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Contrast is the Name of the Game

Contrast-Based Semi-Structured Elicitation Techniques for Studies on Children's Language Acquisition

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Abstract

This paper discusses a series of so-called “elicitation” games that encourage children to talk in a situation that is as natural and relaxed as possible. Such games have played a central role in language teaching and speech therapy, where they have been employed to provide language training or to assess children’s linguistic development without putting them under stress. Recently, such games have become more widely used in language acquisition research. Here they are employed to obtain rich sets of language production data from children who are too young to take part in controlled experiments on language production. Moreover, they can be used in longitudinal studies where children are recorded over longer periods of time and might develop strategies in experiments. Most of these elicitation games target a specific construction or domain of grammar and so language teachers, speech therapists and researchers spend a lot of their time developing new games for each individual construction they would like to elicit from children. As this can be very time-consuming, there is a demand for games that can be adapted to a broad range of phenomena and situations (for instance, situations with one or several players). In this paper, I will present three such games, which might be useful for acquisition researchers, language teachers and speech therapists: the Bag Task, the Picture-Pairing Task and the Puzzle Task. In addition, I will discuss the advantages and disadvantages of using such games in a research context.

1. Spontaneous Speech Sampling, Production Experiments and Semi-Structured Elicitation

Language professionals involved in teaching and speech therapy have always used language games to encourage children to talk in a situation that is as natural and relaxed as possible, and recently, such games have become more widely used in language acquisition studies with young children. In this paper, I will present three games and discuss how they can be employed in a research context. Any game that encourages children to talk or to use particular constructions, word forms or words is potentially useful for language teaching or therapy – and many parents have expressed an interest in such games as well. Hence, the following description and discussion of the games will be targeted at a wider audience and remain non-technical.

Studies on children's language production employ a wide variety of methods (Behrens 2008, Eisenbeiß 2006, *subm.*, Menn & Bernstein Ratner 2000, McDaniel et al. 1996, Wei and Moyer 2008). Until quite recently, most researchers mainly relied on two basic types of data collection methods: the first type of method is spontaneous speech sampling, where children are audio/video-recorded in everyday situations (e.g. free play, dinner table conversation, picture book reading,...). The second type of method are production experiments with standardised procedures and carefully designed stimulus materials. A third method, which is comparatively recent and will be the focus of this paper, is semi-structured elicitation. Here, the communicative situation is as natural as possible, but games, pictures, videos, etc. are used to encourage the production of rich and comparable samples of spoken speech. For instance, studies on children's acquisition of adjectives such as *red* or *small* have used elicitation "games" with differently coloured and sized objects that encourage the use of colour and size adjectives (Eisenbeiß et al. 1994, Eisenbeiß 2003). In the following, I will briefly discuss how these methods can complement one another and how semi-structured elicitation techniques can contribute to research on first language acquisition.

Recording spontaneous speech in everyday situations is an ideal starting point for any study on children's speech production:

- Spontaneous speech sampling does not require prior in-depth knowledge of the respective language to create stimulus materials.
- Naturalistic data have a „high ecological validity“: the researcher’s interference is limited to the recording of the learner’s speech – often without the learner even being aware of it. Thus, it is unlikely that learners develop particular response strategies – not even in longitudinal studies where they are recorded over longer periods of time.
- Spontaneous speech recordings do not involve any particular task demands and can hence be obtained from any learner, independently of age, cognitive and linguistic ability.
- Spontaneous speech recordings where children interact with their regular conversation partners (parents, siblings, etc.) also show us how often particular words, grammatical markers, or constructions appear in the child’s own speech and in the speech the child hears in everyday situations.
- Spontaneous speech data can be analysed and re-analysed with respect to a broad range of phenomena. That is, once recorded, spontaneous speech samples can form a data source for many projects and purposes.

However, recording spontaneous speech has some disadvantages:

- Spontaneous speech samples do not provide a sufficient data base for studying words, grammatical markers or constructions that are not used very often in everyday speech.
- When one always records children in the same, comparatively unchallenging everyday situations, it is easy to underestimate their linguistic abilities. In such situations, it is perfectly appropriate for children to use the same words and simple constructions over and over again – even when they are in principle able to produce far more complex constructions and different words.
- On the other hand, it is often not easy to determine whether the utterances that children produce in spontaneous speech are really productive – i.e. whether they reflect the child’s grammar or simply something that they have memorised without understanding it completely. Many utterances that appear in spontaneous speech samples have appeared in children’s input – either in the same form or in

slightly modified form. For instance, it is difficult to say whether utterances such as *That's a ball* and *That's a cat* are based on adult-like grammatical representations – or on a structure like *that's-a-X* that may contain parts that have been memorised as a unit.

- In naturalistic studies, the researcher's interference is very limited. Hence, it is not possible to systematically manipulate and investigate variables that might affect children's speech production (e.g. the type of construction or the length of sentences).

Researchers who want to systematically manipulate some variables and control for the effects of others, can choose from an increasing range of experiments with standardised procedures, carefully designed stimuli and a limited range of response options (see Eisenbeiß subm., Menn & Bernstein Ratner 2000, McDaniel et al. 1996, Wei and Moyer 2008).

In the simplest case, learners are given a prompt to produce a particular form or construction. For instance, in a study on negated utterances, learners could be told: *I'll say something and then you say the opposite*. And in a study on noun plurals, learners could be given sentences to complete, e.g. *This is a door. These are two ...?* In such production experiments, some researchers use novel words to ensure that children's responses cannot be based on memorised forms or utterances from their input. For instance, in her seminal study, Berko (1958) investigated whether and how learners use their grammatical knowledge to produce new word forms: children of different age groups were shown pictures of made-up creatures and asked to produce inflected word forms of novel words (e.g. *This is a wug. These are two ...?*). Such experiments have some advantages over spontaneous speech data:

- Experiments allow researchers to study words, grammatical markers or constructions that are quite rare in everyday conversations.
- Children's productive language use can be investigated better than in naturalistic studies as children can be asked to produce forms that they have never or hardly ever heard in their input. The use of standardized procedures helps to avoid accidentally providing learners with linguistic models or feedback that might influence their behaviour.

- Variables that might influence children's speech production can be investigated systematically (e.g. sentence length or the frequency of words or grammatical markers).

Thus, controlled production experiments can supplement naturalistic studies. However, they cannot completely replace them as they have some disadvantages:

- Experiments involve specific task demands; for instance, memorising new words or pictures that have to be described. Due to these task demands, children might perform less well than in naturalistic studies. Hence, one can underestimate their linguistic knowledge.
- Children might develop strategies to respond to particular tasks, in particular in longitudinal studies in which children are recorded more than once. Then, the results of the experiment would reflect the use of these strategies, and not children's linguistic knowledge or processing capacities.
- Due to the task demands of controlled production experiments, they are typically only appropriate for children who are at least 3 years old.
- As experiments do not reflect children's everyday input and use of language, they do not provide any information about the frequency of particular forms and constructions in their input and in their own speech production.
- Experiments are targeted to the study of a particular phenomenon and the resulting responses are quite limited (typically individual words or utterances). Thus, data from experiments can usually not be analysed for phenomena outside the range of the original study.

Researchers sometimes want to study phenomena that are acquired before the age of three, but do not appear very frequently in children's everyday speech. For instance, children typically start producing adjectives such as *red* and noun plurals such as *cars* long before their third birthday, but they do not use these forms often enough to allow researchers to carry out a reliable and detailed analysis of their acquisition. In this situation, semi-structured elicitation techniques can encourage speech production in a naturalistic – and often game-like - setting. Many of these techniques can be used to obtain data for low-frequency phenomena from children as young as 1;6. They can supplement naturalistic speech samples as they create contexts for the respective

grammatical constructions without introducing task demands that are too high for young children or lead to training or strategy effects in longitudinal studies. However, as semi-structured elicitation does not provide representative input or frequency data, it cannot replace naturalistic sampling. Rather, elicitation techniques should be used in conjunction with naturalistic speech samples so that one can determine how frequent the construction or form under investigation occurs in everyday speech. Moreover, such a combination of spontaneous and elicited production data allows us to determine whether the use of elicitation techniques leads to task-based errors or strategies (see e.g. Eisenbeiß (2003) for discussion). If this is not the case, elicitation techniques can be used in individual recordings or in longitudinal studies. There they can help us to collect richer and more varied data sets that can be analysed for a broad range of phenomena – not just for the phenomenon under study.

Moreover, elicitation games encourage children to talk in a situation that is as natural and relaxed as possible. Hence, such games can play a crucial role in language teaching and speech therapy; where they can be used to provide language training or to assess children's linguistic development without putting them under stress.

2. Types of Semi-Structured Elicitation Techniques

With respects to the target of elicitation, three basic types of semi-structured elicitation techniques can be distinguished: *Broad-spectrum techniques* are not targeted to particular words or constructions. Rather, they are used to obtain rich speech samples that allow researchers to compare speakers with different ages, and linguistic or cultural backgrounds. Some of these tasks involve stimuli that encourage participants to describe displays of events or objects. One of the best known broad-spectrum elicitation tools in child language research is the so-called Frog story book (Mayer 1969), a picture book without words that shows the story of a boy who finds a frog and takes him home as a pet (see Berman and Slobin 1994 for an overview of studies involving the frog-story book). Other tasks involve shared activities, for instance the Bag Task that we will describe below.

Meaning-focused elicitation techniques target a particular semantic domain where different constructions are used within the same language or across languages. For instance, the “cut-and-break” video stimulus consists of individual short video clips that

are used to elicit descriptions of “separation and material destruction” events (e.g. cutting, breaking, ripping apart; see Bohnemeyer, Bowerman and Brown (2001)). And Eisenbeiß and McGregor (1999) have created a picture book in which actions that affect body parts are depicted and participants are asked to describe these actions (*the cat hits the dog on the nose, the dog sprays water on the girl’s legs,...*).

Form-focused elicitation techniques target specific forms or constructions – typically ones that do not occur very frequently in everyday speech. For instance, games with (pictures of) objects in different colours and sizes have been used to elicit noun phrases with adjectives, e.g. *the small red balloon, the big red balloon, or the big blue balloon* (Eisenbeiß et al. 1994).

While we can look at the targets of semi-structured elicitation techniques to distinguish between broad-spectrum, meaning-focused and form-focused techniques, one can also look at the types of communicative settings to distinguish different elicitation techniques. In all of these settings, one has to give children a reason to talk, to encode a particular meaning or to use a particular form. This can be achieved in different ways: In *speaker/listener-tasks*, children are asked to provide information for someone who obviously does not have access to this information. For instance, one can ask children to describe a past event, or a picture or video that they have just seen to someone who was not present at the time. Note, however, that this involves some memorisation and is not very effective for children under the age of two or three as they often do not remember the event, picture or video or get distracted very easily.

In *director-matcher tasks*, the speaker does not simply pass on information to a passive listener, but “directs” the “matchers” in such a way that the matcher can actively recreate a display of toys or objects, find a particular object in a set of objects or follow the director’s instructions. For instance, in some of the “space games” developed by members of the Max-Planck-Institute for Psycholinguistics, Nijmegen, matchers have to follow route descriptions through toy landscapes (Senft 2007). Just like speaker/listener-tasks, these types of task are also typically not appropriate for very young learners who tend to simply point or find the task frustrating as they are often not able to direct the matcher very well.

For very young children, it is therefore typically better to use *co-player tasks* in which players have to exchange information and coordinate actions to achieve goals, either in everyday activities such as cooking or in games. In the following, we will present three co-player tasks that have been successfully employed with two-year old children and sometimes even with children that were slightly younger and just beginning to string words together. The Bag Task is a broad-spectrum elicitation technique and the Picture-Pairing Task is typically used as a form-focused elicitation technique. The Puzzle Task can be used both as a form- focused and as a meaning-focused technique. Moreover, it could be used as a broad-spectrum task if a broad and diverse range of pictures is used.

3. The Use of Contrasts in Semi-Structured Elicitation

Elicitation techniques aim at getting speakers to mention particular aspects of events, e.g. locations, directions, actions, manners of motions, event participants, objects, object properties. Speakers of all ages are more likely to describe these aspects of events when they are contrasted with others. For instance, one can create a game with a set of objects that are similar and only differ with respect to their colours and sizes (e.g. a small red balloon, a big red balloon, and a big blue balloon). Then, children will have to mention the colour or size when they want to get the listener to hand over a specific object from this set, producing noun phrases with adjectives in which an article is required as well (e.g. *give me the big red balloon*). Then, one can investigate whether children actually produce the article or omit it, as often observed in young children. Moreover, in languages like German, where adjectives carry gender, case and number endings, one can analyse children's use of these endings.

Such elicitation techniques for noun phrases with articles and size and colour adjectives have been described and evaluated in a variety of studies; and it could be shown that they are effective. For instance, Eisenbeiß (2003) analysed 9586 utterances from 39 spontaneous speech recordings of 7 monolingual German children (2;1-3;6). In this large data set, she only observed 249 noun phrases that contained an adjective and required an article (2.6%). Even more strikingly, 8 (=21%) of the 39 recordings, did not contain a single noun phrase with an adjective and an article context; and only 4 of them (=10%) exhibited more than 10 of these noun phrases. A correlation analysis between the percentage of utterances with these noun phrases and the mean number of words per

utterance showed that this type of noun phrase did not become more frequent the longer the utterances of the children became over time ($r=.247$, $p>.05$). Rather, even the older children who produced longer utterances rarely produced noun phrases with adjectives and article contexts.



Fig.1: Pictures for Eliciting Descriptions for Actions on Body Parts
(Eisenbeiß 2003, 2005)

This naturalistic data set was compared with 7197 utterances from 25 recordings of 2 monolingual German children (1;11-3;3) that involved the semi-structured elicitation techniques described by Eisenbeiß (1994). All recordings that involved elicitation games contained noun phrases with adjectives and article contexts; and 19 recordings (=76%) even contained more than 10 noun phrases of this type. The 4.383 utterances of the younger child (1;11-2;11) contained 394 (=9%) utterances with a noun phrase that

contained both an adjective and an article context. The older child (2;9-3;3) produced such noun phrases in 116 (=4%) of her 2814 utterances from elicitation games. Note that 5 of the spontaneous speech recordings discussed above come from this older child. However, of the 997 utterances from these naturalistic recordings, only 13 (=1%) contained a noun phrase with an adjective and an article context. Thus, even for the same child, we can observe a difference between recordings with and without elicitation games.

Similarly, Eisenbeiß and Matsuo created pictures for eliciting descriptions of actions on body-parts by using pictures with contrasting agents, patients and affected body parts (e.g. a woman washing a kangaroo's paw, a girl washing its nose/face and a man washing its tail, a man washing a cat's tail; see Fig.1 for the corresponding pictures). These pictures were then used in the Puzzle Task described below (see also Eisenbeiß et al. 2009, Eisenbeiß, Matsuo 2003, 2005).

Both German and Japanese children mentioned the body part as well as its possessor in the vast majority of utterances (Eisenbeiß and Matsuo 2003), though such utterances are rare in spontaneous speech samples from children (Eisenbeiß, Matsuo and Sonnenstuhl 2009).

Note, however, that Japanese children did not always use the object case marker *o* on the patient noun phrase in these sentences (e.g. in the phrase referring to the kangaroo). *O* is optional in Japanese and only has to be used for the object when it is not entirely clear who does what to whom. Mentioning who did what to whom was, however, not necessary in this version of the elicitation game: none of the agents in the picture set appeared as a patient in another picture. For instance, the man, the woman and the girl were always washing body parts of animals; they were never washed by anybody else. Thus, children could uniquely identify a picture without making it explicit who did what to whom. They could leave out the object marker and simply mention the person, the body part and the animal whose body part was washed - and this is what many children did. This suggests that the use of one contrast in a picture set does not necessarily lead to maximally rich descriptions of stimulus materials that mention every single detail. Rather, each contrast seems to make one aspect of a stimulus more salient and relevant for encoding. Hence, for a study of the object marker *o*, one might have to contrast

pictures where one picture presents participant A as an agent and participant B as a patient while another picture shows the reverse – B acting on A. However, when confronted with pictures that contrast with respect to several aspects of the event, children might start to use descriptions that are more detailed than strictly necessary as they get into “detail mode”. This could be beneficial, but it might also lead to slightly unnatural strategies. Therefore, semi-structured elicitation techniques typically only involve one or very few contrasts, e.g. one contrast in colour and one in size (the big blue balloon vs. the big red balloon vs. the small blue balloon vs. the small red balloon), or contrast between different agents, different patients and .different goals in a possession transfer event, see e.g. Fig.2)



Fig.2: Pictures for Eliciting Possession Transfer Descriptions of Possession Transfer
(Eisenbeiß and Matsuo 2005)

4. The Bag Task

The Bag Task is a broad-spectrum elicitation tool that can be used with children in the second half of their second year, which is typically the age when they start to combine words. The Bag Task can be played with one or more children. It involves a large bag that contains LEGO[®] blocks and animals of different sizes and colours. One can use some of the available LEGO[®] sets (e.g. the farm animal set or the wild-animal sets) and supplement them with individual other animals, toys or objects to elicit particular nouns. Alternatively, one can create a set of toys that contrasts with respect to the properties whose linguistic encoding one is interested in. However, it is crucial that there are quite a few systematic differences with respect to object or animal properties so that speakers have to refer to these objects when they want to uniquely identify the individual objects or animals (for instance one can use a small and a big lion or dogs of different colours and sizes). The bag has pockets on the outside that match the animals in colour and have coloured buttons, ties, and other fasteners. If possible, different sizes of pockets that match the animals in size can be used. Note, however, that Velcro fasteners make loud noises and can hence make later transcriptions of recordings difficult. Zippers may be used, but should be large and very robust to avoid frustration, breakage or injury. Similarly, for children under the age of three, all parts, including buttons, should be robust, attached firmly, and too large to swallow.

One can create landscapes and buildings with the LEGO[®] blocks and simply play with the individual toys and blocks. However, one can also play a game in which one has to take the toys out of the bag and put them into the different pockets – and later find them and take them out again. These two activities can be combined. For instance, one can first take all toys and blocks out of the bag, one by one. If the object taken out of the bag is an animal, it will be placed in the matching pocket. If it is a LEGO[®] block or another object, it will be used to create building and landscapes for the animals. Once all toys have been taken out of the bag and the landscape and buildings have been set up, one can then take the animals out of the pockets and start playing. At the end, one can put everything back into the bag (or its pockets), one by one.

Children will typically need some assistance to open or close the pockets and to insert or remove toys or LEGO[®] blocks. Thus, they tend to ask other players to help them hide

or find animals in the pockets, referring to colours, sizes and locations to uniquely identify the pockets and toys for which they need help (see Slobin et al. (2009) for some German data from this task). Typically, the bag will also encourage children to talk about relationships between animals and pockets (matching vs. non-matching), differences between pockets, etc. In addition, adults can make some “stupid” mistakes that elicit comments from the children involved. That will typically result in children telling them they are wrong (*The big lion does not belong in the small pocket; it goes in the large pocket, etc.*).

If children are old enough, one can set out some rules: for instance, one can introduce a rule according to which one is only allowed to take objects out of the bag or put them into the pockets if one has first told the others what one intends to do. This can be motivated by pointing out that not everyone around the table can see all sides of the bag and needs to know where things are so they can be found again. This game can be played with more than two players. If several children are involved, it is often useful to explain the “rules” of the game, in particular the need to talk about all actions and objects, to the older children. They will then typically enforce these rules, and ensure that their younger siblings do not simply point and act. Note that these instructions by slightly older children tend to contain relevant data for studies on inflection, motion verbs, locations, etc.

5. The Picture-Pairing Task

The Picture-Pairing Task is a semi-structured elicitation task that can be used with children from the age of two. It is a two-player task, which is typically played with an adult and a child. However, if at least one of the children is slightly more mature and familiar with games such as Memory[®], the rules of the game can be explained to the children and they can play the game on their own.

This game is similar the classic “Memory” game, but both the rules and the materials differ from the original. In that game, a set of picture cards is placed face down on a table or on the floor, and players take turns turning pairs of cards over. On each turn, the player will first turn one card over, then a second. If the pictures on the two uncovered cards are identical, the player scores one point, keeps the two matching cards and gets another turn. If they are not identical, the cards are turned back over and the other player

gets a turn. The game is over when all cards have been turned over and matched; and the player who has collected the largest number of matching cards has won the game. This game typically involves memorising the position of cards that had already been turned around and might be a match for cards that are turned around at a later point. However, the game can be played with two-year olds if the cards are not turned around again when they do not match. This elicitation variant of the game is obviously less appropriate for training children's memory, but young children seem happy to play it in this way and it still involves finding matching pairs of cards.

In the two variants of the game that will be discussed below, the children are asked to provide descriptions of the pictures on the cards. Children are typically happy to do this if it is introduced as part of the game. If they are not willing to do this, one can use an "observer" puppet with bad eyesight who cannot see the picture and needs to hear what is on the pictures. In pilots, it has been shown that children may find puppets with blindfolds scary and that some children who do not like wearing glasses get upset or distracted by puppets with broken glasses. However, all children seemed to like a fish puppet who could not see properly above water, just as a child would not be able to see very clearly under water.

When the Picture-Pairing Task is used as a form-focused elicitation game, the pictures on the paired cards are not identical as they would be in the classic version of the game Memory[®]. Rather, the paired pictures have the same background colour and each of the pairs in the game matches in the same way. Two variants of this game can be distinguished: In the contrast-oriented variant, the matching pictures contrast minimally with one another and the child has to describe what is on the two pictures and to say whether they match. For instance, the picture set in Fig.3 shows a matching pair of cards with small green bananas and large yellow bananas, a matching pair with dirty white cat and a clean brown cat, etc. This variant of the game targets noun phrases with adjectives. The child is expected to attempt utterances like *I have small green bananas and large yellow bananas. And they match* or *I have (small green) bananas and a (white dirty) cat. And they do not match*. Note that the contrasts in colour, size, etc. are only visible for matching pairs and thus children might only use adjectives for these picture pairs. However, once children have seen that picture pairs frequently differ with respect to

colour and size, etc. they often tend to produce these adjectives even when it is not strictly necessary, especially if they have encountered the matching picture before.

In the combination-oriented variant of the game, the pictures belonging to one pair are also not identical, but matching. Here, the child is asked to form an utterance with components that are depicted on the matching pictures. For instance, in a Picture-Pairing Task for eliciting utterances with the German verb *helfen* 'help', we used pictures as the ones in Fig.4 to elicit utterances such as *Das Pferd hilft der Frau* 'The horse is helping the woman' or *Das Pferd hilft nicht dem Friseur* 'The horse is not helping the hairdresser'. Similarly, we used pictures as the ones in Fig.5 to elicit utterances with the verb *gehören* 'belong', such as *Die Leine gehört dem Hund* 'The leas belongs to the dog'.

In this variant of the game, it is crucial that the child knows when pictures are matching. This can be achieved through world knowledge (e.g. dog leashes belong to dogs and helmets belong to motor bikers); and the background colour of the pictures can be used as an additional cue. Moreover, one can present the child with the target verb without providing a sentence that the child could use as a model. For instance, introducing the cards in Fig.4, one could say *In diesem Spiel geht es um helfen/gehören* 'This game is about helping/belonging'. This would not show the child how to use the verb help with a subject and an object.

Note that it is not important that the children know the colour words if this is not the focus of the study. As long as children can match the cards, one can use this task. Thus, if one knows that the children under study have difficulties distinguishing colours, one can make use of different background patterns or shades of grey to indicate which cards are matching. And if one wants to investigate formal properties of adjectives (for instance in a study on adjective endings in German), one can use adjectives that do not refer to colour, but to size or emotions or other object properties (small vs. large, happy vs. sad, clean vs. dirty, etc.).

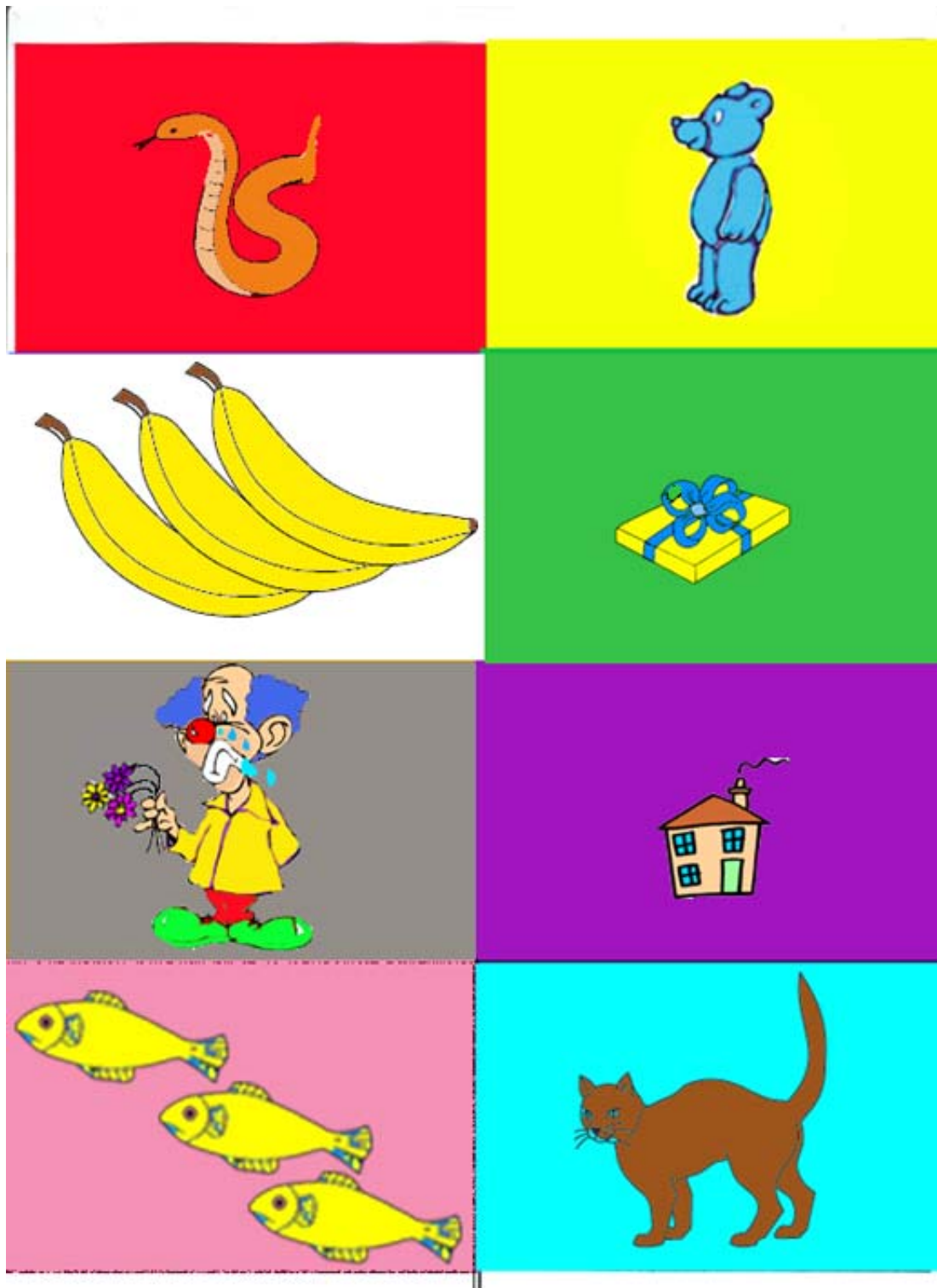


Fig.3a: Picture Pairs for Eliciting Noun Phrases with Adjectives

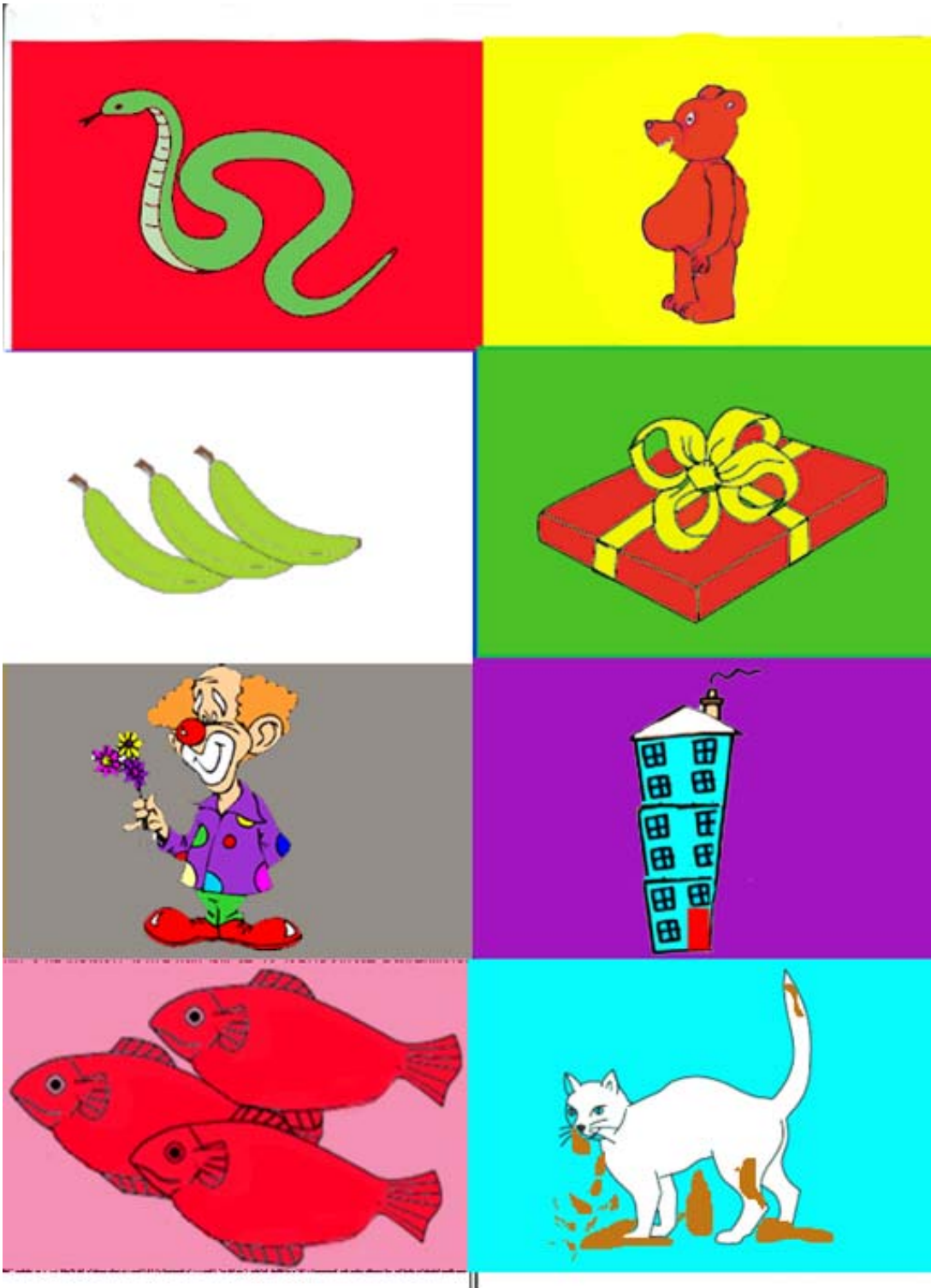


Fig.3b: Picture Pairs for Eliciting Noun Phrases with Adjectives



Fig.4: Picture Pairs for Eliciting Utterances with the Verb *helfen* 'help'



Fig.5: Picture Pairs for Eliciting Utterances with the Verb *gehören* 'belong'

6. The Puzzle Task

The Puzzle Task can be used as a meaning-focused elicitation task, but also as a form-focused elicitation task for a broad range of constructions or lexical elements. Moreover, it can be employed as a broad-spectrum elicitation task. In this task, children have to ask for puzzle pieces with pictures on them, which they can then put into cut-outs of a puzzle board that show matching pictures (Eisenbeiß and Matsuo 2003, 2005, Eisenbeiß, Matsuo, Sonnenstuhl 2009), see Fig.6. It is often advisable to first look at all the pictures with the child, pointing out communalities and differences between the individual pictures. For instance, for the pictures in Fig.1, one might want to point out: *These are all pictures of washing, but there are different people, and different animals, and it not always the same spot that needs washing. What kind of animals do you see?....* For the pictures in Fig.2., one could tell the child: *These are all pictures of giving, but there are different people, and different animals, and the food for the animals is different as well. Which animals do you see?...*

The pictures on the puzzle pieces differ minimally from each other, so that children have to express the differences verbally in order to clearly identify the puzzle piece they want (see e.g the materials in Fig.1, Fig.2 and Fig.8). In a form-focused version of the task, the differences between the individual pictures can be chosen so that children are forced to use a particular construction. For instance, if one wants to elicit noun phrases with adjectives, one can use pictures of objects that contrast with respect to colour, size, (similar to the matching pictures in Fig.3). Similarly, one could employ pictures of individual objects and sets of the same objects to elicit singular and plural forms (*one bear vs. two bears*, etc.) One can also use this task to get children to name individual objects, animals, people, or actions that are depicted on different puzzle pieces.

Alternatively, the Puzzle Task can be used as a meaning-focused elicitation technique. For instance, one can depict possession transfer events as in Fig.2 and see when English children decode this meaning using a double object construction (*The woman gives the cat the mouse*) – and when they employ a prepositional construction (*The woman gives the mouse to the cat*).



Fig.6: The Puzzle Task

Similarly, Eisenbeiß and Matsuo have used pictures with actions on body parts as the ones in Fig.1 and Fig.8 to investigate how German children talk about an event in which the body part of an animal is affected by an action (Eisenbeiß, Matsuo, Sonnenstuhl 2009, Eisenbeiß, Matsuo 2003, 2005).

The Puzzle Task can also be employed as a broad-spectrum elicitation technique, with a broad range of engaging pictures that differ in various ways. One can also get an older child to explain the game to a younger child and analyse both children's speech.

The materials for the Puzzle Task consist of a wooden puzzle board with pictures in cut-outs and exchangeable puzzle pieces with pictures. As mentioned above, the puzzle pieces differ minimally from one another (see e.g. Fig.1, Fig.2 and Fig.8); and each picture on a puzzle piece is identical to the picture in the matching cut-out on the puzzle board. The puzzle consists of several parts: the first part is a wooden frame that holds everything in place (Fig.7). The second part is the piece of paper with the contrasting pictures, typically in A3 format and laminated (Fig.8). Before the game is played, this piece of paper is placed into the frame of the puzzle board. Note that this piece can be exchanged during an elicitation session with a child. In this way, several puzzles can be played without the need for different puzzle boards, which reduces logistic problems. The third part of the puzzle is the picture holder, a flat piece of wood with cut-outs that fits into the framed puzzle board and keeps the paper with the pictures in its position so that the pictures are visible in the cut-outs (Fig.9). Note that this piece of wood has to fit into the frame neatly, but needs to be lifted out every time the puzzle pictures are changed. Hence, it is advisable to have a little opening in the puzzle-board frame (see the right side of the board in Fig.7). That makes it easier to lift up the picture holder with the cut-outs, which has a matching extension on the right side (see Fig.9).

For each of the pictures on the piece of paper under the picture holder, a matching puzzle piece is created (Fig.10). These pieces will fit into the cut-outs with the matching pictures (Fig.11). The number of puzzle pieces and complexity of the shapes for the puzzle pieces can be adapted to the age of the child – with fewer and simpler shapes for the younger children.



Fig.7: The Board for the Puzzle Task



Fig.8: A Picture Set for the Puzzle Task

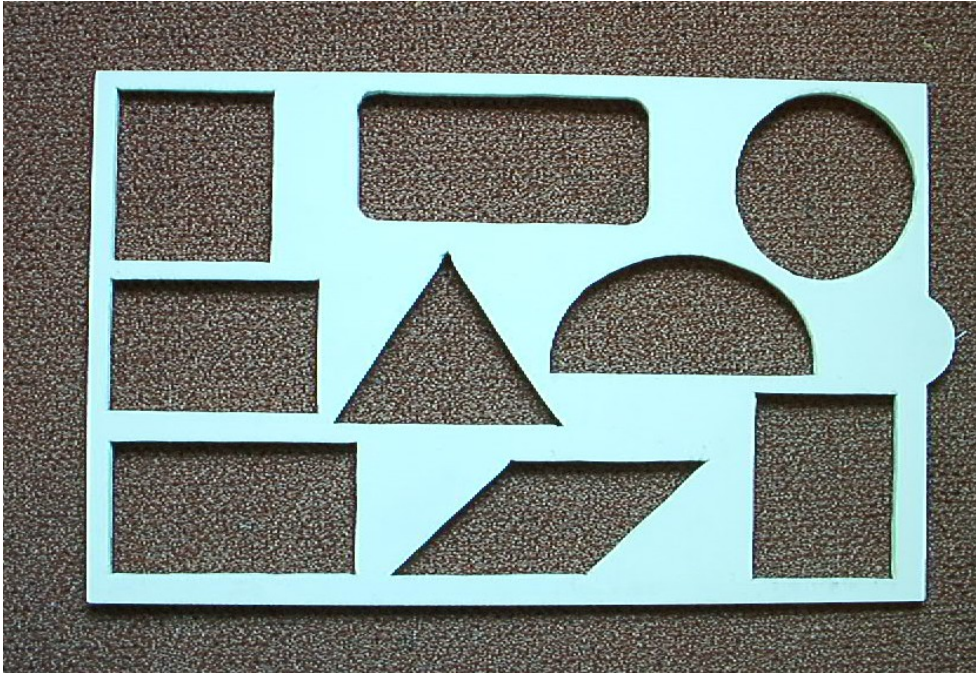


Fig.9: The Picture Holder for the Puzzle Task



Fig.10: A Set of Puzzle Pieces for the Puzzle Task

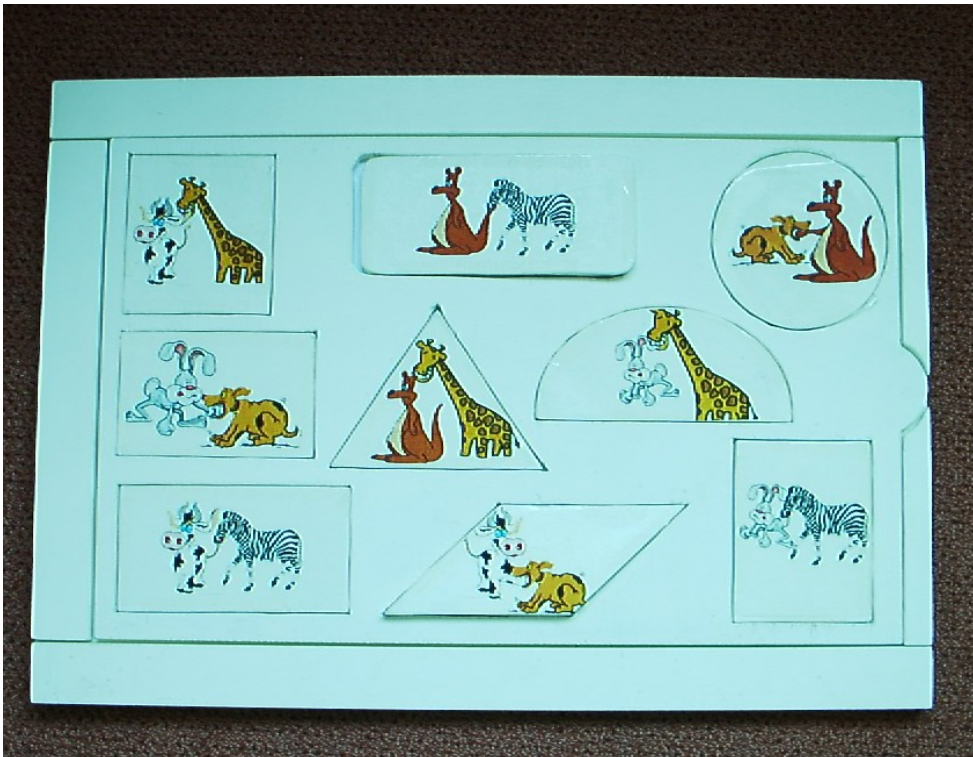


Fig.11: A Finished Puzzle from the Puzzle Task

7. Summary

In this paper, I have presented three games that can be used to study children's language production in a semi-naturalistic context: the Bag Task, the Picture-Pairing Task and the Puzzle Task. All three games are co-player tasks and they can be used for different purposes. The Bag Task is a broad-spectrum elicitation technique that can be used to encourage children to talk and use a broad range of words, forms and constructions. The Picture-Pairing Task is typically used as a form-focused elicitation technique to obtain data for a particular construction or type of word form. The Puzzle Task can also be used as a form-focused technique, but it can also be employed as a meaning-focused technique to encourage children to talk about particular types of situations, objects or properties. It could also be used as a broad-spectrum task if a broad and diverse range of pictures is used. Taken together, these three task offer researchers a tool set that can be adapted for studies on a broad range of topics. In addition, these games could be used in language teaching or speech therapy situations. Here, they can encourage children to talk and

practice their linguistic skills; and teachers or therapists might want to provide feedback that can further support children in their learning.

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