

The quantitative analysis of pitch is based on selected recordings (a 'sub-corpus') where the subjects were around 42 months (3;6 years), and includes 7 of the 8 children (the last child did not participate to an extent that would have given a meaningful quantitative result for our purpose). An overview is given in Table 1. Using the recordings from six months after the alleged onset

of role play around or before the age of three (Fein, 1981; Nicolopoulou, 2018) means that the recordings are still early in the children's life as role players, but late enough that they would have had time to adapt to the cues and role play registers.

Subject:	Celice	Lars-Lars	Inga	Morten	Hedda	Kimbo	Klara
Gender:	F	M	F	M	F	M	F
Session No:	16	16	18	9	16	21	25
Age (months):	42	42	43	42	44	43	42
Utterances:	199	252	316	364	381	112	208
Role utterances:	139	168	73	200	255	34	66
Analyzed utterances:	85	181	197	228	265	79	145

Table 1: *Files and ages for quantitative data (from Strand, under revision).*

F0 values were extracted in Praat (Boersma & Weenink, 2020) using a series of scripts created for the purpose (see Strand & Johnsen, under preparation). First, utterances with non-overlapping speech were extracted from the subcorpus. In the subsequent sample (n=1,146), any remaining overlapping speech was removed, and the f0 values were extracted using Praat's built-in algorithm.[5] The f0 signal was manually corrected for errors (correcting where the algorithm had chosen the wrong harmonic, and removing data where there were interfering periodic noises and where creak and harsh voice resulted in too much aperiodicity for the algorithm to give a reliable result). The resulting f0 data were imported to R (R Core Team, 2019) using the R package `rPraat` (Bořil & Skarnitzl, 2016) for further analysis.

The excerpts that were selected for exposition in the qualitative analysis were transcribed in detail basing on an adapted version of conversation analysis system. A list of the transcription conventions are is given in Table 2

[5] The pitch deviations were at times extreme, and to be able to pick up the whole signal, the pitch floor and ceiling of the Praat algorithm were set to 150 and 1500 Hz respectively. Pitch was sampled 100 times per second. For the other parameters, the default settings of Praat were used.

in section 7. For more details on the transcription procedure and standard, see Strand (2020a). In the whole corpus, 9,299 utterances were coded as role utterances,[6] where the children act several different roles characters, but most often firefighters and family members.[7]

For the qualitative analysis, we focused on play frames that involved firefighters ('rescuers') and fire victims ('rescuees'), which often revolved around dolls stuck inside the doll house which was on fire, and which the firefighters had to come to the rescue to. From the first author's first hand knowledge of the corpus, we knew that these play sessions were abundant (2,583 of the role utterances were coded as "firefighter", meaning that they were manipulating a firefighter doll when uttering it), and that these two roles were prone to vocal manipulations. These play frames of rescuer-rescuee play tended to follow certain scripts, such as the firefighters shouting "I'm coming" (*jeg kommer*). To limit the search for relevant examples, we searched for the verb 'come' in present and the infinitive in firefighter utterances (n=195), and the discourse context of those utterances were investigated further. Both researchers examined the discourse context of each of these utterances, paying particular attention to whether the children manipulated their voice creatively in their role utterances, or marked them using special prosody or song. The analysed excerpts were chosen because they were examples of how children use contrastive voices stylistically and as entextualizing cues in role play.

[6]This number also includes what is termed 'ludic speech acts' in Strömqvist (1984), or 'magical utterances' in Høigård (1999): speech acts with a illocutionary force, which by their utterance creates an event or action, typically a repeated, often sung or monotonously chanted infinitive or bare verbs. The children may, for example, exclaim 'bathe bathe bathe' to constitute the act of taking a bath, or employ similar uses of linguistic reduplication for the same effect, for instance *tripp trapp tripp trapp* to constitute the act of climbing up stairways.

[7]Other prominent characters were cultural characters from children's books or television shows, as well as doctors and members of the police force.

4 Results, quantitative analysis

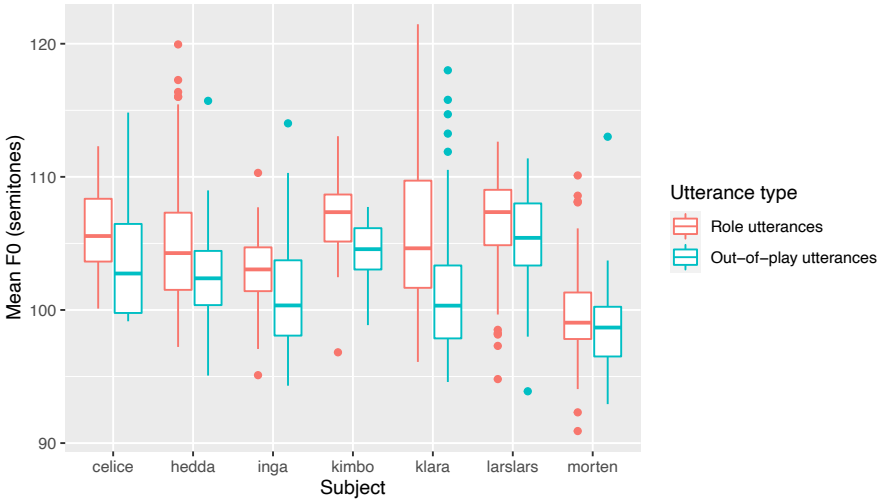

Figure 1: *Mean F0 (semitones) for each utterance, coarsely sorted into in-character role utterances and out-of-play utterances.*

For the quantitative investigation, the mean F0 for each utterance was calculated in semitones. The results of the utterances split into role utterances and out-of-play utterances are given in the boxplot in Figure 1. The role utterances are on average higher in pitch than the out-of-play utterances, indicating that this might be a genre characteristic of North Norwegian role play, and that it is visible on the coarse time scale of a whole play session, although it could be undetectable in specific play frames due to other factors. There is however a large within speaker/within register variation in the data, with a range from 12.2 semitones for Celice in her role utterances to 25.4 for Klara. Although the role utterances are on average higher than the out-of-play utterances, this does not always hold when looking at the switching between utterance types in the emerging play context. For some subjects the maximal value of the out-of-play utterance is higher than that of the role utterances

(Celice, Inga, and Morten), and the minimal value of the role utterances is lower than that of the out-of-play utterances (Kimbo and Morten).

To make sure that the result of pitch on the long timescale was reliable, we fitted a linear mixed effects model to the data in R using the package `lme4` (Bates et al., 2015), with utterance type as fixed effect, mean pitch of every utterance as the dependent variable, and by-subject random intercepts and slopes for the effect of utterance type on pitch (the H_1 model). The model showed a difference of 2.2 ($\pm$0.49) semitones (SE) as an effect of utterance type ($t = -4.533$). A comparison between the H_1 model to a model of the null hypothesis (random variation, i.e. no effect of utterance type, the H_0 model) was made using a Likelihood Ratio Test. The H_1 model's ability to explain the variation superseded the H_0 model beyond the conventional threshold for dismissing the null hypothesis ($\chi^2(1) = 10.658, p < .01$).[8]

The variation in the data probably stems from the specific role character identities and stances, as well as specific situations in the role play that demand excursions from the neutral higher pitched genre cues. A quantitative model of the present granularity is mainly naïve to such variation in its very nature. As an illustration of the effect of different roles on the large timescale, we have divided the role utterances in to firefighter utterances and non-firefighter utterances in Figure 2 (with only the children who partook in that particular role in the subcorpus).

Although the firefighter utterances contribute slightly negatively on the mean pitch of the role-utterances as a whole, it varies between the subjects, and for Inga the opposite holds. The last point may be due to the fact that Inga played the role of grandfather during that particular session, a role character possibly also associated with low pitched voice. In any event, this is a good illustration of the limits of the usefulness of quantitative measures in

[8] We compared the H_1 model to (i) a model with only by-subject random intercepts (not slopes) and (ii) a linear model without any random effects. The H_1 model was a better fit for the data (less information loss, AIC = 6348.642) than both (i) (AIC = 6352.573) and (ii) (AIC = 6690.323).

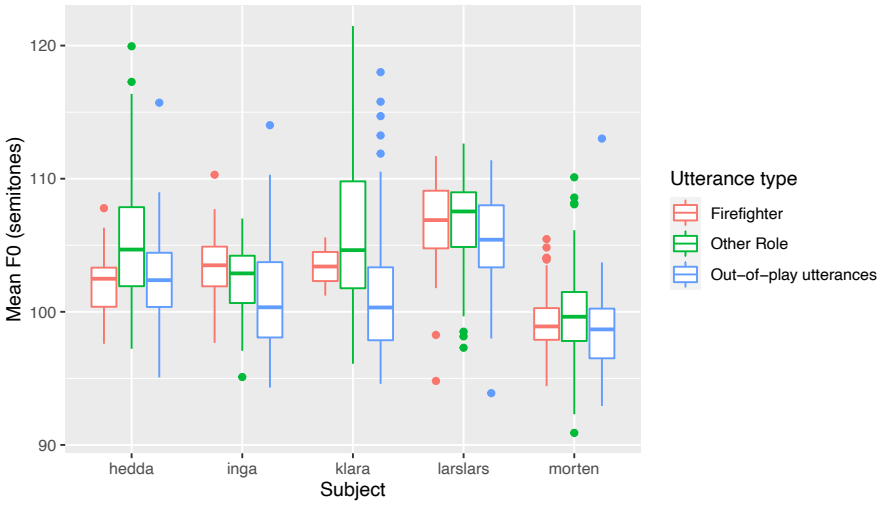

Figure 2: *Mean F0 (semitones) for each utterance, coarsely sorted into firefighter role utterances, non-firefighter role utterances, and out-of-play utterances.*

identifying the features of the registers of different role characters, and the need for either more controlled data in terms of the different roles characters played, or a qualitative, more fine-grained investigations to tease out the differences and semiotic functions of variation in pitch on a more local time scale.[9]

[9] A similar mixed effects model to that above, using role utterance type (fireman/non-fireman) as the fixed effect, was fitted to the role play utterances only. The model showed a difference of 1 (SE = 0.8) semitone between the role utterance types ($t = 1.313$). This model's ability to explain the data did not supersede the null hypothesis model sufficiently to dismiss it ($\chi^2(1) = 1.8623, p \approx .17$), so we cannot conclude that the predictors of the model explain the variation in the data.

5 Results, qualitative analysis

In the following three subsections we analyse excerpts that demonstrate how children employ paralinguistic features in role play and we show how these features can be interpreted as performative and how they work as entextualization cues in play. Throughout we also discuss how the children negotiate social meanings and associate particular social attributes with these particular features. Since paralinguistic features are the main object of study, this could be useful even to speakers with minimal or no knowledge of Norwegian.

5.1 Subsection 1: pitch and timbre

Subsection one focuses on the social meanings and performative functions of alternations in pitch and timbre. During play the children frequently altered or lowered their pitch or manipulated their voice to sound darker. In Excerpts 1–3 we demonstrate how such alternations are resources when, for example, performing particular social personas in the play reality, as well as when trying to catch the attention of peer players.

In Excerpt 1 both Morten's and Kimbo's dolls (both rescuees) are stuck on the middle floor (the kitchen) of the doll's house. Morten loudly calls for help in an increasingly intensive manner. The repetitive calls for help (altogether he cries for help 6 times) is one of the ways in which the play frame 'burning house' is constructed, and similar sequences are found numerous times in the data material.

In line 1, Morten's vowels sound excessively backed and rounded, giving a darker timbre than in his unmarked out-of-play speech. The vowels are also sustained, and even more so in line 3. Celice (firefighter) aligns with Morten, and accepts his call for help, by yelling that she is on her way (lines 2 and 4). Her voice in these utterances sounds darker than her unmarked out-of-play speech, both in pitch and timbre. This is even more pronounced in Excerpt 3, and we will return to this point below. The utterances in 5 and 6 are

Excerpt 1: *"Help, help!"*

1	Morten: (3;5)	HJELP HJELP (0.6) HJE::[:LP *help help …*
2	Celice: (3;1)	[jeg kom[me:r *I'm coming*
3	M:	[HJE:::LP (.) HJE::LP HJELP *help help …*
4	Celice:	jeg komme:r↓ *I'm coming*
5	M:	**Kimbo (.) e det kke lurt (0.7) at den her den her (.) ska gå nedover dit? (0.9)**
6		**e det kke en god idé at trappa- eh** *Kimbo, isn't it smart that this one this one goes down here? isn't it a good idea that the stair-*
7	Kimbo: (3;0)	HJE:LP HJE::LP ((excessively open vowels)) *help help*
8	C:	JEG KOMMER (.) jeg slukker ↑her (.) jeg slukker *I'm coming I'm putting out the fire here I'm putting it out*
9	K:	(2.0) æ treng hjelp, ↑æ æ kommer ned *I need help I I'm coming down*
10	K	[jeg ko- jeg kommer meg ikke ned *I ca- I can't get down*
11	C:	[en stige (.) og så treng du en stige? *A ladder and you're gonna need a ladder*
12	M:	ja (2.3) du må hoppe ned *yes you have to jump down*
13	K:	**nei du må- (.) da da da dett æ (.) da slo (0.6) [han sæ** *now you hav to- then then then I'll fall then he got hurt*
14	C:	[du må gå hit her *you have to go this way here*

out-of-play utterances in which Morten is trying to negotiate the placement of a stairway in the doll's house. These utterances are marked by a shift from the standard variety to the local dialect in prosody, and are vocally unmarked. In line 6 Kimbo (rescuee) cries for help, giving his voice a slightly darker timbre, whereby Celice (firefighter) reassures him that she is on her way (line 11). Apart from East Norwegian intonation, Celices utterances sound unmarked.

We focus here on Morten's cry for help in lines 1 and 3. The shift in the vowel quality and timbre may be a tool for giving different 'voices' to different role characters: by contrasting the quality from Morten's other roles previously in the play and improvising over a variety of ways to call for help. These prosodic and vocal improvisations could be regarded as a way to authenticate his character's need for help, and thereby as a performance that intends to communicate the 'seriousness' of the situation. He adds drama and authenticity to the play situation to keep 'the audience' (the fellow players) immersed in the role play.

Excerpt 2: *"I'm stuck in the mountain""*

1	Morten:	HJELP HJE:↑↑E:LP (0.8) HJE:::LP (5.0)
	(3;5)	*help help …*
2	M:	↑↑jeg sitt høyt høyt høyt oppå fje:llet, (0.8) ↑jeg kommer ikke meg ne:d (.) jeg sitt <høyt oppe> ((falsetto, mean pitch on *ne:d*: 650 Hz)) *I'm sitting high high high up on the mountain I can't get down I'm sitting up high*
3	Kimbo:	å her bare eh soverommet, du
	(3;0)	*and here only ehm bedroom*
4	M:	↓jeg kommer ikke meg ne::d (0.4) ((mean pitch on *ne::d*: 410 Hz)) *I can't get down*
5	M:	↓jeg kommer ikke meg ne:d (0.4) ((mean pitch on *ne:d*: 400 Hz)) *I can't get down*
6	M:	jo jeg kommer ned *yes I'm coming down*
7	Staff:	*perhaps he needs help from the firetruck to get down?*

A few turns later (Excerpt 2), Morten's doll (rescuee) is located in the top floor of the doll house. In line with the play frame, Morten starts calling for help to get down. In this instance, his call for help is produced with an exaggerated high pitched voice and use of falsetto (lines 1-2). Celice (firefighter), playing with the firetruck on the opposite side of the house, does not respond to Morten's call for help. In line 2, Morten suggests, through his

role utterance, that he is stuck in a tall mountain, thereby transforming the doll house through a role utterance. In line 4, Kimbo (rescuee), playing with one of the other dolls inside tho house, directs his doll towards Morten, stating that it is a bedroom, rejecting Morten's invitation to transform the doll house to a mountain, also this in a role utterance. In lines 4–7, Morten cries for help in an increasingly low pitch. To illustrate the decline in pitch, the mean Hz of the vowel in *ned* ('down') has been given (rounded to closest 10 Hz).

Children at this age may not always direct their role playing utterances towards someone particular.[10] Morten's pitch variations may therefor be interpreted as a mere improvisation (Sawyer, 1994) of a helpless person and an example of being immersed and explorative in a performance, while still staying true to the shared play frame and the genre with its conventions. However, in this particular case, a more probable interpretation is that Morten's pitch excursions here may be a means of attracting the attention of the play mates, as an entry request (cf. Cromdal, 2001; Guldal, 1997; Sawyer, 1994). Celice is the one controlling the firetruck with the ladder and thereby the only possible rescue for Morten's doll, she is occupied with fixing the fire hose on the firetruck a bit further away from the doll house. Moreover, this interpretation of Morten trying to capture Celice's attention is strengthened by the fact that a supervising kindergarten teacher suggests that Morten's role character needs help from the fire truck to get down (line 8), and that when he gives up on getting Celice's attention (line 7), his pitch excursions seem to stop and he uses his neutral modal voice.

Excerpt 3 is from later in the same interaction as Excerpts 1 and 2, and Celice (firefighter) is still controlling the firetruck. In this excerpt, the differences in pitch is even clearer than in the previous excerpts. Starting out quite loud, vivid and bright-voiced, for each turn, Celice's voice is getting perceptively darker both in pitch and timbre (lines 4 and 6–9). She achieves

[10] Thanks to Carola Kleeman for directing our attention towards the need to clarify this important point.

Excerpt 3: *"I'm coming"*

1	Kimbo:	æ da:tt
	(3;0)	*I fell*
2	Morten:	[hje:lp au
	(3;5)	*help ouch*
3	Celice:	[↓JEG KOMME:R↓
	(3;1)	*I'm coming*
4	C:	↓jeg komme:r *((360 Hz, lip rounding))*
		I'm coming
5	K:	au (.) æ må [bare skli ned
		ouch I just have to slide down
6	C:	[↓jeg kommer (0.5) *((300 Hz))*
		I'm coming
7	C:	↓jeg kommer *((270 Hz))*
		I'm coming
8	C:	↓↓jeg kommer (3.8) *((300 Hz, lip rounding))*
		I'm coming
9	C:	[↓↓jeg kommer *((lip rounding))*
10	K:	[æ sklir (bare) ned
		I'll just slide down

this due to a combination of lowered pitch and rounded lips, which increases the relative energy in the lower part of the spectrum (Laver, 1980). The average pitch of "kommer" in each utterance (rounded to closest 10, and only in points without overlapping speech), as well as the presence of lip rounding are given in the transcription. As the pitch listings demonstrate, the perceived contrast is not *only* due to actual differences in pitch level, but pitch in conjunction with lip rounding.

In the three last excerpts, we have seen/heard Celice improvise over the voice characteristics of the firefighter persona. Along with other ritualized element of the specific play frame of 'burning house' (asking if there is a fire, the act of coming to the rescue, raising the ladder, etc.), the creative use of pitch and other vocal manipulations make up Celice's firefighter performance, which can be seen as improvisation within a quite free script.

Different kinds of accentuation is conveying information about the firefighter's identity, and Celice engages in a kind of social stereotyping

through her theatrical stances (cf. Aronsson, 2011). The use of paralinguistic manipulations, such as low pitch and dark timbre, ascribes the character with features associated with masculinity, simply through iconicity (the mimicking of larger physiology through lowering of the voice and timbre), which in this particular case could be seen as stereotypical or tropic, and as such an example of indexicality: the connection between firefighters and typical values of masculinity are closely connected in culture (the fraction of women in the operative Norwegian fire fighter brigade is 4.4%, DSB, 2018), and in the children's culture, the most famous fire fighter – Fireman Sam – is a male figure, who often appears in the children's play (see below).[11] In addition, the paralinguistic manipulations, along with other traits (intensity, prosody) she also conveys information about the characters' stances and attitudes. The character seems vigorous, morally engaged and authoritative. The entextualization cues also have an aesthetic dimension: the children improvise to amuse each other and to provide internal drama in the play sequence and to construct themselves as attractive play mates and as "play competent" and to keep play mates immersed and invested in the role play.

5.2 Subsection 2: harsh and creaky voice

Section two focuses on harsh and creaky voice. Similar to the alternations in pitch and timbre, also harsh and creaky voice seem convey information about social attributes of the play character. Moreover, as we show in Excerpt 4, harsh voice may also convey information about the characters state of mind.

In Excerpt 4, Hedda (firefighter) and Morten (rescuee) are playing, and Klara is present in the room, engaging in what seems to be solitary, parallel playing. The excerpt starts in a discussion regarding the colours of the firemen's uniforms, whereby the Hedda and Morten agrees on the premise of

[11] Note that there is a female firefighter in the Fireman Sam tv series. However, apart from Sam, we have not encountered any of the other characters from the series in the material. Our gratitude to Merete Anderssen for pointing this out to us.

Excerpt 4: *"Because fireman Skam"*

1	Hedda:	**det er før det at (.) han brannmann Skam s- (.) brannmann-**
	(3;1)	*that is because that fireman Skam fireman*
2	Morten:	**ehm no må den ned**
	(3;5)	*ehm now it has to come down*
3	H:	**ja**
		yes
4	M:	##e HJE::LP HJE::LP (.) HJE::LP## ((harsh voice))
		help help …
5	H:	↓↓jeg kommer sna:rt (1.6) ##oi##((harsh voice))
		I'm coming soon wow
6	M:	#jeg sitt fast oppå# he:r (1.6) ↓#jeg# får meg ikke ne:d
		I'm stuck up here I can't get down
7	H:	##da må jeg bruke lædderen## ((harsh voice))
		then I have to use the ladder [code-switch to English]
8	M:	jeg sitt #høyt# oppe i huset mitt
		I'm sitting up high in my house
9	Klara:	((unintelligible))
	(2;8)	
10	H:	KLATRA NED LÆDDEREN
		climbed down the ladder [code-switch]

the play (someone has to get help to get down). Harsh voice (indicated with ##) is used by both Morten (line 4) and Hedda (lines 5, and 7). There are also instances of creaky voice (indicated with #) in Morten's utterance in lines 6 and 8.

In the previous example, Celice used pitch to ascribe a gendered identity to the firefighter role character. Here, Hedda ascribes masculinity and 'roughness' through iconicity to the firefighter role character's identity through the use of both low pitch and harsh voice. Morten's use of creaky voice can be analyzed as indexing exhaustion from being stuck on top of the house for so long.

5.3 Subsection 3: popular cultural references

There were several examples in the material of how the children perform snippets of songs or characters from their popular culture in performances during play. Excerpts 5–6 demonstrate how the children draw on Fireman Sam and improvise over the Fireman Sam theme song in play. In Excerpt 5, Celice transforms her doll to Fireman Sam by illucutionary force, a transformation that is taken up by her fellow player Inga.

In Excerpt 5 there are three girls present. Celice (firefighter) has the firetruck, while Hedda's doll (rescuee) is inside the house. Inga (rescuee) sits between Celice and Hedda. In line 1, Inga calls in a high pitch, warning about the fire. All speech sounds sound fronted, possibly due to a displacement of the tongue forward (cf. Laver, 1980, p. 46f, on the discussion of 'tongue-fronted voice' and "adult women adopting 'litle girl' voices"). Celice responds in a low pitched voice that she is on her way in line 2. In line 3 she mimics the popular children's television figure Fireman Sam. In line 8, 10, and 13 Inga uses an overly monotonous intonation, possibly to make it sound like crying in panic, without having to raise her voice.

The lingual displacement of Inga in line 4 creates the aural illusion that the speech is uttered by someone with a very small oral cavity. Through iconicity, this indexes smallness, which again may index the helplessness of a child or the trope of 'damsel in distress' in contrast to the decisiveness of the firefighter. By mimicking and parodying Fireman Sam, Celice draws on a pop-cultural reference as a semiotic resource for improvising during the play session, a footing that Inga accepts in line 13 in explicitly asking for help from Fireman Sam. Inga and Celice co-construct the play frame and drive the play forward through joint improvisations over well known tropes and cultural references. We see that kindergarten children's experiences from the outside world and popular culture is brought into the role play (similar to what Lytra, 2007, reports in her study of children's play in a Greek primary school) where they make up cultural expressions that adds on to the cluster of

Excerpt 5: *"It's me, Fireman Sam"*

1	Inga:	↑hjelp (.) det e brann i huset [vårt↑
	(3;3)	*help our house is on fire*
2	Celice:	[↓jeg kommer↓ (1)
	(3;1)	jeg kommer (.) jeg må bare slukke (3.2) ↓jeg kommer↓ (2.9) treng dokker hjelp av en slukker? det e::r (.) meg, Brannmann Sam
		I'm coming I'm coming I just have to put out the fire I'm coming do you need help from an extinguisher? it's me, Fireman Sam
3	I:	HJELP [DET BRENNER *((fronted, narrow))*
		help there's a fire
4	C:	[((unintelligible))
5	I:	(det) [hje:lp
		(it) help
6	C:	[((unintelligible)) stigen ((unintelligible))
		ladder
7	I:	KAN DU HJELPE MEG? ((monotonous intonation))
		can you help me
8	C:	#ja# (0.7) jeg slukker
		yes I put out the fire
9	I:	_jeg må komme opp stigen: det brenner_
		((monotonous intonation))
		I have to come up the ladder there's a fire
10	C:	se:: det brenn på alt
		look there's fire on everything
11	I:	det brann:er:: ↑KOM (til) HJELP↑ (6) ↑(KOM)↑ (2.0) hjelp (1.0)
		it fires come help come help
12		hjelp meg brannmann Sam ((monotonous intonation))
		help me fireman Sam

entextualization cues.

Mentions and enactments of Fireman Sam are recurring in the corpus, and in some cases these are accompanied by breaking into improvisations over the Fireman Sam theme song. An example of this is given in Excerpt 7 (a), which starts with Lars-Lars and Celice, negotiating the roles and the play frame (lines 1 and 2). Although they both agree that Celice's doll is a boy, and

Excerpt 6: *Fireman Sam theme songs 1*

```
              Session 14
1  Lars-Lars  du e en gutt
   (3;4)      you are a boy (0.6)
2  Celice     æ e faktisk en gutt som styre den her
              ((unintelligible)) (1.4)
   (3;4)      I am in fact a boy who is driving this here
3  L:         ##hoi Brannmann Sam en vennlig mann ((humming))##
              brannelann ((singing)) (1.0)
              hey Fireman Sam a friendly man 'brannelann'
              (nonce word, possibly 'fireland')
4  C:         er brann? (0.9)
              Is fire?
5  L:         nei (.) æ sa en ##brann i landet##
              no I said 'a fire in the land'
```

that she is playing the role as a boy, Lars-Lars tacitly aligns with Celices suggestion that her doll is a part of the fire brigade nonetheless. When this has been established, Lars-Lars jump-starts the playing with his performance, with harsh voice an improvisation over the theme song (line 3). Celice joins the playing in line 4.

Lars-Lars' performance in line 3 is packed with entextualization cues. First there is harsh voice and singing, as well as the reference to the popular character Fireman Sam. In addition, the final word, *brannelann*, could be interpreted as verbal play, playing with rhyming (possibly *brann* 'fire' and *land* 'land, country').

As a further illustration of this phenomenon, we have included three additional examples of breaking into the Fireman Sam theme song in Excerpt 7 (b-d) that do not stem from interactions containing the word *komme* (cf. section 3).

This collection of excerpts demonstrate both the frequency of this phenomenon, but also draw the attention to the children's improvisational skills. In many instances the examples involve some degree of textual improvisation (c and d), and use of verbal playing, such as rhyming nonce

Excerpts 7: *Fireman Sam theme songs 2*

(a) *Session 9*
Celice: Brannmann Sam du stole på han (.) Brannmann Sa:::m ((singing))
(3;2) *Fireman Sam you trust him …Fireman Sam*

(b) *Session 7*
Celice: Brannmann Sam er ikke ren den som spiller på pitar ((singing))
(3;2) *Fireman Sam is not clean the one who plays pitar (nonceword)*

(c) *Session 8*
1 Lars-Lars brannmann Sam (0.5) stole på han ((singing))
(3;1) *(verbatim lyrics of Fireman Sam theme song)*
2 stole på b- [(0.9) brannmann (0.8) SKRAM:: ((singing))
trust in fireman uhm 'Skram'
3 Investigator: [*put that there?*
4 Morten: £neif£ kjenner de[re ((humming)) ((singing))
(3;6) *no do you know …*
5 L: [dere trannmann tram ((singing))
you 'trannman tram' (nonce words)
6 M: [((humming))
7 L: [bra- (0.7) for ingen er så god [((unintelligible)) ((singing))
for no-one is as (tram)
8 M: [((unintelligible))
9 L: ingen er så (.) bra (som han) ((singing))
no-one is as good as him
10 M: **[æ må på do æ ska bar-** …
I have to got to the toilet I just have to …
11 L: [st- DU DU DU DU ((humming)) kjenner der[e tisse ##BÆSJ## (.) å ##bæsj## ((singing))
do you know pee-poo and poo
12 M: **[æ kommer når æ har vært på do**
I'll be back when I've been to the toilet

words or scatology. Moreover, by summoning a shared, popular cultural reference, such as Fireman Sam, the children also use the play setting to negotiate a shared group identity with shared references. Through such re-contextualizations the children also demonstrate how play is a context where the children explore, and perhaps socializes each other into, the aesthetics and ludic functions of language.

6 Discussion

This article has investigated how children make use of paralinguistic features in role play and how such features are used in performative communicative acts. In this section we summarize the results and discuss them in light of how the children use role play performances to (i) dissociate their speech from the out-of-play utterance context, (ii) to construct their play characters' identities, (iii) to improvise in creative and playful ways, (iv) to show off their role playing skills, and (v) to construct and reconstruct role play as a ritualized genre as (a part of) children's culture (cf. section 1).

To address the research question, we used both a quantitative and a qualitative analysis on a case of a corpus of spontaneous free play between 7 North Norwegian children at the age of 3–4. In the quantitative analysis (looking at a single recording for each child), we found that there was a significant difference in pitch, between the role utterances and the out-of-play utterances, the role utterances being slightly higher in pitch on average, despite large variation within both subject and utterance type. This difference, which works as an entextualization cue in the play setting, probably would have gone unnoticed in a purely qualitative analysis.

The qualitative analysis consisted of a close, turn-by-turn analysis of chosen excerpts of children engaging in the play frame of 'burning house' (taken from the whole corpus spanning one year). In the qualitative analysis we investigated the communicative functions of pitch and other paralinguistic vocal features (lip rounding, tongue displacement, harsh and

creaky voice), as well as the use of spontaneous sung improvisation over popular cultural references. The qualitative discourse analysis complements the quantitative, as a tool to scrutinize the local play discourse in a way that a quantitative analysis could not have done. Thus, the two analyses in conjunction give a fuller picture of the object of study.

In section 1.2 we pointed out how the function of entextualization in detaching the text from its context was particularly relevant to role play utterances (cf. (i) above, and the notion of the metacommunicative message 'this is play,' Bateson, 1976 [1955]). As the analysis shows, the children employ numerous cues to entextualization. The children may, for example, codeswitch from their own dialect to the standard variety (morphologically and/or prosodically, Strand, 2020a, under revision, see also Morten in Excerpt 1), and, as shown in the quantitative analysis, use a higher pitched register. Moreover, they use paralinguistic features, such as pitch variations and voice quality to index specific stances or stereotyped identities of the role characters. Although we agree that all these cues contribute to entextualization, and that they often appear in clusters (cf. 'signal clusters' in Kleemann, 2013, 2015; see also Guldal, 1997), we find it improbable that the children use energy to amass all these cues simultaneously to achieve a single communicative function when only one such cue would have been sufficient. It seems reasonable to assume that the cues have the potential to fill several 'secondary' functions of entextualization and performance, and at different levels of salience.

One of these secondary functions is the use of stylization to ascribe identities and stances to the role characters (cf. (ii) above), through stereotyped stylization and indexicalization, the way that Celice, Hedda, and Lars-Lars do (e.g. excerpt 1–5) when they use lower pitch and timbre, and/or harsh voice in their firefighter performances to ascribe 'masculinity' or 'roughness' to their characters, or when Inga manipulates her voice to sound smaller in excerpt 4, to ascribe helplessness to her role character. This voice manipulation also has an organizing function in the narrative that is played out in the fantasy reality, as

it helps keep track of the different roles and events of the role play. This latter point is particularly apparent in the 'burning house' play frame, where specific actions (calling for help, coming to the rescue) are tightly connected to the agents of the narrative (rescuees, firefighters).

The improvisation over familiar tropes, play frames, and stereotypes also includes the television theme songs from the children's popular cultural references outside the kindergarten and play situation. Altogether the children's creative use of voice manipulations and other improvisations add to the aesthetics of the play performance: The children act as agents that create and maintain an immersive multiparty play scene and a ludic atmosphere, through which they also construct and maintain group membership (cf. (iii) above, and the concept of 'ludic space,' e.g. Kolb & Kolb, 2010). The analyses also clearly demonstrate that children's play frames are not mere imitations of the adult world, or of the children's experiences outside the play group. Rather, they are emergent and dynamic resources for children's improvisation: they link figures and artefacts, iconically and indexically, to firetrucks and firefighters. Thus, the young children creatively make use of popular media cultures surrounding them during role play to construct and sustain play frames.

The use of popular culture references can also be seen as a way of enhancing the artfulness of the performance (Lytra, 2007). Play is an important part of children's lives, and their competence in the codes of role play can be exchanged in social capital which can give access to popular play groups, toys and role characters. Thus, the benefit of the artful improvisation we have seen in the excerpts, is not only the increased immersion and 'fun' of the role play, but also the exposure of their skills as players (cf. (iv) above). This is most obvious in those performances in which the performative communicative function is the most salient, such as in Lars-Lars' improvisations over the Fireman Sam theme song in Excerpt 6 which includes creative use of voice quality, song, reference to popular culture, and verbal play, and in Excerpt 7 (c), which includes all the above and also scatology.

For the improvisations to be felicitous and to gain appraisal from other players (i.e. the 'audience'), they cannot transgress too far from the play frame, or they will be sanctioned, either explicitly, as Kimbo did with Morten, when Morten transformed the house to a mountain in Excerpt 2, or implicitly, as when the other children ignore other children's footings and entry requests, or when they do not lend them popular toys or grant them access to play groups. In viewing culture as an emergent phenomenon through performances, we can see how children's culture is reiterated through these entextualizations and their entextualization cues in role utterances, and how it is negotiated through explicit and implicit sanctioning of unwarranted transgressions by peer players (cf. (v) above).

The input source for the standard variety for Norwegian children's play register has been a conundrum for researchers, and it has been suggested that it is transferred orally between generations of children in role play as a part of children folklore or culture (Strand, 2020a, under revision). This suggestion sits well within the theory of role utterances as performances and performances as reiterative and emergent (re)constructions of child culture, of which role play is a genre, through entextualization.

7 Summary and conclusion

Previous research have demonstrated that children use pitch as a metacommunicative cue (Kleemann, 2015) and to convey information about characters' social identities (Andersen, 1986, 2014 [1990]; Hoyle, 1998). This study has documented this difference quantitatively, and also pointed to how pitch works together with other paralinguistic features (voice quality, intonation, song) to create aesthetic and social dimensions in children' role play in a qualitative analysis. By framing the analysis within performance theory (Bauman, 1975, and subsequent), and analysing role utterances as performances, we show how both semiotic, stylistic, social, and cultural properties of the role utterance can be explained in a coherent manner.

The article thus also documents the emergent meta- and socio-linguistic awareness of children as young as three years of age, close to the alleged onset of social role play (Fein, 1981; Nicolopoulou, 2018): it demonstrates how these novice players make use of entextualization cues metacommunicatively in keeping track of the different layers of reality inherent to role play, and how they use indexical cues from stereotypes and tropes to ascribe the identity of their role character personae. Through the artful display of paralinguistic stylization and creative language use, they create an immersive and 'fun' ludic atmosphere, while at the same time showing off their skilfulness in role play.

With this contribution we hope to have highlighted young preschool children's (3–4 years) agency in the creation of children's culture and ritualized genres, and their communicative competence in role play utterances. We also hope to have demonstrated the viability of using Bauman and colleagues' performance theory as a framework for analysing children's utterances in role play, and to incite further studies into this topic.

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conflict of interest

There is no conflict of interest to report.

Supporting Information

Symbol:	Meaning:
text	role utterances
text	out-of-play utterances
text	free translation
((…))	meta-comment
(0.8)/(.)	break of 0.8 seconds/short break
te[xt	
[text	onset of overlapping speech
(text)	uncertain interpretation
↑/↑↑	shift/large shift up in (perceived) pitch
↓/↓↓	shift/large shift down in (perceived) pitch
TEXT	relatively loud words
text	particularly stressed syllable
e:/e::/e:::	unnormally to extremely stretched out segment
#…#	creaky voice
##…##	harsh voice
£…£	smiley voice/suppressed laughter
<…>	slowed down speech
(3;1)	age of child (years;months)

Table 2: *Explanation of transcription conventions.*

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Appendices

A.1 Consent form, parents

UiT

NORGES
ARKTISKE
UNIVERSITET

Samtykkeerklæring til forskningsprosjektet «Rollelekspråk hos norske barn»

Hva innebærer deltakelse i studien?
Deltakelse i denne studien innebærer at vi får ta lyd- og video-opptak av ditt barn i barnehagen.

Hva skjer med informasjonen om ditt barn?
Alle personopplysninger vil bli behandlet konfidensielt. Dataene vil bli kodet og koblingsnøkkelen vil bli lagret på en passordbeskyttet server som bare prosjektledelsen har tilgang til. Alle navn i studien vil bli sensurerte, og ditt barn vil ikke kunne gjenkjennes i publikasjoner.

Innen 31. mai 2021 vil koblingsnøkkelen og alle personopplysninger bli permanent slettet, videoopptakene vil bli sladdet og navn og sensitiv informasjon vil bli klippet fra lydopptak, slik at alle opptak og transkripsjoner forblir anonymiserte.

Frivillig deltakelse
Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker ditt samtykke vil alle opplysninger om deg og ditt barn bli slettet. De data fra ditt barn som ikke er anonymiserte ennå vil også bli slettet.

Studien er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Bakgrunnsopplysninger

Dialekt-/språkbakgrunn, forelder/foresatt nr. 1: _____
(kommune/land)

Dialekt-/språkbakgrunn, forelder/foresatt nr. 2: _____
(kommune/land)

Eventuelle kommentarer:

Samtykkeerklæring
Jeg har mottatt informasjon om studien og under de forutsetninger som er beskrevet over samtykker jeg til at:

☐ Det kan gjøres lyd- og videoopptak av mitt barn (nødvendig for deltakelse i prosjektet)

Barnets fornavn: _____

Barnets fødselsdato: _____

_____
(Navn til forelder/foresatt i blokkbokstaver)

_____ _____ _____
(Signatur, forelder/foresatt) (Sted) (Dato)

_____
(E-post, **ikke obligatorisk**)

☐ Ja takk, send meg informasjon om publikasjoner fra dette prosjektet

A.2 Information letter to parents

UiT

NORGES
ARKTISKE
UNIVERSITET

Rollelekspråk hos norske barn
Et forskningsprosjekt ved UiT – Norges arktiske universitet

(Behold dette arket selv)

Informasjon til foreldre/foresatte

Vi henvender oss til dere i forbindelse med en undersøkelse av rollelekspråk hos norske barn. Undersøkelsen foregår ved Institutt for språk og kultur, UiT – Norges arktiske universitet.

Mange norske barn bytter dialekt når de leker rollelek – gjerne til noe som høres ut som Oslo-dialekt eller *søring.* Vi ønsker å undersøke hvordan norske barn mellom to og seks år snakker når de leker rollelek. Vi vil samle inn forskningsmateriale til undersøkelsen ved å gjøre lydopptak av barn i lekesituasjoner i barnehagen to ganger i måneden over en viss periode.

Det vil ikke ha noen konsekvenser for barnehagen om dere ikke ønsker at barnet deres skal delta.

Formål
Dette forskningsprosjektet har to formål. For det første ønsker vi å finne ut hvor «flinke» norske barnehagebarn er i rollelekdialekten sin. Det vil si: hvordan og hvor mye skiller rollelekdialekten seg fra den lokale dialekten. For det andre ønsker vi å finne ut hvordan rollelekdialekten utvikler seg fra to og et halvt til seks år. Ved å gjøre dette ønsker vi å kartlegge norske barnehagebarns flerdialektale kompetanse og hvordan denne tilegnes og brukes.

Hva innebærer studien
Det vil bli gjort flere lyd- og videoopptak av lekesituasjoner i barnehagen, der to eller flere barn leker med hverandre rundt leketøy skaffet til veie av UiT. Opptakene vil bli lagret på en passordbeskyttet server ved UiT. Opptakene vil anonymiseres: navn og annen sensitiv informasjon blir slettet fra lydopptak og ansikt blir sladdet på videoopptak.

Opptakene vil transkriberes (skrives ned) av forskere og forskningsassistenter ved Institutt for språk og kultur, UiT. Det vil bli brukt dekknavn for alle barna i transkripsjonen. Det vil ikke være mulig for uvedkommende å identifisere noen barn i det transkriberte materialet. Forskerne og forskningsassistentene som transkriberer er underlagt taushetsplikt.

De anonymiserte transkripsjonene gjøres allment tilgjengelige for andre forskere som er interesserte i barnespråk. Lyd- og eventuelle videofiler vil **ikke** være allment tilgjengelige, men vil være tilgjengelige for forskere som søker om å få tilgang i et begrenset tidsrom. Disse må i så fall søke Barnespråkslaboratoriet ved Institutt for språk og kultur, UiT, om tilgang og må begrunne søknaden med et spesifikt prosjekt de trenger dataen til.

Prosjektet varer til 31. mai 2021, og innen da vil navnelisten med deltakere slettes og personopplysninger i materialet omkodes slik at dataene ikke kan knyttes til person, og ingen person kan kjennes igjen. Innen dette tidspunktet vil også alle videoopptak og lydfiler bli anonymisert.

Deltakelse i prosjektet er helt frivillig. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Vi vil da slette alle data fra ditt barn.

Vi har dessverre ikke anledning til å betale for deltakelsen i prosjektet, men dersom barnet deres blir plukket ut til å delta i studien, vil vi dere få to kinogavekort. Vi ønsker også å gi barnehagen noen av lekene fra studien.

Ta gjerne kontakt om du skulle ha noen spørsmål.

Studien er meldt til Personvernforbundet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Hilsen
Bror-Magnus Sviland Strand
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Doktorgradsstipendiat i språkvitenskap
UiT – Norges arktiske universitet

A.3 Consent form, kindergarten employees

UiT

NORGES
ARKTISKE
UNIVERSITET

Samtykkeerklæring til forskningsprosjektet «Rollelekspråk hos norske barn» (Barnehagetilsatte)

Hva innebærer deltakelse i studien?
Deltakelse i denne studien innebærer at vi får ta lyd- og video-opptak av deg på jobb.

Hva skjer med informasjonen?
Alle navn i studien vil bli sensurerte, og du vil ikke kunne gjenkjennes i publikasjoner.

Innen 31. mai 2021 vil videoopptakene bli sladdet og navn og sensitiv informasjon vil bli klippet fra lydopptak, slik at alle opptak og transkripsjoner forblir anonymiserte.

Frivillig deltakelse
Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker ditt samtykke vil alle opplysninger om deg bli slette. All data du har deltatt i som ikke er anonymiserte ennå vil også bli slettet.

Studien er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Samtykkeerklæring
Jeg har mottatt informasjon om studien og under de forutsetninger som er beskrevet over samtykker jeg til at:

☐ Det kan gjøres lyd- og videoopptak av meg

_____
(Navn i blokkbokstaver)

_____ _____ _____
(Signatur) (Sted) (Dato)

_____
(E-post, **ikke obligatorisk**)

☐ Ja takk, send meg informasjon om publikasjoner fra dette prosjektet

A.4 Information letter to the kindergarten

UiT

NORGES
ARKTISKE
UNIVERSITET

Rollelekspråk hos norske barn
Et forskingsprosjekt ved UiT – Norges arktiske universitet

Informasjon til Barnehager
Mange norske barn bytter dialekt når de leker rollelek – gjerne til noe som høres ut som Oslo dialekt (eller *søring*). Vi ønsker å undersøke hvordan norske barn mellom to og seks år snakker når de leker rollelek. Vi vil samle inn forskningsmateriale ved å gjøre lyd- og videoopptak av barn i lekesituasjoner to ganger i måneden over en viss periode.

Formål
Dette forskingsprosjektet har to formål: For det første ønsker vi å finne ut hvor «flinke» norske barnehagebarn er i rollelekdialekten sin. Det vil si: hvordan og hvor mye skiller rollelekdialekten seg fra den lokale dialekten. For det andre ønsker vi å finne ut hvordan rollelekdialekten utvikler seg fra to og et halvt år til seks år. Ved å gjøre dette ønsker vi å kartlegge norske barnehagebarns flerdialektale kompetanse og hvordan denne blir tilegnet og brukt.

Hva innebærer studien?
Vi vil foreta flere lyd- og videoopptak av lekesituasjoner i barnehagen (to ganger i måneden) der to eller flere barn leker sammen rundt leketøy skaffet til veie av UiT. Opptakene vil bli transkriberte av forskere og forskerassistenter ved Institutt for språk og kultur, UiT.

Hvordan kan barnehagen delta?
Dersom dere har lyst til å delta trenger vi:

- Hjelp til å komme i kontakt med foreldre
- Hjelp til å velge ut barn som liker å leke sammen
- Et sted å sette opp leker og opptaksutstyr

Foreldre: For at vi skal kunne samle data fra barn må vi ha samtykke fra foreldre og vår første kontakt med foreldre må gå gjennom barnehagen. Dere kan hjelpe oss ved å sende informasjon om prosjektet og skjema med samtykkeerklæring gjennom de vanlige informasjonskanalene fra barnehagen til foreldrene (f.eks. e-post).

Barn: For å få best mulig data er det avgjørende at barna leker godt sammen. Vi håper dere kan hjelpe oss å velge ut barn som leker godt sammen til studien.

Leker: UiT stiller med leker og opptaksutstyr i tillegg til en forsker eller forskerassistent som vil komme og sette det opp og være til stede under opptaket.

Det vi derimot trenger hjelp til, er å finne et rom/en del av barnehagen vi kan sette opp lekene og opptaksutstyret

Jeg svarer gjerne på spørsmål på e-post (bror-magnus.s.strand@uit.no) eller telefon (776 44243).

Studien er meldt til Personvernforbundet for forskning – Norsk samfunnsvitenskapelig datatjeneste AS.

Vennlig hilsen
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UiT – Norges arktiske universitet

A.5 Non-disclosure agreement, assistants

UiT

NORGES ARKTISKE UNIVERSITET

Teieplikterklæring i samband med forskingsprosjektet «Rolleleikspråk hos norske born»

Kva er omfatta av teieplikta?
Som vitskapleg assistent i forskingsprosjektet «rolleleikspråk hos norske born» er du forplikta til å ikkje på nokon måte spreia personidentifiserande personalia, som faktisk namn og fødedato, med personar eller organisasjonar utanfor forskargruppa. Denne teieplikta er ikkje kravd ved lov, men kjem etter ei avveging av det moralske ansvaret me som forskarar har overfor forskingssubjekta. For det fyrste gjeld det det moralske ansvaret vårt overfor føresette, som har samtykka til at me kan samla inn og lagra forskingsdata frå borna deira og seinare gjera det tilgjengeleg for andre forskarar, under føresetnad at data er anonymiserte og at einskildpersonar ikkje skal kunna identifiseras. For det andre gjeld det vårt moralske ansvar overfor borna, som ikkje er kapable juridisk, og ikkje i alle høve kognitivt, til å fullt og heilt avgjera i kva grad dei skal vera med i forskingsprosjektet.

Kva er ikkje omfatta av teieplikta?
I kraft av å utføra eit oppdrag på vegne av staten er du underlagt meldeplikta i barnevernloven (§4–6). Det vil seia at dersom du i stillinga di oppdagar noko som kan tyda på at eit barn bli mishandla i heimen eller blir utsett for andre former for alvorlig omsorgssvikt, er du forplikta til å informera barnevernstenesta i kommunen utan hinder av teieplikta, anten direkte eller via barnehagen.

Teieplikterklæring

☐ Eg har gjort meg kjent med og forstått det som står over om teieplikt knytt til stillinga mi som vitskapleg assistent i forskingsprosjektet «rolleleikspråk hos norske born».

_____
(Namn i blokkbokstavar)

_____ _____ _____
(Signatur) (Stad) (Dato)

UNIVERSITY OF TROMSØ