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# Children creating a mess: what underlies this phenomenon in kindergarten pupils?

**Abstract:** The article contains a discussion about the problem frequently observed by parents and teachers regarding small children and their inability to be tidy in self-care situations, while playing or following instructions given by adults. The article contains an overview of theories helping to elucidate the occurrence of such problems among kindergarten pupils and children setting off to begin their primary school education. The author of the text focuses particularly on children's individual predisposition to benefit from instruction given by adults and the schema theories, especially the concept of scripts, plans and themes elaborated by Schank and Abelson.

**Keywords:** children making a mess, children's theory of mind, cognitive schemas

## Introduction: children making a mess, the origin of the concept and its application

The term ***children making a mess*** was first introduced in Polish pedagogical discourse by Edyta Gruszczyk-Kolczyńska in November 2009 during an international conference organized in Kraków by the Association for Children with Genetic Disorders GEN and the Department of Special Education at the Adam Mickiewicz Univer-

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sity of Poznań[1]. The term was employed in reaction to a pedagogical study which resulted in heightened attention being given to a specific group of kindergarten pupils. Even though its originator claims that the problem of making a mess refers to older kindergarteners (five- and six-year-olds), the habit is formed a lot earlier[2]. According to Gruszczyk-Kolczyńska's findings, children making a mess having performed some simple actions, lose interest in what they are doing, abandoning objects, or suddenly stop half-way through what they were saying and change the topic. The above definition pertains to only one type of behaviour from a whole range demonstrated by such children, which constitute an actual impediment in their benefitting from kindergarten education.

However, after an in-depth analysis of related literature I have come to the conclusion that the problem was not discussed or elaborated on by anyone apart from the aforementioned author. It is astounding, especially since such behaviour is now often manifested by kindergarteners, according to many teachers. School teachers point to the fact that an increasing number of children find it difficult to organize their work space properly or perform tasks with several components, being generally untidy and sloppy. This growing tendency cannot be explained only with overcrowded classrooms, short breaks between lessons, or classes spread out unevenly in the school week.

An analysis of home environments of the children concerned reveals that their behaviour at home is similar: they follow only simple instructions, leave objects wherever they stand, and while changing literally throw things off and drop them on the floor. Parents, on the other hand, are constantly critical of their children's behaviour, following them around and tidying up the mess they leave behind, help them get dressed or feed them. In their opinion such assistance is a faster, more peaceful and less troublesome option. Moreover, parents tend to justify their children (and themselves), saying, for instance: "he is still too small; he's got time; he will learn later; he always does so; that's the way he is; his father and grandfather were the same as kids; you have to do everything for him anyway". The types of behaviour demonstrated by the children's guardians, which the researcher was able to determine on the basis of short interviews and conversations, are characterised by impatience, simplification of self-care activities to the bare minimum, as well as ignoring the necessity to teach children orderliness in their surroundings.

What is more, Gruszczyk-Kolczyńska managed to determine the scale of the problem – having interviewed some of the kindergarten teachers she was able to find that there are several such children in every group of kindergarteners. The number of

[1] E. Gruszczyk-Kolczyńska, *Krótkie wykłady o dobrym wychowaniu. O dzieciach siejących bałagan. Jakie są tego przyczyny i w jaki sposób można to zmienić na lepsze*, "Bliżej Przedszkola", 2010, *11*. Retrieved Feb 15, 2020, from: https://blizejprzedszkola.pl/o-dzieciach-siejacych-balagan,2,83.html#.

[2] E. Gruszczyk-Kolczyńska, E. Zielińska, *Dwulatki i trzylatki w przedszkolu i w domu. Jak świadomie je wychowywać i uczyć*, "Bliżej Przedszkola", 2012, p. 132.

such children is growing. From the information she collected from parents and teachers, the above-mentioned children do not manifest permanent change in behavioural patterns after being admonished or offered assistance by adults. They constantly copy their way of behaviour and, as a consequence, form and consolidate improper habits.

## What underlies the creation of mess in kindergarten pupils?

It is indeed fascinating that some children can accept kindergarten rules easily and master the skills required of them, while others find it extremely difficult to abide by the rules.

My research has revealed that the discrepancy can be effectively clarified by means of five theories: **individual predisposition to benefit from instruction given by adults**, **expectations theory, self-verification, symbolic interactionism** and **children's theory of mind**.

## Susceptibility to learning, expectations theory, self-verification and symbolic interactionism: social conditions of children making a mess

**Susceptibility to learning** is treated as an individual ability. That is why, to determine its scope, one has to refer to the analysis of repetitions necessary for a child to master a specific activity in a similar situation. At one end of the continuum one can find children who need three or four repetitions to master a complex activity, while at the other – children who need more than a dozen repetitions[3]. What this means in practice is that there are children who, having been familiarised with a series of consecutive actions, understand instantly why they need to perform them and can copy them without error. All they need, in fact, is a hint to be able to carry out the actions better every time, being more and more self-reliant. At the same time, there are children who require for the complex action to be divided into a series of simple activities, and after that to be guided on how to proceed and repeat them many times, to be finally able to efficiently perform the complex task on their own.

**Expectations** are subjective assessments of the likelihood of a specific gain occurring after a particular behaviour. It is also a factor whose knowledge makes it possible to predict the behaviour of other people in the environment. When entering into relationships with people, there is a tendency to create specific expectations about

[3] Z.I. Kałmykowa, *Metodika diagnostyki obuczajemostii szkolnikow: na materiale fizyki. Obuczajemost w principy postrojenija metodow jejo diagnostyki*, [in:] *Problemy diagnostyki umstwiennowo razwitija uczaszczichsja*, Moskwa 1975, according to: E. Gruszczyk-Kolczyńska, *Jak dzieci dowiadują się, co można, a czego nie można. O wychowaniu zamierzonym i niezamierzonym*, „Bliżej Przedszkola", *10*, pp. 10–14.

their motivations, attitudes and behaviours. Although most of them are created unconsciously, they form the basis of people's intentional behaviour. The arising expectations have a rigid and hardly changeable structure, this happens if they are based on cognitive patterns.

According to psychologists Edward Jones and Daniel McGillis, there are two types of expectations. The first – created on the basis of information about a person's belonging to a given social group (expectations based on category), the second – created on the basis of characteristics and behaviours disclosed by a person in various situations over time (expectations based on an object). In the same way, there are also two ways of communicating them – directly (this happens when a child hears from a parent or teacher that they cannot cope with the task because they have less talent than other children) and indirectly (using non-verbal, subtle signal, even unconscious, like in the situation when a parent persistently ignores children's queries or requests for help[4].

There is a theory directly related to expectations known as the **self-fulfilling prophecy**, or as the Rosenthal or Pygmalion effect[5]. It concerns the relationship between social perception and behaviour undertaken towards other people.

[4] E. Jones, D. McGillis, *Correspondent inferences and the attribution cube: A comparative reappraisal*, [in:] J.H. Harvey, W. Ickes, R.F. Kidd (eds.), *New directions in attribution research*, vol. 1, Erlbaum, Hillsdale 1976, pp. 389–420 according to: S. Trusz (eds.), *Efekty oczekiwań interpersonalnych. Wybór tekstów*, Wydawnictwo Naukowe Scholar, Warszawa 2013, p. 41.

[5] R. Merton, *The Self-Fulfilling Prophecy*, "The Antioch Review", 1948, *2 (8)*, pp. 193–210. This effect was first described by sociologists William Isaac Thomas and Robert Merton in 1948. Both claimed that if a person sees the situation as real, it is also true in its consequences. This expectation effect was originally described in the context of the research process. It is the researcher's unconscious tendency to act and to make interpretations during the research process in such a way as to gain confirmation of his/her own hypothesis. An experiment showing the occurrence of this effect on educational grounds was described by Robert Rosenthal and Leonora Jacobson. In primary school, children were tested with an intelligence test designed in such a way that the result could indicate the developmental possibilities of the student. From each of the 18 studies classes, 1/5 of the pupils were selected for the experimental groups, which were presented to the teacher as predestined to achieve high school results over the next 8 months. The control group consisted of other children. In practice, therefore, differences between groups existed only in the minds of teachers. After the assumed time, the children were subjected to another examination, which revealed that children with low abilities (included in the test) obtained good results when the teachers expected them to (R. Rosenthal, L. Jacobson, *Self-fulfilling prophecies in the classroom: Teachers' expectations as unintended determinants of pupils' intellectual competence*, [in:] M. Deutsch, I. Katz, A.R. Jensen (eds.), *Social class, race and psychological development*, Holt, Rinehart & Winston, New York 1968, pp. 219–253). School influences students' "achievements through teachers' expectations" (P. Cuttance, *Do schools consistently influence the performance of their students?*, "Education Review" 1977, *29*, pp. 317–325). However, this works in two directions – the teacher's high expectations towards the child allow him/her to achieve greater achievements (Galatea effect), while low expectations delay his/her achievements (Golem effect) (E.Y. Rabad, J. Inbar, R. Rosenthal, *Pygmalion, Galatea and the Golem: Investigations of biased and unbiased teachers*, "Journal of Educational Psychology" 1982, *74*, pp. 459–474).

Self-fulfilling prophecy reveals itself when three conditions are met. The first – when the teacher or parent creates false expectations in their minds about the child (most often they have their source in cognitive schemes, for example, shared by general stereotypes about gender, personal characteristics or motivation). The second is to reveal these expectations to the child in a more or less subtle way, e.g. with the comment "you are the same as your father", "girls are not fit for such things" or with the help of non-verbal signals, i.e. body shapes, facial expressions or gestures. And finally – the third condition – confirmation in the child's behaviour of earlier expectations of parents and teachers, which will happen if a child suspected of clutter once again does not maintain order around him or when the adult interprets his attempt to keep order as a failure, i.e. behaviour in accordance with the original expectation.

This theory can to some extent explain the behaviour of adults towards children who create a mess, which contributes to the persistence of the problem. Due to the fact that in the very definition of creating a mess, I emphasize that these children constantly ignore rules and order. The repetition of these behaviours may give rise to specific expectations on the part of adults. It works in two directions - on the one hand, adults expect young children to be able to effectively organize the space around them, maintaining order during activities. On the other hand, adults, seeing the child's awkwardness in carrying out tasks, perform tasks instead of the child or provide him/her with such far-reaching help that the child only has to submit to them.

The theory of **symbolic interactionism** should be included here. It states that behaviours are always interpreted before people react to them in a specific way. If the adult's behaviour expresses his/her beliefs and permanent dispositions, it directly affects his/her expectations of the child regarding the nature of his/her subsequent behaviour[6]. According to this theory, it can be assumed that children predict that adult behaviour towards them will be repeated (e.g. differences in the treatment of children who create a mess and their peers who do not). The mechanism of equalizing attitudes between the behaviour of an adult and a child tends to be similar, hence the unfavourable behaviour of parents and teachers towards children who are messing will be compounded by the number of behaviours presented by children that involve not maintaining order around themselves.

And vice versa – changing adults' behaviours to more favourable ones can cause equally favourable reactions from children. Of course, this does not mean that making a mess seems to be conditioned only by the expectations of adults, but the impact of this phenomenon on the persistence of the problem of clutter should be taken into account.

[6] R.H. Fazio, J.M. Darley, *Expectancy confirmation processes arising in the social interaction sequence*, "American Psychologist" 1980, *35 (10)*, pp. 867–881, see also: D.W. Jamieson et al., *Pygmalion revisited: New evidence for student expectancy effects in the classroom*, "Journal of Educational Psychology" 1987, *79 (4)*, pp. 461–466.

Finally, it should be considered how the child's self-attributes, according to the expectations of adults, affect their explanation of their own successes and failures, i.e. the construction of their own **self**. Children who create a mess, consistently treated by adults in a differentiated way (e.g. in a kindergarten group by teachers, or in comparison to their siblings in the family home), after some time, may come to the conclusion that their behaviour accurately reflects their character traits or skill level, for example, "if the teacher keeps telling me I'm doing wrong and I will never learn order, it means I can't do it and I'm a mess". In this case, the scope of confirmation will increase in each subsequent situation of a similar nature, making adult expectations consistent with a childish pattern. As demonstrated by William B. Swann and Robin J. Ely, confirmation occurs when adults who witness the observed behaviour are confident in their own expectations, while children presenting specific behaviour – uncertain of their own self[7]. Importantly, it should be remembered that adult expectations may be the result of cognitive distortions resulting from their own developmental experiences and that the level of perceived similarity in the area of behaviour, personal characteristics or external appearance (e.g. "he is the same as me his age") may intensify behaviour patterns that are characteristic of high or low expectations[8].

What is important in the phenomenon of children making a mess is that they do not change their behaviour. Adults are torn between two desires. On the one hand, they are aware and want the child to be independent, on the other hand, they love them immeasurably, they want to take care of him/her, "because he/she is still so small", to help him and spare him unpleasant situations. Children see this dilemma and do not change their behaviour, because they anticipate in their mind that adults will help them anyway, and in the end they will give praise and love, kisses and hugs.

## The way in which children put together conceptual knowledge of the world – children's theory of mind

Ever since the bloom of developmental psychology scholars have been fascinated with the way children acquire knowledge about their surroundings. The variety of speculation, hypotheses and research led to the birth of **children's theory of mind**[9]. In

[7] W.B. Swann, R.J. Ely, *A battle of wills: Self-verification versus behavioural confirmation*, "Journal of Personality and Social Psychology" 1984, *46*, pp. 1287–1302, according to: S. Trusz (ed.), *Efekty oczekiwań interpersonalnych…, op. cit*., p. 45.

[8] R.C. Rist, *Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education*, "Harvard Educational Review" 1970, *40*, pp. 411–451.

[9] The term "theory of mind" was coined by David Premack and George Woodruff in 1978. ToM was submitted to wide and detailed analysis in the 1990s. From a wider perspective it provides information on the workings of the mind and in a narrower sense it refers to abstract causal and explanatory systems which allow children to effectively predict and express emotions along with voicing needs.

related literature the term is used to cover many different phenomena pertaining to reasoning. Its most modern definition describes theory of mind as an intuitive comprehension of one's own mental states as well as those of others[10], which corresponds with the term "mental imagery"[11] (deriving from the theory of Jean Piaget, who was the forerunner of this approach). The gradual development of images, from reproducing to anticipatory and from static to kinetic, until the final emergence of actual representation in the form of transformative images in the concrete operational stage, paves a child's way, in the process of development, to making use of logical structures of reasoning, allowing them to construct a fully coherent knowledge about the world. The process of arriving at such knowledge is a result of a child's individual activity[12], as a consequence of which the representation of the world is formed through a system of internal symbols and codes. The above representation is both knowledge itself, as well as the way in which it is later organised, and subsequently defines cognitive development as moving from the level of procedural knowledge, which refers to the way we behave in our environment – "I know how", to declarative knowledge, connected to the way we reflect on the actual world – "I know that"[13]. The spokesman for the constructivist theory of the manner in which children arrive at their image of the world – Jerome Bruner, enumerates three modes of representation: enactive (understanding events on the basis of actions leading to them); iconic (based on images as equivalents of objects and events); and symbolic (representing experience through ideas)[14]. If we explore Bruner's theory further we will discover that, while obtaining information in the manner mentioned above, human beings revert to two modes of thought – paradigmatic and narrative. The first of these is based on logical reasoning and helps describe reality in an objective way, while the other refers to the realm of intentions, needs, emotions and beliefs – the subjective mode of reasoning. Both ground-breaking theories presented here introduce a distinction between the way children think about the world of objects and the internal world, which justifies the need for further study in the area of the children's theory of mind.

Here one should mention the most renowned researchers in the field: Katherine Nelson, Jean M. Mandler, Anette Karmiloff-Smith, as well as Roger C. Schank and Robert P. Abelson.

[10] R. Schaffer, *Psychologia rozwojowa. Podstawowe pojęcia*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2010, p. 134.

[11] J. Piaget, B. Inhelder, *Od logiki dziecka do logiki młodzieży: rozprawa o kształtowaniu się formalnych struktur operacyjnych*, PWN, Warszawa 1970, p. 137.

[12] M. Białecka-Pikul, *Co dzieci wiedzą o umyśle i myśleniu. Badania i opis dziecięcej reprezentacji stanów mentalnych*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2002, p. 12.

[13] K. Stemplewska-Żakowicz, *Osobiste doświadczenia a przekaz społeczny. O dwóch czynnikach rozwoju poznawczego*, Wydawnictwo Leopoldinum, Wrocław 1996, p. 68.

[14] J. Bruner, *Poza dostarczone informacje*, PWN, Warszawa 1978, p. 534.

However, a full understanding of the idea behind each of the theories presented above requires the clarification of their key term – **schema** – since it is one of the most often misused terms in psychology.

**Schema theory** draws on three components: constructivism, the poverty of stimulus argument, reconstructive hypothesis, stereotyping, the assumption of graceful degradation of an output, and the principle of cognitive economy[15]. The outside world is constructed in the mind thanks to the interpretation of stimuli retrieved from sensory receptors and then granted meaning based on our personal beliefs, goals and expectations. Thus, every human being, having experienced different things, carries a different representation of reality in their minds – a phenomenon called **constructionism** by scholars dealing with the issue. However, the information humans receive from their sensory receptors often provides them with very poor content – at times being too meagre to give foundation to an adequate recognition of an object or a situation. This is why the human mind completes the data with so-called default values – which are both different and specific to each and every individual person, because they are based on our attitude and expectations. **The poverty of stimulus argument**, however, points to the fact that the poorer the data coming from our sensory receptors, the greater the risk of an inappropriate interpretation of such data. Whatever human beings perceive is then stored in their memory system and reconstructed in a specific, adequate situation. Information retrieved from long-term memory does not remain unchanged and constant after it has been moved to short-term memory. Additionally, such retrieval depends on individual attitudes, beliefs and goals. As a consequence, memory recall is in fact a particular kind of reconstruction of the registered data, and not its mechanical reproduction. Thus, the information gathered in long-term memory serves merely the function of building material in the process of memory retrieval – a phenomenon given the name of **reconstructive hypothesis** by Ulric Neisser[16]. However, the constantly recalled memories tend to move further and further away from the reality of perceived events or actors and shift towards traits characteristic for a specific category, which is a process called the stereotyping of memory. **The assumption of graceful degradation of an output** explains why humans undertake reasoning and, subsequently, action even though they have insufficient premises at their disposal. Referring to a computer metaphor often used to introduce schema theory, one should expect that incomplete information based on an insufficient amount of data obtained from sensory receptors will lead to abandoning any attempts at reasoning or action – as would be the case should the decision be taken by a computer programme (**rapid degradation of an output**). Nevertheless, humans will provide a solution even if they are not in possession of complete

[15] K. Najder, *Schematy poznawcze*, [in:] M. Materska, T. Tyszka, *Psychologia i poznanie*, PWN, Warszawa 1997, p. 38.

[16] According to: K. Najder, *Schematy poznawcze*, [in:] M. Materska, T. Tyszka, *Psychologia i…*, *op. cit*., p. 40.

data. Results arrived at in this manner are *degraded*, but are revealed even if they are "worse". One must also remember that human cognitive make-up is designed at being maximally useful with a minimal amount of effort made. The effort in this case is the number of procedures needed for achieving a particular result. Following **the principle of cognitive economy**, human memory must be organised in a way allowing for the shortest possible searching time, elimination of unnecessary data, and reduction of procedures carried out in order to arrive at the most relevant outcome – which in practice means attempts at reasoning and undertaking actions.

On the basis of the above-mentioned components, one can introduce a definition of cognitive schema understood as a module of the cognitive system designed to construct perception- and memory-based representations of a particular category of objects or events. It contains data both in the form of default values (hypotheses) which refer to these objects or events, as well as procedures useful for selecting some values and assuming other values simultaneously[17].

On the basis of the studies conducted by the above-mentioned authors, Katherine Nelson points to the existence of script-like forms of organizing knowledge gained by children. Her findings suggest that the representation of the world is subject to gradual modification with the increasing quantity of experience. At the beginning, the generated sequence of events becomes longer; after that the order in which they are given is arranged; the number of elements not specific for a given situation is reduced; and finally conditional connections are created – crucial for the emergence of alternative paths in the script. The very structure of a script remains essentially unchanged; what changes are the representations – a phenomenon which is understood as the process of creating categories. According to Nelson, categories can be derived from several scripts containing the same variable (meta-script connections)[18].

Nelson's assumption of the universal (to children and adults alike) structure according to which representations are formed was further supported by Jean M. Mandler, who emphasised the significance of "structural invariants". In the course of developing, the knowledge of the "that" type is derived from the knowledge of the "how" type, which happens as a result of various procedures available through an experience-search conducted by both children and adults. The increasing amount of such procedures leads to them becoming automatic, objective, and the subsequent incorporation into operational systems at a higher level[19].

According to Annette Karmiloff-Smith, a situation in which procedures become automatic leads to the activation of a "meta-procedural operator" designed to coor-

[17] *Ibidem*, p. 43.

[18] K. Nelson, *Cognitive development and the acquisition of concepts*, [in]: R.C. Anderson, R.J. Spiro, W.E. Monague (eds.), *Schooling and the acquisition of knowledge*, Lawrence Erlbaum Associates, Hillsdale New Jersey 1977.

[19] See more: J.M. Mandler, *Stories, scripts and scenes. Aspects of schema theory*, Lawrence Erlbaum Associates, Hillsdale New Jersey 1984.

dinate and integrate the initially disconnected procedures. It suggests the transition from implicit to explicit representations[20]. Implicit knowledge is inscribed into procedures designed to attain this goal, and single components cannot be retrieved and compared with identical fragments of other procedures. This is because components function only within the scope of the particular procedures. However, as soon as they become automatic they are moved to the explicit kind of knowledge and they become recorded there. Unfortunately, this second stage is exposed to errors which might emerge in the course of such processing. While using data available in the implicit form, children are aware of the fact that it is in itself a potentiality on the road to realizing a given amount of information, which in turn is an evidence of "metacognition".

## Scripts, plans and themes theory: how a child imagines the world

The analysis of possibilities and limitations of the concept that would explain the occurrence of clutter-like behaviours in children has led me to a theory that seems to be the most accurate explanation of why it happens that a group of children has trouble maintaining order around them, while being highly resistant to upbringing correction on the part of adults.

Schema theories, and especially the concept of **scripts, plans and themes**, help to explain why older kindergarteners make such a big mess in their surroundings. What distinguishes this theory, developed by Roger Schank and Robert Abelson, from other schematic concepts, in my opinion is the emphasis on the importance of situational context for the development of a given skill. Schank and Abelson elaborated three main groups of schemata: scripts, plans and themes[21]. **Scripts** represent events which – from the perspective of the actor – seem to be repeated with a very high frequency. A script contains sets of default scripts of the event which are similar to a plan of a sequence of scenes. An appointment at the doctor's, using the toilet or having a meal can all serve as examples of a script. **Plan** is a more general schema in comparison with a script. It contains information on the way the actors of the scene achieve their goals, for instance: a plan to treat one's illness (more general in comparison with the script of a doctor's appointment); a plan to meet one's physiological need (more general in comparison with the script of using the toilet); and finally, a plan to satisfy one's hunger (more general in comparison with the script of having a meal). According to Schank and Abelson, a plan helps to understand the events for which a person has no ready scripts prepared. The third group of schemata – **themes** – are

[20] See more: A. Karmiloff-Smith, *Beyond Modularity: a developmental perspective on cognitive science*, A Bradford Book. The MIT Press, London 1992.

[21] See more: R. Schank, R. Abelson, *Scripts, Plans, Goals and Understanding. An Inquiry into Human Knowledge Structures*, Erlbaum, New Jersey 1977.

of a superordinate nature. This group defines the goals of the actors in various social situations. The goals of kindergarteners will thus be different from those of pupils, teachers, or parents.

The scripts resemble scenarios according to which the child organizes its purposeful activities in certain conditions. They contain knowledge such as: "it must be done to achieve the goal...", "it usually happens in such a way...", "this is what you can expect...". Each of these scenarios always includes:

- a repetitive situational context, i.e. a scene;
- props that occur in a given situation (i.e. the environment and the objects it contains);
- actors, i.e. participants in situations that make it possible to achieve the goal;
- specific sequences of actions necessary to achieve the intended goal.

A well-formed script helps the individual to perform activities in a way which meets expectations, and with minimal effort, time and energy spent. Thanks to that, children can take care of their needs and simultaneously analyse interesting questions in their minds.

Script modification consists of: changing the sequence of activities to new ones, taking into account acquired knowledge about different conditions in which we can achieve the goal and the need to include the core activity sequence for the script. For example – when visiting a museum, seeing the inscription "cloakroom", we know that there you should undress. We don't have to think about it more accurately, and our thoughts can then be focused around completely different topics. The less effective the script is, the more often the child will try other behaviours to achieve the intended effect. By introducing modifications – the child gradually develops scripts. However, the more precise the scripts are and the faster the child can apply them in a new situation, the greater his/her functioning and causative capabilities.

## The application of the theory in research on children who make a mess

Gruszczyk-Kolczyńska, looking at the functioning of children who create a mess, has concluded that scripts are being built in their minds in a faulty way. The educational errors and short-sightedness described earlier show that adults prefer to teach children a series of simple tasks here and now, ignoring everything around them[22]. In the long run, this results in the formation of rigid and non-functional habits, which are much more difficult to change later. To understand this, let us focus on the example of having lunch in kindergarten. Everyone must eat to survive (**theme**), to achieve this one must implement the **plan** to satisfy hunger. Depending on your experience, it has a more or less extensive meal **script**.

[22] E. Gruszczyk-Kolczyńska, *Dwulatki i trzylatki w przedszkolu i w domu…*, *op.cit*., p. 140.

Barbara, a five-year-old in a kindergarten group, takes a place at the table. The girl has a well-developed meal script. She knows that you should wait until the cook puts a plate of soup in front of you. She can choose the right cutlery and use it efficiently. She says "bon appétit". She eats in peace – carefully, without looking around, does not spill or talk. After the meal is over, she wipes her mouth with a napkin, says "thank you, I liked it", puts the plate back in its proper place, moves the high chair and sits on the carpet in its place waiting for other children. Barbara was taught by her parents and guardians of cultural behaviour at the table, in accordance with generally accepted social norms, hence the implementation of this script in kindergarten does not cause her difficulties. The girl has a well-developed situational script. She performs it mostly automatically.

Christopher – who had completely different habits in his family home, i.e. ate in a place of his choice (and not together with other household members), played with food, frowned, talked during a meal, got up from the table when he spilled soup (the carers wiped the mess he made); when he ate, he stood up without a word, leaving the plate when he finished eating, letting the adults do the rest for him; he never wished others 'bon appétit' and or offered thanks for the meal. In kindergarten he will behave similarly. This will result in the teacher paying attention to him, instructing him, constantly suggesting activities. The boy does not have a properly built situational script. He seems to use a personal script to a greater extent, depending on his mood and impulsive desires.

This does not mean that Christopher will not follow the correct script. Having possibilities and limitations of script theory, plans and topics, and regularities governing the formation of habits, Christopher's behaviour can be changed. However, in order to be able to plan corrective actions effectively, one needs to thoroughly understand the specifics of children messing up, including: individual children's difficulties and limitations as well as all external stimuli affecting the persistence of incorrect patterns.

## Conclusion

The phenomenon of children making a mess seems to derive from problems centred on their formative and educational environment. Meticulous study of the rules according to which the knowledge of the surrounding world is formed in the mind of a child can help researchers to elaborate solutions improving everyday functioning of such children and result in the implementation of effective remedial actions which can be taken both at home and in the kindergarten.

The aim of this article was to indicate which theories may shed light on the behaviour of making a mess, especially as there are more and more children having this problem. The presented theories, especially scripts, plans and themes theory, give an

excellent explanation of this phenomenon and are useful in constructing corrective actions.

The problem of everyday functioning of these children and their future school fate needs to be deepened, which I have been doing in my academic research for over five years[23]. The data obtained are promising and offer the chance to change for the better the fate of children who create a mess.

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[23] Research was carried out in Warsaw kindergartens among the oldest pupils, their parents and teachers. They allowed an accurate description of the phenomenon of creating a mess, including a detailed presentation of the causes of this phenomenon and the creation of a children's typology. The research results were described in an unpublished doctoral dissertation entitled *Children making a mess – application of mind theory in determining causes and corrective actions*.

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