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Tell me a story about that!
Assessing language abilities of 10-year-old Danish-speaking children using the Global TALES protocol

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Introducing Section

The current project was divided into three parts: an introducing section, an article section, and a closing section. The study is built up around the Global TALES (GT) protocol, an international study investigating children's language abilities thro-ugh personal narratives. The introducing section will introduce the overall aims of the project and will elaborate the operationalisation of some of the terms used in the article as background information. The article section includes the main study in line with methods used in previous GT research. Finally, the closing section will present and investigate the usability of a new method of analysing the personal narratives elicited by the GT protocol based on Michael Bamberg's positioning theory.

Aims of the Project

The project aims to investigate the usability of the GT protocol in a group of 20 typically developed 10-year-old Danish speaking children. This is done via the following research question:

> *How can the Global TALES protocol be used to assess language abilities for typically developed 10-year-old Danish-speaking children?*

As mentioned, the project is divided into an article section and a closing section. These two parts consist of two different kinds of analyses. The article section investigates the children's language abilities through measures of microstructure and evaluative devices, which are based on research from previous GT studies, and will include a standardised test of expressive language from CELF-IV (the formulated sentences task). Measures of theory of mind (the Strange Stories task) and self-efficacy (the General Self-Efficacy scale) are also included to investigate relations with language abilities. The article section will therefore focus on the children's linguistic competencies and social understanding. The closing section presents a different analysis based on Michael Bamberg's positioning theory, which has not been conducted before in relation to the GT protocol. This analysis was included to investigate the children's sense of identity and agency levels and to see whether the analysis was applicable in personal narratives of 10-year-old children. The positioning analysis should therefore be considered as a feasibility study.

Terms Used in the Article

The children's language abilities were investigated via the linguistic measures of microstructure and the use of evaluative devices. The microstructural and evaluative measures will be described in the following.

Microstructure

The language competencies have been operationalised via measures of microstructure: total number of utterances, total number of words, mean length of utterances, number of different words, and proportion of errors.

- Total number of utterances (TNU) and total number of words (TNW) are both measures of productivity. They were used to indicate the length of the children's personal narratives. Despite both TNU and TNW being measures of productivity, both measures were used in the current study as they provide individual knowledge of language productivity. A person can produce many utterances without using many words but can also produce many words and few utterances.

- Mean length of utterances (MLU) is a measure of syntactic complexity and a product of TNU and TNW. The MLU is calculated by dividing TNW with TNU:

$$\frac{Total\ number\ of\ words}{Total\ number\ of\ utterances} = Mean\ length\ of\ utterances$$

  MLU can provide information about the complexity or sophistication of the individual language resources.

- Number of different words (NDW) is a measure of word diversity. It provides information on vocabulary and thereby how many different words the children use in their personal narratives.

- Proportion of errors is a measure of grammatical errors. This measure was calculated in percent for each personal narrative and was thereby dependent on TNW.

$$\frac{Grammatical\ errors}{Total\ number\ of\ words} * 100 = Proportion\ of\ errors$$

  This could be errors such as conjugation or order of words.

All calculations were performed by the online program https://malgreinir.herokuapp-.com after having been divided into utterances and checked for grammatical errors. This is also explained in the article section.

Evaluative Devices

To be able to express thoughts, feelings, beliefs, and meaningfulness of a narrative the narrator can make use of evaluative devices (ED's) (Westerveld et al., 2023, p. 2). Previous studies have used a range of different ED's, which is further explained in the article. A recent study by Westerveld et al. (2023), investigating the personal narratives of English-speaking 10-year-olds from three different countries, used 12 different types of ED's. As the current project is a smaller scale study, only three out of 12 ED's were used based on their frequent occurrence in previous research. These ED's were emotional words (EMOT-w), mental words (MENT-w), and intensifiers (INTENS). For a more detailed account see https://osf.io/sge9v.

- EMOT-w refer to internal emotional states of the narrator or another character occurring in the narrative. E.g. "I love my little brother", "she made me angry", "my mom got upset with me".
- MENT-w refer to cognitive mental states of the narrator or other characters in the event. This could be "… how someone is thinking about, remembering, or perceiving the event" (Westerveld et al., 2020, p. 4). E.g. "and then I thought oh no", "I didn't understand why I was jealous", "I didn't know what to say".
- INTENS are used to intensify or stress the word that they modify but should not provide new information about the word (Westerveld et al., 2023, p. 6). E.g. "I felt really bad", "that was a bit annoying", "he's always told me that he didn't smoke".

Segmenting into C-units

Before conducting the analyses, the children's narratives were divided into utterances which are based on communication units (C-units). A C-unit is an "independent clause with its modifiers" and includes a main clause with one or more subordinate clauses (Miller et al., 2015, p. 36). This was done in accordance with Systematic Analysis of Language Transcripts (SALT) conventions. A main clause must be present for the C-unit to make meaning. SALT conventions describe the clause as "a statement

containing both a subject and a predicate", a subject being a noun phrase and a predicate being a verb phrase (C-unit Segmentation Rules, 2016, p. 1). The following narrative is an example of how the narratives were divided into utterances. The narrative was translated from Danish into English by the author, why structural differences and differences in meaning may occur, however this is for illustration purposes. In line with the standards of the GT feasibility study "… reformulations, repetitions, false starts, and filler words (e.g. [uh and hmm]) were put in brackets and not included as part of the analysis" (Westerveld et al., 2022 p. 7). Utterances and words that were not related to the narrative or that were produced in response to examiner prompts inconsistent with the protocol were also excluded. This resulted in the following segmentation and exclusion of words with main clauses put in boldface and subordinate clauses underlined. Child = B, adult = V.

Narrative before dividing into C-units:

B: Hmm right when I moved here at my very first play date I took the bike to my friends place and then I accidentally rode a bit too fast and looked behind me and then I fell down from the bike and strained my ancle and then I didn't really know what to do because I couldn't walk

V: No

B: But we couldn't really find anyone who could help us and then uhm then I was just sitting there and cried while like they ran to me and then they had to carry me home to my friend because I couldn't support myself on my foot

Narrative after dividing into C-units:

B: [Hmm] **right when I moved here** <u>at my very first play date</u> **I took the bike to my friends place**

B: **And then I accidentally rode a bit too fast** <u>and looked behind me</u>

B: **And then I fell down from the bike** <u>and strained my ancle</u>

B: **And then I didn't really know what to do** <u>because I couldn't walk</u>

V: No

B: **But we couldn't really find anyone who could help us**

B: **And then** [uhm then] **I was just sitting there and cried** <u>while</u> [like] <u>they ran to me</u>

B: **And then they had to carry me home to my friend** <u>because I couldn't support myself on my foot</u>

As can be seen in the narrative, the clauses in boldface make up the essence of the narrative, i.e. they can be read by themselves without the subordinate clauses and the narrative would still make sense. On the other hand, by removing the main clauses and only reading the subordinate clauses, the narrative does not make any sense. The main clauses can therefore stand by themselves, while the subordinate clauses depend on the main clauses, and can therefore be considered as a kind of additional information.

Article Section

Abstract

Introduction: Personal narratives make up 50% of children's daily conversations. They affect social-, emotional-, cognitive-, and linguistic skills which in time has an impact on education and career opportunities and are therefore important for a successful development. Despite the importance of personal narratives children's language abilities are often assessed using standardised norm-based tests. Fictional narratives and story retelling have been used to supplement standardised testing. However, these types of narrative assessment do not assess the child's spontaneous language. A newly developed international research project called the Global TALES (GT) protocol was created to capture children's personal narratives using six prompts eliciting narratives from different emotions. The current study is the first study investigating personal narratives of Danish-speaking children elicited by the GT protocol. The aim of the study was to investigate the feasibility of the GT protocol for Danish typically developed children and to investigate and compare Danish children's language abilities (via measures of *microstructure*) with what has been reported for children acquiring other languages. Furthermore, the study investigated the children's social cognitive abilities (using *evaluative devices*, *self-efficacy beliefs*, and *Theory of Mind*) as well as language abilities using a standardised test aiming to investigate associations between these abilities and language abilities elicited from the GT protocol.

Method: 20 typically developed 10-year-old Danish-speaking children (14 girls and six boys, age: 9;11 to 11;1) produced personal narratives elicited from the GT protocol. The Formulated Sentences subtask from CELF-IV was used as a standardised measure for productive language. Six additional prompts were piloted to elicit emotionally self-conscious narratives. The children rated their self-efficacy beliefs using the General Self-Efficacy Scale and were lastly presented with six false belief stories from the Happé Strange Stories task.

Results: The GT protocol successfully elicited narratives from the children and individual variability was high. Results from the microstructure analysis showed that the average TNU was 47.3, TNW was 544.5, MLU was 11.32, and NDW was 187.55. Differences were present between the original GT prompts and the emotionally self-conscious prompts, favouring the former. There were no significant differences between positive and negative prompts in relation to microstructure. However, use of

ED's was higher when talking about emotionally negative experiences. Results from the FS task correlated with MLU, but not with other language measures. Use of ED's correlated with TNU, TNW, and NDW, while only EMOT-words correlated with SE and SS scores.

Conclusion: The GT protocol can successfully be used to elicit personal narratives from TD Danish-speaking 10-year-olds. Results of microstructure and use of ED's are comparable to results from existing literature of children speaking other languages. Emotionally self-conscious prompts can additionally be used to elicit personal narratives in this age group and should be investigated in different age groups. Future research should investigate differences between language assessed via spontaneous language use (GT) and standardised norm-based tests to determine the most effective tools for assessing language abilities.

Introduction

Telling narratives is a complex skill that makes it possible to communicate real or fictional events whether they be written or orally produced. Personal narratives make up 50% of children's daily conversations, and the ability to tell narratives therefore affect social-, emotional-, cognitive-, and linguistic skills which in time impacts education and career opportunities (Vogindroukas et al., 2020, p. 3). It is a skill that is affected by the world around us, and any person's narrative therefore reflects culture and tendencies of the world while also containing the narrator's own reflections of the narrated experiences (Kraljević et al., 2023, p. 1).

Narratives are told from an early age and consist of different types of narratives, e.g. scripts and fictional- or personal narratives (Kraljević et al., 2023, p. 1). As children get older their narrative abilities become more complex. Kemper (1984) suggests that "as children's horizons broaden so does the scope of their stories" underlining the impact of the world around us and the continuing expansion of lived experiences (p. 100). As to the developmental trajectory of children's narrative skills results from research on the field differ. Generally, children around the age of three can give accurate, detailed accounts of experiences that have happened to them multiple times, but also experiences that have happened to them once (Fivush, 2003, p. 1). Between the ages of three to five children are able to construct a remembered self in the form of a life-story narrative (Berk, 2014, p. 460), and around the age of 10 the ability to create plot structure (causal arrangement of events and character introduction etc.) is generally well developed and is completed during school age (Chang, 2004, p. 90; Reilly et al., 2004, p. 230).

Assessment of language skills often consists of standardised norm-based testing, while results from a large catalyse study recommends language assessment of Developmental Language Disorder to include functional language use as well as standardised tests. However, little is known on whether children's language performance differ on these two domains (Bishop, 2014, 387). Narrative assessment could be a potentially useful method for complimenting standardised testing (Lyons, 2023, p. 2). Since personal narratives play a significant role in many aspects of developmental areas, they should

be considered a valuable tool in clinical practice for exploring these developmental areas.

Personal Narratives

Bruner (2004) mentions that we become the autobiographical narratives (personal narratives) that we tell (p. 694). Westby and Culatta (2016) differentiate between two types of personal narratives: *event narratives* and *integrated life stories*. Event narratives refer to a single or closely related event(s) whereas integrated life stories refer to larger events happening over time or accounts of whole lives (p. 260). Personal event narratives are used in social interactions when sharing experiences with others and play a big part in interpersonal factors as they help creating a better understanding of these experiences and identity creating an understanding of our past, present, and future selves.

In this creation and understanding of our past, present, and future selves, an integral part of personal narratives is autobiographical memory. Autobiographical memories are the collection of memories that individuals have of their own life experiences and events (Nelson & Fivush, 2004, p. 486; Fivush et al., 2011, p. 321). Autobiographical memory emerges during the preschool years, as children around the age of two develop a self-image and a time-organized life story. As the children's language abilities broaden so does their ability to narrate and remember these memories. The narration and memorising are dynamic and constantly evolving processes wherein memories are continuously being updated and reinterpreted through intrapersonal factors, cognitive development, and social interactions (Berk, 2014, p. 298).

The intrapersonal factors involve the importance of memories in the construction of identity and sense of self, as they are dynamic systems that change over time (Howe, 2004, p. 45). Our memories and life narratives help establish self-continuity and self-understanding. The self is the narrator and the central figure of the personal narrative, so how we perceive and experience this self (e.g. self-concept and emotions) affect how these memories are stored and retrieved (Cohen, 1989, p. 118; Fivush, 2011, p. 560; Habermas & Bluck, 2000, p. 748; Howe, 2004, p. 45).

Autobiographical memory is often divided into *episodic memory* and *semantic memory*. Episodic memories concern personal episodes that happened in real life –or rather life-events such as a wedding or a holiday. They are often rich in sensory detail and emotion, which help bring details to life. Semantic memory refers to our general knowledge of the world including facts –such as the general points of this article (Matlin & Farmer, 2007, p. 145).

The development of narrative skills and autobiographical memories also play an important role in creating and maintaining social interactions, making it possible to share these experiences and stories with others. Parental reminiscing styles play an important factor in children's creation of autobiographical memories and the narration hereof. Children of *highly elaborative* parents, parents who create elaborate and coherent narratives with their children, create more detailed and coherent narratives and display a more coherent sense of self compared to children of *low elaborative* parents, parents who talk less frequently about the past and are more concerned about specific details (Fivush et al., 2011, p. 321; Han et al., 1998, p. 701; Nelson & Fivush, 2004, p. 497). The social function of the narrative entails *pragmatic abilities* as the narrator must obey social rules and be wary of the listeners perspective. This involves *theory of mind* (ToM) abilities wherein the narrator needs to be able to understand the listeners thoughts, feelings, and beliefs in order to know which details are necessary to communicate to make sense of the narrative (Bamberg & Damrad-Frye, 1991, p. 689). The narrator also needs to be aware of their own thoughts, feelings, and beliefs to understand how these affect their own viewpoints and telling of the narrative (Westerveld, 2023, p. 2).

Evaluative Devices

A personal narrative is therefore not just an account of what happened and who was involved in the narrative. To be able to express these thoughts, feelings, beliefs, and meaningfulness of the narrative the narrator can make use of evaluative devices (ED's). The use of ED's can also be an indicator for the narrator's ability to differentiate between their own mind and others, therefore use of ED's may relate closely to ToM abilities (Westerveld et al., 2023, p. 2). Furthermore, ED's can help processing and remembrance of an event by the person being evaluative and thereby promoting self-reflection and self-regulation, which can be useful when facing similar events in

the future (Westerveld, et al., 2023, p. 2). Evaluation can therefore also be said to play a big part in the understanding of the past, present, and future self. An early study by Labov et al. (1968), based on interviews about getting into fights, identified four types of ED's: *intensifiers, comparators, extensives,* and *explanations*. A study by Peterson and McCabe (1983) used the *conversational map* technique, prompting narratives by presenting commonly experienced events followed by asking: Did anything like that happen to you? The study identified 21 types of ED's, where the children used *gratuitous terms* (intensifiers) most often (p. 59). A later study by Peterson and Biggs (2001) found that intensifiers, *emotional states*, and *frames of mind* were used most frequently (p. 816). A study by Westerveld et al. (2023) investigated English-speaking children's use of 12 types of ED's, across the six personal narratives elicited by the GT protocol. The study found that the children used intensifiers and *evaluative words* most frequently, "… followed by negatives, emotion words, causal statements, and mental-state verbs" (p. 10).

Self-Efficacy/Agency

Self-efficacy (SE) is according to Bandura (2007) crucial for motivation and goal setting and constitute the foundation of *agency* (p. 8; Pervin & John, 1999, p. 181). SE is created through a complex cognitive process consisting of direct, social, and physiological processes. Through SE we set self-criteria and process experiences, thereby guiding responses in everyday situations displaying agency and self-knowledge (Bandura, 1978, p. 351; Bandura, 1986, p. 390; Berk, 2014, p. 18; Code, 2020, p. 1).

Perceived self-efficacy is the persons own opinion of their self-efficacy, and their belief that their capabilities will help them succeed. The perceived SE can affect which sorts of assignments the person believes they are able to overcome, thereby affecting and regulating the persons values, attitudes, actions, and convictions of themselves, hence agency (Scholz et al., 2002, p. 1; Berk, 2014, p. 18). SE ratings have been found to be related to emotional health and academic and career development (Botting et al., 2016, p. 541).

Therefore, SE beliefs in one's abilities to regulate, control, and understand one's thoughts, feelings, and actions can be expected to draw parallels to our evaluative abilities and the language use of beliefs, thoughts, feelings, and actions.

The Global TALES Protocol

The Global TALES (Talking about Lived Experiences in Stories) project was initiated by the Child Language Committee of the International Association of Logopaedics and Phoniatrics in 2018. It is an international project dedicated to:

> *investigate methods for eliciting and analyzing children's personal event narratives, with the ultimate aim of developing global tools and approaches to support interventions for this important skill in children with significant challenges in their learning, including those with language disorders* (Westby, 2021, p. 14).

The project so far includes studies from 15 countries. A feasibility study by Westerveld et al. (2022) elicited the GT protocol with 249 10-year-old typically developed (TD) children from 10 different countries, speaking eight different languages, to conduct cross-cultural and cross-linguistic analyses. The narratives were analysed for microstructure, via *total number of utterances* (TNU) and *total number of words* (TNW), topics, and the researchers' views on implementing the protocol. The protocol was successful at eliciting narratives and showed individual variability in relation to both microstructure and topics, but also that children around the world share many commonalities regarding use of topics (p. 2).

The Global TALES Protocol and its Emotions

The six emotions in the GT mainly contain basic emotions such as anger, happiness, and worry, as well as complex emotions such as pride (Barrett, 2005, p. 953; Berk, 2014, p. 408). Other types of emotions are however relevant to investigate in relation to personal narratives. These are self-conscious emotions which are more complex than the original six emotions (Knüppel et al., 2007, p. 111; Jensen de López et al., 2012, p. 44). Six new prompts with self-conscious emotions (envy, admiration, shame/embarrassment, guilt, jealousy, and gratefulness) were developed for the current study by Laura Quintanilla Cobian, Kristine Jensen de López, and the author of the current study and integrated in the format of the GT protocol. One important difference between basic emotions and self-conscious emotions is that while the firstly mentioned can be understood and interpreted by facial expressions, which gives them a physical attribute, complex emotions cannot be perceived physically, e.g. through facial expressions (Jensen de López et al., 2012, p. 44). Each of the included self-

conscious emotions "… involve injury to or enhancement of our sense of self", and understanding of these evolve around the age of two to three years, even though the use of the words first evolves around school age (Berk, 2014, p. 408; Jensen de López et al., 2012, p. 45). Jensen de López et al. (2012) argue that children's understanding of self-conscious emotions are closely related to their implicit social knowledge and that this is a precursor for the developing understanding of self-conscious emotions (p. 44).

Research show that pre-schoolers cannot comprehend that two opposite emotions can happen at once, which also reflects the fact that spontaneous word use of self-conscious and complex emotional words has not evolved at this age (Berk, 2014, p. 415, Jensen de López et al., 2012, p. 45). The development of an understanding that people can experience mixed emotions helps the child to understand that people can also display a different emotion than the one they really feel. This promotes the understanding of self-conscious emotions, and around the ages of six to seven years children become better at differentiating between emotions that can seem similar (e.g. happiness and pride). Around the ages of eight to nine years children understand that some complex emotions comprise different kinds of emotions (e.g. pride is also comprised of happiness) (Berk, 2014, p. 416).

Positive and Negative Emotions

Previous studies have also found differences in children's language use between positive and negative emotions (Chen et al., 2012, p. 667; Fivush et al., 2003, p. 16; Reese et al., 2011, p. 430). For example, children provide and remember more details about traumatic and negative events than they do about positive events (Ornstein, 1995, Fivush, 1998). Differences in positive and negative emotions can have an impact on clinical practice, as emotionally negative experiences can be of relevance for coping issues. Providing help in creating a detailed and coherent account of the events that happened can have a positive impact on coping with trauma and can lead to better mental health (Fivush et al., 2003, p. 3). A study by Fivush et al. (2003) investigated children's narration of positive and negative experiences and found that narratives about emotionally negative experiences were more internally focused and coherent than when talking about positive experiences (p. 16). A study by Kraljević et al. (2023), eliciting the GT protocol with 10-year-old Croatian-speaking children, found

that the children expressed more lexically diversity and provided more contextual information when producing narratives in relation to positive emotions compared to negative emotions. On the other hand, narratives elicited from the negative prompts were better elaborated chronologically and thematically (2023, p. 14).

Objectives

The current study aims to investigate language abilities with a group of 20 TD 10-year-old Danish-speaking children using the Global TALES protocol to contribute with Scandinavian data to the GT world-wide study. In addition, several research questions are put forward aiming to investigate in which ways language aspects in children's personal narratives can serve as insights into their social competencies and the development of the self. Self-efficacy beliefs play a role in our abilities to regulate, control, and understand our own thoughts, feelings, and actions and ED's provide us with the language to express and understand beliefs, thoughts, feelings, and actions. Relations between SE beliefs and ED use in young children is therefore investigated. Furthermore, ED's can indicate the narrator's ability to differentiate between their own mind and others, why production of ED's could be related to ToM abilities (Westerveld et al., 2023, p. 2).

Finally, as mentioned, the GT protocol is based on basic emotions, problem-solution situations, and a few complex emotions. Since an understanding of self-conscious emotions develops later than basic emotions (Jensen de López et al., 2012, p. 45), the current study aims to investigate if this influences the children's production of personal narratives.

This leads to the following overall research question:

> *How can the Global TALES protocol be used to assess language abilities*
> *for typically developed 10-year-old Danish-speaking children?*

Additional and related questions:

1. How do Danish-speaking children perform on microstructure measures of verbal productivity (TNU, TNW), word diversity (NDW), syntax (MLU), and grammar (proportion of errors) and evaluative abilities (ED's)?

2. Do some Global TALES prompts elicit richer language use (microstructure and ED's) than others?

   Including:

   a. Are there differences in language production (microstructure and ED's) elicited by the original GT emotions and the newly developed self-conscious emotions?

   b. Are there differences in children's language use (microstructure and ED's) elicited by positive and negative emotions?

3. Is there a relation between measures of microstructure and the standardised subtest, formulated sentences, from the CELF-IV?

4. Is there a relation between measures of microstructure and use of evaluative devices?

5. Is there a relation between use of evaluative devices and self-efficacy beliefs (measured by the General Self-Efficacy scale)?

6. Is there a relation between use of evaluative devices and theory of mind abilities (measured by the Strange Stories task)?

Method

Participants

Participants were recruited from a school in a small town in Denmark. All children were approximately 10 years of age and were in the same year at school. None of the children were reported to have language difficulties or receiving special education or speech and language therapy. The sample consisted of 20 children, 14 girls and six boys, and the mean age was 10;4 (SD = 3.63, range 9;11-11;1). In order to get information on the children's demographic background (displayed in Table 1) a parent questionnaire was sent out by the school along with a description of the purpose of the study and the consent forms. The questionnaire asked about the child's name, birthdate, and age followed by questions about both parents' levels of education, income of the household, and top three languages spoken at home. As shown in Table 1 the children came from homes of well-educated parents with average to high incomes. All children were reported to speak Danish as their first language with only two children speaking a second language.

Table 1. Participants' demographic information

	N	%
Parent education, Mom		
Primary school	0	0
High school	0	0
Trade qual	2	10
Bachelor	7	35
Postgraduate	11	55
Parent education, Dad		
Primary school	0	0
High school	0	0
Trade qual	5	25
Bachelor	4	20
Postgraduate	11	55
Relative income (based on parent responses)		
Very low	0	0
Low	1	5
Average	13	65
High	4	20
Very high	1	5
No answer	1	5
First language spoken in home		
Danish	20	100
Second language spoken in home		
German	1	5
French	1	5

Procedure

The children were tested separately in a secluded place at school. 17 of the children were tested by the author, and due to time restrictions three children were tested by a second master's student who had gone through the same training as the author. The session took about 30 minutes and consisted of the Danish version of the GT protocol with its original six prompts and six newly developed prompts, not part of the original protocol, six stories from the Happé Strange Stories (SS) task, the General Self-Efficacy (GSE) scale, and the Formulated Sentences (FS) subtask from CELF-4. Before data collection the parents had been asked to fill out a consent form, and all children provided verbal consent.

The Global TALES Protocol

The six prompts from the GT protocol were translated into Danish by Kristine Jensen de López, professor at Aalborg University, and were previously administered by the

author and the second tester as graduate students in Børnesprogklinikken at Aalborg University. In accordance with the protocol the child received an explanation of the task before beginning of the session and was asked to produce a story in response to each prompt individually: excited, worried, annoyed, proud, problem situation, and something important. The prompts were later followed by the six newly developed self-conscious prompts: envy, admiration, ashamed/embarrassed, feelings of guilt, jealousy, and gratefulness. Encouragement and follow-up prompts were provided in accordance with the protocol when needed. The protocol can be downloaded at: https://osf.io/ztqg6/.

The Happé Strange Stories Task

The SS task was included in the study to gain knowledge of the children's ToM abilities. The task was created by Francesca Happé to assess "… people with autism's ability to give context-appropriate mental state explanations for non-literal utterances" and consists of 24 short written vignettes (Happé, 1994, p. 131). The children were presented with six of these stories, which have previously been used in another study by Fletcher et al. (1995) investigating story comprehension and attribution of mental states. They consisted of four stories revolving mental states and two revolving physical states. The children's answers were rated for accuracy as zero, one, or two points for each story, two being the highest rating.

The General Self-Efficacy Scale

To get an indication of agency levels the children's perceived SE was rated using the GSE scale. The scale was developed by Schwarzer and Jerusalem (1995) and was translated into different languages and has shown acceptable reliability and evidence of validity (Scholz et al., 2002, p. 242). Mikkelsen and Einarsen (2002) translated the scale into Danish in a study investigating adults in a working environment (p. 397). As some wordings of the questions were anticipated to be less familiar to children of this age consequentially consistent explanations of the words were provided if needed. The scale consists of 10 statements to which the child rates how accurately the statement fits them from the answer options on a four-point likert-scale: *not at all true, barely true, moderately true,* or *exactly true* giving points from one to four in the mentioned order.

The Formulated Sentences Subtask

The FS task is a subtest from CELF-4, a standardised norm-based tool for assessing children. The task measures the child's ability to produce whole, semantically, and grammatically correct sentences containing a target word related to a specific picture. The task was included to investigate correlations between the children's expressive language abilities elicited by a standardised test and by the GT protocol. In accordance with the FS task the child was presented with the visual stimuli (a book of pictures) and was asked to formulate a sentence with the presented target word for each stimulus. Scoring was done by the author in accordance with the protocol providing raw scores.

Transcription and Analysis

All narratives elicited by the GT protocol were audio recorded for transcription and analysis purposes. The samples were transcribed by the author following the standards of the GT feasibility study meaning that "… reformulations, repetitions, false starts, and filler words (e.g. [uh and hmm]) were put in brackets and not included as part of the analysis" (Westerveld et al., 2022 p. 7). In accordance with the Westerveld et al. 2023 study, utterances that were not related to the narrative or were produced in response to examiner prompts that were inconsistent with the protocol were excluded. In order to analyse microstructure elements, the transcriptions were segmented into utterances based on communication units (C-units), which are defined as an independent clause with its modifiers (Miller et al., 2015, p. 36). This was done in accordance with Systematic Analysis of Language Transcripts (SALT) conventions. The transcription used symbols according to Málgreinir, a computer program developed to analyse microstructure. The microstructural measures were measures of language *productivity*: total number of utterances (TNU) and total number of words (TNW), *syntactic complexity*: mean length of utterances in words (MLU), *lexical diversity*: number of different words (NDW), and *grammar*: proportion of errors (PE).

The analysis of Evaluative Devices was inspired by the Westerveld et al. (2023) study including three out of the 12 ED types included in the study. The included ED's were all at word level consisting of emotional words (EMOT-w), intensifiers (INTENS), and mental words (MENT-w). For a further description see Westerveld et al. (2023, p.

6). EMOT-w, INTENS, and MENT-w were chosen due to their frequent occurrence in previous ED research and appearance in children's narratives (Westerveld et al., 2023; Peterson & McCabe, 1983).

To analyse differences between positive and negative emotions, the original six prompts from the GT protocol were grouped into positives: prompt 1 (happy/excited), prompt 4 (proud), prompt 6 (something important, and negatives: prompt 2 (worried/confused), prompt 3 (annoyed/angry), and prompt 5 (problem situation).

Reliability Process

5% of the transcriptions were independently looked through by the thesis supervisor and the author for segmentations of the microstructure and the ED analysis. There was almost 100% agreement, and any disagreements were solved before continuing the segmentation and analysis. Nine master's students in psychology verified consistency and correctness of the scoring of the SS task and the FS subtask. The GSE scale was scored by the author.

Statistical Analysis

All statistical calculations were carried out in IBM SPSS. For aesthetic purposes Excel was used to produce figures. As the study was a within-group design, the statistical analyses were carried out through *paired samples t-tests* and *bivariate correlation analysis*. *P* values are reported as Pearson's r two-tailed. The paired samples t-tests were conducted to analyse differences between positive and negative prompts and between the original six prompts and the self-conscious prompts. The bivariate correlation analyses were conducted for relations between the measures of microstructure and FS scores, microstructure and use of ED's, use of ED's and GSE scale scores, and use of ED's and SS task scores. Correlation coefficient values were interpreted via *Pearson's correlation coefficient* as: 0.1 - 0.29 indicating a small effect, 0.3 - 0.49 indicating a medium effect, and correlation coefficients above 0.5 indicating a large effect. The sample was also tested for outliers, looking at *skewness* and *kurtosis*, where one outlier was found and removed for the FS task.

Results

Results of the participants' performance on verbal productivity and semantic diversity are shown in Table 2 by TNU and TNW (quantity of speech), MLU (syntax), NDW (word diversity), and proportion of errors (grammar).

TNU ranged from 16 (P11) to 99 (P17) with a mean score of 47.3. 16 out of 20 participants (80%) were within +/- one SD from the mean using 27-64 utterances. Two participants (P2 and P11) were >1 SD below the mean and two participants (P1 and P17) were >1 SD above the mean. TNW ranged from 160 (P11) to 1330 (P17) with a mean score of 544.5. 16 out of 20 participants (80%) were within +/- one SD from the mean using 275-769 words. The same four children as the TNU measure were respectively >1 SD above and below the mean. The NDW ranged from 91 (P11) to 338 (P17) with a mean score of 187.55. 14 out of 20 participants (70%) were within +/- 1 SD from the mean using 128-249 different words. Three participants (P2, P11, and P16) were >1 SD below the mean and three participants (P1, P10, and P17) were >1 SD above the mean. The MLU ranged from 8.02 (P4) to 13.43 (P17) with a mean score of 11.31. 12 participants (60%) were within +/- 1 SD from the mean creating utterances between 9.82 (P16) to 12.51 (P14) in length. Three participants (P3, P4, and P19) were >1 SD below the mean and five participants (P7, P10, P12, P17, and P18) were >1 SD above the mean. The proportion of grammatical errors ranged from 0-1.38% indicating that the children were close and made few errors.

Table 2. Participants' performance on verbal productivity, first six prompts

Participant	TNU	MLU	TNW	NDW	Errors, %
1	89	11.99	1067	296	0.09
2	20	9.90	198	102	0.51
3	47	9.36	440	171	1.14
4	57	8.02	457	167	0.22
5	59	10.93	645	215	1.71
6	41	12.20	500	177	2.2
7	37	13.00	481	178	0.0
8	44	11.80	519	186	1.16
9	62	11.95	741	249	0.54
10	58	13.26	769	256	1.17
11	16	10.00	160	91	0.0
12	27	13.11	354	151	0.85
13	64	10.91	698	208	0.14
14	43	12.51	538	196	0.37

15	35	10.34	362	151	1.38
16	28	9.82	275	115	0.0
17	99	13.43	1330	338	0.23
18	48	13.15	631	219	0.32
19	43	9.07	390	157	0.51
20	29	11.55	335	128	0.6
Mean	47.3	11.32	544.5	187.55	
SD	21.08	1.59	283.15	62.84	
% of children +/- 1 SD from the mean	80	80	60	70	

Microstructure and Differences Between Prompts

To investigate differences within the prompts to see if some prompts elicited responses with more mature microstructure abilities Figure 1 (a, b, c, d) was created showing TNU and TNW for each prompt respectfully for the original and self-conscious prompts.

Figure 1. Box plot for total number of utterances and total number of words for the original GT and newly developed self-conscious prompts
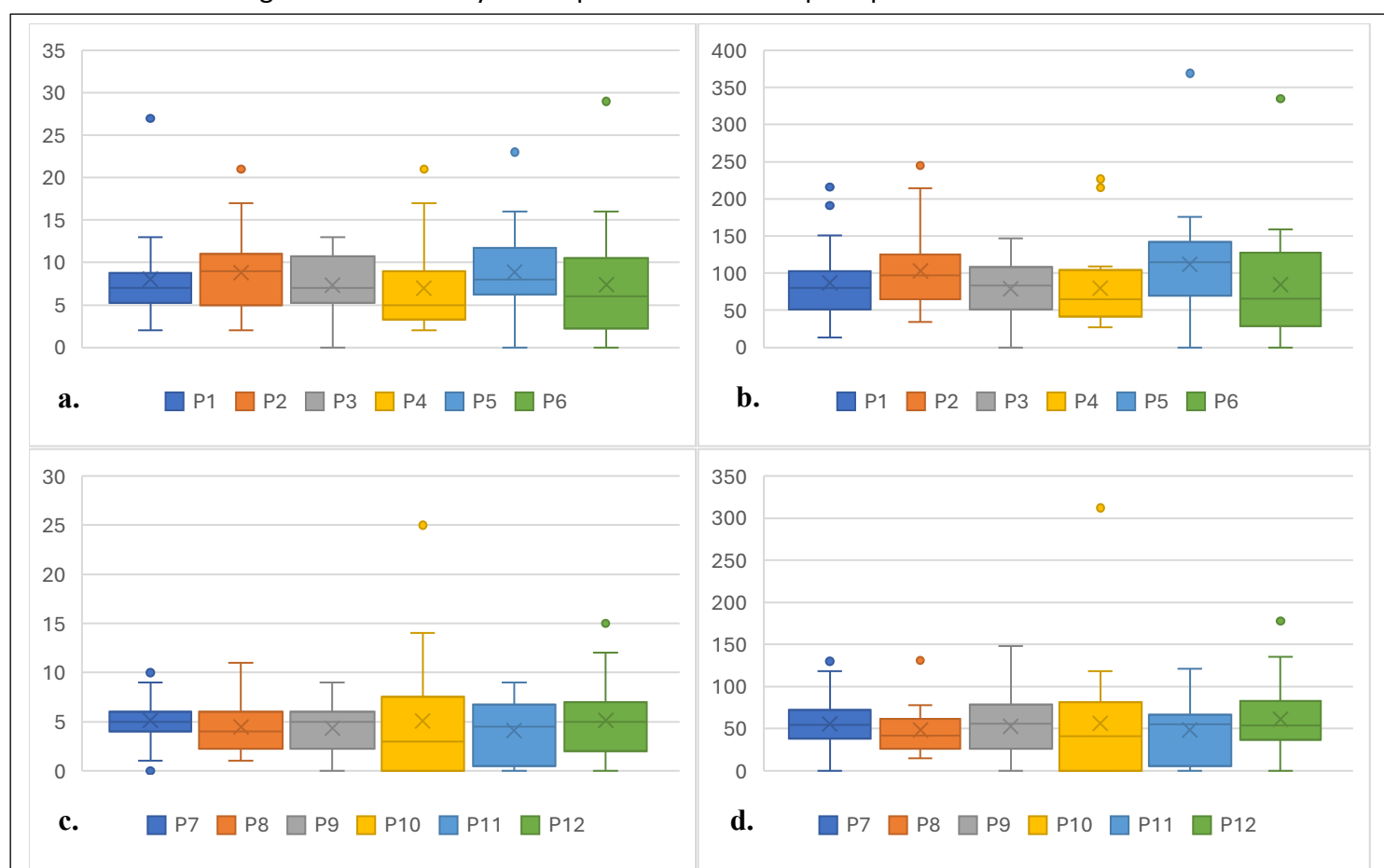
From top left: a. TNU original GT prompts, b. TNW original GT prompts, c. TNU self-con-
scious prompts, d. TNW self-conscious prompts. Each box plot displays the minimum, first
and third quartiles, median (the line), mean (the X), and the maximum for each prompt.

Inspection of the values for each prompt in figure 1a and 1b, the mean values on both
TNU and TNW for the first six prompts are quite similar ranging from 6.95 (Prompt
four) to 8.8 (Prompt two) for TNU and 78.95 (Prompt three) to 111.9 (Prompt five)
for TNW. The mean values for TNU and TNW for the last six prompts are also quite
similar ranging from 4.1 (Prompt 11) to 5.15 (Prompt 12) for TNU and 48.7 (Prompt
11) to 61.45 (Prompt 12) for TNW. This means that the individual differences meas-
ured by TNU and TNW for each prompt in the first six compared to the last six prompts
did not seem noticeable. The mean values for the original GT prompts indicated higher
scores than the self-conscious prompts. To test this difference a paired samples t-test
was performed.

Evaluative Devices and Differences Between Each Prompt

To investigate whether individual prompts elicited a greater use of ED's than others
the data was first analysed descriptively followed by inferential statistics, presented in
Figure 2.

Figure 2. Box plot for ED use for the original GT prompts
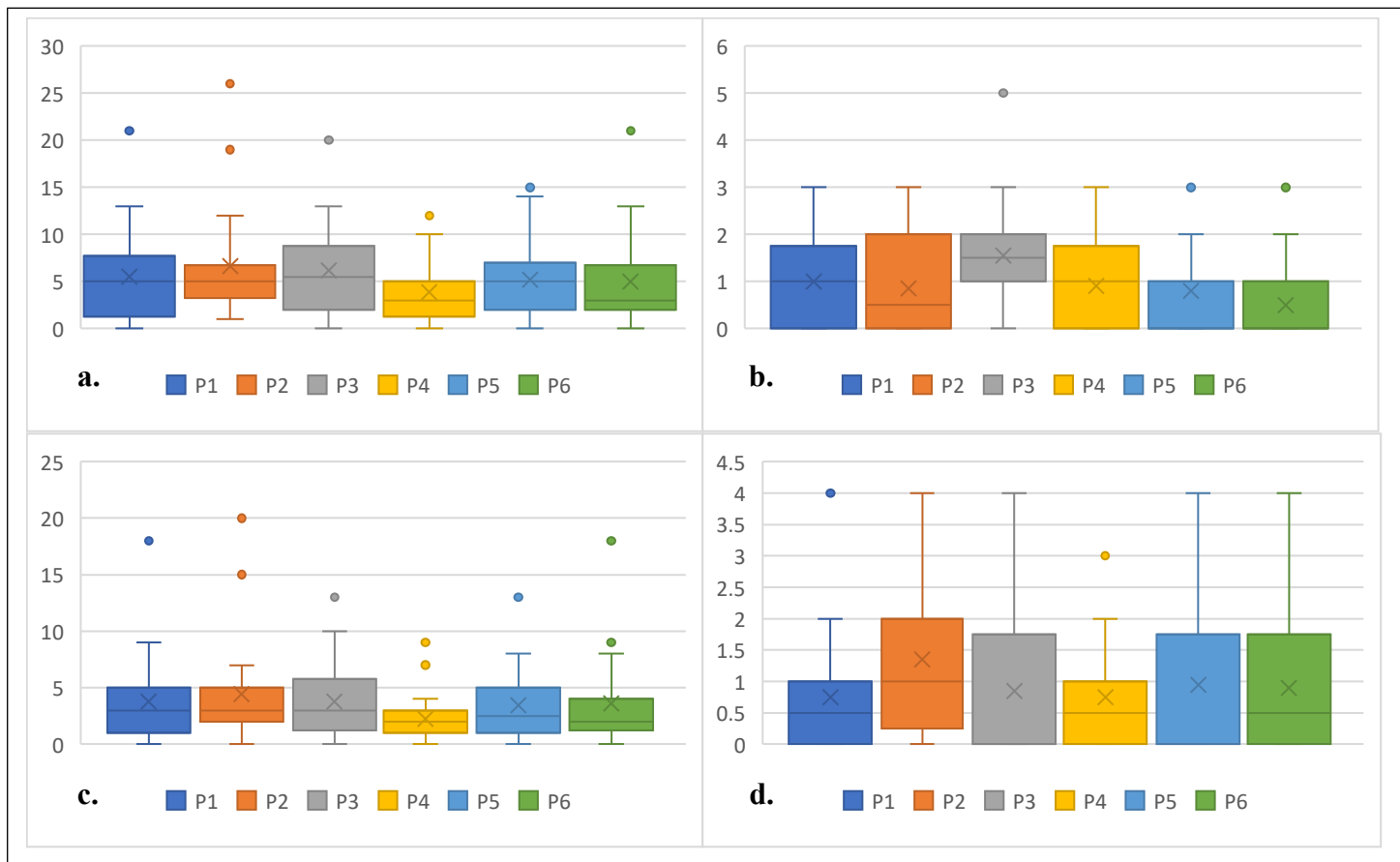
From top left: a. evaluative devices in total, b. emotional words, c. intensifiers, d. mental words. Each box plot displays the minimum, first and third quartiles, median (the line), mean (the X), and the maximum for each prompt.

Prompt 4 elicited the lowest use of ED total with a mean value of 3.9 compared to prompt 2 with a mean value of 6.65. Prompt 6 elicited the lowest use of EMOT-words with a mean value of 0.5 compared to prompt 3 with a mean value of 1.55. Prompt 4 elicited the lowest number of INTENS with a mean value of 2.25 compared to prompt 2 with a mean value of 4.45. Prompt 1 and prompt 4 elicited the lowest number of MENT-words with a mean value of 0.75 compared to prompt 2 with a mean value of 1.35.

Differences Between the Original GT Prompts and the Emotionally Self-Conscious Prompts

A paired samples t-test was conducted on the TNU, MLU, TNW, NDW, and all ED measures to investigate whether there was a difference in the children's

microstructural values and use of ED's between the original six prompts and the newly developed self-conscious prompts. Results are presented in Table 3.

Table 3. Paired samples t-test for differences between first and last six prompts on microstructure and ED's

	N	First six M (SD)	Last six M (SD)	P
TNU	20	47.30 (21.08)	28.40 (15.29)	<.001
MLU	20	11.31 (1.59)	11.47 (1.72)	.709
TNW	20	544.50 (283.15)	322.65 (193.29)	<.001
NDW	20	187.55 (62.85)	124.65 (54.77)	<.001
EMOT	20	5.60 (3.87)	4.55 (3.79)	.290
INTENS	20	21.25 (19.38)	12.05 (9.35)	.004
MENT	20	5.55 (3.75)	3.10 (3.02)	.014
ED total	20	32.40 (24.10)	19.70 (14.65)	.002

The paired-sampled t-test showed a statistically significant difference in TNU from the original first six prompts ($M = 47.30$, $SD = 21.08$) to the self-conscious last six prompts ($M = 28.40$, SD), $t(19) = 6.28$, $p < .001$. The mean difference in TNU was 18.9 with a 95% confidence interval ranging from 12.59 to 25.20. The eta squared statistic (.67) indicated a large effect size. TNW also showed a significant difference from the first six prompts ($M = 544.50$, $SD = 283.15$) to the last six prompts ($M = 322.65$, $SD = 193.29$), $t(19) = 6.02$, $p < .001$. The mean difference for TNW was 221.85 with a 95% confidence interval ranging from 144.68 to 299.02. The eta squared statistic (.66) indicated a large effect size. There was also a significant difference in NDW from the first six prompts ($M = 187.55$, $SD = 62.85$) to the last six prompts ($M = 124.65$, $SD = 54.77$), $t(19) = 7.14$, $p < .001$. The mean difference in mean scores was 62.9 with a 95% confidence interval ranging from 44.46 to 81.34. The eta squared statistic (.70) indicated a large effect size. Differences for the first and last six prompts for MLU were not statistically significant (First: $M = 11.31$, $SD = 1.59$; Last: $M = 11.47$, $SD = 1.72$), $t(19) = -0.37$, $p = .709$. The mean difference in scores was 0.16 with

a 95% confidence interval ranging from -0.99 to 0.69, indicating that there was no difference between the MLU scores. The eta squared statistic was (.01) indicating a small effect size.

To summarize differences for the first and last six prompts for the measures TNU, TNW, and NDW were all statistically significant with the original GT emotions eliciting more utterances, words and different words compared to the self-conscious emotions. The measure of MLU did not differ statistically between the two categories of emotions (first and last six emotions), meaning that the GT protocol and self-conscious emotions result in the same MLU.

For the ED's the paired samples t-test did not show a statistically significant difference in EMOT-words between the first six prompts (M = 5.60, SD = 3.87) and the last six prompts (M = 4.55, SD = 3.79), t(19) = 1.10, p = .290. The mean difference was 1.05 with a 95% confidence interval ranging from -.97 to 3.07. The eta squared statistic (.06) indicated a moderate effect size. INTENS-words did show a significant difference between the first six prompts (M = 21.25, SD = 19.38) and the last six prompts (M = 12.05, SD = 9.35), t(19) = 3.27, p = .004. The mean difference in INTENS-words was 9.2 with a 95% confidence interval ranging from 3.30 to 15.09. The eta squared statistic (.36) indicated a large effect size. There was also a significant difference in MENT-words between the first six prompts (M = 5.55, SD = 3.75) and the last six prompts (M = 3.10, SD = 3.02), t(19) = 2.70, p = .014. The mean difference in MENT-words was 2.45 with a 95% confidence interval ranging from .55 to 4.35. The eta squared statistic (.28) indicated a large effect size. Lastly, differences were present for total use of ED's with a statistically significant difference between the first six prompts (M = 32.40, SD = 24.10) and the last six prompts (M = 19.70, SD = 14.65), t(19) = 3.60, p = .002. The mean difference in ED total was 12.7 with a 95% confidence interval ranging from 5.31 to 20.09. The eta squared statistic (.41) indicated a large effect size.

Therefore, group differences were present for MENT, INTENS, and ED total with a statically significant difference between the first original six prompts and the emotionally self-conscious prompts. Differences in EMOT-words were not statistically significant.

Differences Between Positive and Negative Prompts

For the analysis of differences in children's microstructural values and use of ED's between the positive and negative prompts only the six original prompts were included, as negative emotions outnumbered positives on the last six prompts. Positive prompts included: prompt 1 (happy/excited), prompt 4 (proud), and prompt 6 (something important). Negative prompts included: prompt 2 (worried/confused), prompt 3 (annoyed/angry), and prompt 5 (problem situation). For the analysis two groups of three prompts were created. The data is based on the same sample, within-group, a paired samples t-test was conducted. Results are presented in Table 4.

Table 4. Paired samples t-test for positive and negative prompts on microstructure and ED's

	N	Positives M (SD)	Negatives M (SD)	p
TNU	20	22.35 (14.31)	24.95 (10.68)	.413
MLU	20	33.62 (7.54)	33.84 (8.51)	.914
TNW	20	250.30 (166.34)	294.15 (140.37)	.122
NDW	20	143.70 (66.89)	161.75 (58.83)	.127
EMOT	20	2.40 (1.98)	3.20 (2.28)	.065
INTENS	20	9.60 (9.61)	11.65 (10.6)	.133
MENT	20	2.40 (1.76)	3.15 (2.74)	.225
ED total	20	14.40 (11.68)	18.00 (13.67)	.062

Paired samples t-tests showed that differences between positive and negative prompts were not statistically significant for any of the microstructure measures or for the ED's.

TNU (Pos.: $M = 22.35$, $SD = 14.31$; Neg.: $M = 24.95$, $SD = 10.68$), t (19) = -0.83, $p = .413$. The mean difference in TNU scores was 2.6 with a 95% confidence interval ranging from -9.11 to 3.91. The eta squared statistic (.04) indicated a small effect size. MLU (Pos.: $M = 33.62$, $SD = 7.54$; Neg.: $M = 33.84$, $SD = 8.51$), t (19) = -0.11, $p = .914$. The mean difference in MLU scores was 0.22 with a 95% confidence interval ranging from -4.41 to 3.97. The eta squared statistic (<.01) indicated a small

effect size. TNW (Pos.: $M = 250.3$, $SD = 166.34$; Neg.: $M = 294.14$, $SD = 140.37$), t (19) = -1.62, p = .122. The mean difference in TNW scores was 43.85 with a 95% confidence interval ranging from -100.50 to 12.80. The eta squared statistic (.12) indicated a moderate effect size. NDW (Pos.: $M = 143.7$, $SD = 66.89$; Neg.: $M = 161.75$, $SD = 58.83$), t (19) = -1.59, p = .127. The mean difference in NDW scores was 18.05 with a 95% confidence interval ranging from -41.7 to .05. The eta squared statistic (.12) indicated a moderate effect size. EMOT-words (Pos.: $M = 2.40$, $SD = 1.98$; Neg.: $M = 3.20$, $SD = 2.28$), t (19) = -1.96, p = .065. The mean difference in EMOT scores was 0.8 with a 95% confidence interval ranging from -1.65 to 5.64. The eta squared statistic (.17) indicated a large effect size. INTENS-words (Pos.: $M = 9.60$, $SD = 9.61$; Neg.: $M = 11.65$, $SD = 10.6$), t (19) = -1.57, p = .133. The mean difference in INTENS scores was 2.05 with a 95% confidence interval ranging from -4.78 to 0.68. The eta squared statistic (.11) indicated a moderate effect size. MENT-words (Pos.: $M = 2.40$, $SD = 1.76$; Neg.: $M = 3.15$, $SD = 2.74$), t (19) = -1.25, p = .225. The mean difference in MENT scores was 0.8 with a 95% confidence interval ranging from -1.65 to 5.64. The eta squared statistic (.75) indicated a large effect size. Total number of EDs (Pos.: $M = 14.40$, $SD = 11.68$; Neg.: $M = 18$, $SD = 13.67$), t (19) = -1.99, p = .062. The mean difference in ED scores was 3.6 with a 95% confidence interval ranging from -7.39 to .19. The eta squared statistic (.17) indicated a large effect size.

Associations Between Language Performance on Microstructure and the Formulated

To investigate whether there was a relation between the children's language production on GT narratives (microstructure) and their scores on the standardised FS task correlation analyses were performed. Inspection of the data showed one outlier which was removed for this analysis. Results from the correlation analysis are presented in Table 5.

Table 5. Bivariate correlation analysis for microstructure, FS scores, ED's, the GSE scores, and the SS scores

	TNU	MLU	TNW	NDW	FS	EMOT	IN-TENS	MENT	ED total	GSE	SS
TNU	–	–	–	–	–	–	–	–	–	–	–
MLU	.29	–	–	–	–	–	–	–	–	–	–
TNW	.96**	.53*	–	–	–	–	–	–	–	–	–
NDW	.94**	.56*	.98**	–	–	–	–	–	–	–	–
CELF	.19	.66**	.35	.36	–	–	–	–	–	–	–
EMOT	.65**	.42	.69**	.77**	.32	–	–	–	–	–	–
INTENS	.73**	.37	.73**	.72**	.17	.72**	–	–	–	–	–
MENT	.51*	.37	.48*	.48*	.17	.25	.42	–	–	–	–
ED total	.77**	.40	.77**	.70**	.22	.78**	.99**	.53*	–	–	–
GSE	.51*	.24	.52*	.51*	.15	.47*	.36	.39	.43	–	–
SS	.53*	.05	.50*	.45*	-.16	.45*	.31	.24	.36	.33	–

*p <.05   **p <.01

All correlations were positive. The children's scores for the FS task showed a statistically insignificant small, positive correlation with TNU, $r(18) = .19$, $p = .44$, and an insignificantly medium, positive correlation with both TNW, $r(18) = .35$, $p = .141$ and NDW, $r(18) = .36$, $p = .126$. There was a statistically significant large correlation between FS and MLU, $r(18) = .66$, $p = .002$.

The correlation analysis therefore indicates that the children's scores on the FS task do not show correlations with other measures of microstructure than the MLU, which showed a significantly large correlation.

Correlations Between Use of Evaluative Devices and Microstructure

Correlation analyses were performed to investigate whether there were relations between measures of microstructure and use of ED's and are displayed in Table 5. All correlations were positive. As displayed in Table 5 EMOT-words displayed a large and very significant correlation with TNU, $r(18) = .65$, $p = .002$, TNW, $r(18) = .69$, $p < .001$, and NDW, $r(18) = .77$, $p < .001$. There was however only a medium and insignificant correlation between EMOT-words and MLU, $r(18) = .42$, $p = .62$. INTENS-words displayed a large and very significant correlation with TNU, $r(18) = .73$, $p < .001$, TNW, $r(18) = .73$, $p < .001$, and NDW, $r(18) = .72$, $p < .001$, and a medium and insignificant correlation with MLU, $r(18) = .37$, $p = .113$. MENT-words displayed a

large and significant correlation with TNU, $r(18) = .51$, $p = .023$, a medium and insignificant correlation with MLU, $r(18) = .37$, $p = .368$, and a medium and significant correlation with TNW, $r(18) = .48$, $p = .034$, and NDW, $r(18) = .48$, $p = .035$. ED total showed large and very significant correlations with TNU, $r(18) = .77$, $p < .001$, TNW, $r(18) = .77$, $p < .001$, and NDW, $r(18) = .70$, $p < .001$. Again, there was only a medium and insignificant correlation between NDW and MLU, $r(18) = .40$, $p = .084$.

Correlation analyses for the ED measures (EMOT, INTENS, MENT, ED total) therefore indicate large and significant correlations between the production of EMOT, INTENS, ED total and the production of number of utterances, words, and a greater use of different words. There was also a large and significant correlation between production of MENT and number of utterances, but not for MENT and any of the other measures of microstructure. MLU only showed medium and insignificant correlations with all ED measures.

Correlations Between Use of Evaluative Devices and the General Self-Efficacy Scale Scores and Strange Stories Scores

To investigate whether there were relations between use of ED's and both GSE scale scores and scores from the SS task correlation analyses were performed, also displayed in Table 5. All values were positive. The bivariate correlation analysis showed a statistically significant medium correlation between the children's GSE scores and EMOT-words, $r(18) = .47$, $p = .035$ and the children's SS scores and EMOT-words, $r(18) = .45$, $p = .045$. There was statistically insignificant medium correlations between GSE scores and INTENS-words, $r(18) = .36$, $p = .119$, MENT-words, $r(18) = .39$, $p = .94$, and ED total, $r(18) = .43$, $p = .061$. For the SS scores there was a statistically insignificant medium correlation with INTENS-words, $r(18) = .31$, $p = .189$ and ED total, $r(18) = .36$, and an insignificantly small correlation with MENT-words, $r(18) = .24$, $p = .312$.

Discussion

The current study investigated the use of the Global TALES protocol from a sample of 20 TD Danish-speaking children. The protocol successfully elicited stories from all children in line with previous GT research (Westerveld et al., 2022; Einarsdóttir &

Þráinsdóttir, 2023). The children's language abilities, in relation to the GT protocol, were compared to scores on the FS subtask from CELF-IV. Analyses of ED's were included to get an indication of the children's evaluative abilities, and to investigate whether there was a correlation between evaluative- and narrative (measured by microstructure) abilities. To get an indication of the children's ToM abilities and agency levels, the study also included the Happé SS task and the GSE scale. The results were analysed for potential relations between ToM abilities and agency levels compared to evaluative abilities.

Microstructure Abilities Produced in Global TALES

In line with other Global TALES studies the microstructural results for TNU, TNW, and NDW showed large individual varieties. The mean TNU score (47.3) for the Danish data was in line with countries from the GT feasibility study such as Israel (Arabic and Hebrew), Croatia, and Brazil. The minimum TNU for the Danish children was 16 which was in the lower end and lower than countries from the GT feasibility study where the minimum TNU ranged from 17 (Russia) to 35 (New Zealand). The maximum TNU in the current study was 99 which was also in the lower end compared to the feasibility study where the maximum TNU ranged from 71 (Israel, Arabic speaking) to 227 (Taiwan).

The mean TNW score (544.5) for the Danish data was very much in line with results from the Icelandic-speaking children where the TNW had a mean score of 546. For this measure the Danish sample was in the upper end compared to countries from the feasibility study, where the TNW ranged from 160 (USA) to 662 (Australia) (Westerveld, 2022, p. 10). Einarsdóttir and þráinsdóttir (2023) point out that it is interesting that children from the English-speaking countries were the ones who overall produced the lowest and the highest number of words. They suggest that the TNW therefore is not dependent on the language spoken (p. 8). It could be interesting to investigate differences within the Nordic countries, and more specifically Scandinavian countries, as these countries are geographically closer than the English-speaking countries also having a long history of shared culture and similar languages (Hilson, 2019).

The mean MLU and NDW were not reported in the GT feasibility study, and it was therefore not possible to make a comparison with the 10 included countries.

However, studies from Iceland (8.7), Ireland (8.6), and Turkey (4.52) did include results from the MLU measure (Lyons et al., 2023, p. 4; Einarsdóttir & þráinsdóttir, 2023, p. 8; Maviş & Yaşar-Gündüz, 2023, p. 7). The Danish children produced longer utterances (11.31) than children from the other countries. This makes sense as the Danish sample produced fewer utterances and used more words resulting in a higher syntactic complexity (measured by MLU) compared to other countries.

A comparison of the NDW measure was only possible between Denmark (187.55), Turkey (147.4), and Iceland (205.5) indicating that the Danish sample displayed an average use of vocabulary.

The proportion of grammatical errors were relatively low, which is in accordance with other GT studies (Westerveld, 2022; Einarsdóttir & þráinsdóttir, 2023). As the current sample consisted of TD children it may be expected that the proportion of grammatical errors would be low.

Differences in Prompts

The current study was also interested in differences between prompts and therefore investigated productivity differences between each prompt, differences between the original GT prompts and the emotionally self-conscious prompts, developed for the current study, and differences between positive and negative prompts.

The Individual Prompts

All 12 protocol prompts were successful at eliciting stories from the children. The first six prompts being successful in line with previous Global TALES studies (Westerveld et al., 2022; Einarsdóttir & þráinsdóttir, 2023; Lyons et al., 2023). The fact that the newly developed prompts for self-conscious emotions were successful indicates that they could be potential complementary candidates for the GT protocol, while more research would be needed in usability across different ages and languages. Previous GT studies did not find any significant differences between the original six prompts, and since there did not seem to be any noticeable differences within the original six prompts, according to figure 1a., b. and 2a., b., in the current study (including both microstructure and ED's), it is seemingly in line with previous GT studies (Westerveld, et al. 2022, p. 11; Westerveld et al., 2023, p. 9). The pattern was the same for the self-conscious prompts (not including ED's), according to figure 1c., d., where differences

between the prompts also did not seem noticeable. This indicates that the compared prompts were equally usable for eliciting narratives.

A total of five narratives were missing from the results of the first six prompts as a few children did not provide narratives to all prompts. This resulted in a total 115 out of 120 possible narratives (20 children x six prompts = 120). The last six newly developed prompts were affected by a greater number (18) of missing narratives. This resulted in the last six prompts eliciting a total of 102 out of 120 possible narratives.

Differences Between the Original GT Prompts and the Emotionally Self-Conscious Prompts

The 18 missing narratives from the self-conscious prompts were also reflected in the differences between the prompts of the self-conscious emotions and the basic emotions. The measures TNU, TNW, and NDW all showed significantly large effect sizes, meaning that there was a difference between the two types of emotions on these measures, where production of the self-conscious emotions was significantly lower. It is interesting that the MLU showed an insignificant and small effect size, meaning that the MLU was similar across self-conscious and basic emotions. The use of ED's also showed large effect sizes with the children using significantly more ED's in the first six prompts. This was the case for all ED's apart from EMOT-words, which only showed an insignificant and moderate effect size.

Developmentally, a better understanding of the more complex self-conscious emotions and the fact that they can comprise different kinds of emotions occurs around the age of eight to nine (Berk, 2014, p. 416). It is however interesting that the results of TNU, TNW, and NDW measures for this sample of 10-year-olds show large differences between the basic and self-conscious emotions. This difference could be due to a number of reasons. Perhaps the understanding of the self-conscious emotions is not fully developed around this age, which makes it harder to: first, identify autobiographic memories containing these emotions and second, put these memories into words. As the self-conscious emotions also involve injury and/or enhancement of our sense of self, it could be that feelings such as envy, shame/embarrassment, guilt, and jealousy, which can involve injury to the self, were harder to talk about because of the fact that children around this age are more self-conscious and did not want to put themselves in an

uncomfortable position (Berk, 2014, p. 419). Another possibility for this discrepancy, which could be due to methodology, is that the children were presented with the first six prompts (the basic prompts) at the beginning of the session and followed by the last six prompts as the third activity of the session. This could have resulted in a fatigue effect where the children got tired of performing the same repeated activity (Egleston et al., 2011, p. 1). This could have been prevented by counterbalancing the order of the two sets of prompts.

It could be interesting to conduct another analysis, where the use of ED's were calculated proportionally for use per utterance to see if this would give different results in which the large differences in microstructure would not have an impact.

Differences Between Positive and Negative Prompts

The paired samples t-test comparing positive and negative prompts did not show statistical significance for ED's and microstructural measures. The effect sizes for microstructure varied from small to moderate. This indicates that there was no difference between positive and negative prompts.

The results for TNU, TNW, and MLU correspond to results from previous GT research with children of the same age speaking Croatian (Kraljević et al., 2023, pp. 11-13). A study by Kraljević et al. (2023) did show differences between positive and negative prompts on the NDW measure, where the children displayed a greater lexical diversity when talking about positive experiences (p. 12). Looking at the mean values descriptively for the current results, the negatives seemingly induced a higher TNW and NDW production, meaning that the children produced a greater number of words and showed a greater lexical diversity on negative prompts. However, this difference only showed a moderate effect, and was not great enough to be significant. This contradicts the results of the Kraljević et al. study (2023), showing greater NDW with positive experiences (p. 12). Previous research, based on personal narratives, investigating differences in language use between positive and negative emotions/experiences did find differences favoring negatives (Chen et al., 2012, p. 667; Fivush et al., 2003, p. 16; Reese et al., 2011, p. 430). Chen et al. (2012) explain that these differences could be due to negative experiences evoking more psychological, cognitive, and emotional activity, therefore eliciting greater language use (p. 669).

For the ED measures the effect sizes varied from moderate to large. This could indicate differences between positive and negative prompts, favouring negatives, but that the sample was too small to show any significance. However, a study by Peterson and Biggs (2001) showed that anger arousing experiences of children aged three to eight years prompted higher use of emotional words than happy experiences (p. 815). Similarly, Fivush et al. (2008) found negative experiences to prompt a higher use of mental state language, explaining this difference as negative events containing a problem–solution situation where mental state language is needed to clarify the experience to the listener (p. 590). This is also in accordance with the tendencies of the current study. Peterson and Biggs also included intensifiers in their study but did however not report their use of frequency making results difficult to compare with the Danish sample.

Relations Between Microstructural Measures and Performance on the Formulated Sentences Task

The only significant and large correlation between the FS task and the measures of microstructure was MLU. Since the FS task is a standardised measure for productive language, it may be expected that all measures of microstructure would correlate, as high productions for these measures would indicate a rich language use and therefore better language abilities. TNU and TNW are measures of quantity of speech, and it would therefore have been expected that these measures would correlate with scores of productive language (the FS task). The lack of correlation could indicate that the FS task and the spontaneous language samples are measures of different language abilities at this age or different constructs of language production. This is important information when raising the question of how language abilities should be measured, and hence which tools should be used in clinical assessment of children with language disabilities. The results point in the direction of previous research stressing the importance of not only using standardised testing when assessing language abilities, but also supplementing with spontaneous language tools (Thordardottir et al., 2010; Yonovitz & Andrews, 1995; Fulcher-Rood et al., 2018). Some researchers' argument that standardised norm-based testing show issues related to specificity and sensitivity and that they do not provide information about the child's learning abilities or ways to facilitate their language performance (Gutiérrez-Clellen & Peña, 2001, p. 217). This is important information for speech language therapists when choosing an intervention method, so

that the children can "… meet the academic standards for vocabulary learning that are expected of them at school" (McGregor et al., 2021, p. 4).

Evaluative Devices and Microstructure

The correlation analysis showed significantly large correlations between EMOT, INTENS, ED total and all measures of microstructure apart from MLU. MENT only showed a large and significant relation to TNU, and significantly medium correlations with TNW and NDW. This indicated that there is a relation between ED's and TNU, TNW, and NDW, meaning that the children scoring high on the three latter mentioned measures are also more evaluative in their language. Research, investigating children from ages three to 12 years, has found that use of ED's increases with age concurrently with increased language abilities (Bamberg & Damrad-Frye, 1991; Peterson & Biggs, 2002; Fivush et al., 2003, p. 16), and that the ability to use ED's in narrative discourse entails certain levels of linguistic proficiency and socio-cognitive skills, which are both areas that develop drastically from middle to late childhood (Drijbooms et al., 2016, p. 781; Beck et al., 2012, p. 505).

Self-Efficacy Beliefs and Evaluative Devices

The correlation analysis showed mixed results between GSE scores and ED use. A significant medium correlation was found between GSE scores and EMOT-words as the strongest and only significant correlation. Out of all ED types, it is not surprising that EMOT-words displayed the strongest correlation as emotion-descriptive language is a core component of SE. Research indicate that children who are competent users of emotion-descriptive language also are more socially efficacious than children with averagely developed emotional language (Beck et al., 2012, p. 503). SE and agency play roles in regulating, controlling, and understanding thoughts, feelings, and actions, and ED's are important for meaning making and evaluating and expressing thoughts and feelings (Westerveld et al., 2023, p. 2; Scholz et al., 2002, p. 1; Berk, 2014, p. 18). Therefore, a relation between SE beliefs (agency) and ED use was expected. As the correlation analysis did not show clear signs of correlations it could be that: i. there is no relation between SE beliefs and evaluative competencies, ii. the GSE scale was not a proper tool for encapsulating agency, iii. SE beliefs were not accurate representations of agency, iv. many children produced responses reflecting a ceiling effect.

Mentalization Abilities and Evaluative Devices

The correlation analysis also showed mixed results between SS scores and ED use. This was a bit surprising as the SS task is acknowledged as a measure of ToM, and since ToM abilities makes it possible for the narrator to be aware of both their own and the listeners thoughts, feelings, and beliefs, and use of ED's makes it possible to express these thoughts, feelings, beliefs, and also meaningfulness of a narrative, a relation between these two measures was expected. There was a relation between EMOT-words and SS scores, but not for the other ED measures. As ToM is a term for mentalization abilities, it was especially surprising that there was no relation between SS scores and use of MENT-words. The lack of correlation could also be due to the design of the study. Due to time restrictions only six stories from the SS task and three out of 12 ED types were included in the study. Future research should include more SS stories and more different types of ED's to make a clear inference.

Limits and Future Research

The children from the current study came from well-educated, high-income families. This, including a relatively small sample, makes results less generalisable. All children were from the same school, which also makes for less generalisable results. However, this makes for a homogenous group, controlling for contextual conditions, making it easier to identify outliers and avoids confounders. Another limit of the study is the order in which the children were presented with the different assignments. This was especially in relation to the emotionally self-conscious prompts as they were introduced as the third assignment for all children, which could have resulted in a fatigue effect, where the children got tired of doing the same activity. The lack of correlation between ED's and SE beliefs could be due to the GSE scale not being an age-appropriate measure for SE beliefs in addition to the ceiling effect. The lacking correlation between use of ED's and the SS scores could be due to the relatively small sample of SS stories (6). In relation to the correlation analysis (especially for the FS task) it is important to note that the current study consisted of TD children, and that correlations possibly could look different for children with language difficulties such as DLD. Future research should investigate differences between spontaneous language samples and standardised language measures.

Conclusion

Personal narratives make up 50% of children's daily conversations and are important for a successful development. They affect social-, emotional-, cognitive-, and linguistic skills which in time has an impact on education and career opportunities. The current study investigated the use of the Global TALES protocol for eliciting personal narratives and investigating language abilities in a sample of 20 TD 10-year-old Danish-speaking children. The results indicate that the protocol was successful at eliciting personal narratives from the current sample, and that the narratives can be used to assess different areas of language abilities. Individual variability on the microstructural measures was high and results were comparable to previous research, which is in line with other GT studies. Results from previous GT studies indicate differences in language abilities across language and culture. There were significantly large differences between the original GT prompts and the newly developed emotionally self-conscious prompts, which were also successful at eliciting narratives. The children were more evaluative when talking about emotionally negative experiences and children who were more evaluative also displayed better quantity of speech and lexical diversity. There was no association between the children's scores on the FS task and microstructure apart from MLU. This is important information when considering how language abilities should be measured and evaluated, as this seems to indicate that spontaneous language samples and the FS task measure similar abilities, but only on MLU. Future research, specifically clinical research, should focus on this difference. There only was a relation between use of EMOT-words and both SE beliefs and SS scores.

Future research should include larger participant groups from different geographical locations and social classes in Denmark to get a more diverse and representative sample. Next step could also be to investigate children with language difficulties. With further research and developed norms, the Global TALES protocol could be a potentially important tool when assessing children's language abilities.

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Closing Section

After having analysed the children's linguistic competencies and social understanding, the project moves on to a different method of analysing personal narratives: positioning theory. The following section should be read as a new perspective on the analysis of children's personal narratives. An overview of how children's narratives have been investigated will be presented followed by Michael Bamberg's theory on identity construction in personal narratives. This constitutes the background knowledge for an analysis of the personal narratives told by the sample of 10-year-old Danish-speaking children included in this study in relation to the Global TALES protocol.

A short account of narrative history

In 1968 Labov and Waletzky published a pioneering study investigating personal narratives of non-standard English-speakers. They proposed that narratives comprise of two elements: a *referential* function and an *evaluative* function. The referential element of the narrative refers to the telling of the experience in the *temporal sequence* that it happened, and information related to the listener. The evaluative element is information about what the event meant to the narrator and/or contains information about the narrator (Labov & Waletzky, 1997, p. 4; Lyons & Roulstone, 2018, p. 18). According to Labov and Waletzky a narrative comprises of minimum two temporarily ordered, independent clauses, and is comprised by "an abstract, orientation, complicating action, resolution, and coda" (Lyons & Roulstone, 2018, p. 18). Since then, there has been a rise in the interest and research of personal narratives, also called the *narrative turn* in social sciences. In the early 80's the understanding of 'life as narrative' emerged, wherein the human life is seen as a story, and therefore the *self* and meaning making as existing and being constructed in a past, present, and future (Glintborg & de la Mata, 2021, p. 1). Within this turn Jerome S. Bruner was a central figure. According to Bruner we make sense of ourselves, the world, and other people by telling stories ('stories' and 'narratives' often used intertwined). Narratives therefore also contain elements of the self indicating the narrator's identity (Glintborg & de la Mata, 2021, pp. 1-2).

Within this view of stories being at the core of human experience, two main approaches to narrative have occurred: *big stories* and *small stories*. Big stories can be accounts

of full lives wherein events are related to an overall life story. Small stories concern particular events and are widely used in daily conversation (Lyons & Roulstone, 2018, p. 18). According to big story theorists, such as Dan P. McAdams (2015), people make meaning by creating their life story and thereby identity (p. 262). When taking part in social interactions and people are being asked to tell something about themselves, they share parts of this life story to create a picture of themselves. Small stories theorists, such as Michael Bamberg, are interested in the function of narratives and how they are used in social settings to create an understanding of who the narrator is –identity construction. Bamberg and Georgakopolou (2008) mention that narratives are situated, and that the narrator uses them to position identity (2008, p. 379).

Therefore, the personal narrative always has a function in the ongoing interaction where the narrator uses the narrative to construct a sense of self. This construction should not be understood as a single act, but as a process in which the narrator in each new narrative is being offered a chance to represent themselves in a new way (Keller-Cohen & Dyer, 1997, p. 150). Labov and Waletzky (1997) mention that this is part of why people tell narratives, which they defined as a "…stimulus in the social context in which the narrative occurs" (p. 4) as part of their analysis on evaluation. The narrator makes choices throughout the telling of how they want to be perceived. This self is therefore constructed for this particular context (Keller-Cohen & Dyer, 1997, p. 150).

Identity Construction

Bruner mentions that the self is constructed via transactions and discourse and describes the terms *outer knowledge* and *inner knowledge* (Jensen de López & Lyons, 2021, p. 105). Outer knowledge concerns statements from other people and is knowledge of other's selves. To understand the selves of others, one must, to some degree, rely on knowledge about our own inner self (inner knowledge). Bruner (1997) also mentions that we model what we observe in others in our own selves (p. 147). The construction of self (or identity) is therefore also a social process, wherein the individual models what is socially acceptable.

Within this telling of the self and the construction of identity and how we want others to perceive us, an essential term is *agency*. According to Bruner (1997) "agency indicators refer to acts of free choice, to voluntary actions, and to initiatives freely

undertaken in pursuit of a goal. They are legion, ranging from signs of mere hesitation to expression of intentions" (p. 149). In the process of choosing which identities to present (via personal narratives) the narrator makes active choices –thereby displaying agency. Bamberg mentions that we can view the individual in passive ways or as an active agent constructing their own identity (Lyons & Roulstone, 2017, p. 505). Furthermore, Bamberg agrees with the view that identity is constructed in the interaction with others, and that agency takes place in a person to world and world to person direction of fit (Bamberg & Dege, 2021, p. 33). This discursive approach emphasises identity as a constructive process rather than a person simply *having* identity. Identity emerges throughout life and is formed by social contexts. Therefore, identity is also reconstructive and changeable throughout the life span (McAdams, 2015, p. 262).

Within this type of approach to narrative, the aim is to contribute to a reconceptualization of the "identity dilemma": that is, that we are clinging on to the illusion of staying or actually being the same, though we are at the same time constantly changing. In other words, we seem to gain our sense of constancy by way of continuously changing (Bamberg & Georgakopoulou, 2008). According to Bamberg, individuals are facing three dilemmas in the identity formation process: "(i) a successful diachronic navigation between constancy and change, (ii) the establishment of a synchronic connection between sameness and difference (between self and other), and (iii) the management of agency between the double-arrow of a person-to-world versus a world-to-person direction of fit" (2011, p. 3).

Positioning Theory

In an attempt to link the approach of Labov and Waletzky, and what language is about (how events are sequentially ordered and evaluative), with the approach of how "…people attend to one another in interactional settings…" (Bamberg, 1997, p. 336), Bamberg developed his *positioning theory* wherein *dominant discourses* and *master narratives* are part of an analysis of how speakers describe people (including themselves) and their actions in specific ways, making descriptive choices and thereby performing discursive actions which results in or display identity (Glintborg, 2019, pp. 16-17). Narrators pick a position among those available in the current interaction, making positions resources that become repertoires when practiced (Bamberg, 2011, p. 3).

This aligns with the small stories approach as it takes place in everyday encounters throughout the person's life, which Polkinghorne calls *micro processes* where change and consistency work together. The identity process therefore takes place in situated practices via small stories (Glintborg, 2019, p. 17).

Bamberg's three levels of positioning consist of (i) "How are the characters positioned in relation to one another within the reported events?", (ii) "How does the speaker position him- or herself to the audience?", and (iii) "How do narrators position themselves to themselves?" (Bamberg, 1997, 337).

The first level concerns how the characters in the story are constructed and what the story is about. This is for example via use of roles, so to speak, such as the protagonist and antagonist or the perpetrator and victim. The function is to find out which kinds of linguistic means the narrator uses to point out or establish the 1. agent of the story, who is the one in control of the happenings or 2. the main character, who does not display agency and who is merely the victim of happenings in the outside world or who is perhaps a strong character achieving a reward. At this level the characters are related to space and time, which gives us an indication of how the narrator views the world (Bamberg, 2004, p. 366; Bamberg, 1997, 337).

The second level focus on the interactive work between the participants in the narrative/interactive setting. Here the question lies with the function of the story in the ongoing interaction –how does the narrator want to be understood? The use of the talk is what results in identity, which is what makes up the analysis on this level.

The third level looks at how the narrator positions a sense of self/identity by having constructed characters and the content of the story on level one and how the narrator wants to be understood in their way of talking to the listener(s) in the current interaction on level two. Level three goes beyond the current telling and interaction by the narrator creating an answer to the 'who am I?' question. The answer to this question creates a sense of continuity and an understanding of the narrator, from the listeners perspective, that can, but not necessarily, go across contexts. This is what makes the storytelling discursive. That it is not necessarily just a here-and-now understanding, but a creation and sharing of self and its positioning within cultural discourses (Bamberg, 2004, pp. 336-337; Bamberg, 1997, p. 337; Glintborg & Krogh, 2016, p. 53).

Bamberg mentions that the analysis of positioning is a linguistic analysis, where linguistics should be understood as performance features used by the narrator to provide an understanding of them as a person. Therefore, both syntactic constructions and pragmatic organisation are at play in the analysis of positioning. The syntactic constructions are linguistic strategies, i.e. how the sentence is constructed. The pragmatic organisation takes place in the discursive purpose of the narrative, i.e. the reason why the narrative is told (Bamberg, 1997, p. 338).

Objectives

Having investigated the usability of the GT protocol when assessing linguistic competencies and social understanding of this sample of children in the article section the following analysis will use the positioning analysis to investigate the psychological constructs: identity and agency. Despite Bamberg's positioning theory having been clearly defined in research from Bamberg himself and other researchers, it seems that few studies have applied the positioning analysis to narrative accounts –this especially being the case with children. In an article by Bamberg (1997) he applies the analysis for two very short narratives, from a then ongoing study, of two children aged six years and concluded that the third positioning level was not applicable (pp. 337-338). Another study by Bamberg (2004) investigated positioning between adolescent boys, aged 12-15 years, in an interactive group setting. The following analysis was interested to see whether the positioning analysis was applicable for personal narratives produced individually by 10-year-old typically developed (TD) children elicited by the Global TALES (GT) protocol. Furthermore, the aim was to investigate whether the analysis could indicate agency levels in the children's narratives. Lastly, as the article section has focused on differences between the prompts, the current analysis was also interested to see whether there were differences between the GT prompts by some prompts eliciting higher levels of agency than others. The analysis should be understood as an introductory feasibility study to explore whether the positioning and agency analysis is applicable and is therefore a stepping stone in the usability of the positioning analysis.

Method

The following methodological section will concern how the positioning and agency analysis was conducted.

Each narrative was analysed individually for each child based on the previously mentioned positioning levels presented by Michael Bamberg (1997): (i) "How are the characters positioned in relation to one another within the reported events?", (ii) "How does the speaker position him- or herself to the audience?", and (iii) "How do narrators position themselves to themselves?" (p. 337). The analysis therefore followed the three positioning levels starting at level one, moving on to level two, and ending at level three where all levels came together resulting in an answer to the identity question: Who am I? (i.e. how does the listener understand the narrator?). The agency analysis departed from Bruner's (1997) outline of agency as "agency indicators refer to acts of free choice, to voluntary actions, and to initiatives freely undertaken in pursuit of a goal. They are legion, ranging from signs of mere hesitation to expression of intentions" (p. 149). Agency levels exist on a continuum and therefore the narratives were first categorised into the following five groups: 1) not answered, 2) story not analysable for agency levels, 3) no agency/low levels agency, 4) some level of agency, and 5) minimum one element of high agency levels.

Analysis

Results from the categorisation showed that 82 out of 120 narratives contained at least one element of agency (see Table A). Based on these results all narratives within categories three till five were analysable for the different levels of positioning theory.

In the following sections two narratives will be analysed as examples of how the positioning and agency analysis was conducted. Utterances from the narrators will be elaborated, looking into how the narrators have employed these syntactic constructions (i.e. linguistic strategies) and how they are organised by the pragmatic purposes of the stories.

Example 1

When asked to produce a narrative about "a time you felt annoyed or angry" a 10-year-old girl gave the following narrative:

> 1. Yeah actually Agnete (a girl from her class at school) she has sometimes annoyed me a lot and actually also made me a bit sad sometimes
>
> 2. But she has done that to practically everyone because she has a big temper
>
> 3. But she is also aware of it herself and really tries to work on it a lot
>
> 4. And she's gotten better too
>
> 5. But right then I felt really angry and also a little bit scared because I was afraid to do something completely wrong all the time

If we then start out on the first level (How are the characters positioned in relation to one another within the reported events?), analysing the narrators use of linguistics to position the characters in relation to each other, we can see what the story is about and how the narrator constructs the characters involved. The narrator talks about Agnete and how she has made the narrator sad/scared/angry. In the first unit the narrator constructs Agnete as the protagonist, who has annoyed and made the narrator sad. In the second unit the narrator emphasises this protagonist role by saying: "she has done that to practically everyone". In the third unit we see that Agnete is not just the protagonist of the story, she also tries to do better as she is "aware of it" and "tries to work on it a lot". The listener is therefore left with the impression that Agnete could be a person with a big temper and/or upsets a lot of people, but that she is still a good person, who tries to do better. In the fifth bit the narrator constructs herself as the victim by saying that she "felt *really* angry" and afraid "to do something *completely* wrong *all the time*". The way that the narrator has constructed herself and Agnete leaves a sense of empathy for the narrator, the *I*, and an alignment against Agnete, the *other*.

For the second level (How does the speaker position him- or herself to the audience?), analysing how the speaker positions herself to the audience, we will look at what the function of the story is and how the narrator wants to be understood by her use of talk. The narrator justifies her description of Agnete as the protagonist, and as someone who has annoyed and made her sad in the second unit: "she has done that to *practically everyone*". This sentence therefore does not only have the function of emphasising

Agnetes role, but also it is a justification by linguistically using the "*practically eve-ryone*" saying *I am not the only one who has experienced this.* In the third unit the narrator both excuses Agnetes behaviour, but also how the narrator just pictured her. It could be that the girl feels bad for talking ill about Agnete, and by excusing Agnetes behaviour the narrator also excuses her own behaviour (talking bad about Agnete). In the fifth unit the narrator says "but *right then* I felt…" emphasising to the audience that *I am not usually like this, but just then I was.*

For the third level (How do narrators position themselves to themselves?), analysing how the narrator positions herself to herself, we will look at how the analysis from level one and two comes together to answer the self/identity question: Who am I? This is how the narrator throughout the narrative has created a sense of continuity and un-derstanding of her as a person – i.e. how we as the audience understand her. As already established, the narrator excuses Agnete's behaviour and how the narrator just pictured her. In the fifth unit when saying: "*But right then* I felt…" the narrator is creating a self-awareness and understanding of herself as she was in the past and in the present by implicitly saying that *today I understand Agnete, but RIGHT THEN I felt this way.* Who is this girl then? The narrator goes from being a victim in the story to being 'the bigger person'. She feels bad for Agnete and is trying to be considerate of her. My conclusion is therefore that the narrator is a considerate person.

As for the agency analysis, the narrator goes from being the victim of the story dis-playing no agency, to seemingly being quite reflective of the experience displaying affection for Agnete despite having been annoyed by her. Therefore, the narrator dis-plays some degree of agency.

When asked to produce a narrative about "a time you felt proud" a 10-year-old girl gave the following narrative:

1. It was actually not too long ago
2. Last time I was at swimming lessons with my mom
3. We attend family swimming lessons in (name of city) together
4. We had done lots of fun games
5. Then it was free play where we jumped off diving boards

6. And I wasn't bold enough to jump from the third (three meters tall)

7. Then I went up to have a look

8. Then I went back down again and back to my mom

9. And she said Linda you'll climb three meters higher up in the air when you're climbing trees

10. And now you're going to go back up and jump in

11. And then I did it

12. And I was so proud of myself afterwards

As for the first level, the story is about the girl not having the courage to jump from the high jumping board until she gets encouragement from her mom leaving the girl with a feeling of pride after having done it. The girl constructs the story as being quite blissful mentioning that her and her mom does swimming lessons together, and that they had just done lots of fun games. In unit five, she is implicitly saying *then it was time to jump off the diving boards* hereby also creating a mood emphasised by the "I wasn't bold enough". In bit nine her mom is constructed as the helper providing the narrator with reason and the courage to overcome her fear.

For the second level, diving into the function of the story, the narrator builds a description of herself that changes throughout the story. In unit six she says that she was not bold enough to jump off, followed by unit seven and eight where she says: "then I went up to have a look, then I went back down again". Hereby saying that she tried to see if she could do it, but it was too high, and she went back to her mom for safety. She is met by her mom with encouragement in unit nine, but also a sense of *it is silly that you are afraid of this when you usually climb much higher*. This is followed by almost a commandment in unit 10, when the mom says "…now you're going to go back up and jump in". This sentence by itself seems harsh, as the girl has just provided the audience with the description of herself as being afraid, thereby having instilled a sense of sympathy in the audience. It does however lead the girl to jump off in the end. Ubit 12: "and then I did it" seems to follow the, *it was easy I just did it,* leaving her feeling proud of herself.

Having constructed this build-up of the girl not having the courage to jump off the jumping board, going up to check, going back down again, and then ending up doing

it in the end also leaves the audience with the sense that *she should be proud*. The semantic (temporal) organisation of the narrative therefore works as a build up to the girl overcoming her fear and feeling proud in the end. Therefore, I have chosen to describe her as a person who can overcome her fear and/or a brave person.

The development of agency throughout the story goes from the narrator being afraid and not going through with what she set out to do, displaying a lack of agency, but in the end choosing to do it anyway overcoming her fear and thereby displaying high levels of agency. The girl does receive some help to overcome this fear, but nevertheless, she could have chosen not to go through with it anyway.

The positioning and agency analysis resulted in Table A for an overview.

Table A. The positioning and agency analysis

16	17	18	19	20
Getting a new dog	Taking part in gymnastics event	Trip to fun park	Family trip	Family trip
Dead pet	Injury	A resourceful person	Moving	Helpless, impotent
Sibling banter	Sibling banter	An emphatic person	The bigger person	N/A
Good at sports	Persistent person	Overcomes fear, bravery	Good at sports	Overcomes fear, bravery
Good at reasoning	Takes care of others	Calculated	N/A	N/A
Good at sports	Attended funeral of family member	Appreciation of *big sibling* role	Persistent person	Surprised by own abilities

7	8	9	10	11	12	13	14	15
Spending time with friend	Birthday	Appreciates family memories	Trip to fun park	First day of school	Birthday	Birth of cousin	Over whelmed by emotions	Trip to fun park
Helpless	Does not like when things are out of the ordinary	Self-reflective, in touch with own emotions	Victim, helpless	Injury	Helpless, impotent	Anxious about cigarettes and smoke	Feels left behind	Helpless, impotent
Bantering with sibling	Sibling banter, asks adults for help	Forced against will	Victim, helpless	Sibling banter	Sibling banter	Solution oriented	Sibling banter	Sibling banter
Does good for others	Persistent person	Overcomes fear, bravery	Appreciation of *big sibling* role	Good at sports	Intelligent	Good at sports	Skills ad mired by others	Persistent person
A resourceful person	Seeks adult help	A resourceful person	Gets to see old friends	Seeks adult help	A peer conflict	Does not want to appear as someone who lies	Helps others	Inventive person
Open to challenges	Likes approval	Chose to say goodbye to dead family member	Makes own decision	Sibling changes school	N/A	N/A	Took part in competition	Learned new skill

Prompt	1	2	3	4	5	6
1	Birthday	Leisure activities	Family trip	Birthday	Taking part in big event	Family trip
2	Feeling of helplessness, wants to help mom	School trip	Helpless	Helpless	Feels left behind	Family trip
3	Considerate person	Sibling banter	Forced against will	Injustice, helpless, impotent	The better-knowing big sister	Unfairly treated
4	Fast learner (in sports)	Takes care of others	Good at sports	Learned new skill	Intelligent, better knowing	Good at sports, Surprised by own abilities
5	Sense of justice, conflict resolver, the mediator	Takes care of others	Independent	Helps others	Conflict resolver, the mediator	Feels lost, helpless, impotent
6	A well-liked person	Did well at school	Surprised by own abilities	Event with soccer team	Intelligent, better knowing	Passionate about football

N/A = Not Answered, White = Did not contain enough information to fit the analysis, Red = Low/No agency, Yellow = Agency to some degree, Green = Agency

Levels of Agency Distributed Across the Global TALES Prompts

When constructing Table A it became clear that there were differences between the prompts in relation to agency levels. Therefore, Figure A. was created to investigate these differences, and whether some prompts elicited stories with higher agency levels than others. The six prompts tended to vary regarding how successful they were at eliciting narratives containing agency.

As displayed in Figure A for the full data sample narratives elicited with prompt 1 (happy/excited) only contained one narrative where agency was present to some degree, meaning that 19 narratives did not contain any indication of agency or were not

applicable for this analysis. Prompt 2 (worried/confused) and prompt 3 (annoyed/angry) mostly contained low levels of agency or agency to some degree.

Figure A. Agency levels for each prompt
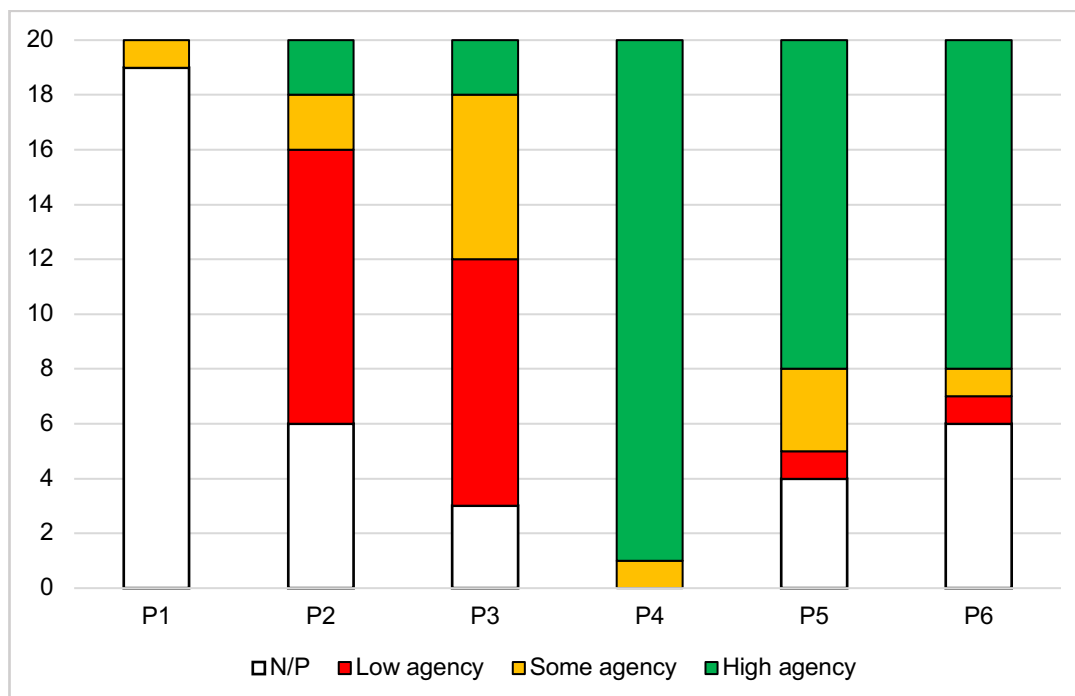
N/P = Not present

Prompt 4 (pride) contained 19 narratives of high agency and only one with some level of agency. This means that the current sample of children produced narratives of high agency when talking about a feeling of pride. This was followed by Prompt 5 (problem situation) and prompt 6 (something important) which also proved to be successful in eliciting narratives containing high agency.

When combining the analysis of agency and positioning it became clear, that when talking about emotionally happy or exited events, the children mostly produced narratives that did not contain any sense of positioning. As seen in Table A four narratives were about the children's birthdays. When looking further into these narratives it became evident that the narratives mostly contained a depiction of what happened on the day of their birthdays assigning themselves the feeling of being excited/happy therefore ending the positioning analysis on level one. The same pattern was present for family trips and the other assigned categories in Table A. Most narratives elicited by the excited/happy prompt did not provide linguistic and pragmatic content aligning

with the first level of the positioning analysis. The narratives not containing positioning above level one also did not contain any agency.

For the remaining narratives all three positioning levels were present making it possible to answer the 'who am I' question. However, as mentioned earlier, they varied in agency levels. When telling narratives elicited by worried/confused or annoyed/angry, many narratives contained a sense of helplessness, injustice, and being forced against will. Prompts of being worried/confused and annoyed/angry therefore seem to elicit narratives of low agency levels.

On the other hand, narratives elicited by pride, problem situation, and something important all contained high levels of agency. These narratives often involved the children taking action (e.g. resolving conflicts, taking care of others), overcoming obstacles, and their abilities. In these events the children displayed control (or taking control) of their surroundings, the happenings in the story, or reflections on the event often displayed as the protagonist, hero, or helper. Prompts of pride, problem situation, and something important therefore seem to elicit high agency narratives.

All three positioning levels must therefore be present in the narrative to make a clear interpretation, while agency levels differ.

Levels of Agency for the Individual Children

To investigate whether there were individual differences between the children the data was analysed displaying agency levels for each individual child (see Figure B). For this analysis a point system was created, where no-low agency was assigned zero points, some level of agency was assigned one point, and a high level of agency was assigned two points. The points were added together for all six stories for each child with a maximum possible score of 18 points.

Figure B. Agency levels for the individual children
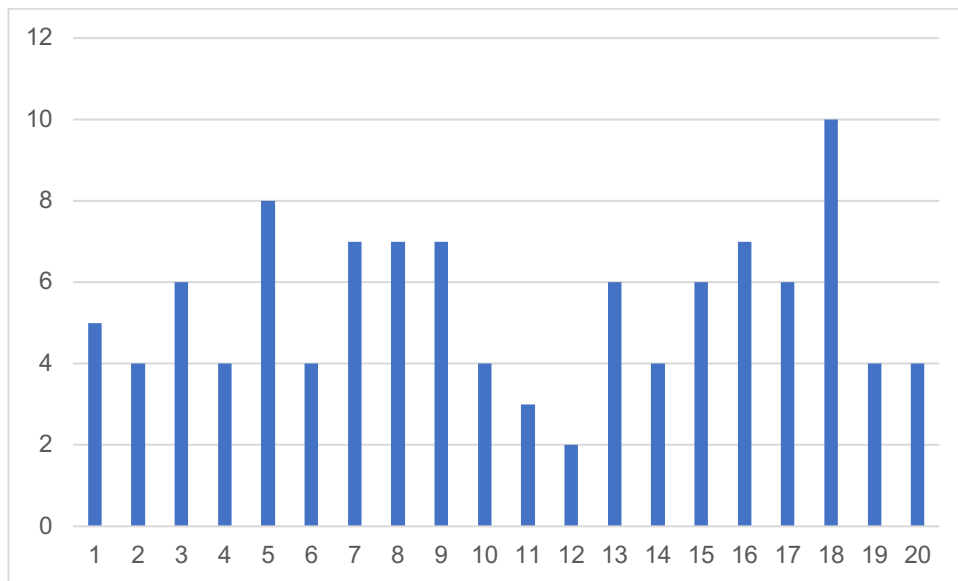
As displayed in Figure B individual differences were present ranging from two points to 10 points. It is important to note that overall, there were five missing values as child number 12, 13, and 19 were missing one narrative and child number 20 were missing two narratives affecting their agency levels.

Discussion

Why do some Prompts Elicit Higher Agency than Others?

It is interesting that the agency levels differed in relation to the different prompts. This is especially because Figure 1 in the article section did not display big variations between the original GT prompts measured by TNU and TNW. This indicates that despite the prompts not seemingly eliciting linguistic differences, they do elicit pragmatic differences.

As mentioned, the happy/excited narratives only included one narrative displaying some level of agency. To indicate a sense of identity, Bamberg's theory argues that there must be a sense of positioning going on in the narrative or between the narrator and the audience. As the narratives elicited by the happy/excited prompt did not contain information above the first level of the positioning analysis, they were not fit for this type of analysis, and did not indicate agency. This indicates that higher levels of positioning have to be present to indicate agency levels.

In response to the annoyed/angry prompt, the narratives were often related to the children experiencing barriers or inequality caused by others –especially by their parents and siblings. The sense of helplessness, injustice, and being forced against will in relation to the worried/confused or annoyed/angry prompts, may in some sense seem expected as the children talked about events where they did not have control of their surroundings or happenings in the story often displaying themselves in the role of the victim without autonomy or as a bystander unable to take action. These prompts therefore seem to naturally elicit stories of low agency.

As mentioned earlier, Fivush et al. (2008) explain that narratives containing problem-solution situations contained more mental state language to clarify the experiences to the listener (p. 590). Perhaps there could be a relation between the need for clarifying experiences and actions to the listener and higher levels of agency. Furthermore, the problem situation, pride, and something important narratives involved the children taking action (e.g. resolving conflicts, taking care of others), overcoming obstacles, and their personal and physical abilities. As the children displayed a sense of control, these experiences could seem to naturally evoke a sense of agency.

The prompts therefore seem to be biased in their ability to display agency and evoke positioning. If the positioning and agency analysis are to be used in clinical practice prompts such as problem situation, pride, and something important seem to be most efficient and best fit for this use. As time and resources are often limited in clinical practice a prioritisation of some prompts could be an option.

The Individual Differences in Agency Levels

As Figure B displayed individual differences between the children's levels of agency this indicates that the agency analysis can be used to differentiate between the children and provide an indication of agency levels. Since the GSE scale seemed to indicate a ceiling effect in the children's SE scores, as investigated in the article section, the current agency analysis could provide a better indication for levels of agency. The agency analysis could be a potentially valid tool for usage in clinical practice. As agency, as previously mentioned, refers to acts of free choice and that we actively construct our own identity (Lyons & Roulstone, 2017, p. 505), it could be interesting to investigate relations between agency levels and children's well-being. A sense of identity is

important for development, and it could be hypothesised that children with low agency levels would have a harder time constructing a clear identity and sense of self making them susceptible to lower life quality. Therefore, the current analysis could be a possible future assessment tool in clinical practice for indicating children's well-being.

Bamberg (1997) mentions that the positioning analysis is both a linguistic and pragmatic analysis, as the narratives are made up of syntactic constructions and pragmatic organisation (p. 338). It is therefore difficult to conclude what caused these differences between the children. Language competencies and social understanding develops in tandem. A study by Botting (2002) investigated the usability of narratives as a tool for studying differences and similarities between children with speech and language impairment (SLI), pragmatic language impairment (PLI), and autism spectrum disorder (ASD). They found that the children displayed the same kinds of difficulties when constructing narratives, but that it was due to underdeveloped socio-cognitive abilities for children with PLI and due to underdeveloped linguistic abilities for children with SLI (pp. 14+16). The study also underlines the importance of focusing on different areas of language. As personal narratives make up half of children's conversations underdeveloped language abilities can affect the development of both social and cognitive areas (Vogindroukas et al., 2020, p. 3). The current study focused on TD children meaning that both their pragmatic and linguistic abilities were well developed, giving all children equal opportunities to produce narratives. The analysis would therefore need further testing with a wider set of children and clinical groups to investigate and differentiate between these areas to indicate reliability and validity.

Age and Identity

Identity development takes place throughout the whole life, but around the age of 10, when adolescence starts, children start to become aware of their developing identity and start settling on personal values and goals (Berk, 2014, p. 469). Despite the children most likely not being completely aware of their identity at the age of 10, it was possible to use the positioning analysis to indicate identity. Many children talked about their personal achievements or academic and athletic abilities providing an understanding of who they are (e.g. someone who is considerate of others or good at sports). As mentioned earlier, the narrator displays agency, being an active agent, in the process of choosing which identity to present (Lyons & Roulstone, 2017, p. 505). This was

also present for the current analysis, as it was possible to apply an analysis of agency when a construction of identity was present.

Creating a coherent sense of self (identity) connects the self in the past, present, and future, providing the individual with a sense of well-being and understanding of the self through time, one's values, and goals. According to Berk (2014), children around the age of 11 start to establish autonomy from the family (p. 6). As responses to the annoyed/angry prompt often revolved experiences of barriers to independency or inequality, the children have most likely begun developing a sense of autonomy at this age and any threat to this experience of autonomy and independence is a threat to them as people as it jeopardizes a part of their identity. As a 10-year-old the children are balancing the developing autonomy and the role of being a child with the adults (e.g. parents and teachers) still being in charge.

Narratives are important for the development of self-understanding and can contain information regarding children's self-concept and personhood. Therefore, narratives do not only represent a here-and-now picture of the child's development but can possibly indicate cornerstones of their future pathways to adult personality in line with the view that the self is constructed in a past, present, and future (Ely et al., 1998, pp. 259-260; Glintborg & de la Mata, 2021, p. 1). Humans tend to remember events that have some sort of personal meaning, and these autobiographic memories are often retold through life (Ely et al., 1998, pp. 259-260). As mentioned earlier, according to Bamberg, narratives are told in social contexts creating an understanding of who the narrator is and are therefore never just told at random (Bamberg & Georgakopolou, 2008, p. 379). Future studies should focus on this identity and agency development throughout the life to identify more precisely at what age these positioning levels start to be expressed and their developmental pathways. This information may be seen as an important tool in clinical practice with children that are struggling regarding identity and agency.

Regarding the usability of the positioning theory the current study indicates that the positioning levels are present, at least to some degree, at the age of 10. Bamberg's (1997) own positioning analysis, as mentioned earlier, did not seem to successfully identify a presence of positioning levels two and three from the narratives of two six-

year-olds (p. 337). Perhaps the autonomy and identity development around the age of 10-11 years is important for the positioning ability. As linguistic and pragmatic abilities develop in tandem, this could also indicate that children at the age of 10 have developed better linguistic abilities compared to children aged six making it easier for the children in the current study to present positioning at level two and three. A study by Kraljević et al. (2023) investigated age differences in language abilities using the GT protocol and found a significant improvement in lexical diversity (NDW), syntactic complexity (MLU), and coherence of the personal stories from ages seven to 13 years (p. 8). It could be interesting to conduct a longitudinal study with a group of children to investigate the development of positioning and agency across age.

Limits and Future Research

The positioning analysis was conducted by the help of the supervisor of the project, who made an independent positioning analysis. The positioning analysis was therefore made independently by two researchers. Results were compared and high levels of similarities were reached. It was not possible to acquire reliability, as the analysis was a back-and-forth process reflecting the novelty of the method. For this, statistics are needed. Future studies should also focus on reliability of the GT protocol, as this has not been investigated yet.

Agency levels were analysed by the author indicating a consistent procedure. Seemingly, the analysis was quite straight-forward and not too time-consuming once agreement on the analysis method had been reached. This makes for a usable method in clinical practices when collecting children's personal narratives from the GT protocol. A short presentation from the author was presented at a GT meeting explaining the procedure, which received positive feedback. The usability of the method would need further investigation gathering information from other researchers or speech-language pathologists/therapists. Furthermore, a protocol is needed explaining the procedure for this analysis to be used in practice.

Information is also needed to investigate validity of the protocol –for both the positioning analysis and the GT protocol. Bamberg (1997) mentions that the positioning analysis is also a linguistic analysis, where the narrator uses linguistics to provide an

understanding of them as a person, making syntactic constructions and pragmatic organisation part of the positioning analysis (p. 338). Assessment of language competencies and pragmatics are therefore important to investigate as they occur as a whole. Since the protocol elicits spontaneous language samples it is seemingly an ecologically valid way of capturing language compared to other methods of story retelling or picture books. However, the correlation analysis of the current study only showed a correlation between the FS task and MLU, indicating that the standardised FS task and microstructure are measures of different areas of language (maybe apart from MLU). A Delphi study by Bishop et al. (2016) reached consensus that standardised tests should be interpreted cautiously and complimented by other measures of language (p. 11). Future studies should compare different ways of language elicitation to conclude the most optimal method for language assessment.

GT is an international initiative focusing on many different languages. The study by Westerveld et al. (2022) found differences in different languages across countries, but also found differences in similar languages across countries (the English-speaking countries: Australia, New Zealand, and USA). Future studies should focus on cultural differences and how they affect language use and agency development.

Conclusion

The aim of the project was to investigate the usability of the GT protocol for assessment of language abilities in a group of TD 10-year-old Danish-speaking children. The project focused on two overall analyses: the children's language abilities, in the article section, and whether children's identity and agency levels could be identified through the positioning analysis, in the closing section. Individual variability on the microstructural measures was high, and the children's microstructural abilities were overall relatively average compared to other countries. The positioning analysis was applicable and identified agency levels. Results of the project has shown that the GT protocol is a multifaceted tool able to provide information on both language abilities and psychological aspects such as identity and agency. This is highly usable in clinical practice as the protocol with few resources can elicit personal narratives which can be assessed and provide information on several aspects that can complement standardised testing. As the protocol has proved to successfully elicit language samples across different

languages and cultures it could also be an international tool enabling comparisons of results across countries and cultures. Future research should explore the usability of the positioning analysis further and investigate how the GT protocol can be used to assess language abilities for clinical groups. As the correlation analysis between the FS task and microstructure only showed a correlation between FS scores and MLU further research is needed on which aspects of language that the standardised tests and microstructure assess. This proves the importance of assessing language abilities via a composition of standardised norm based testing and spontaneous language. Overall, the GT protocol was successful at eliciting personal narratives from this sample of Danish-speaking children making analysis of positioning and different areas of language possible.

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* *Texts used in the article*

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