Zsuzsanna Agora *Editor*

PLAY AND SOCIETY: CONFERENCE PROCEEDINGS 2025

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Zsuzsanna Agora
Editor

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"What we sow in play will ripen in society."

A thought that inspired this congress
– and should resonate far beyond.

FOREWORD

Play is a cultural technique of possibility. It opens spaces where roles can be negotiated, rules tested, and alternatives imagined. Play permits what society often hinders: embracing uncertainty, shifting perspectives, and envisioning new forms of coexistence. In this lies its democratic potential. For what and how we play with children shapes the social thinking of tomorrow.

The conference *Play and Society – New Opportunities of Social Innovation,* held in May 2025 at the University of Pécs, embodied this idea – and at the same time served as a field of experimentation: interdisciplinary, international, and exemplary in many respects. It was more than a symposium on early childhood education or play pedagogy. It was a reflective space for fundamental questions: *How does play convey culture? How can play foster social connectedness – or reproduce social exclusion? And above all: What societal conditions are needed for play to unfold its emancipatory potential?*

Many contributions made it clear that play is not only developmentally significant but – as a social practice – always political. Play is not neutral. It matters which forms of play we encourage, which values become visible through them, and which social dynamics they enable.

Taken together, the conference made evident how urgently we need educational spaces today that go beyond the transmission of competencies – spaces that open up opportunities for thinking, experiencing, and acting. Spaces that transcend boundaries – cultural, institutional, and conceptual. In this sense, the conference was also a European learning community, grounded in shared values such as openness, plurality, and social responsibility.

This quality was no coincidence. It was the result of a thoughtful, courageous, and deeply humanistic vision, exemplified by dr. dr. habil. Zsuzsanna Agora. Her engagement – intellectual, organizational, and personal – turned this gathering into an event far beyond the ordinary. In a social climate marked by both

educational and cultural challenges, she created – with foresight and sensitivity – a space where not only academic contributions were shared, but convictions became visible.

As a participant, I was deeply impressed by the diversity of perspectives and the openness and respect that characterized every conversation. The opportunity to bring together international viewpoints on play – from research and practice alike – was both intellectually stimulating and personally enriching. The conference deepened my own understanding of play: not as a pedagogical tool, but as a form of expression for cultural, social, and democratic education.

May this volume carry forward what was initiated in Pécs: a transdisciplinary, value-oriented, and socially relevant dialogue on play – and on the role it can play in shaping an open, reflective, and solidaristic society. A systematic continuation and deepening of this dialogue – in whatever form – appears not only desirable, but socially essential.

Dr. habil. Gerhard Friedrich

Bielefeld University (Germany)

CHAPTER 1

PLAY AND SOCIETY IN THE GLOBAL MAJORITY AND EUROPEAN CONTEXT

MOTHER-CHILD, FATHER-CHILD, AND ALLOCAREGIVER-CHILD PLAY AND CHILDHOOD OUTCOMES IN COMMUNITIES IN THE CARIBBEAN AND AFRICA

Jaipaul L. Roopnarine[1]

Abstract

This chapter is based on a keynote address delivered at the *Play and Society* conference held at the University of Pécs in southern Hungary in the spring of 2025. It was meant to call attention to and share continuing efforts to decolonize the play literature that is predominantly based on theoretical perspectives and research conducted on families and children in high-income countries, namely Australia and those in North America, and Europe. Importation and implantation of perspectives and research approaches and instruments on adult-child play from high-income countries to global majority contexts is a frequent practice. Needless to say, this has bred inequality and the silencing of indigenous endeavors in cataloging the expression and meaning of adult-child playfulness in global majority contexts. After providing a brief introduction of propositions within conceptual frameworks on parenting and risk and protective factors, this chapter shares the findings of four studies conducted in the Caribbean and Africa that add to the push to broaden our understanding of the expression and meaning of play across cultural communities.

1. Conceptual Frameworks

For decades social scientists and educators have urged the development of Indigenous perspectives on human behavior and functioning across cultural communities (see Adair, 2006;

1 Affiliation: Syracuse University, USA; Anton de Kom University of Suriname, Suriname, South America; University of Guyana, Guyana, South America.

Allwood & Berry, 2006; González et al., 2021; Pe-Pau, 2015; Sinha, 1997). Despite these appeals, much remains the same in chronicling adult-child play in global majority contexts (Roopnarine & Davidson, 2015). It has been proposed that more attention should be allocated to process issues embedded in the four stages of indigenization: importation, implantation, indigenization, and autochthonization (development of an independent discipline void of influences from importation) (Adair, 2006). In this regard, attempts have been made to examine adult-child play in global majority contexts with the hope of developing more culturally situated theories, early education practices, and prevention and intervention programs that are more closely aligned with the beliefs and practices of families and children in different settings. It is in the spirit of indigenization that I share the findings of some of our work on adult-child play in diverse cultural communities (e.g., Lape et al., 2023; Ong'Ayi et al., 2020; Roopnarine et al., 2025; Roopnarine & Yildirim, 2018).

Our research on mother-child, father-child, and allocaregiver-child (e, g., grandparents, siblings, aunts, uncles) play drew on elements in conceptual frameworks that aim to enhance sensitive parent-child interactions that promote optimal development in young children who live in economically challenging environments. More, specifically, our work is guided by frameworks that focus on intentional parenting for equity and justice, the ethnotheories or **internal** working models or belief systems tied to socialization practices and developmental expectations of children in situ (Bock, 2002; Super & Harkness, 1997, 2002; Whiting & Whiting, 1975), parental sensitivity (Ainsworth, 1989; Baumrind, 1996; Rohner, 2021), and socioeconomic and home environment resource risk factors and adult-child play (see Conger et al., 2010; Rutter & Sroufe, 2001; Masten & Cicchetti, 2010). Questions have been raised about the applicability of some these frameworks for the conduct of research in other cultural communities (e.g., Keller, 2018). That notwithstanding, parental belief systems, the sensitivity hypothesis, and socioeconomic and home environment resource risk factors have broad implications for adequate parental engagement in early proximal social and cognitive activities

with children across cultural communities (Amodia-Bidakowska et al., 2021; Cabrera et al., 2020; Duursma, 2014; Mol & Bus, 2011; Robinson et al., 2021).

The developmental niche model, rooted in cultural perspectives on multiple factors within and external to the family such as behavioral styles of adults, innate needs, children's learning environment, social systems, subsistence patterns, history, and environment (Whiting & Whiting, 1975), has been employed to assess adult beliefs about the role of play, engagement in play, and childhood development (Roopnarine & Davidson, 2015). It focuses on internal working models or ethnotheories about childrearing and childhood development, cultural customs, and risks and opportunities in the physical settings in which children reside (Super & Harkness, 1997, 2002) and has been used to assess its moderating influence on associations between parent-child play and childhood outcomes (e.g., Roopnarine & Jin, 2012). In a comparable manner, quality of parenting has been instrumental in determining childhood outcomes across cultural communities but its link to parent-child play has not been adequately determined. Finally, multi-level risks and protective factors (e.g., harsh parenting, family violence, adult mental health, parental guidance, positive engagement, maltreatment) within the family system can influence the impact of parent-child playful activities on children's cognitive and social development (Rutter & Sroufe, 2001; Masten & Cicchetti, 2010). Sutton-Smith (2017) asserts that playful activities are central to emotional survival. Thus, it is necessary to establish the moderating and mediating function of adult-child play activities on associations between family risk factors and developmental outcomes in young children.

2. Contexts of Studies

In some of the post-colonial Caribbean and African countries we targeted for our studies, there are unattended issues related to historical trauma emanating from slavery, indentured servitude, and decimation of Indigenous peoples. Today, these communities face persistent economic hardship, high rates of violence in

the family and community, lack of quality early childhood education programs, poor educational resources in the home environment, neighborhood insecurity, and food insecurity, among other challenges (Engle & Black, 2008; Jeong et al., 2016; Roopnarine & Chadee, 2016). Mateshifting is a frequent practice in the Caribbean region where couples bear children in visiting and common-law unions (Anderson, 2021; Chevannes, 2001). Paternal investment and emotional connections to children and families can be unpredictable (Roopnarine & Jin, 2016). Among families in both regions of the world, allocaregiving is common (23.2% in Latin America and Caribbean and 15.4% in North Africa), and the division of childcare and household labor are markedly gender-differentiated (Cuartas et al., 2020).

For over four decades now, my colleagues, students and I have used different methods of inquiry and of data collection (in-home observations, surveys, testing) to assess early parental engagement with infants, toddlers, and preschoolers in diverse cultural communities (e.g., India, Brazil, Kenya, Guyana, Jamaica, Trinidad and Tobago, Suriname). Parents in some of these cultural communities (e.g., Caribbean region) have early developmental expectations of children and vague beliefs about the benefits of playful interactions for childhood development (Roopnarine et al., 2015). Furthermore, early childhood education stresses the importance of acquiring early academic skills such as reading and writing and learning through rote memory. Though changing, family beliefs about early socialization and the dynamics of couple relationships make it all the more important to examine adult-child play and childhood development in Caribbean and African cultural communities.

3. Parent-Child and Allocaregiver-Child Play in Four Cultural Communities

Caribbean Context: To highlight efforts to provide more Indigenous perspectives on play, this segment of the chapter outlines the findings of four studies on parent-child and allocaregiver-child play in Caribbean and African cultural communities.

These studies relied heavily on the UNICEF Multiple Indicator Cluster Surveys, an international effort to collect data on the health and well-being of families and children in global majority contexts. Our studies were built around the Family Care Indicator (FCI) model (see Evans & Jakiela, 2024) that underscores the primacy of proximal stimulations activities, such as playing, reading, telling stories, and taking children outdoors for the development of early literacy, numeracy, executive function, and social skills (Cuartas et al., 2023; Roopnarine et al., 2019; Rothenberg et al., 2024). It is well documented that proximal early stimulations activities such as playing, reading, telling stories, naming counting, and taking children outside are associated with positive cognitive and social outcomes in young children in high-income countries (Amodia-Bidakowska et al., 2021; Robinson et al., 2021; Shorer et al., 2019; Zosh et al., 2017). However, as will become evident, the impact of these early stimulation activities on children's cognitive and social skills are not uniform across cultural communities.

The first study involved 10,673 families and their preschool-aged children from multiple ethnic groups in Belize, Dominican Republic, Jamaica, Guyana, and Suriname (Yildirim & Roopnarine, 2018). Considering the traditional division of childcare and household labor in the Caribbean region, wherein mothers are still the primary caregivers to children (Anderson, 2021; Roopnarine & Jin, 2016), the aim was to examine whether there were different patterns of associations between mothers' and fathers' engagement in playing, reading, and telling stories and children's literacy and social skills in the same path model. The child outcomes measures were selected on the basis of their significance for children's transition to formal schooling and social relationships with other children (Mol & Bus, 2011; Morrison & Cooney, 2001; Roskos, 2019).

Mothers were far more likely to play with, read, and tell stories to their preschool-aged children than fathers across the five countries. More specifically, 71.1% of mothers in Belize, 51.3% in Dominican Republic, 59.6% in Guyana, 68.9% in Jamaica, and 49.7% in Suriname compared to 40% of fathers in Belize, 20.1% in Dominican Republic, 30.9% in Guyana, 23.1% in Jamaica, and 16.3% in Suriname

engaged in play with children. An identical pattern was observed for reading and telling stories to children. This marked gender disparity in engagement pattern in early proximal stimulation activities is congruent with the findings of other assessments in 51 global majority contexts (see Rothenberg et al., 2024). It is noteworthy, that over 90% of children played with toys from shops/stores, 40% played with homemade toys, and roughly two-thirds played with household and outside objects. Associations between maternal and paternal engagement in play with children across the five countries were sporadic. What stands out is that educational attainment, home educational resources, and preschool enrollment were good predictors of children's early literacy skills.

In a subsequent study (Roopnarine et al., 2025), my colleagues and I extended our focus on adult-child play to include allocaregivers. Participants were 1305 families and preschool-aged children from the English-speaking countries of Jamaica and Trinidad and Tobago (Roopnarine et al, 2025). Again, using conceptual frameworks on sensitive proximal parental engagement, we assessed associations between maternal, paternal, and allocaregiver engagement in playing, reading, and telling stories and children's literacy, numeracy, and social skills, Furthermore, we assessed potential predictors of maternal, paternal, and allocaregiver engagement in the three early stimulation activities and children's literacy, numeracy, and social skills.

Not unexpectedly, mothers were more likely to engage in playing, storytelling, and reading than fathers and allocaregivers in both Jamaica and Trinidad and Tobago. Fathers engaged in playing with and reading to children more than allocaregivers in Trinidad and Tobago, but allocaregivers were more likely to play with children than fathers in Jamaica. Mothers and fathers in Trinidad and Tobago were more likely to play, read, and tell stories to children than their counterparts in Jamaica. Household wealth index, mothers' educational attainment, and literacy materials in the home environment increased the odds of mother, father and allocaregiver engagement with children in both countries. Additionally, enrollment in preschool, number of books in the home, and children's age and sex were significant predictors

of children's literacy, numeracy, and social skills in both countries. In the Jamaican context, maternal engagement in play was positively related to children's literacy skills and paternal book reading was related to children's literacy and social skills. Turning to Trinidad and Tobago, paternal storytelling was positively related to children's social skills and allocaregiver engagement in play was positively related to children's numeracy skills. Overall, father engagement in early stimulation activities were better predictors of childhood outcomes than that of mothers, further indicating the significant role of fathers in early childhood development in communities with economic challenges (see Evans, & Jakiela, 2024; Roopnarine et al., 2021).

4. Adult-child Play in the African Context

A previous study found that mother-child and father child play across 18 African countries (Algeria, Central African Republic, Chad, Congo, Ghana, Guinea Bissau, Kenya, Madagascar, Malawi, Mali, Mauritania, Nigeria, Sao Tome and Principe, Sierra Leone, Somalia, Swaziland, Togo, Tunisia, and Zimbabwe) was lower than rates found in the Caribbean region (see Roopnarine et al., 2019). For instance, 40% of mothers and 14% of fathers engaged in play with preschool-aged children. These low rates of parental engagement may be attributed to educational attainment, availability of home educational resources, and time spent away from children for economic activities. That is, parents have to navigate a delicate balance between meeting daily family needs with time allocated to advancing developmental goals for children—the embodied capital approach (see Bock, 2001). As will become clear next, play with other adults and siblings routinely occur in a number of global majority contexts that value collectivistic childrearing practices (Hofstede & Hofstede, 2001).

An assessment (Ong'Ayi et al., 2020) of mother-child, father-child, and allocaregiver-child play (N=990) in Bungoma, Kakamega, and Turkana counties in Kenya showed that far more allocaregivers engaged in play (81.62%, and 4.05%, < 1%, respectively), storytelling (35.67%, 19.45%, and 5.67%, respectively), and reading (8.11%,

2.70%, and 2.70%, respectively) to children than mothers and fathers. It appears that allocaregivers step up to provide early stimulation activities with children in the absence of elevated levels of parental engagement with children. Interestingly, engagement in play by parents or allocaregivers was not associated with children's literacy skills. In accordance with families in the Caribbean region, preschool enrollment, wealth index, and maternal educational attainment were good predictors of children's literacy skills, underlining the role of socioeconomic conditions, educational home resources, and access to early childhood education for fostering literacy skills development in global majority contexts.

5. Play as a Protective Factor

In the fourth study, we determined connections between socioeconomic and home environment resource risk factors and children's literacy and social skills (Lape, et al., 2023). As suggested above, research on the potential benefits of play should be assessed within the complex array of multilevel family risk and protective factors longitudinally. In line with propositions on risk and protective factors proposed in frameworks on developmental psychopathology, scholars have suggested the mediating and moderating function of positive parental guidance and proximal early stimulation activities on associations between family stressors and children's cognitive and social skills (Conger et al., 2010; Masten & Cicchetti, 2010; Rutter & Sroufe, 2001). The negative consequences of socioeconomic stress, low levels of parental sensitivity, and quality of couple relationship on cognitive and social outcomes in young children have been demonstrated across cultural communities (Davies et al., 2016; Conger et al., 2010; Roopnarine et al., 2023; Roopnarine et al., 2025). Unfortunately, not much exists on the mediating role of adult-child play on associations between socioeconomic and home environment resource risk factors and children's literacy and social skills in Caribbean and African cultural communities. It seems obvious that exploring these issues would be central to understanding childhood development in difficult circumstances.

In an effort to demonstrate the role of early stimulation activities in mediating family stressors on childhood outcomes, we examined whether parental cognitive engagement and positive guidance influenced the associations between family socioeconomic and home environment resource risk factors and children's literacy and social skills. Our sample consisted of a group of 1208 multiethnic families in the English-speaking country of Guyana. Four items constituted positive parental guidance: using explanations, redirection, take away privileges, and forbid child from doing something it likes to do. Early stimulation activities included reading, telling stories, naming counting objects, and singing to children, all of which could involve playful exchanges. In our assessment model, parental guidance partially mediated the association between socioeconomic risk and children's literacy skills, whereas parental early stimulation activities partially mediated the associations between home environment educational resource risk and children's literacy and social skills. It is not difficult to see that the quality of parent-child engagement that involves play could lessen the impact of family risk factors on childhood development in global majority contexts.

6. Conclusion

Taken together, the four studies discussed herein provide insights into adult-child play and children's social and cognitive skills in two regions of the world where families face multiple economic and social challenges in their daily lives (Engle & Black, 2008). In Caribbean and African countries, mothers are the ones who are more predisposed to engaging in proximal early stimulation activities with children than fathers and allocaregivers. Associations between adult engagement in play and children's literacy and social skills do not match those found in high-income countries in Europe and North America. Wealth index, educational attainment, and preschool enrollment were better predictors of childhood outcomes than play per se in some Caribbean and African contexts. This could be due, in part, to adult beliefs about the benefits of play for childhood development and

the general preference for early educational training. It is also the case that being major stressors, socioeconomic conditions could interfere with adult engagement in play and childhood development. Overreliance on the UNICEF-Multiple Indicator Surveys that recorded whether or not adults played with children, without attending to the nature and quality of play, could have affected the findings obtained as well.

Research needs to move beyond assessing bivariate associations between adult engagement in play and childhood development toward developing structural equation models (SEM) that include the mediating and moderating function of adult child play activities on associations between multilevel family risk and protective factors and childhood development in global majority contexts. Previous studies (e.g., Rothenberg et al., 2024) have assessed the relative contributions of maternal, paternal, and allocaregiver early stimulation activities and childhood development in the same assessment model. In global majority contexts, allocaregiving is common and grandparents, aunts, uncles, and siblings engage in quite a bit play with children. It is likely that they are in an advantageous position to assume a significant role in fostering early childhood development when parents are in the throes of meeting basic economic needs.

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TRADITIONAL GAMES AND HERITAGE EDUCATION: CONNECTING THE PAST, PRESENT AND FUTURE

Francesca Berti[1]

Abstract

The paper focuses on the play form of 'traditional games'. This term was first introduced by anthropologists in the late 19th and early 20th centuries upon discovering striking similarities between games played, by children and/or by adults, in regions of the world which are very far from each other (Parlebas, 2016). Traditional games are part of intangible cultural heritage, which is defined by UNESCO (2003) as a set of practices and knowledge that are often transmitted orally, such as cooking, crafts, music, dance, dialects and fairy tales. Passed down from generation to generation, such heritage is constantly recreated by the community in response to environmental, social and economic changes.

The present contribution's theoretical framework lies, therefore, at the intersection of Play Studies and Heritage Studies, as well as between Pedagogy of Play and Heritage Education. The reference context here is represented by the UNESCO (2003) and the Council of Europe (2005) conventions, both emphasising the active role of society in heritage identification and safeguarding. The paper aims to emphasise how discovering and rediscovering traditional games, with their local variations and universal features, enable us to engage with and appreciate elements of natural, cultural tangible and intangible heritage through mapping spaces and memories of play (Berti, 2023). Forged connections between the local and global levels, and between the past, present and future, contribute to fostering participation in the safeguarding of heritage.

1 Affiliation: Free University of Bolzano/Bozen, Faculty of Education, Italy.

1. Introduction

There are certain games that everyone has played at some point in their life. These are games that we played as children and still play or learn as adults. Whether in the playground, at a family gathering, after school, in the pub or as a hobby, games shape the way we spend time with others. In other words, play and society are closely intertwined. Of the wide variety of play forms, such as analogue and digital, outdoor and indoor, only a few games are played alone; most require an opponent, partner or team. Some games can be played without anything. Others require expensive equipment. Some are governed by rules, while others are based on imagination.

Play has been investigated by philosophers since the antiquity. As early as the 4th century BC, Plato considered play to be an integral part of citizens' education in his work The Laws. His use of the terms 'paidia' and 'paideia' marked the beginning of play as being considered as an educational tool. In 18th century, the German playwright and poet Friedrich Schiller coined the evocative phrase, 'A man is only fully a man when he plays' (1967 [1793], p. 106). Here, too, play is considered an educational tool and part of the 'aesthetic education of man', as the title of his treatise suggests. Within education, play is recognised as the field of experience in which children are immersed (Dewey, 1938).

Nowadays, the realm of play is investigated by Play Studies and its variants, such as Game Studies and Game Design, among others. It is a relatively new field of research, initiated by the impetus given the Dutch historian Johan Huizinga, who in the 1940s argued for the existence of a 'homo ludens' alongside 'homo faber' and 'homo aeconomicus' (Henricks, 2015).

Yet, although we all know what play is, it is difficult to define. In fact, it is an elusive concept (Spariosu, 1982). Various disciplines, including archaeology, history, anthropology, psychology and philosophy, have attempted to define play but their definitions are always influenced by their own disciplinary traditions. Furthermore, as Sutton-Smith observes: Any definition

is nothing more than an attempt to find something in common between the forms of play of children and adults, animal and human forms, dreams, daydreams, playing and games, sports and parties (Sutton-Smith, 1997, p. 5).

In the late 1950s, the French sociologist Roger Caillois attempted a more pragmatic approach to the debate, noting that, although it is extremely difficult to define 'play', we do know that human beings play 'games'. He therefore compiled large lists of games and discovered that all of them either individually or in pairs possess four characteristics. He termed these characteristics 'competition' (physical and/or mental), 'luck', 'vertigo' and 'pretence'. Caillois also recognised a continuity between the more or less structured presence of rules and imagination or the absence of rules (Caillois, 1961; Henricks, 2015).

2. Traditional Games

Experts in Play Studies tend to classify games according to their invention phase. The term 'traditional games' refers to those that existed before the mid-18th century, when the first games were produced on a large scale (Berti, 2021). Other terms are sometimes also used to refer to play practices that are old/ancient or related to folklore. Ultimately, it is the subject that determines what is recognised as 'traditional' (Berti, 2020).

Traditional games include children's yard and street games, as well as games played by adults at specific times of year, such as holidays or rituals, or in particular social contexts, such as bars, pubs, markets or meeting places. Approximately 85% of traditional games are motor games, while the remaining 15% are social games, also known as cognitive games. Around 45% of these games are played by both children and adults (Lavega Burgués, 2016, p. 105).

These games cover a period ranging from prehistory to antiquity, the Middle Ages, and the modern age. Stone engravings, archaeological finds, iconographic sources and literature all testify to the existence of a wide range of games rooted in rituals and myths in ancient times.

Towards the end of the 19th century, early anthropologists discovered surprising similarities between play practices and toys from different regions of the world. In other words, they found that the same types of games and toys existed in all cultures and eras and could tell the story of humankind. These games and toys are an expression of both the diversity and similarity between cultures (Parlebas, 2016). American collector and ethnographer Stuart Culin embarked on an ambitious project to map all the games in the world. However, he actually only managed to do so for games from North and Central America, Korea, Japan, and China (Culin 1895, 1907). His comparative observations demonstrate that, despite the variety of materials and shapes of play objects, it is possible to recognise typologies, such as: spinning tops, shuttlecocks, string games, board games, ball games, bowling and pin games, card games, throwing games, and fighting games (Lavega Burgués, 2006).

The German philosopher Ludwig Wittgenstein uses the example of games and their variety to define 'family resemblances' when describing the similarities between languages:

For if you look at them, you do not see something common to all of them, but similarities, relationships and a whole series of these. Don't think, look! We see a complex network of similarities that overlap and intersect, similarities in the large and the small. There is something that runs through the entire thread, namely the continuous overlapping of these fibres (Wittgenstein, 1968 [1953], pp. 36-37).

Within a game typology/family, in other words, there is a rich number of varieties and resemblances even between games belonging to regions that are very distant from each other. Striking similarities sometimes raise the question of whether there has been cultural contact, for example through migration and trade, or whether play is a constant that unites mankind and is markedly innate in human beings from a philosophical point of view.

One could therefore trace an imaginary thread connecting the games of different regions and continents — a precious thread that reveals the diversity of cultures and the universality of the human experience of play:

Figure 1: The thread that links the experience of play around the world

At present, cross-cultural comparisons continue to be valuable. For instance, Jean-Pierre Rossie's study of farming communities in Morocco reveals parallels in their practices with societies of ancient Greece, Etruria and Rome, where play mostly took place outdoors in rural and pastoral settings (Rossie, 2015; Dasen & Vespa, 2022).

However, it should also be considered that, in the process of establishing modern states, especially in Europe, along with the rejection of some traditional practices and the adoption of others, new traditions may also have been created (Hobsbawm & Ranger, 1983), which do not necessarily indicate continuity with the past (Fournier, 2024).

3. Traditional Games and Sports / Traditional Sports and Games

There are two ways to study traditional games. The first focuses on the individual game itself. We can research its origins and how it has changed over the centuries. Take the game of 'Pachisi', for example, which arrived in Europe from the Indian subcontinent at the end of the 19th century thanks to British merchants who patented it in the UK under the name 'Ludo' and circulated it throughout Europe and the Mediterranean.

Alternatively, one can focus on how a game is played. In this case, we can discuss 'play communities' within a specific territory. These play practices reveal the relationship between the

community and the territory. In general, we refer to these as 'traditional sports and games" (TSG). A 'traditional game' is specific to a local culture, has its own rules and forms, and is played at a particular time of year in dedicated spaces. However, if the game is played at a regional level and tournaments are organised, it needs to be codified and is referred to as a 'traditional sport'. If this codification covers all aspects of the game, including rules, equipment, venues and referees, then it is referred to as a 'sport'. Olympic sports are one example, as they are played in the same way all over the world. In the transition from a traditional game to a sport, the original link with a local culture is lost.

In Italy, the term 'traditional games and sports' is used to draw attention to the connection with intangible heritage. This is thanks to the extensive research into traditional Italian play communities carried out by the *Associazione Giochi Antichi* (Verona), a grassroots association that promotes the *Tocatì – International Street Games Festival*[2]. At an international level, the term 'traditional sports and games' (TSG) is preferred. UNESCO defines TSG as follows:

Traditional sports and games are leisure and recreational physical activities that may have a ritual character. They are part of the diversity of universal heritage. These games, which derive from regional or local identities, are practised individually or collectively, based on rules accepted by a group organising competitive or non-competitive activities, and feature a wide variety of playing practices (UNESCO, 2017).

These rich varieties of games, which are an expression of cultural creativity known as *ludodiversity* (Parlebas 2016), are mostly collective motor games (such as bowls and skittles) that take place outdoors in urban and/or rural settings. They are widespread throughout the world and across all cultures and have ancient origins. They are usually played on a weekly or seasonal basis, or during festivities, in rural or urban environments, such as squares and parks (Lavega Burgués, 2016; Fournier, 2013).

2 www.tocati.it

4. Heritage, Participation, Active Citizenship

Traditional games, thus, are at the same time expression of local play practices and the universality of the human play experience (Parlebas, 2016). Such fascinating quality emerges at the *Tocatì – International Street Games Festival*, organised by the *Associazione Giochi Antichi* in Verona since 2002. The festival brings together Italian play communities and, each year, features a guest from a different region of the world. The games encountered at this event, whether traditional Italian games and those from the annual host country (among others, Hungary, Scotland, Mexico or China), often resemble each other's (Berti & Gasperini, 2021).

Furthermore, when selecting the guest country, efforts are made to invite Italian traditional play communities that present games similar to those of the guest country, and to place them in the same square. In 2013, for instance, the guest country was Hungary, and in the square where the whip game was presented, whips from South Tyrol were also displayed to highlight the similarities between different regions and cultural traditions. In other words, at the Tocatì Festival, cultural similarities are discovered that spark curiosity about others: what was previously considered to be 'my' game becomes 'our' game. Something we have in common emerges.

The Tocatì Programme, in which the Tocatì Festival is a major action, has been included in the UNESCO List of Good Practices for the Safeguarding of Intangible Cultural Heritage since 2023. This recognition highlights Tocatì's strong commitment to the 2003 UNESCO Convention Framework, which came about through four years of drafting an international application programme (joined by Italy, Belgium, France, Cyprus and Croatia) initiated and implemented with the engagement of UNESCO facilitator for the application of the 2003 Convention, Valentina Lapiccirella Zingari. The Tocatì Programme, thus, stresses the relationship between a traditional play community and the territory it inhabits, the way the UNESCO Convention does:

Intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity (UNESCO, 2003).

Moreover, the 2003 UNESCO Convention for the Safeguarding of Intangible Cultural Heritage went beyond the idea of preserving natural and cultural heritage (UNESCO, 1972) by introducing the concept of 'safeguarding'. These measures encourage the transmission of heritage from one generation to the next, as well as promoting community participation. The 2003 Convention legitimises a bottom-up approach and values 'communities, groups and individuals' as bearers of a living, constantly evolving heritage. This implies viewing culture as a 'process in the making' (Bauman, 1999): it is not only passed down through the generations, but also gains value through how individuals perceive it. In this transition from object to subject, all elements of heritage, whether material or natural, can be considered intangible, as it is the subject itself that narrates, interprets, and participates in their safeguarding (Giancristofaro & Lapiccirella Zingari, 2020).

At the European level, also the 'Convention on the Value of Cultural Heritage for Society' (Council of Europe, 2005, known as the *Faro Convention*) emphasises both individual and collective commitment, recognising participation as a vital strategy for safeguarding initiatives. In other words, it highlights the role played by society, alongside governments and experts, in recognising and safeguarding cultural and natural heritage.

From this perspective, heritage education as well involves participatory processes of knowledge construction, focusing on those who narrate and interpret the specific heritage itself, giving participants a voice in the process of discovering and identifying it.

5. Heritage Education Projects with Traditional Games: The Intercultural Potential

In a heritage education project focusing on traditional games, children engage in a research which recollect memories, investigate present areas dedicated to play and connect the local dimension with a global one. By doing so we give them the opportunity to explore the past, take action in the present and care for the future. Just as early anthropologists did, we have identified similarities and differences between cultures around the world.

In terms of planning a school project, the following elements could be included:

- classroom activities planned by teams of teachers;
- research into places and stories related to play in the neighbourhood (past, present and future);
- organisation of play sessions;
- organising play time;
- making handcrafted games and toys;
- researching typologies/families of games played around the world;
- conducting interviews with parents and grandparents about childhood games. In this activity, children could be invited to collect memories of playing from their family members, thus contributing to the creation of a collective story;
- using the research carried out in class and the stories collected relating to our local area, the wider region, and the regions of origin of families with a migrant background to make up a wide spectrum of games. These can then be classified into types and families (e.g. ball games, running games, board games, spinning top games, marbles, etc.);

- creating a local map (of the town or neighbourhood) describing the local heritage;
- tracing a thread on other world maps without country borders (see fig. 1) for each game typology/family;
- presenting a final exhibition, bringing together stories, maps, objects collected and organising games.

Children are asked to collect stories about play by interviewing their parents, grandparents and other older people. Memories of games have narrative qualities because they evoke joy. These stories convey the light-heartedness of play, as well as personal experience and nostalgia. They recount visits to different countries and the countries of origin. The stories often tell of social and economic changes. For example, older people often lament that children no longer play in the streets as they once did. Most surprisingly, however, is that multicultural communities, where old and new migrations are ever-present, find a meeting place through this storytelling.

A project with traditional games, therefore, is just the *hook* to start thinking with abduction/inference, stimulating an interest in going beyond the dichotomy self/other and observing, instead, the fluidity of cultural boarders.

As with games, similarities in other elements of intangible cultural heritage (i.e. fairy tales, bread baking, dance and music) can be recognised at national, regional and sub-regional levels. For instance, traditional practices in border areas often exhibit significant similarities in terms of dialects, crafts, cuisine and fairy tales. In the postcolonial discourse, these spaces where cultures meet are called 'intermediate spaces' or 'hybrid spaces', as they blur the boundaries between cultures. Exploring these similarities helps us to overcome cultural barriers, reduce processes of 'othering' and foster dialogue (Bhatti & Kimmich, 2018).

When children group games into families, they are practicing inference: they need to find the relationships between the games met both in their research and in the stories collected from parents

and grandparents. This process leads them to discover that play may be seen as a space shared among cultures.

Such dimension is made visible by the use of world maps and the practice of mapping itself: the exercise of connecting several points on the map through real strings directly engages children in weaving the symbolic thread that links together experiences of play across cultures.

Recalling Wittgenstein one more time, the activity stimulates children's ability to "see what is in common" (*das Gemeinsame sehen*) and to think about things and concepts "with blurred edges" (*mit verschwommenen Rändern*).

The core of this approach resides in Wittgenstein's question:

If I am shown various leaves and told "This is called a leaf", I get an idea of the shape of a leaf, a picture of it in my mind. But what does the picture of a leaf look like when it does not show us any particular shape, but rather "what is in common to all shapes of the leaf"? (Wittgenstein 1968)

This intercultural approach, which is based on the search for similarities, can be visualised through a four-stage model:

1. cultures are observed through the prism of finding similarities, which leads to curiosity about the other;
2. a space for encounter emerges;
3. openness towards the other increases;
4. dialogue is established, and a new willingness develops that allows mutual cultural differences to be valued.

Participatory activities allow us to discover the games played in our neighbourhoods, enabling us to immerse ourselves in mapping the territory and collecting stories by questioning the local community. We consider everyone who constitutes our community, encompassing both past generations and new migrants (Berti, 2023).

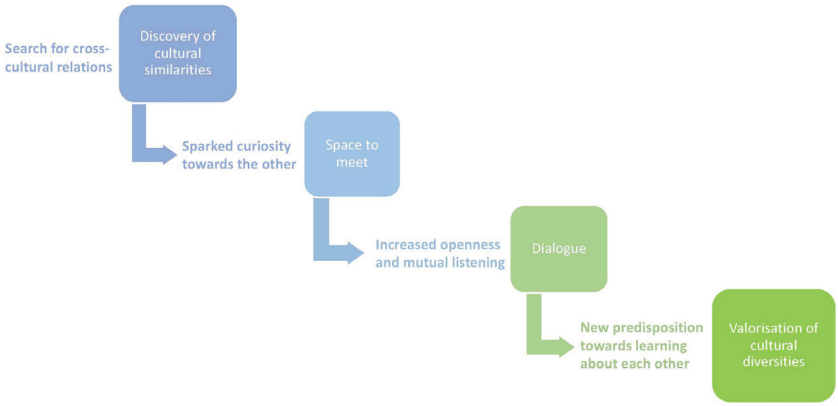

Figure 2: Model of intercultural dialogue through similarity. (Berti 2023)

6. Conclusion

Traditional games – present in all cultures around the world from prehistory to the present day – allow us to discover elements of similarity and cultural diversity between cultures thanks to the variety of play practices. Traditional games, in fact, are expression of intangible cultural heritage. The exploration of similarities among cultures, allows to reflect on the fact that cultures are not rigidly separate entities, on the contrary, they include spaces of overlapping, spaces in-between that make boundaries blurred (Bhatti & Kimmich, 2018). Each story collected by children in a school project around traditional games, involving parents and grandparents, contributes to creating a collective narrative of the local natural, cultural, material and intangible heritage. This type of participatory initiative helps build and strengthen the community itself.

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THE EUROPEAN CHILD GUARANTEE

Valeria Spazzoli[1]

Abstract

This study introduces the European Child Guarantee (the Guarantee), a core European Union instrument designed to break the intergenerational cycle of disadvantage and combat child poverty across Member States. Introduced as part of the 2021 European Strategy on the Rights of the Child, the Guarantee operationalizes Principle 11 of the European Pillar of Social Rights by ensuring effective and free access for "children in need" to essential services, including early childhood education and care (ECEC), healthcare, healthy nutrition, and adequate housing. Despite a decline in overall EU poverty since 2019, the share of children at risk of poverty or social exclusion slightly increased to 19.5 million in 2024, highlighting the urgency for stepped-up efforts. The paper details the Guarantee's implementation status, which is supported by the European Social Fund + (ESF+), and outlines its targets to reduce the number of people at risk of poverty by at least 15 million by 2030, with at least 5 million being children. Finally, it underscores that investing in children is not only a moral imperative but an economic necessity, as childhood disadvantage costs European OECD countries an average of 3.4% of GDP annually.

1. Introduction

The European Commission, the Parliament and the Council proclaimed the European Pillar of Social Rights at the Gothenburg Summit, in 2017. The Pillar sets out 20 key principles that represent the compass guiding towards a strong social

1 Affiliation: European Commission Directorate-General for Employment, Social Affairs and Inclusion, Brussels, Belgium.

Europe that is fair, inclusive, and ensures opportunities for all. Principle 11 states that children have the right to affordable early childhood education and care of good quality and that children have the right to protection from poverty.

In 2021, the Commission presented the European Pillar of Social Rights Action Plan to turn the 20 principles into concrete actions. The Action Plan sets three headline targets for 2030 on employment, skills and poverty, welcomed by EU political leaders. The poverty target aims to reduce by 2030 the number of people at risk of poverty or social exclusion by at least 15 million compared to the 2019 level, out of whom at least 5 million should be children.

In 2021, the European Commission presented the European Strategy on the Rights of the Child, a comprehensive EU policy framework to ensure the protection of rights of all children, and secure access to basic services for vulnerable children. The Council Recommendation establishing a European Child Guarantee (the Guarantee) is part of the Strategy.

The Guarantee is the EU instrument to break the cycle of disadvantages for children. It aims to prevent and combat social exclusion by guaranteeing access for children in need to a set of key services: early childhood education and care, education (including school-based activities and play), healthy meal each school day, healthcare, healthy nutrition, and adequate housing. The Guarantee targets 'children in need', which refers to children at risk of poverty or social exclusion thereby also contributing to upholding the rights of the child by combatting child poverty and fostering equal opportunities and participation in the society in the young age, and later on. All the EU Member States are currently implementing the Guarantee, also with the support of the European Social Fund + (ESF+).

The EU policy framework to combat child poverty and to break the cycle of disadvantages is broad and it includes various policy responses from increasing participation in the labour market for parents to protecting children's rights. For more than a decade, EU

has been supporting Member States to break the cycle of disadvantage, starting with the 2013 Commission recommendation on investing in children (European Commission, 2013a). The Council Recommendation on early childhood education and care: the Barcelona targets for 2030 (European Commission, 2022), encourages Member States to increase participation in accessible, affordable and high-quality childcare in order to facilitate women's labour-market participation and enhance children's development. Moreover, a wide array of instruments exists to support labour market participation of parents.

In 2024, the number of adults living in poverty in the EU declined, while the share of children living in poverty or at risk of social exclusion slightly increased. The EU poverty target, including child poverty reduction, remains within reach. However, stepped-up efforts at the EU and national levels are needed.

Combatting child poverty and social exclusion is not only a moral imperative, but a social and economic one. Investing in children is vital for a sustainable, efficient and competitive knowledge economy and a fair society. Future growth prospects and the sustainability of social protection systems depend on today's children. Public expenditure incurred to correct the consequences of childhood poverty throughout a person's life is significantly higher than necessary investments to improve their life chances by supporting them during childhood.

In June 2024, Commission President Von der Leyen announced in her political guidelines the first-ever EU Anti-Poverty Strategy to help people access essential protection and services. In this context, the Guarantee should be strengthened to prevent and fight social exclusion, through education and childcare, healthcare and other key services.

2. Child Poverty in the EU

Measuring Child Poverty in the EU

At the European level, the notion of children at risk of poverty or social exclusion (AROPE[2]) is used to monitor child poverty. The notion refers to the situation of the household the child belongs to, being exposed to at least one of the following adversities:

- Risk of poverty (abbreviated as AROP, for at-risk-of-poverty), meaning that the household income is below 60% of the national median income, with specific weighting for the size of the household; or
- Situation of severe material and social deprivation, which is enforced lack of at least 7 out of 13 necessary items – e.g. ability to keep home adequately warm, etc); or
- Very low work intensity (working age members of the household working for a time equal to or less than 20% of their total work-time potential during the previous year).

In the EU, children in the EU remain structurally more exposed to poverty – which is a key driver of social exclusion – than the rest of the population. Recent data show that in 2024, 21% of the EU population (93.3 million people) was at risk of poverty or social exclusion, indicating a decline compared to 2019 levels. However, the share of children living in poverty or at risk of social exclusion slightly increased, in 2024 there were 19.5 million children in the EU at risk of poverty or social exclusion. Germany and Romania recorded the largest reductions between 2023 and 2024, while Belgium, Finland and France saw notable rises. Relative to 2019, there have been substantial absolute reductions in the child population at risk of poverty or social exclusion in around a third of Member States, most notably in Italy and Romania, but the population has increased noticeably in another third of countries, with large rises in France, Germany and Spain. Based on the 2024 figures, Cyprus, Ireland and Sweden have already achieved their national targets for child poverty reduction.

2 It is the main indicator to monitor the EU 2030 target on poverty and social exclusion and was the headline indicator to monitor the EU 2020 Strategy poverty target.

Addressing Child Poverty in the EU

Social exclusion is a complex and multidimensional phenomenon. Its key drivers are insufficient resources and poverty, but also a lack of equal access to goods and services due to various forms of disadvantage, preventing full participation in society.

The current levels of child poverty in the EU remain unacceptable. Figures not only indicate that a significant group of children suffers in their young age, but also that these children are likely to remain at risk of poverty and/or social exclusion as adults. Furthermore, the effects of social exclusion on children can last beyond the life-course and be carried on into future generations, creating a vicious cycle of transmission of poverty across generations. Without the necessary support, children from disadvantaged backgrounds or low-income families are likely to experience the intergenerational transmission of disadvantage.

Policy actions and investments targeted to children from disadvantaged socio-economic backgrounds hold the promise of breaking the intergenerational cycle of disadvantage, with the greatest chances of success, by levelling the playing field in child development. Breaking the intergenerational cycles of disadvantage starts with investment to reduce the gap in access to key services between children in need and their better-off peers, thereby ensuring equal opportunities for all children and that nobody is left behind.

Greater investment in children holds the promise of breaking the cycle of intergenerational disadvantage (see European Commission, 2013b) and has a high multiplier effect (Hemerijck et al., 2016). A key role in breaking this cycle is played by early childhood education and care (ECEC), education, and healthcare systems (D'Addio, 2007). Available studies (e.g. Heckman, 2008) emphasise the critical influence of investment in pre-school years (especially before the age of 3), during which most of the essential cognitive and social skills are formed. These appear to be the years with the highest rate of return on education achievement and overall human capital investment in children. This rate of return is especially high when combined with intervention in health

and education. Children from disadvantaged backgrounds benefit even more from this investment, because high-quality early childhood education and care help to reduce the inequality stemming from non-school factors such as family and neighbourhood. It was estimated that investing in early childhood education and care can yield an annual return of up to 13% *(see figure 1).*

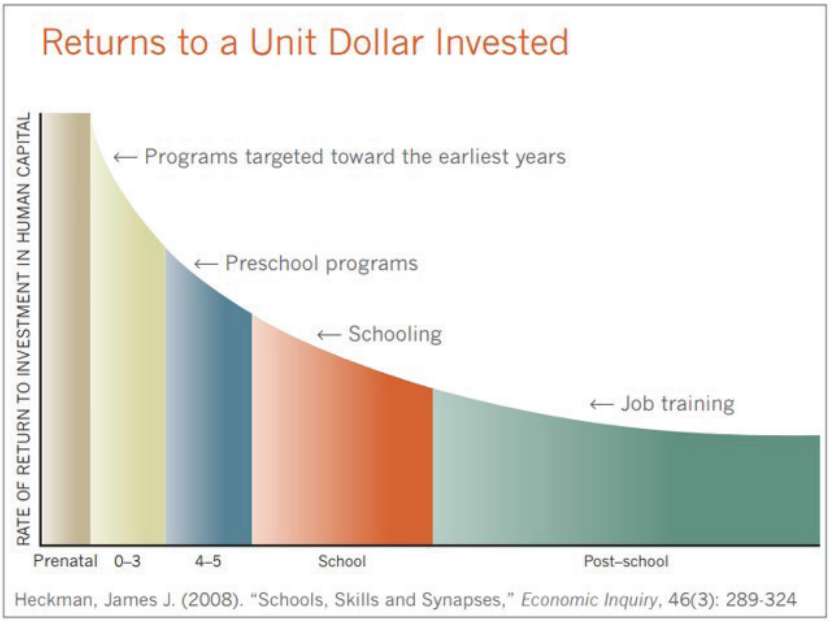

Figure 1. Heckman's equation

On the other hand, not combating child poverty brings some costs. On average across European OECD countries, working-age adults who experienced socio-economic disadvantage in childhood are about 3-6 percentage points less likely to be employed, earn about 20% less, and report worse health (equivalent to around two weeks ' full health per year) than adults with more favourable childhoods. These penalties represent important losses for economies. Across European OECD countries, the labour market penalties from childhood disadvantage are worth on average the equivalent of 1.6% of GDP each year, and the health penalties on average 1.9% of GDP, producing a total average cost from childhood disadvantage that stands at the equivalent of 3.4% of GDP, annually. (OECD, 2022)

3. The European Child Guarantee and its Implementation

Council Recommendation Establishing a European Child Guarantee

In 2019 Commission President Ursula von der Leyen announced in her Political Guidelines (European Commission, 2019) the creation of a European Child Guarantee (hereafter 'the Guarantee') with a view to ensuring that in Europe every child at risk of poverty or social exclusion has access to the most basic of rights such as healthcare and education. The Guarantee was meant to concretely operationalise principle 11 of the European Pillar of Social Rights and it was announced by the 2021 European Pillar of Social Rights Action Plan.

On 24 March 2021, after consultations with key stakeholders including children themselves, the European Commission adopted a proposal for a Council Recommendation establishing a European Child Guarantee (European Commission, 2021b), along with the supporting Staff Working Document (European Commission, 2021c). The Council adopted the proposed Recommendation, in a record time, on 14 June 2021. (European Council, 2021d) Member States approved the Recommendation unanimously, showing a strong political support for the instrument.

The Guarantee aims to prevent and combat social exclusion by guaranteeing access of children in need to a set of key services, thereby also contributing to upholding the rights of the child by combating child poverty and fostering equal opportunities. It targets "children in need" which refers primarily to children, under the age of 18, at risk of poverty or social exclusion. Alongside poverty, other forms of disadvantage create barriers for inclusion and participation in the society thus, the Guarantee caters for the specific needs of: (i) homeless children or children experiencing severe housing deprivation; (ii) children with disabilities; (iii) children with a migrant background; (iv) children with a minority racial or ethnic background (particularly Roma); (v) children in alternative (especially institutional) care; and (vi) children in precarious family situations. The focus on children in need is meant to prevent them from remaining at risk of poverty or social exclusion as adults.

While social exclusion is multi-dimensional, it strongly correlates with the lack of access to key services, such as early childhood education and care, education, nutrition, and housing. While these services are in place, the evidence shows that access in particular for children in need is uneven across Member States. (Flisi & Blasko, 2019). The drivers of unequal access to services are manifold and include: (i) lack of financial resources to cover for the costs of the services by parents or guardians; (ii) limited availability, particularly in rural, remote or disadvantaged areas; (iii) lack of adaptation of services, or personnel, to children with particular needs; (iv) lack of information on the available services; (v) administrative barriers; and (vi) risk of social stigma. The Guarantee recommends that Member States ensure that children in need have:

a) effective and free access to high-quality early childhood education and care, education and school-based activities, at least one healthy meal each school day and healthcare;

b) effective access to healthy nutrition and adequate housing.

With a view to guaranteeing effective and free access to high quality early childhood education and care, education and school-based activities and a healthy meal each school day for children in need, Member States are recommended to, for instance: identify and address financial and non-financial barriers to participation in early childhood education and care, education, and school-based activities; take measures to prevent and reduce early school leaving, including by providing personalised guidance and strengthening cooperation with families; provide learning support to children with learning difficulties to compensate for their linguistic, cognitive and educational gaps; adapt facilities and educational materials of early childhood education and care and of educational establishments and provide the most appropriate response to the specific needs of children with special educational needs and of children with disabilities, using inclusive teaching and learning methods; for this purpose ensure that qualified teachers and other professionals are available, such as psychologists, speech therapists, rehabilitators, social workers or teaching assistants; put in place measures to support inclusive

education; provide at least one healthy meal each school day; ensure provision of educational materials, including digital educational tools, books, uniforms or any required clothing, where applicable; provide high speed connectivity, digital services and adequate equipment necessary for distance learning to ensure access to educational content online, as well as to improve digital skills of children in need and teachers; provide transport to early childhood education and care and education establishments, where applicable; ensure equal and inclusive access to school-based activities, including participation in school trips and sport, leisure and cultural activities; develop a framework to provide after school care and opportunities to participate in sport, leisure and cultural activities.

With a view to guaranteeing effective and free access to quality healthcare for children in need, Member States are recommended to: facilitate early detection and treatment of diseases and developmental problems, including those related to mental health; provide targeted rehabilitation and habilitation services for children with disabilities; implement accessible health promotion and disease prevention programmes targeting children in need and their families, as well as professionals working with children.

To guarantee effective access to sufficient and healthy nutrition for children in need, including through the EU school fruit, vegetables and milk scheme, Member States are recommended to, for instance: support access to healthy meals also outside of school days, including through in-kind or financial support, in particular in exceptional circumstances such as school closures; limit advertisement and restrict the availability of foods high in fat, salt and sugar in early childhood education and care and educational establishments;

To guarantee effective access to adequate housing for children in need, Member States are recommended to: ensure that homeless children and their families receive adequate accommodation, prompt transfer from temporary accommodation to permanent housing and provision of relevant social and advisory services; assess and revise, if necessary, national, regional and local

housing policies and take action to ensure that the interests of families with children in need are duly taken into account, including addressing energy poverty and preventing the risk of homelessness, specific attention should be devoted to the needs of people with disabilities; provide for priority and timely access to social housing or housing assistance for children in need and their families; take into account the best interests of the child as well as the child's overall situation and individual needs when placing children into institutional or foster care; ensure the transition of children from institutional or foster care to quality community-based or family-based care and support their independent living and social integration.

To implement the Recommendation, the Member States have nominated their Child Guarantee Coordinators (European Commission, 2025) and prepared national action plans (European Commission, n. d.), which cover the period until 2030. The Member States have to biennially report to the Commission on their national implementation measures.

Furthermore, the Indicators' Sub-Group of the Social Protection Committee, together with the European Commission, agreed on a monitoring framework[3] which tracks through statistical indicators, the progress of Member States in delivering on the European Child Guarantee. The monitoring framework also helps to identify good practices and foster mutual learning. It is regularly updated to keep it up to date and explore ways to fill the remaining data gaps.

Current Status and Challenges in the Implementation of the European Child Guarantee

The implementation of the Guarantee at the national level is on its way. By now, the Commission has received all 27 national action plans. The overall analysis shows different levels of ambition in the plans, reflected by targets (or lack of thereof), the scope of the measures and the financial allocations. Overall, the plans point out to some key areas of success such as efficient coordination,

3 The EU framework for monitoring the implementation of the European Child Guarantee has been updated - European Commission

both horizontal (ministries in charge of social protection, health, education, and housing), and vertical (national, regional, and local levels). Some general challenges remain as concerns the design of policy measures. For instance, universal schemes or discounts/subsidies instead of free access.

Specifically concerning effective access to free early childhood education and care, all action plans pledge to expand the provision of ECEC, both for the general population and for children in need. On access to free education and school-based activities, all plans report that access to education is universal and free; several action plans include reduction of early school leaving; not all the national plans provide sufficient attention to free and effective access to school-based activities, Finland, Sweden, Denmark, and Netherlands stand out as most compliant by stipulating that participation cannot be made conditional on financial contributions. On school meals, Croatia, Latvia, Lithuania and Luxembourg introduced free meals for all pupils (joining Finland, Sweden and Estonia); Portugal and Slovenia are highly compliant as regards targeted provision for children in need; the EU Milk and Fruit Scheme or other schemes for provision of snacks is mentioned are several action plans. Across EU, public healthcare for children is generally free, while some hidden challenges exist such as shortages of personnel and long waiting lists; most of the actions mentioned in the plans are meant to close the gaps for children in need. As regards effective access to healthy nutrition, comprehensive approaches can be found in the Austrian and Cypriot plans, where measures combine education, advertising restrictions and limitation of availability of unhealthy foods. Finally, effective access to housing remains somehow challenging; some measures are planned to increase the supply of social/affordable housing, but these are not enough to guarantee effective access for all children in need; moreover, deinstitutionalisation of alternative care and support for young people leaving it touched upon in some action plans only.

Support from European Social Fund + (ESF+)

EU funding is available to support Member States in implementing the Guarantee. In line with the Regulation establishing the European Social Fund Plus (European Commission, 2021c), Member States must allocate an appropriate amount of their resources of the ESF+ for the implementation of the Child Guarantee through targeted actions and structural reforms to tackle child poverty. In particular, Member States that between 2017 and 2019 recorded the risk of poverty or social exclusion among children that was above the EU average, should allocate at least 5% of their resources of the ESF+ strand under shared management to support targeted actions and structural reforms to tackle child poverty. This applies to Bulgaria, Croatia, Cyprus, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Romania, and Spain.

Commission's analysis shows that poverty has been programmed by 23 MS reaching EUR 8.9 billion in total. Member States have been used by Member States to develop new or improved mainline services and programmes to better reach children at risk of poverty or social exclusion. For instance, the ESF+ has been supporting the extension of compulsory pre-school education for all children aged 4 years old.

4. Future Developments and Next Steps

The 2024 AROPE data for children suggests that some gaps remain despite the progress in the implementation of the European Child Guarantee since its creation in 2021. For instance, looking at the participation of children below 3 years old in ECEC, there are still substantial gaps between children in need and the overall population.

In 2024, President Von der Leyen's Political Guidelines 2024-2029 (European Commission, 2023) announced the first-ever EU Anti-poverty Strategy with the aim "to help people to get access to the essential protection and services they need, along with addressing the root causes of poverty" and "As part of this we will

strengthen the Child Guarantee to prevent and fight social exclusion through education, healthcare and other essential public services".

The preparations for the Anti-poverty Strategy at the European level have started. The Commission is currently running a wide consultation to collect evidence before presenting the Strategy in early 2026. At the same time, implementation of the Guarantee continues. Member States will submit the second round of the biennial progress reports by 15 March 2026 (i.e. four years after the deadline for submission of the action plans). The Commission together with the Child Guarantee Coordinators has started a qualitative assessment of the Guarantee implementation, discussing topic by topic. Finally, the Commission will have to report to the Council reviewing the progress made in the implementation of the Guarantee is due in mid-2026.

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CHAPTER 2
CONCEPTS OF PLAY

THE SINE QUA NON CONDITION OF PLAY

Paul Sacher-Toporek[1]

Abstract

In an increasingly complex world where play is often misunderstood or relegated to a simple pastime, this article proposes the Sine-Qua-Non-Model-of-Play, an interdisciplinary model developed over two decades, by the author. The model addresses a critical gap in current research: while the benefits of play are well-documented across fields from pedagogy to management science, little is known about its fundamental „working" mechanisms. Drawing on the foundational work of educational scientists Hans Scheuerl and Andreas Flitner, the model identifies six essential determinants that are the necessary and sufficient conditions for play to occur. These include elements such as security, freedom, and presentness. By providing a clear framework for understanding play, the model helps to distinguish it from other activities and can be used to analyze why play may be absent in specific environments. Ultimately, this contribution offers a universal and practical tool for researchers and professionals to better understand, analyze, and foster play in any context.

1. Introduction

Looking at this picture, most people would immediately say what they see, if asked: "I see children playing." If we started asking: "Can you describe - *why* they are playing?", the answers would certainly take longer and probably differ in many ways. It turns out, it is easy to recognize, when someone is playing, but it is difficult to explain why.

1 Affiliation: Founder and leader of SpielWERT management consulting company, Vienna

Picture 1: Guess what they´re doing

While the ability to recognize Play is universal, the explanations of it vary. Most of these explanations are based on personal and subjective approaches towards Play. No matter how many different answers or explanations you get, the question remains as to whether these explanations are exhaustive.

Given the importance of Play in fields ranging from pedagogy (Almy, 1973; Abresch, 1980; Kreuzer, 1983; Baer, 1995; Ginsburg, 2007; Zimpel, 2011; Hauser, 2013; Hüther, 2016) and developmental psychology (Schenk-Danzinger, 1988; Montada, 2002) to sociology (Fröhlich 2012; Hobmayr 2014), psychology (Heckhausen, 1980; Helbig, 2023) and management science (Jost, 2001; Werbach, 2012; Deuschle, 2025) it is surprising, that there is hardly any research on how Play "works". Play seems to be taken for granted in many scientific publications. However, this assumption has its gaps and pitfalls. Doubts first arise, when the word "Play" is translated into another language. In German, for example, "Play" is translated as "Spiel". However, in German „Spiel" also means „Game". It turns out, that the German word "Spiel" is a homonym. The same applies to other languages such as Czech "Hra" and can lead to a confusion *within* a language. Some German publications about "Play" actually refer to games, which makes things even more confusing.

Besides confusion *within* one language, there is also confusion *between* two languages. Using one of the AI-translation assistants that are currently emerging shows this dilemma. Some of them cannot differentiate between Play and Game. Their translations are therefore most likely incorrect.

Homonyms are mostly useless for scientific explanations, because they can lead to the situations described above. Science requires clear formulations and definitions. The following article presents an interdisciplinary model, called the Sine-Qua-Non-Model-of-Play. It was developed by the author over a period of 20 years, and it can be used in any scientific field, when researching or using Play.

2. Theoretical Foundations of the „Sine-Qua-Non-Model"

The theoretical foundations of the model are based on the findings of educational scientists and play researchers *Hans Scheuerl* and *Andreas Flitner*.

2.1. Hans Scheuerl

In the 1950s, Scheuerl compiled the most up-to-date findings on Play at the time, recording the work of over 130 researchers. (Scheuerl, 1954, p. 243) Scheuerl meticulously analyzed their findings looking for similarities and parallels. His (main) goal was to discover what Play is. (Scheuerl, 1954, p. 5) His methodology involved filtering out, in a kind of matrix, those factors that recur in the various observations and are therefore essential to Play from all the findings and observations of the aforementioned individuals. He identified *six essential characteristics* (determinants) without which Play is impossible. This can be called the Sine Qua Non Condition of Play. According to his findings Play is impossible without these six determinants. They must all operate *simultaneously*, and if just *one* is missing, Play ceases. The determinants are a com- bination of real and subjective factors. This means, that a person´s decision to play depends universally on these determinants, but their subjective perception of their effectiveness varies from individual to individual.

2.2. Andreas Flitner

Flitner studied children's play in particular (Flitner, 1978). He recognized that children's Play is evaluated differently, depending on the scientific approach. For example, a psychologist and an educator would evaluate Play differently. This results in *different approaches* to Play, but they all collectively attach great importance to it. In addition to Scheuerl´s phenomenological approach he identifies a developmental psychological, a psychoanalytic and a social psycho- logical approach. (Flitner, 1972, p. 7) In all of these approaches Play is used as a „tool" to help children in their development.

2.3. Expanding the Model Based on Recent Findings

However, these approaches do not address how Play "emerges." It is only, when Play "is there", that the benefits of Play can be utilized. Therefore, all of these approaches should be interested in knowing *how* Play arises, *when* it takes place, and *what* can hinder it (e.g. if a child does not get involved in playing). To get to this point, the various approaches to Play can be phenomenologically traced back to a universal form: Free-Play. Free-Play (Freispiel) is cited as the starting point for Play, the "big bang" of Play, so to speak, referred to here as the "primal phenomenon". A child who encounters the six determinants will almost "automatically" transition to Free-Play.

Over the past few years, many "Types of Play" have been invented. A personal recent research has shown that there are now more than 20 different types.2 While it can be useful to categorize Play, it is questionable whether all of these types and distinctions are needed. (comp. Mogel 2008, p. 79) People tend to compare, and it causes a lot of confusion, if one Type of Play is rated higher or more 'important' than another. All Types of Play can be derived from Free-Play, and a child who has the opportunity to play freely will most certainly experience all of these types. From this point on "Play" means "Free-Play" and vice versa. This will make things easier to understand.

2 Further information about these types here: https://www.smartkidzplayandlearn.co.uk.

Although the findings of Scheuerl and Flitner are several decades old, they remain relevant today. Nevertheless, much new knowledge has emerged since the 1950s that could not have been considered in Scheuerl's time. However, these new findings reinforce and support phenomenology and the six determinants. Findings from neuroscience (Schultz 2011), psychology (Csíkszentmihályi, 1992), motivation research (Rheinberg, 2006) can be seamlessly linked, as can findings from management science (Malik, 2006), and sociology (Hobmeier et al., 2014), and more recently, from human resource management (Helbig, 2024).

2.4. The Six eterminants of Play

According to Scheuerl, the six determinants of Play are: *Freedom, Inner Infinity, Illusionary Fantasy, Ambivalence, Closed System and Presentness*.

For the model, the six determinants (on the left) were transferred into a contemporary format (in the middle) and expanded (on the right), to include the "Inner Voice". It describes the different and *simultaneously effective* feelings and emotions during Play. This makes Play easier to understand.

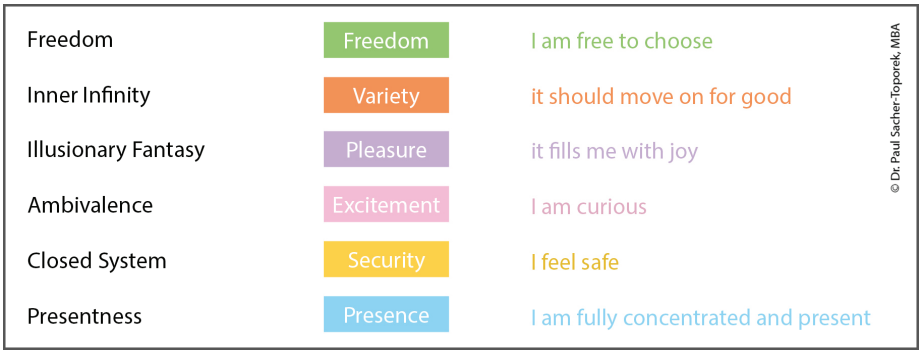


Figure 1: The six determinants transferred into a contemporary format. Additionally, the associated motivations and emotions are briefly described to better empathize with individuals while playing.

In the next step, for practical application and analysis of Play, the determinants have been reordered. Security comes first.

2.4.1. *Security/Safety*

There is another word in German (Sicherheit) that has two English translations. "Security" and "Safety". In the spirit of Scheuerl both are meant by "Sicherheit". It may come as a surprise that safety / security is at the top of the list in the model. Ideas about Play often suggest that children love risk and that a "safe environment" hinders them playing. It is true, that children love risk, and an important aspect of Play is exploring boundaries. (Schermann, 2018, p. 9) However, the safety / security referred to here goes one step further. It is about safety that has both an internal and an external effect. This can best be illustrated with

Picture 2: Closed System / Security

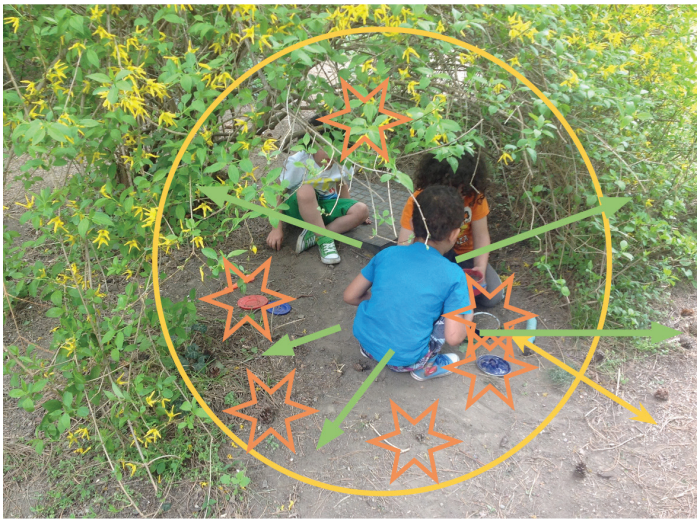
At first a "closed system" is needed. The children in the picture have instinctively chosen a safe place for their Play. There is no danger from outside or inside. To feel safe and secure, is the *basic requirement* for Play. They feel safe and secure.

2.4.2. Inner Infinity – Variety

Picture 3: Inner Infinity / Variety.

At next, there is a *variety* of objects needed, that *interest* the children. It is important to understand, that the diversity and the appeal of these objects depend on the users. For older children, with these objects, the necessary *variability* may no longer be present, because they already have different Play interests. Therefore a well-prepared Play environment must be age appropriate. (Mogel, 2014) So many possibilities – they want to move on for good.

2.4.3. Freedom



Picture 4: Freedom

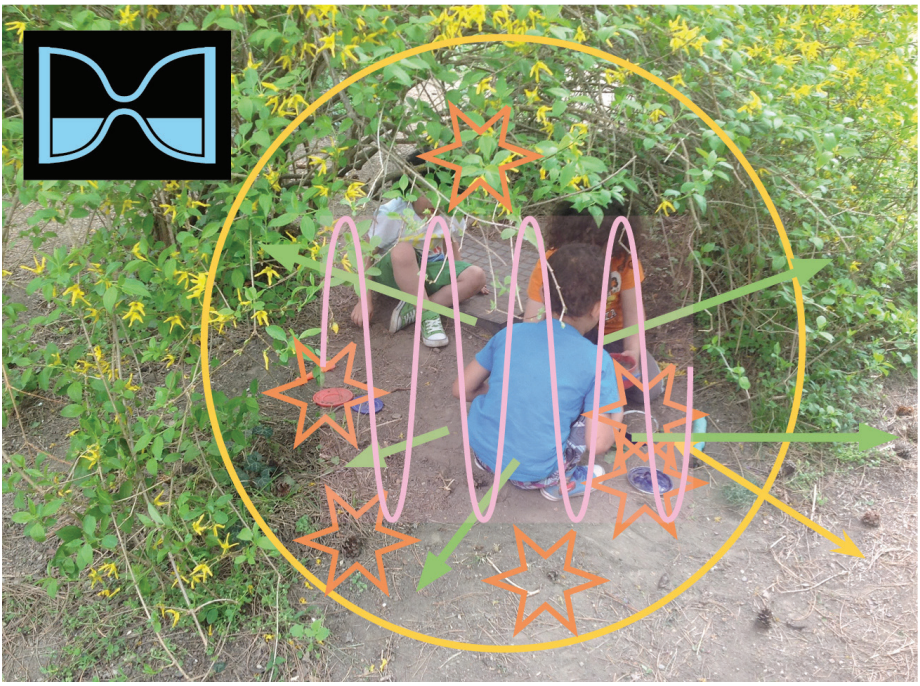
Freedom in Play means, that the child can, at any time, freely choose, what do next. This also includes, leaving the place at any time or rest. They are free to choose their next steps.

2.4.4. Ambivalence – Excitement

Picture 5: Ambivalence / Excitement

Although there is only a static image here, the tension is clearly visible. Play is *ambivalent*, sometimes loud, sometimes quiet, sometimes fast, sometimes slow, but always energetic. Curiosity makes them move. There is movement without Play, but there is no Play without movement. Children move when they play, and this is a healthy side effect of Play. They are excited and curious about what comes next.

2.4.5. Presentness / Presence

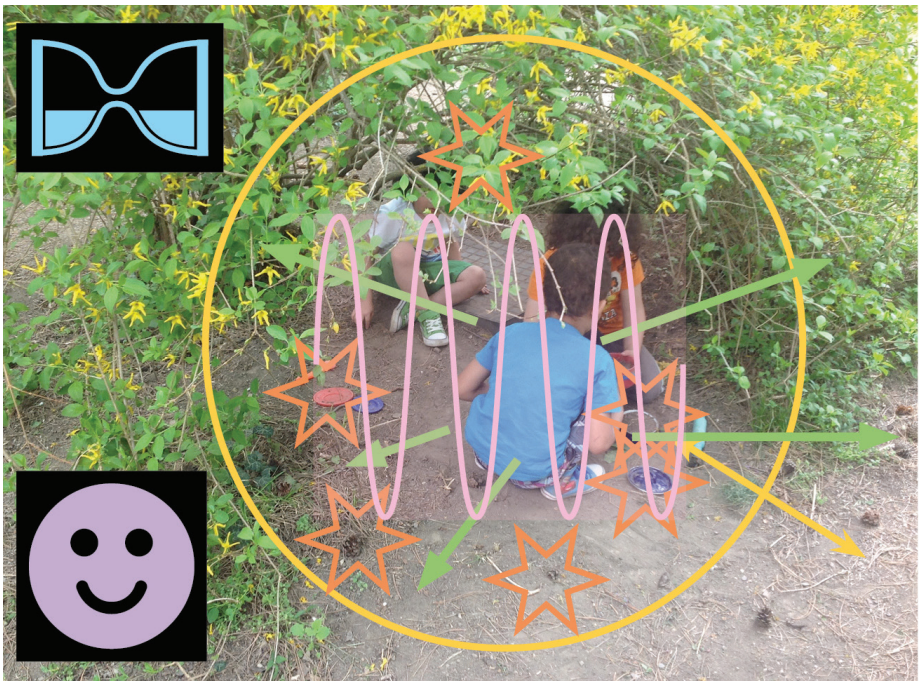


Picture 6: Presentness / Presence

Those who play are completely in the moment and forget the time around them. Any disturbance can destroy the Play. Play has no time limit; it is impossible to come to an end.

They are fully concentrated and present.

2.4.6. Illusionary Fantasy / Pleasure



Picture 7: Illusionary Fantasy / Pleasure

Although the children's faces cannot be seen, they radiate contentment. It is clear, that they enjoy their playing. According to recent findings, the release of dopamine, which is well known in brain research as the „happiness hormone" is a reward for gaining knowledge. (Schultz, 2011, p.p. 96) Play continues to evolve (Mogel, pp. 138) and hardly ever repeats itself, because the brain only rewards new experiences and insights. They are filled with joy.

3. Conclusion

The model presented here shows children at Play. Many activities that children engage in are mistakenly interpreted as Play, although they are *not* playing. However, children themselves always know, if and when they are playing. When children's actions are mistakenly interpreted as Play, even though they are done with a different intention, they may feel, that

they are not being taken seriously. Similarly, they may feel, that they are not being taken seriously, when their Play is dismissed as a pastime.

The model helps to distinguish between Play and different types of other activities, thereby avoiding many misunderstandings. It applies not only to children, but to all age groups, because Play is a "Transcultural Universality" (Mogel, p. 141). It has proven its worth over many years of practical Play analysis. Play can be recognized based on the six determinants. The model can also be used to analyze why Play does not take place in certain situations. In this case, the analysis will certainly show that one or more determinants will be missing.

In relation to society, the model can be used, to analyze public spaces, educational institutions or any place, where Play is desirable. With an understanding of the complex interrelation- ships, "barriers to Play" can be removed.

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THE PLAY IN COMENIUS AND HUIZINGA'S CONCEPTIONS

Tünde Noémi Csiha[1]

Abstract

The introductory part of this study highlights the importance of gamification in modern education, tracing its origins back to the 17th century with Comenius's work, *Schola Ludus*. Comenius, during his time in Sárospatak, Hungary, emphasizes play's essential elements and their integration into educational practices, particularly through drama and dramatization. The study provides historical context for *Schola Ludus* and analyzes Comenius's pedagogical view of play. Additionally, it compares Comenius's ideas with those of Johan Huizinga, who, in *Homo Ludens*, presents a theory of play that resonates with Comenius's concepts. The comparative analysis reveals significant similarities in their definitions of play, both recognizing its fundamental role in human life. However, they attribute different functions to play: Comenius views it as a pedagogical tool, while Huizinga sees it as a driving force behind all aspects of human culture, tracing its origins to ritual dramatizations. Ultimately, this study underscores the shared belief of both thinkers in the intrinsic connection between play and human nature, while also highlighting their distinct perspectives on its purpose and significance in education and culture.

1. The Role of Gamification in Contemporary Education

Today, technological advancements and societal changes are imposing a new rhythm on education. Alongside innovative methods and digitalization—and indeed, harnessing their advantages and possibilities—gamification is experiencing a

1 Affiliation: University of Sopron, Benedek Elek Faculty of Pedagogy, Sopron, Hungary.

renaissance. Regardless of its form, the essence of gamification lies in arousing learners' curiosity and enhancing students' motivation throughout the teaching and learning process, thereby increasing their engagement.

Its goal is to make curriculum content appealing and interactive for students while simultaneously developing their thinking, creativity, problem-solving abilities, and preparing them for collaborative work and group-based task resolution. Playful learning also facilitates learning from one's own and peers' mistakes; every reconsideration, replanning and correction of errors provides further opportunities for growth.

Gamification and cooperative learning strategies strengthen collaboration among group members—an essential skill in today's world. These educational aims are typically regarded as achievements of 21st-century pedagogy. It is therefore striking to observe that many of these ideas can already be found in the work of Comenius. In what follows, I will examine several of these principles, placing them in a somewhat broader context.

2. Comenius, Father of Modern Education and Pedagogy

Comenius (Jan Amos Komenský, 1592–1670), a scholar, teacher, and priest of Moravian origin with partial Hungarian roots, possessed encyclopedic knowledge and was one of the most influential educators of his time. His work left a profound and lasting impact not only on contemporary pedagogical practices but also on the modern educational systems still in use today. Recognized as the father of modern education, Comenius laid the foundations for an educational structure that continues to shape schooling across the world.

In his seminal work *Didactica Magna* (1657), he systematically articulated both the external and internal organizational principles of school-based education. This included detailed considerations of the academic calendar, school holidays, subjects of study, the

structuring of students into classes, foundational educational principles, instructional methods, and the practical implementation of pedagogy.

What is less commonly known is that, even in the 17th century, Comenius envisioned world peace and a universal language. Guided by an enduring pedagogical optimism, he maintained an unwavering belief in the educability of the human being and was firmly convinced that education could play a pivotal role in addressing and overcoming the social challenges of his time.

3. Comenius' Way until Sárospatak

In the Amsterdam preface to *Schola ludus*, Comenius identifies Czech as his native language and describes himself as a theologian who has served the Lord in the preaching of the Gospel since 1616. In the preface, he mentions that he was the head of the church in Fulnek, Moravia, and that he was forced into exile in Poland, where he undertook educational duties at the gymnasium in Lesno. It was here that he researched and sought to implement the science of didactics, a field being developed at the time by Wolfgang Ratich and other contemporaries.

In Lesno, Comenius formulated a fundamental principle for himself: that the division of knowledge (the teaching of the totality of things) should be integrated with the teaching of the Latin language. As he stated: *"rerum et verborum easdem esse divisiones, posseque utrumque ita simul tradi, ut exiguo libello tum tota rerum universitas, tum tota Latina lingua comprehendatur"* (Comenius, 1999, p. 96). Thus, the *Ianua Linguarum* was born. Although Comenius felt the work still required refinement, he published it in 1631 at the urging of his friends.

Comenius himself confessed that the popularity of the work came as a surprise. A flood of congratulatory letters arrived for the author, and within a short period, the book was translated not only into twelve European languages but also into various Asian languages, including Arabic, Persian, Turkish, and the Mughal

language widely used throughout East India. *"Non solum enim in omnes primores Europaeas linguas (XII numero, quarum editiones publicas vidimus, nempe Latinam, Graecam, Bohemicam, Polonicam, Germanicam, Suedicam, Belgicam, Anglicam, Gallicam, Hispanicam, Italicam, Hungaricam), sed et in Asiaticas: Arabicam, Turcicam, Persicam adeoque Mogolicam, toti Orientali Indiae familiarem* […] *translatus esset idem libellus noster"* (Comenius, 1999, p. 96).

In the Amsterdam preface, Comenius also acknowledges the support he received from Ludovicus de Geer, who relieved him of his school duties and teaching obligations for a period of six years, allowing him to focus on his research. He lists the works published during this time at the printing press in Lesno, Poland:

1. *Methodum linguarum novissimam* (*The Newest Method of Languages*), which builds on didactic foundations and demonstrates practical language instruction in schools through the example of Latin;
2. *Vestibulum Latinae Linguae* (*Introductory Latin Textbook*), the *Vestibulum*, which includes elementary Latin grammar and a Latin-German glossary;
3. *Ianua Linguarum* (*Intermediate Latin Textbook*), with a Latin-German glossary, presenting the structure of the Latin language up to the level of eloquence.

4. The Educational Importance of the Sárospatak Years

Only the publication of *Latinitatis Atrium cum elegantiarum grammatica et lexico* (*Advanced Latin Textbook*, the *Atrium*), remained outstanding—a work intended to offer grammar and a lexicon of linguistic refinements—when, in 1650, Comenius and his patron Ludovicus de Geer received an invitation. The renowned scholar was summoned to Hungary by Zsuzsanna Lórántffy, the widow of Prince György Rákóczi I of Transylvania, and her son, Zsigmond Rákóczi, to offer counsel on the

reform of schools and eventually to reside with them. The Princess consort asked him to modernize the Reformed College of Sárospatak into a contemporary training institution for priests. At Sárospatak - known as the culturally flourishing "Athens on the Bodrog" - Zsuzsanna Lórántffy envisioned a seven-grade pansophic school founded on Comenian principles. In practice, however, only a three-grade Latin school came into being. To support the educational program, Latin-Hungarian editions of *Vestibulum*, *Janua*, and *Atrium* were printed at the Sárospatak press. (Comenius: *Schola ludus,* 1999, Biblioth. Comeniana VII, Sárospatak preface). Although Comenius spent only a few years in Sárospatak, this period proved to be pivotal in the development of his pedagogical career (Csorba, 1999).

From the Amsterdam preface, we also learn that during the final semester of his stay in Sárospatak, Comenius reworked his textbook *Ianua Linguarum* (*The Gate of Languages*), adapting it into a dialogic form. His intention was that students would memorize the dialogues contained in the book and perform them in the form of theatrical presentations. The students achieved great success with these performances.

Although Comenius departed for the Netherlands in 1654, at the request of the Princess he left behind in Sárospatak his personal manuscript copy of the exercise book entitled *Ianua Linguarum Praxeos. Schola Ludus* (*Practice for the Gate of Languages. The School as Play*), so that the school could continue to use it. Following Comenius's departure, the Princess ordered the work to be printed and presented him with a printed copy as a gift.

The exercise book was also met with great acclaim in the Netherlands, and Comenius was encouraged by his peers to publish it there as well. He prepared the Dutch edition with a new preface—thus the existence of two different prefaces.

5. *Schola Ludus* – an Invitation to Gamification in Education

According to the Sárospatak preface of the 1656 Sárospatak edition of *Schola Ludus,* included in the volume *Bibliotheca Comeniana VII. Comenius és a magyar iskola* (1999), Comenius states that, in presenting the curriculum through dialogue, he followed the method of Sebastianus Macer, rector of the school in Leszno. Macer had created a dramatized exercise book based on Comenius's own textbook, *Ianua Linguae Latinae* (*Introduction to the Latin Language*). Macer's death prevented him from continuing this work, and thus Comenius undertook to complete the dramatization for the entire body of material to be learned. In this way, he processed the *Encyclopaedia of Things to Be Learned*. His principal methodological tools in creating the exercise book were visual demonstration and the encouragement of active, self-directed learning („*autopsia* et *autopraxia"*) (Comenius, 1999, p. 76).

In the preface to the Sárospatak edition, Comenius, while arguing for the necessity of dramatization in education, articulates aims that are strikingly similar to contemporary educational goals. He conceives of the school as a *„humanitatis officina"* (a workshop of culture) and as a *„vitae praeludium"* (a prelude to life) (Comenius, 1999, p. 76). He maintains that by the time students complete their schooling, they should be cultivated individuals, prepared for practical life. It is through practical education that they can be equipped for this purpose.

For this reason, everything within the school must resemble real life and be infused with vitality and active engagement. The school is a place for preparatory activities that ready students for life; however, these preparatory activities need not carry the full seriousness of life itself. Rather, the process of preparation should be playful, so that it becomes appealing to the youth and motivates them toward action and participation. School becomes attractive when students are able to engage in their work with joy and enthusiasm.

Performing before an audience also serves as a powerful

motivational factor for students, offering them a unique opportunity to overcome their shyness. Dramatic performance draws even the most reserved students into social life, encouraging more relaxed and open behavior, and fostering interpersonal connections. It promotes the development of social skills, enhances cooperation, and improves both situational awareness and the ability to respond appropriately to various social contexts. The prospect of performing, and the competition for leading roles, further motivates students, as it provides recognition and a sense of achievement that reinforces their engagement.

Having seen the extent to which Comenius advocated for the gamification of education and the necessity of dramatization, let us now examine the elements of play as conceived by Comenius. He also placed particular emphasis on ensuring that the learning process be engaging and enjoyable for students—one that provides meaningful experiences. Moreover, he stressed that the organization of teaching, learning, and various educational activities should take into account the developmental characteristics and age-specific needs of the learners.

6. Key Elements of the Play by Comenius

In the Amsterdam preface of his work *Schola Ludus*, Comenius outlines the essential features of Play, identifying it as a pleasurable and engaging activity characterized by:

1. movement: "*primum, in ludo quod oblectat, motum esse dico*",
2. voluntariness: "*secunda in lusu oblectatio a spontaneitate est*",
3. social interaction: "*tertia in lusu oblectatio a societate est homini tam naturaliter desiderata […] humanitatis characterem animis nostris propter amorem communionis*",
4. competition and striving for victory: "*quarto concertatio seu de victoria certamen*",

5. it has an internal order "*quintum, quod lusum facit iucundum, ordo est"*; if a player breaks the rules, he harms the others, disrupts the order, and the game turns into its opposite,

6. an easy mode of learning based on examples and imitation, with little theoretical instruction): "*sextum, quod ludicris amabilitatem conciliat, est fadiis addiscendi ea modus, meris constans exemplis et imitation"*,

7. rest always follows the play: "*ad oblectationes per intervalla reditur suavius*" (Comenius, 1999, pp. 102, 104). According to Comenius, these seven elements define what makes truly Play.

7. Comenius's Seven Elements of the Play applied to Education

According to Comenius, for students to acquire the curriculum **quickly, effectively, pleasantly, and thoroughly,** certain conditions must be met. Learning should take place: 1. **with movement (***cum motu),* 2. **voluntarily and willingly (***sponte ac libenter),* 3. **in community (***et in sodalitio);* 4. **in a spirit of competition (***atque cum concertatione),* 5. **in good order: (***et ordine pulchro),* 6. **through clear and consistent practice: (***et praxi mera),* 7. **with intervals for the refreshment of the soul (***et cum interspersis animi relaxationibus* (Comenius, 1999, p. 106).

In his view, schools can only become playful and effective learning environments if these elements are meaningfully integrated into classroom activities. Every student should be an active participant; no one should remain a passive observer. Students should engage voluntarily and with enthusiasm, combining usefulness with enjoyment. Doing everything together, learning through playful interaction increases the desire to learn. The framework of all activities should be a well-organized intellectual competition. Order must prevail, so that everyone feels a sense of satisfaction and well-being. Everything should be turned into play

and action—knowledge through discovery, tasks through hands-on activities—periods of work and refreshment should alternate. A school that balances seriousness with play becomes a playground for the soul. *"Atque haec sunt septem illa, quae ludum esse ludum faciunt, et quibus datis datur, quibus sublatis tollitur ludus. Quae proinde scholasticis occupationibus conciliari si poterunt, omnia et singula, scholas vere ludos fore patebit"* (Comenius, 1999, p. 106).

When, in the Amsterdam preface, Comenius summarizes the characteristics of the play and then applies them to the school education, he states that the school must above all develop thinking, speech, and free action. We also know the crucial role that visual demonstration (or illustration) plays in Comenius's pedagogy. He sees dramatization as a perfect solution for cultivating thought and speech and for fostering autonomous action, since through the method of lifelike representation the world is conveyed in a way that is easily graspable for the child's understanding. Thus, Comenius considers dramatization a form of illustration that both sharpens the intellect of students and incites them to act. *„Format enim primum mentes ad sapientiam: omnium, quae mundus habet rerum, et quae sub puerilis aetatis cognitionem cadunt, vivis omnium repraesentationibus instillans notitiam. Format dehinc linguam ad universalem quasi Latini sermonis, eumque purum et fluidum usum. Et denique animi corporisque motus ad actiones decoras"* (Comenius, 1999, p. 106).

As we have seen, Comenius's stay in Sárospatak (1650–1654), Hungary, was an exceptionally productive period in his life. It was in Sárospatak that he composed *Schola Ludus*, for which he wrote two prefaces—one for the Sárospatak edition and another for the Amsterdam edition. From the Amsterdam preface, we gain insight into Comenius's conception of play and his advocacy for gamification on the field of education. However, the significance of *Schola Ludus goes beyond its purely* pedagogical usefulness. It's important to be aware of the fact, that Comenius's understanding of the play also served as a foundation for Johan Huizinga's later concept, which, however, takes a very different direction by examining the play as a cultural phenomenon.

8. Key Features of the Play by Huizinga following Comenius

In his work *Homo ludens* (2023), Johan Huizinga, the Dutch historian and one of the founders of modern cultural history, outlines the essential characteristics of play, drawing on the ideas of Comenius. He defines play as a voluntary act—a point that we identified as the second element in Comenius's enumeration. Huizinga emphasizes that although play is not identical with real life, it is essential for human development and well-being, serving a biological function. As we have seen, Comenius similarly highlighted that play and physical activity are instinctive needs of the child. He even provides an example: if a child is forbidden to participate in play with others or to move together with them, the child will often choose to leave the setting altogether, as, in their view, the absence of movement equates to the end of play.

Huizinga further stresses that play is always marked by spatial and temporal boundaries—it takes place in a separate and limited domain. While Comenius does not state this explicitly, it is present implicitly: for the child, the game ends as soon as they leave the designated play area. According to Huizinga, play creates order; indeed, play *is* order—it introduces a sense of perfection into an otherwise imperfect world. As previously discussed, Comenius also places significant emphasis on the order and harmony that arise within play, as well as on the observance of rules by the players. In Comenius's framework, this is identified as the fifth principle. When players violate or disregard the rules, it leads to a breakdown of order and signals the end of the game. The cooperative spirit dissolves, giving way to conflict and the collapse of harmony. Huizinga echoes this fifth principle, adding that a player who breaks the rules is seen as a *spoilsport*—one who disrupts the play experience—because the game can only function under the condition of fair play. Both Comenius and Huizinga also note the element of competition inherent in play, particularly the drive to achieve superiority or primacy. Additionally, Huizinga highlights the secretive nature of play. This relates to his broader idea that play is set apart from everyday life. The players are bound to one another by hidden ties, and they form a distinct group, separated from non-participants.

The characteristics of play, as presented by Comenius and Huizinga, display striking similarities; however, the two thinkers construct distinctly different conceptual frameworks upon them. What unites their interpretations is the recognition that play constitutes a fundamental human need—particularly in childhood. Comenius, therefore, seeks to apply play within the field of education as a means of enhancing and sustaining motivation. Building upon, yet surpassing, Comenius's system, Huizinga argues that play is present in nearly every aspect of human life. He goes even further by attributing to play a culture-generating function.

9. Culture-Creating Role of the Play by Huizinga

Huizinga (2023) conceptualizes play as a foundational aspect of culture. He argues that human culture both originated and evolved through play, and, in many ways, as a form of play itself. According to Huizinga, play is not exclusive to humans but is rooted in animal behavior, thus preceding the emergence of culture. Through his analysis of various domains of human cultural life, he demonstrates that central societal practices are deeply intertwined with elements of play. This is evident in language, where abstract thought and metaphorical expression reflect playful engagement, as well as in mythology, which Huizinga views as symbolic narratives of human existence. Furthermore, he identifies play in religious rituals, sacrificial practices, and rites of passage.

When Huizinga asserts that play has a culture-creating function, he is careful to clarify that this does not imply culture originates directly from play, nor that play gradually evolves into culture through some linear developmental process. Rather, he proposes that culture was, in its earliest manifestations, *played*. Within these ludic practices, communities articulated and conveyed their understanding of life and the world. Sacred performances and ceremonial competitions represent recurring forms through which culture emerged and continued to develop—not merely through play, but *as* play.

10. Conclusion

This study demonstrates that the concept of gamification—so popular in contemporary education—had already received considerable attention from Comenius in the 17th century. In his work *Schola Ludus*, he not only collected and defined the key characteristics of play, but also developed a method through which these elements of play could be integrated into education. Comenius's system had a significant influence on Huizinga. The comparative analysis reveals the remarkable similarity between Comenius's and Huizinga's definitions of play, particularly in their identification of the essential elements without which play cannot exist. Both thinkers also affirm that play is inseparable from the human being and it constitutes a fundamental human need. Despite the substantial overlap in their identification of the characteristics and key components of play, the two thinkers attribute entirely different functions to it. In Comenius's framework, play serves pedagogical purposes—more specifically, motivational aims—and dramatization plays a role not only in knowledge transmission but also in socialization. In Huizinga's conception, the basic human need and drive to play shapes every aspect of human life. Building on Comenius, yet surpassing his pedagogical aims, Huizinga traces the origins of all human culture back to play, emphasizing its culture-generating function. In his conception of play, culture takes root in the first ritual dramatizations, the first acts of mimesis, and the earliest competitive games performed by early societies in honor of their gods.

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CHAPTER 3
GAMES
FOR EDUCATIONAL PURPOSES AND SOCIAL INNOVATION

PLAYING FOR SOCIAL INNOVATION

Zsuzsanna Agora – Edit V. Gilbert[1]

Abstract

This study presents the pedagogical-psychological board game models developed by research groups at the University of Pécs. These innovative models are designed to integrate knowledge acquisition, personality development, and community building. The research is based on the premise that play, as a fundamental function of human existence, is one of the most engaging forms of learning. We utilized this potential not merely for knowledge transfer, but to create synergies, facilitate coping with ambivalences, and bridge seemingly irreconcilable value systems, thus laying the groundwork for a culture of appreciation. This framework stems from the understanding that societies struggling with unprocessed collective identity traumas—where confronting loss is too challenging for community members—require the establishment of a supportive, "containing" social environment. The special feature of the board games presented here is their personalized knowledge approach, the personality-shaping effect of which can be successfully harnessed to serve the goals of social innovation.

1. Introduction

The aim of this study is to present the board game developments created by research groups at the University of Pécs, with significant contributions from historian Dr. Zsuzsanna Agora, historian Dr. Virág Rab, and literary historian, comparatist, and translator Dr. Edit V. Gilbert. (Agora & Rab, 2015) These developments aim not only to convert traditional curriculum into a game format but also to promote reflective thinking and meaning-making, which are crucial for identity development. In other words,

1 Affiliation: University of Pécs, Faculty of Cultural Sciences, Education and Regional Development and Faculty of Humanities, Pécs, Hungary.

the goal is to actively engage participants in their learning journey through board games. Students are encouraged to move beyond passive reception of knowledge; instead, they should shape their understanding through personal experiences and reflections.

Unlike gamification (Sanchez et al., 2020), which often asks, "*How can we structure this task to make it feel like a game?*" the "Identity and Knowledge" pedagogical-methodological model presented here focuses on the learner's internal psychological state. It poses the question: "*How can knowledge be made personally relevant and intrinsically motivating for learners in a way that enhances their self-image and fosters a value-based relationship with their community*?" Essentially, this model emphasizes the learner's internal developmental potential.

2. Identity and Knowledge – a Pedagogical Model

The relationship between identity and learning is crucial in education. Understanding this connection allows educators to create more effective, engaging, and supportive learning environments that acknowledge and celebrate students' diverse identities. Learning means not just cognitive development, but it also involves emotional and social dimensions, influencing how individuals understand themselves and their place in the world. When learning materials relate to students' identities, they find the content more engaging and meaningful and meaning is a human need. (Müller, 2011; Baumeister, 1991) This relevance enhances motivation and retention of knowledge. This holistic view recognizes that a learner's identity influences their engagement and success in educational settings.

The "Identity and Knowledge" pedagogical model[2], developed at the University of Pécs, highlights the crucial connection between learners' self-perception and the knowledge they acquire. This approach personalizes the learning experience, making it more relevant and meaningful for students, which in turn fosters intrinsic motivation. The model focuses on three primary objectives:

2 The Model is part of the Innovation Portfolio of University of Pécs: Identity and Knowledge – Pedagogical Methodological Innovation (2017) PTE 225. Ibh.1. (2017)

1. *Enhancing students' self-image*: This objective aims to strengthen students' self-image in relation to their learning, which is vital for both academic success and personal development. By improving their confidence in their abilities, this transformation promotes a positive self-perception that positively influences their interactions and engagement within the educational environment.

2. *Personalized knowledge*: Contextualizing new information is essential for effective learning. This model emphasizes the importance of framing knowledge within a personal context, enabling students to connect what they learn with their own experiences. By employing dialogical and cooperative learning methods, the goal is to create a more engaging educational experience. This personalized approach encourages students to develop a value-based perspective, helping them recognize the relevance of their studies in their own lives and communities.

3. *Shaping attitudes*: The third objective focuses on cultivating positive attitudes towards knowledge, learning, oneself, and one's community. By fostering a constructive relationship with learning and promoting a sense of belonging, students are more likely to engage actively in their education. This development of positive attitudes is essential for lifelong learning and civic engagement.

Board games based on this model are valuable not only in the classroom, but in any community—large or small—where the focus is on exploring values, self-reflection, and building trust. Their essence lies in initiating dialogue among players to enable meaningful self-narratives and promote a deeper understanding of one's own environment.

An essential element of personal identity formation is reflecting on how we are perceived by those around us. This "outside eye" can be supportive and empowering, provided the person receives sufficient recognition. However, if this is lacking, it can be destructive and cause feelings of worthlessness or invisibility. The board games thus create the basis for "healing" and affirming dialogues.

The following two chapters introduce two board games developed based on the "Identity and Knowledge" model, created through years of seminar research in collaboration with our students. The first game, "This is About Us! Identity and Locality in the Ormánság," serves as a local history teaching board game that simultaneously fosters personal and local identity development. The second game, "Identities in Between: European Destinies," focuses on the creations of European culture, particularly modern literature and film, and aims to facilitate the development of both national and European identities.

3. "This is About Us! Identity and Locality in the Ormánság" – A Board Game Project

The first board game developed on the Model was "This is about Us! Identity and Locality in the Ormánság". This game explores the historical and geographical region located in the southwestern corner of Baranya County, Hungary. In this area, which was once swampy and wet, villages were constructed on naturally elevated, dry spots known as "ormák" (translating to "peaks" or "ridges"). The Ormánság is characterized by small villages that reflect an archaic culture and boast a stunning natural environment. Despite these cultural and environmental treasures, many young people born in these villages perceive no future for themselves here. The region has been significantly affected by historical demographic changes, rendering the Ormánság one of the most economically and socially disadvantaged areas in Hungary.

As part of a university project funded by the European Union, we had the opportunity to develop educational or cultural programs for children in a disadvantaged region. As historians, we believed it would be beneficial to educate these children about the historical and cultural values of their area. However, instead of creating a traditional history textbook, we opted to design a board game. The concept of gamification is well-known in education, where playful methods can make topics more engaging.

In this instance, we felt that simply gamifying the content would not suffice. Our goal extended beyond merely imparting knowledge; we aimed to influence attitudes and foster a deeper connection to their cultural heritage.

In the initial phase of the project, history students traveled to Vajszló, a village in the Ormánság region, where they compiled a cultural value inventory through fieldwork and library research. This extensive body of knowledge laid the groundwork for the development of the board game. Additionally, a sociology student conducted research among the residents of Vajszló for her thesis, which was subsequently published as an academic study (Páncsity, 2017; 2020). The findings from this study revealed that residents identified unemployment and limited financial opportunities as their primary challenges. Responses to questions measuring territorial classification indicated weak local and regional identities, with a significant majority of respondents (62.1%) primarily identifying as Hungarian. According to the results of a semantic differential scale assessing the village's atmosphere, interviewees characterized the residents as generally disunited, inactive, and indifferent to communal matters. In contrast, they less frequently described them as united, enthusiastic, or attentive (Páncsity, 2017, pp. 27–33).

The project spanned over five years and involved students from Kodolányi János Elementary School and the Municipality of Vajszló, and, as part of an international collaboration, faculty and students from Bloomsburg University. Through the board game, international participants learned more about Vajszló in just ninety minutes than many local residents might know. We supported the American students in their game development through joint courses conducted via Skype, and we showcased the game globally.

Throughout this collaborative process, it became clear to all participants that in board game development, the journey is just as important as the final product. The hours spent together allowed us to experience a state of flow, the inherent freedom of play, and the joy of creation. We also fostered deeper connections, as we

shared personal stories about challenging moments in our lives, families, and countries. These discussions revealed to us that individual destinies are intricately linked to the fates of nations and local communities, and indeed, to the broader history of Europe.

Our second board game development, based on the "Identity and Knowledge" model, focused on the cultural dimensions of the European region. This initiative stemmed from fieldwork conducted in collaboration with the European Network Remembrance and Solidarity (ENRS). The ENRS runs an educational project that trains university students to conduct interviews with residents of Europe's border regions. These interviews reveal that identity is not a singular concept; individuals can simultaneously identify as Hungarian, Greek, and German. The concept of "In-Between", which is part of the ENRS project title, became the subtitle of our board game, *European Destinies*. The next chapter will introduce this board game project.

4. This is Us: Medea and Her Children, the Visit of the Old Lady– Roles for Players

Designing the board game "European Destinies: Identities In-Between" was a transformative experience for its creators during 2018–2019. The initiative was spearheaded by Zsuzsanna Agora and Edit Gilbert from the University of Pécs. Leveraging their professional networks, research collaborations, cultural associations, and personal contacts, they set out to create a European board game in English, following an invitation from the Potsdam *Spielmarkt*.

For six months, during a dedicated time slot in the spring semester of 2019, the seminar group convened to construct a unique game universe. Students majoring in literature, history, linguistics, and psychology joined the course to delineate the boundaries and design the dimensions of this board game world, integrating their diverse competencies, interests, and passions. With the assistance of a graphic designer, the game board—entitled "Europe"—was crafted, featuring the names of member states in

their native languages. Instead of using the capitals as reference points, the game highlighted the smallest settlements in each country (a symbolic expression of the relevance of being visible even if for the little one). To promote economic and sustainable practices, game tokens were sourced from Kinder Egg figures.

The primary pedagogical goal of this game is to foster understanding among European citizens about each other's diverse backgrounds, community support systems, challenging life experiences, and multifaceted identities. By engaging in this game, players are encouraged to resolve conflicts through mutual agreement. The core concept integrates role-playing elements with a quiz format, creating an interactive and educational experience.

What Happens During the Game?

Players embark on an exhilarating journey across Europe, aiming to connect the smallest villages in various countries within one hour. As they successfully complete tasks, they earn the right to place a house on the back of the game box, symbolizing their settlement in Europe. The characters in the game are inspired by significant European films, literary experiences, our studies, and our imagination, enriching the gameplay with diverse narratives. As players traverse the highways of Europe with their chosen characters, they encounter unique challenges determined by a dice roll at various locations.

Game Spaces

Red Spaces: Landing on a red space prompts players to answer a cultural question related to European history, culture, or scientific achievements. Players respond in a quiz format, receiving hints as needed. If they use only two of the five available hints, they can still build their house.

Yellow Spaces: If a player lands on a yellow space, they must answer personal questions regarding their character's plans, desires, or beliefs, embodying the character's perspective. (e. g. the old lady of Dürrenmatt)

Blue Spaces: Landing on a blue space involves resolving a conflict depicted on the card with another designated player, specifically in-character. This task type offers the most excitement, complexity, and potential pitfalls. Players must decide whether to designate their partner based on the player's or the character's traits (e.g., the one with the longest hair, the youngest, or the one who traveled the farthest).

The characters are multifaceted, often embodying multiple identities and challenging backgrounds, frequently belonging to various marginalized groups. Therefore, the conflict tasks on the blue cards must be flexible enough to accommodate any two characters. If their age or other traits prevent them from being active participants, the task will require them to discuss the conflict instead (e.g., one character might discuss an incident involving a family member with the other).

The scenarios on blue spaces are not always conflicts; they may also represent opportunities, encounters, or confrontations drawn from our diverse European experiences. They reflect the continent's ethnic and cultural diversity and aim to facilitate dialogue about these issues. Ideally, the parties involved will find common ground or peacefully defend their viewpoints while preserving their identities without aggression. This format encourages cooperation rather than competition; players collectively inhabit Europe, earning houses as action points.

The game can be played in various ways. While the time for completing tasks is primarily limited by the hourglass, we can extend the playing time for educational purposes; there's no need to rush to finish within 60 minutes. Alternatively, we can adhere to the time limit and then discuss any new insights that arise afterward without constraints. Each community's experience while playing the game serves as an exciting case study.

During playtesting, players thoroughly enjoyed their unique roles, resulting in much laughter. Consistently, one participant emerged as a central figure, fully immersing themselves and inspiring enthusiasm in others. Players often built on previous turns, basing their current reactions on their character's

past experiences, opinions, and interactions. At the end of the game, players discover which famous film or Nobel Prize-winning novel protagonist's destiny they have inhabited for sixty minutes. These moments of realization are particularly enriching experiences for them.

We presented this board game in numerous locations, including after the Potsdam Spielmarkt in 2019. It was shared with various Hungarian and international groups, both within and outside the University of Pécs, as well as in Italy and the United States.

While one can declare a game "finished," practical experience suggests that, much like in book publishing, it is worthwhile to release newer, extended versions. Games can be flexibly developed further by issuing new thematic question cards. With expanded questions, we can explore other areas of European and national cultures, such as childhood games and favorite national fairy tale characters. By learning about these topics, players can recognize that even amidst diversity, we are connected, and our destinies are shared.

However, it is crucial to first focus on strengthening national identities. Only those who appreciate both their own culture and the cultures of others can navigate the shifting boundaries of identity effectively.

5. Conclusion

The board games developed at the University of Pécs offer a novel perspective in the field of educational tools by combining the principles of identity development, learning, and social innovation.

In our interpretation, social innovation denotes the development of new values and attitudes that can instigate changes in the social structure and thus mobilize effective strategies at the local level to meet the challenges of a globalizing world. (Drucker, 1985; Benedek et al., 2015) Social innovation can occur when local residents engage in communication, cooperation, networking,

and the exchange of experiences. In other words, they themselves strive to change the quality of their environment and their economic and life opportunities. Innovation is thus the result of a social process that can be bottom-up or top-down, e.g., from a university. In this board game development project, however, we have combined the two processes so that the two sources reinforce each other: innovation is both knowledge creation and knowledge mobilization.

When developing the model, our premise was that learning is most effective when it resonates with individuals on a personal level. By harnessing the inherent power of play, these games foster an environment in which participants can explore complex topics such as identity, locality, and cultural heritage in a supportive and interactive setting. The model not only strengthens self-image and promotes a sense of belonging, but also encourages players to reflect on their experiences and relationships within their communities. The games serve as catalysts for dialogue and enable players to explore and reconcile different perspectives and values, ultimately contributing to a culture of appreciation and understanding. (Agora, 2025)

The two board games presented here show that their impact goes beyond mere entertainment. They offer the opportunity to address collective identity issues and promote healing processes through meaningful interactions. By focusing on the interconnectedness of our identities and the shared narratives that bind us together, we can develop a deeper sense of empathy and solidarity among participants.

Looking to the future, the potential for further development of these games is extensive. By incorporating new themes and expanding the scope of research to include European and national cultures, we can strengthen their relevance and effectiveness in promoting social innovation. Ultimately, the development and playing of these games confirms the idea that through understanding and cooperation, we can build stronger, more resilient communities that value diversity and shared destinies.

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STUDENT REFLECTIONS ON BOARD GAME DEVELOPMENT THROUGH THE 4T MODEL

Viktória Karádi[1]

Abstract

In today's university education, increasing emphasis is placed on pedagogical approaches that focus not only on the transmission of lexical knowledge but also on the development of skills and attitudes (Baartman & de Bruijn, 2011; Crisol-Moya et al., 2020). The course entitled "Join a Board Game Development!" at the University of Pécs is an excellent example of this approach. It provides a learning environment in which students are not merely passive recipients but also active shapers of the curriculum and the learning process. Based on my personal experience—as a first-year student—I found myself in an extremely complex, experience-based, and innovative educational model. During the course, I became acquainted with the theoretical foundations and practical application of the 4T model (Rab, 2024), and I also had the opportunity to try out and present the cooperative board game called *Korfű,* which is built on collaborative problem-solving and the playful acquisition of historical knowledge. In this study, I would like to present the pedagogical experiences offered by the course, the process of developing and testing the game, as well as the learning outcomes resulting from these.

1. Introduction

Higher education institutions provide various opportunities for students to give feedback in order to improve the quality of education. These include optional and partially compulsory evaluations, such as end-of-semester course or teacher

1 Affiliation: University of Pécs, Faculty of Humanities and Social Sciences, Pécs, Hungary.

evaluations, as well as reflective assignments related to pedagogical subjects. Student reflections provide an opportunity for the personal interpretation of educational experiences, which not only develops students' self-reflection but also offers feedback to teachers and the institution about the effectiveness of courses. In today's educational environment, where numerous different teaching-learning methods1 exist, understanding and taking into account students' individual needs is of key importance (Zaki, 2023; Mair et al., 2023). The 4T model particularly well illustrates that the learning process affects not only the cognitive but also the emotional and social levels: through experiential learning, storytelling, transformation, and knowledge application, students can achieve deeper understanding and personal development (*Rab, 2024).* This complex learning experience contributes to students acquiring knowledge not only on a theoretical level but also in a practical, life-related way.

2. Introducing the „Join a Board Game Development" Course

The course entitled "Join a Board Game Development!" at the Faculty of Humanities and Social Sciences of the University of Pécs is an innovative educational initiative that fundamentally differs from the structure and pedagogical aims of traditional higher education courses. The main goal of the course is to involve students in a real, interdisciplinary project—the development of a new-generation board game—and, in parallel, to develop those skills that are essential for 21st-century learners: cooperation, creativity, responsibility, critical thinking, and social sensitivity.

The special feature of the course lies in the fact that students do not participate in education as passive recipients but can engage as active decision-makers in the various stages of the game's development. From the very beginning of the semester, it became clear that here "learning" does not merely mean the acquisition of knowledge, but rather a process in which students create

independently, take responsibility, and develop through experiential means. One of the distinctive features of the course was that there were no bad questions or wrong answers. Every idea created an opportunity for joint thinking, further development, and application. The instructor's attitude was not controlling or exclusive, but supportive and cooperative—in consequence, the participants of the course were able to work in a safe and encouraging learning space where their individual voices could be expressed.

During the course, the game—particularly the board game called *Korfű* – played a central role, the aim of which is to guide players through the problems of a fictional, yet historically based location. Through historical, environmental, and social challenges, the game demonstrates the potential consequences of our decisions—both on a community and an individual level. The board game was not only a tool during the course but also a methodological cornerstone: it enabled us to learn about the importance of cooperation, the effectiveness of communication strategies, and creative problem-solving. Tasks related to the game—whether testing, interpreting rules, providing feedback, or even translation—all contributed to making learning interactive and practical.

It should be emphasized that the course focused not only on expanding knowledge but also on supporting personal development. University students—whether first-year or more experienced—could take on real roles in the development process. Some helped organize events as team captains or communicators, while others took part in graphic design, storytelling, or testing tasks. The course thus functioned as a kind of "lifelong learning laboratory," where participants could experience that learning is not limited to textbooks or written tests but is a living, creative process through which they can have a real impact on their environment and on themselves as well.

3. The 4T-Model's Role in Education

The 4T model is an innovative, experience-based knowledge transfer system that lies at the intersection of social, economic, and educational challenges. The model is a new type of pedagogical practice applied at the University of Pécs in response to the question of how to create a truly relevant, inspiring, and future-oriented learning environment for today's students *(Rab, 2024).* The course "Join the Board Game Development!" is built in the spirit of the 4T model, and it was with its help that the *Korfű* board game was created, developed with the participation and active contribution of students. The 4T knowledge transfer model (in Hungarian: *Tevékeny – Active, Társas – Social, Tanulás – Learning, Támogatás – Support)* is based on four key factors:

1. Active learning – the integrated transfer of theoretical and practical knowledge.
2. Experiential learning – active participation in real projects, based on the "learning by doing" principle.
3. Social relevance – the goal of learning is to provide answers to real problems that are also relevant to society.
4. Supportive relations – cooperation, solidarity, communication, and shared responsibility.

These four pillars do not operate in isolation but are closely intertwined to form an educational model that recognizes and responds to the current needs of students while helping them navigate the constantly changing social and labor market environment.

4. The Model's Answer to the Challenges of Higher Education

The 4T model starts from the premise that today's students do not only desire professional knowledge but also an inspiring vision of the future, opportunities for active participation, and meaningful activities that are also socially relevant. This educational approach is reflected in every element of the course: game

development as a complex, practical project, students' involvement in development decisions, and the fact that the game's goal goes beyond mere entertainment—it aims for positive social change. The model conveys a competitive mindset: entrepreneurial attitude, proactivity, and systems thinking. Through it, students not only gain thesis topics or scientific advancement but also acquire skills that they can use in their private lives and future employment.

One of the strongest aspects of the 4T model is that it strongly builds on community learning. The joint work carried out during the course, thinking in teams, listening to and complementing each other's ideas not only developed practical skills but also provided deeper social and emotional learning experiences. One of the hidden but all the more important benefits of the model is the development of solidarity. Within the framework of the course, students not only solved tasks independently but often had to cooperate with others, ask for help, and provide support—all in a safe, supportive environment. The roles played during the game and the problems to be solved together highlighted that in life, too, we can face challenges in a similar way—through cooperation, empathy, and strategy.

Korfű is a new-generation board game that serves not only an entertainment function but also takes on significant pedagogical and social roles. The game is set in a world rooted in a real historical and social context, where participants, taking on the roles of different characters, pursue both community and individual goals while dealing with natural and social crisis situations. The development of *Korfű* is closely connected to the 4T model, serving as its practical example, where learning, experience, social relationships, and social responsibility are united in the form of a game.

To create a gamification system that increases student motivation it is necessary to focus on the fundamental elements that make videogames appealing to their players. According to Lee and Hammer *(2011),* games are motivating because of their impact on the cognitive, emotional and social areas of players; and so, gamification in education should also focus on those three areas. In the cognitive area, a game provides a complex system of rules along with series of tasks that guide players through a process to master

those rules. These tasks are designed as cycles of expertise *(Gee, 2003)*. A cycle consists of a series of short-term tasks which players repeatedly try to complete in a try and fail process until the necessary skill level is acquired. When the player is involved in this learning process, games try to assure that players always know what to do next, and that they have the necessary knowledge to do it. To make the learning process customizable, task sequences are usually non-linear, and players have a certain degree of freedom to choose which tasks to accomplish depending on skill and personal preferences. *(Adrián Domínguez, 2013, 2)* The development of *Korfű* demonstrates that gamification, when aligned with the principles of the 4T model, can simultaneously foster motivation, social engagement, and experiential learning.

The theme of the game is built around a fictional world inspired by Orfű – called *Korfű* – where players, as members of a community, attempt to respond to the consequences of real historical and natural disasters that occurred in the past. During gameplay, participants work together to solve a crisis while also keeping in mind the individual goals of their characters. This mechanism requires complex decision-making, empathy, and cooperation, while also highlighting that social problems can be effectively addressed not at the level of individuals but at the level of communities. The uniqueness of the game lies in the fact that not only the game board or the storytelling serve as learning opportunities, but the gameplay itself does: the cooperative structure, character building, strategic thinking, and the integration of historical elements function as tools for knowledge and skill development.

The development of the game did not take place in the traditional way: it was carried out in the form of research seminars with the participation of students from the University of Pécs over the course of about ten semesters. More than 150 students participated in the development, joining the project at various stages—from character creation to mechanical refinements and even narrative elaboration. The whole experience of co-creating a game and having adequate time to do so was viewed as a successful remedy to counter alienation in the classroom and build towards a more fruitful relationship between students and educators. (Vasilis Gkogkidis & Nicholas Dacre, 2020, 10)

The mechanics of the board game were developed by board game designer Balázs Nagy, specifically in such a way as to provide an appropriate challenge for players of different ages while remaining accessible. As a result, the game can be applied not only in higher education but can also reach a wider audience – for example, in school activities, camps, or community programs. The didactic and attitude-shaping functions of the *Korfű* board game are equally noteworthy. On the one hand, it helps convey historical knowledge in an experiential way: it is not about memorizing dates and years but about placing oneself in historical situations and understanding their consequences. On the other hand, it develops participants' systems thinking—that is, recognizing how a decision can have effects on various levels—individual, community, and environment. The game also provides an opportunity for participants to recognize and develop their own coping strategies. Players encounter problems, failures, and conflicts, and through these they try to find the best solutions—all in a safe, risk-free environment. In this way, the game also develops emotional intelligence and self-awareness. Finally, the game socializes the results of university education: it is not only a relevant learning tool for students but also conveys value to a wider audience—especially the younger generation. In doing so, it demonstrates that university research and education can go beyond the academic sphere and can generate concrete social impacts.

5. Personal Learning Experiences and Reflections

At the beginning of university studies, many students have the question: what role will a given course play in their lives? Through experience, we realize that not every subject offers genuine involvement, relevant skill development, or long-term inspiration. However, the course "Join a Board Game Development!" is an exception: as a first-year student, already in my first semester I was able to be a real participant in a creative, socially useful project that went far beyond the framework of traditional learning.

Previously, I had not had the opportunity to participate in such a degree of cooperation as this course required. Initially, the unfamiliar team dynamics and the sharing of responsibilities posed a challenge, but the common goal, the interest in game development, and the supportive instructional background quickly formed our group into a coherent, mutually supportive community. During the course, I experienced that working together is not only more effective but also much more enjoyable: ideas were born by inspiring each other and incorporating different perspectives, which could eventually become parts of the game. This experience reinforced in me the realization that in life's challenges, we do not have to cope alone—asking for help and cooperating is not a weakness but a resource.

The *Korfű* board game deals with problem-solving not only in its theme but also actively involves players in handling crisis situations. The situations and dilemmas experienced during the game can be paralleled with the challenges of real life. The game provides an opportunity to try out different coping strategies in a safe space and to recognize that even from a losing situation we can build if we reinterpret it appropriately. This realization also had an impact on me personally: it pointed out that making mistakes, getting stuck, or starting over is a natural part of the learning process, not its failure. The playful form also reduces anxiety and promotes self-reflection—particularly useful for young students who are still seeking their own roles and strengths.

One of the highlights of the course was the Creative Day, which took place as an event offering interactive activities for the 10–14 age group. Here I had the opportunity to try myself as a team captain and communicator, taking responsibility for the younger ones and supporting them during the game. Surprisingly, it was precisely when playing with the youngest children that we achieved outstanding results in *Korfű*, which proves that the game offers development opportunities for all age groups. For me, the Creative Day was not only professional practice but also a kind of mirror that showed me what I am capable of when I have to operate outside my comfort zone. The children's feedback, active

participation, and creative solutions confirmed to me that game-based learning is indeed a workable method—not only in schools but also in higher education and community spaces.

The course became one of the most defining experiences of my university career so far. Through the theme of the board game, I reconnected with my own childhood creative attempts—such as memories of the tank-themed board game I crafted together with my sibling—while also being given a real opportunity to participate in research-based, community-building work. This experience enriched me not only professionally but also personally. The course encouraged me to become a member of the Endre Grastyán College for Advanced Studies, as well as to participate in organization, translation, and other background tasks related to the game. As a result, I feel that I have become a more active and purposeful member of the university community than I had previously thought. I am increasingly certain that I would like to participate in similar types of projects in the future—not only because of course requirements but also for the experiences, opportunities for development, and connections.

The course "Join a Board Game Development!" and the *Korfű* board game were not merely an academic experience but also a possible vision for education, community, and learning. The experiences gained during the project demonstrate that educational forms based on students' active participation, creativity, and social sensitivity are not only viable but also carry significant added value. Through the practical implementation of the 4T model, I was able to have an educational experience that truly takes into account students' generational characteristics, learning habits, and motivations. The model not only transmits knowledge but also builds community, shapes attitudes, and provides opportunities for independent development. This experience can shape, in the long term, how we view education: not as a subject, but as a lifelike process with social impact.

Based on the experiences of the course and the *Korfű* project, I make the following recommendations: Curricula should include more project-based courses involving student participation, where learning takes place in a practical, socially relevant framework.

The example of *Korfű* has shown that a well-constructed, history-based, narrative board game is not only entertaining but also an excellent pedagogical tool. It is recommended to try similar mechanism-based games in schools as part of history, social studies, or ethics classes. The fact that during the course we could make real decisions, that our ideas were taken seriously and further developed, was a huge motivation. This type of learning is also more effective in the long term than traditional frontal teaching. The model could work not only in higher education but also at the secondary school level—particularly in career guidance, community building, or project-based learning frameworks.

While writing this study, I relived the enthusiasm I experienced during the course. This experience reinforced in me that learning is not merely the accumulation of knowledge, but a complex, emotional, social, and identity-shaping process. The *Korfű* project has helped me not only to get to know myself and my abilities better, but also to believe in the power of co-creation, cooperation, and playful learning. I trust that in the future more and more students will have the opportunity for similar experiences, and that such types of initiatives will not be exceptions but will become the new norms of higher education.

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ChatGPT was used to enhance legibility and coherence of the text as the author is non-native speaker of the English language.

BOARD GAMES AS EDUCATIONAL TOOLS: BRIDGING COMPETENCY GAPS IN ADOLESCENTS

Cornelia Katharina Hofmann[1]

Abstract

The increasing complexity and unpredictability of the modern world necessitate a fundamental shift in educational practices to equip adolescents with essential competencies. This paper explores the emergence of board game classes in Germany as a promising intervention in response to rising youth disengagement and social isolation. Drawing on insights from recent educational reforms, including a competency-oriented national curriculum, the text highlights the unique advantages of board games as a pedagogical tool that fosters critical skills such as communication, collaboration, critical thinking, and creativity – collectively known as the 4Cs. The implementation of board games in educational settings not only addresses the cognitive and affective domains of learning but also provides a platform for social interaction and emotional development. Through a review of existing research and firsthand observations, this paper examines how board games can bridge the gap between digital and analogue learning environments, ultimately enhancing students' readiness for the challenges of a volatile, uncertain, complex, and ambiguous (VUCA) world. The findings underscore the potential of board games to cultivate competencies that are increasingly vital in contemporary society, advocating for their integration into curricula as a means to support holistic adolescent development.

1 Affiliation: Laborschule and Resarch Unit Laborschule at University Bielefeld, Germany.

1. Introduction

Global educational reform underscores the pressing need to equip adolescents with key skills to navigate an increasingly unpredictable and interconnected world. Reports on rising rates of youth disengagement, social isolation, and stress have sparked calls to balance predominant digital learning environments with analogue, interactive modalities that address both the cognitive and affective domains of learning. In Germany, these dynamics are mirrored in the recent overhaul of the national curriculum, which now prioritizes competencies over memorization and has catalyzed initiatives seeking innovative, scalable teaching methodologies.

In 2024 two board game classes have emerged as a promising intervention at the nexus of these developments. Their implementation addresses shortcomings identified by researchers like Aladin El-Mafaalani, who notes a competency lack in today's student populations. To foster competencies in adolescent development, playing board games might become a valuable solution. This text will give first insights to answer the following questions: *What do board games provide and give to society, other media like film or book cannot? Why are board games a valuable means of education? Can competencies and subject related content be trained or learned through board games? Learn to play and you'll learn!*

2. Conquer Competency Lack in Our Youth in an Uncertain World

This chapter outlines the groundwork and basic idea behind Germany's first two board game classes. The idea arose within the newly established German network *Schule* & Spiel (schule-und-spiel.de) in December 2023 by game designer Uwe Rosenberg. Its intention is to connect people working at schools who want to implement board games into their school life—be it within lessons, during recess, afternoon care, and other activities.

2.1. Learning through Board Games in an Uncertain World

The rise of uncertainty studies in recent years crystallizes a research movement that blends methodologies, transcends disciplines, and addresses both timeless and timely questions. Efforts at Bielefeld's Center for Uncertainty Studies (CeUS) and other German universities highlight how uncertainty is both a condition to be managed and a source of creativity and resilience – especially for younger generations facing a rapidly changing world. (Heeren 2025; Herbert et al., 2025) The field's foundations reach back to classic thinkers, but its present and future are characterized by collaborative, future-oriented research that treats uncertainty as both challenge and opportunity (Heeren 2025). In the Vodafone study *Equipped for the future*, students stated that switching between the digital and non-digital is hard to manage (Vodafone Stiftung Germany, 2023, p. 5). One could ask whether introducing digital media at an early age leads to this phenomenon. For this text, simply put, we recognize that switching between digital and analogue at school is one source of uncertainty for our youth. For them, uncertainty leads to a lack of competencies in general and to young people failing in basic competencies. Education researcher Aladin El-Mafaalani phrases this phenomenon as a competency lack due to superdiversity, migration and social injustice which lead to an overwhelmed education system in Germany (El-Mafaalani, 2024, pp. 167–204; Klitzsch, 2024). In an interview he states that you don't necessarily have to ban digital media from the classroom, but that problems have to be addressed in German schools and that we still have to learn why today's youth is struggling (Kietzsch, 2024).

Digital media have become pervasive in the lives of children and adolescents. Although (social) media education is recognized as a crucial responsibility in contemporary society, there is a risk that analogue competencies are being neglected in favor of digital advancements, with emphasis often placed solely on the benefits of the digital realm. The integration of digital games and serious games into educational contexts has progressed to the extent that these modalities are viewed as effective, and sometimes

superior, alternatives for the instruction even of pre-school children (Hauser 2021, pp. 250–252). Current studies show that this yet has to be researched (Ramos et al., 2025). The digital game has been a recognized cultural asset ("Kulturgut") since 2008 (Hauser, 2021, p. 248), whereas the analogue game is still not playing a major role in education, however, since the beginning of 2025 board games are a recognized UNESCO cultural heritage (Wenzel, 2025). Heimlich (2023, p. 191) further cautions against overlooking the analogue sphere, suggesting that exclusive focus on digital games may undermine the development of face-to-face communication skills among adolescents.

Board games have substantial potential to address educational deficits in emotional and social competency development without blaming or focussing on a student's lack. They engage and motivate learners while fostering a spectrum of skills pertinent to the non-digital context. Educators report that analogue board games support competencies vital for future readiness and may offer unique advantages not present in digital alternatives and there are already studies proving that cognitive and competence learning in board games is possible (Sousa et al., 2023). In summary, the 4Cs—communication, collaboration, critical thinking, and creativity—are widely recognized as central competencies for confronting future challenges (QuaLiS NRW, 2025b).

2.2. 4C – Communication, Critical Thinking, Collaboration and Creativity

In short, the so-called 4Cs are a reference to address central competencies in young people to enable them for their VUCA-future. VUCA stands for a *volatile, uncertain, complex and ambiguous world* which we cannot predict. Therefore, we need to teach our students how to deal with unforeseen situations, think flexibly and react spontaneously to any situation while remaining resilient at the same time (Qua-LiS NRW, 2025b). The 4Cs are *communication, critical thinking, collaboration* and *creativity*. For board game players one does not have to stress how board games are challenging all four competencies. Board games constitute a naturalistic and

integrative pedagogical environment where these competencies are activated, practiced, and mutually reinforced, substantiating their value in educational settings. First studies show that board games are suitable in the classroom in general (Noda et al., 2019; Rajković, 2020; van Bebber-Beeg & Herde, 2017). They might offer a particularly efficacious medium for the development of interrelated 4C competencies by embedding them within motivating, interactive contexts. First studies have been published and show that these competencies in general can be trained using board games (Bartolucci et al., 2017; Bayeck, 2020; Pinedo et al., 2022; Rye et al., 2025).

2.3. Competency-Oriented Curriculum Development in Germany

In Northrhine-Westfalia (NRW), the shift in curriculum towards competency-based learning has been implemented progressively since 2004 with the introduction of competence-oriented core curricula (Kernlehrpläne). These core curricula specify the competencies students are expected to acquire by the end of an educational stage, providing schools and teachers with binding competence expectations and orienting teaching goals around these standards. This shift aimed to overcome limitations of traditional content-focused curricula by emphasizing the development of transferable skills and applied knowledge, better preparing students for complex real-life situations and lifelong learning.

The competency approach was also inspired by overarching trends such as the PISA studies which revealed deficits in student competencies despite expanding access to education. In NRW, schools are legally required to develop school-internal curricula based on these competency-oriented core curricula, allowing adjustment to local contexts while ensuring alignment with state-level competence standards. More recently, the QuaLiS (Qualitätsentwicklung und Lehrplanentwicklung in der Sekundarstufe) process supports systematic curriculum development focused on competency frameworks in general education, though a precise timeline of QuaLiS implementation is less

explicitly documented. Important reforms and updates continue. For example, new guidelines and educational principles were finalized in October 2024 and will come into force in August 2025, reflecting contemporary educational needs and further emphasizing competency development in the curriculum landscape in NRW (Ministerium für Schule und Bildung des Landes Nordrhein-Westfalen; Qua-LiS, 2025, Qua-Lis NRW 2025a).

One option towards teaching competencies might be the implementation of board games into the classroom to address the aforementioned competency lack and societal problems. Reasons for board games to being able to provide such high expectations during adolescence will be outlined in the following chapter.

3. Suitability of Board Games for Adolescent Students

First, there is the question of adolescent development and whether this period of life is suitable for playing board games. This paragraph takes a brief look at the connection of neurscience and play development stages of teenagers to evaluate board game applicability for teenagers on a theoretical level.

Play Development Stages of Children

Children's play development follows a sequential progression marked by increasing cognitive and social complexity, as detailed in the handbooks of play researchers (Zimpel, 2011; Hauser, 2021; Heimlich, 2023). In infancy, play begins with manipulative or object play, where children explore their environment through direct interaction with objects. This form of play facilitates sensorimotor integration and lays the groundwork for foundational perceptual-motor skills. As toddlers, they enter the stage of pretend or symbolic play, marked by the use of imagination to assign new meanings to objects and actions, often engaging in parallel play with peers without direct interaction. Subsequently, children participate in hand play, which includes structured motor activities such as clapping games that

promote motor automatization and contribute to emotional regulation and social bonding. From preschool age onward, role play, or sociodramatic play emerges, involving the enactment of social roles and scripts that enhance perspective-taking, theory of mind, empathy, and understanding of social norms. Zimpel (2011) underscores that free, child-initiated play is essential for holistic development across cognitive, emotional, and social domains, proving more effective than adult-directed or highly structured activities.

Entering adolescence, playing does not end but shift towards rules, questioning rules and more risk-taking, however – the play development continues and former play stages continue developing. From observation it can be said that a lot of teenagers engage in very simple childrens' board games or play activities with great enthusiasm – as long as they feel safe and secure in their setting. On a class trip in 2025, during a field trip at a small river I could observe 12- and 13-year-old students were behaving like small children: There were boys mimicking fights and letting it become serious to the grade of not getting hurt, but still serious enough to establish winners. Others drew *Tic-TacToe* into sand and played with stones, while another group started building things or started to explore animal footprints in the sand. Students of this class use board games during lessons and almost all of them were having great fun with very simple board games which are originally intended for kindergarten or primary school like *Fang den Wurm*, *Schokohexe* or *Fröschis*. Only when feeling secure in playing these easy games, can they move on to more complex play settings. From observation, one can see that play biographies often stop or take a break at this age. First observations from the past years at my school and information from conversations with other teachers within the *Schule & Spiel* network is showing that board games – often even the easiest kind – are a match for teens.

Adolescent development is characterized by profound biological, cognitive, and social changes, including significant maturation of the prefrontal cortex which enhances planning, self-regulation, and impulse control, alongside increased emotional and

reward sensitivity rooted in ongoing limbic system development. The transition from childhood involves growing independence, intensified peer influence, and adaptive social learning, with risk-taking and exploration playing a vital role in fostering new cognitive and social competencies and some studies have been conducted to show that board games might be a way to support these competencies (Vita-Barrull et al., 2023; Rajković et al., 2020; Pinedo et al., 2022). A summarized and detailed outline regarding development and board games during adolescence is still a theoretical gap in research.

Neuroscientific foundations

Adolescence is characterized by a period of heightened neuroplasticity, with the brain particularly receptive to experiential and multisensory input. Neuroscientific research (Martinez, 2024) shows that analogue games, by engaging multiple brain regions simultaneously, serve as powerful pedagogical tools that amplify working memory, cognitive flexibility, and sustained attention – the executive functions (Otto, 2022; ZNL, 2017). There already is a study proving that the implementation of board games may strengthen executive functions in the classroom (Vita-Barrull et al., 2023). These neurological processes are further reinforced by dopamine-driven reward systems inherent in gameplay, which increase motivation and reinforce learning. Although our brains are most susceptible to learning during the first years of life, the executive centers of the brain continue to undergo changes into the twenties and are still able to evolve later than that (Brown 2010: 58). Influences on brain development after childhood transfer towards more social settings – one of them might become playing board games. He states: „When we stop playing, we stop developing and when that happens […] things fall apart.“ (Brown, 2010, p. 73)

Play personalities

Not every board game suits every grown-up person. Brown (2010, pp. 65–70) outlines eight play personalities: *joker, kinesthete, explorer, competitor, collector, artist/creator and storyteller*. It might be worth exploring from which age play personalities take effect.

For now, we should think of these play personalities in the classroom, get to know games of every kind, on the one hand to enable our young students to find out their play personality and on the other hand to show how versatile board games are and that there probably is a game for every teenager.

4. Classroom Practice and the Research Project

Teaching board game classes involves cyclic learning – gameplay is followed by individual and group reflection, fostering self-regulation and social cohesion. No new concept in itself, but a lot of colleagues still think one cannot learn with board games, learning cannot be fun or that it is easy to play board games in a classroom. It is not easy. As with other media or methods teachers need to plan their lessons carefully, in my personal experience even more so than for traditional lessons.

The first part of this chapter is completely based on experience and provides the reader with an insight into the first year of my board game class in Bielefeld, followed by the second part which outlines the research project *Gesellschaftsspiele* (board games) at Research Unit Laborschule at Bielefeld University.

4.1. First Observations from the Inside the Board Game Classroom

After the first year of two board game classes in Germany, initial observations suggest that, through regular, structured board game play, students show not just increased academic engagement, but also higher empathy, improved conflict resolution, and elevated organizational skills. These observations are consistent with aforementioned studies and indicate that playful methodologies are appropriate for promoting a broad spectrum of skills.

We started the academic year with a bigger project in which students became board game experts for a selection of games. They had to learn how to play and how to explain games of their choice

with the aim of organizing a parents afternoon to teach their parents and siblings how to play. On their journey towards this goal they got to know new games, practiced explaining them to others—first to self-chosen friends, later to a parallel class who hadn't any board game experience in the classroom. The afternoon was a huge success: parents gave very positive feedback, letting me know how valuable this project has been—in the process but also during the afternoon.

Imagine being 12 years old and explaining a board game to grown-up strangers. After this success, my students even joined a local board game fair and were willing and able to explain board games to complete strangers: no problem. Regarding the curriculum you could see the 4Cs in various situations but also curriculum content, i. e. using appropriate language, describing or putting complex content into easier language for another audience, for example for younger siblings or grandparents.

Apart from this project we used board games in subject related contexts: In history we started learning about the Middle Ages with the *Possenreißer* memory game and compared language back then and today. Atlas work was accompanied by various geography board games, for example puzzles (Germany, Europe, World), *Finden Sie Minden, Zug um Zug* and more. In English we used simple card games to start talking and overcome fears with very simple games and game language within these games (*Snack Rabbits, Plumpsack, Brainstorm*). The most rewading feedback to me was the following sentence of one of my students: „Please, let's play again, I finally dare to speak English!". More subject-related applications of board games have to be put into practice and published to make this idea available to a greater audience.

Apart from the issue of subject-related content, the underlying application and ideas on how to handle board games with bigger groups has to be put into a broader framework. This will be one of the tasks within the research project at Laborschule Bielefeld.

4.2. Research Project „Gesellschaftsspiele“ (Board Games)

In the onset of this research project we wanted to find out which games our teenage students like to play. This goal had to be buried again very quickly and we are now working on enabling conditions for playing at school. To find out more about enabling conditions, we have established some subprojects within the research project. As a theoretical basis, a situational analysis is currently in progress. Other practical subprojects are establishing a games library, a cover lessons project for the whole school to lighten the weight of these challenging lessons for students and teachers alike. We cooperate in-house with younger and older students to find out which settings (don't) work with board games and are planning to cooperate with other schools as well.

To assess competencies, students document their own development using a calendar, in which they write down their daily tasks and weekly reflection – some of them regarding board games. Specific attention is given in a questionnaire to assess competencies like patience, concentration, teamwork, communication, and problem-solving three times per year, potentially enabling longitudinal tracking of progress both in academic and social-emotional domains. Of course, self-assessment can only be one part of the assessment. Further research will have to be conducted; however, first observations point to a more positive development regarding competencies when playing board games regularly. A deeper assessment will include teacher observation and qualitative interviews, supplemented by standardized tools, developed within the project.

5. Conclusion

Integrating board games systematically signals a shift towards experiential, reflective, and competency-based education. This method provides an analogue antidote to the digital habits dominating adolescent lives, strengthening social connection and fostering meaningful engagement in learning. The current absence of

formal, scalable frameworks for implementing board game-based learning remains a significant bottleneck. Our research aims to close that gap, offering assessment tools, curricular recommendations, and best-practice guidelines for educators and policymakers. The ultimate goal is institutionalization: ensuring board game classes are not novel exceptions but established pillars in general education. A lot of questions are still unanswered: *How can board game-based learning accommodate diverse student backgrounds and abilities? What are optimal conditions for scaling this approach across schools and cultures? Which assessment tools capture the nuanced development of competencies via gameplay? How do we guarantee sustainability and continued teacher support in analogue pedagogies?*

The systematic integration of board games into secondary education, as demonstrated in the Laborschule Bielefeld project, offers a promising model for advancing adolescent development. Board games represent a unique intersection of cognitive challenge, creativity, social interaction, and motivational engagement. Ongoing research at Bielefeld University seeks to further evaluate the long-term effects of this approach, support its dissemination in teacher training, and refine frameworks for curricular integration.

Initial conclusions indicate board game classes can meaningfully foster resilience and offer crucial alternatives to the digital saturation of contemporary childhood and youth. The vision is for board game-based learning to become a recognized and research-driven element of comprehensive education—equipping the next generation for both individual fulfillment and societal contribution.

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COGNITIVE DEVELOPMENT GAMES IN MATHEMATICS EDUCATION *(THE DIENES PHENOMENON)*

Julianna Kiss – Sándor Klein – Zsolt Nemeskéri – Iván Zádori[1]

Abstract

This study explores the innovative contributions of Zoltán P. Dienes to mathematics education through his development of educational games, emphasizing their role in fostering cognitive development. Dienes's approach transforms mathematics into an engaging, experiential process by integrating structured games that align with his four principles of mathematics learning: Dynamic, Constructivity, Mathematical Variability, and Perceptual Variability. These principles guide children through six distinct stages of learning, from free play to formalization, cultivating creative and conceptual understanding. Key games, such as Multibase Arithmetic Blocks and Attribute Blocks, exemplify how Dienes's methods embody mathematical structures, enabling students to construct knowledge through hands-on experiences. The study also highlights recent efforts to revive and redesign Dienes's games, including „Who Gets to the Castle?" and „Forest Game," to establish „Dienes math labs" that promote creative thinking in schools. By emphasizing intrinsic motivation, interdisciplinary connections, and student-centered learning environments, Dienes's legacy offers a model for making mathematics both accessible and enjoyable, challenging traditional pedagogical approaches.

1 Affiliation: University of Pécs Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary.

1. Introduction

There is an extensive body of literature on educational games (although it has not yet assumed its deserved place in the practice of Education) (Zheng & Gardner, 2016). This presentation focuses on a specific part of this theme: the methods and views of *Zoltán P. Dienes* on learning mathematics and the role of the games in this process.

2. Dienes's Theory of Mathematics Education

Zoltán P. Dienes (1916–2014) was a brilliant mathematics educator (especially of small children) who sought to transform this often unpopular subject into an engaging activity—all over the world. "There are far too many children who dislike mathematics, more so as they get older, and many who find great difficulty in what is very simple" – he writes in his basic book: *Building up Mathematics* (Dienes, 1967 p.1). His ambition was nothing less than "to create mathematical learning-situations, partly as if we were practising an art-form, and partly as if we were devising an original research-situation" (Dienes, 1967, p. 3.). As he himself wrote, the sources of his "Theory of Mathematics-Learning" are the well-known researches at Harvard led by Bruner, the fascinating work done by Sir Frederick Bartlett, and certain experimental results of my own" (Dienes, 1967, p. 23.). The result is very original, though (Fossa, 2003), and is summarized in *the four principles of maths learning*:

1. *Dynamic Principle:* preliminary, structured and practice games must be provided as necessary experiences from which mathematical concepts can eventually be built, so long as each type of game is introduced at the appropriate time.

2. *Constructivity Principle:* In the structuring of the games, construction should always precede analyses.

3. *Mathematical Variability Principle:* Concepts involving variables should be learnt by experiences involving the largest possible number of variables.

4. *Perceptual Variability Principle:* To allow as much scope as possible for individual variation in concept formation, as well as to induce children to gather the mathematical essence of an abstraction, the same conceptual structure should be presented in the form of as many perceptual equivalents as possible (Dienes, 1967, p. 32).

"I suggest that it is possible to establish fully creative mathematical learning-situations at all stages of mathematics-learning. When a child has effectively formed a concept from his own experiences, he has really created something that was not there before, and this something is built into his personality in the psychological sense in the same way as essential substances in his food are built into his body. The value of this piece of learning to him will be of a similar kind to the painting of a satisfactory picture or the writing of a good story, or the inventing of an exciting play to be acted with his friends. It will have intrinsic value, as part of the very staff that life is made of." (Dienes, 1967, p. 18).

Dienes found that there are different stages of mathematics learning (Dienes, 1973):

1. *free play* (this is when the child first encounters several concrete components from which he later constructs the concept),

2. *rule game* (at this stage, you can give children games tied with rules, but also make sure that rules are not considered sacrosanct),

3. *recognition of common structure* (you need a lot of games that have a common structure),

4. *representation of the common structure* (representation helps to recognise what is common in games that "embody" structure),

5. *description of the structure depicted* (symbolization is the stage of introduction of mathematical notion),

6. *formalization* (the path from axioms to theorems).

"One of the purposes of education is to encourage children to look for ways of understanding the real world surrounding them through the search for similarities, oppositions, and connectedness in the sensory inputs they are receiving. In other words, one of our aims is looking for *structure* in terms of which events can be explained" (Dienes, 1987). This leads directly to Dienes's constant effort to provide interdisciplinary experiences (e.g. tasks involving music, language, movement, and mathematics (Cantieni, Dienes, & Tremblay, 1974). But, as he underlines, these "experiences should be devised in such a way as to give each disciplines its due, without subordinating one to another" – and this is a real challenge (Dienes, 1987).

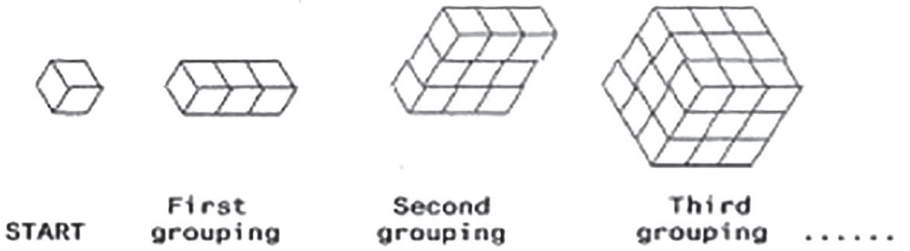
3. The Dienes Games

The "Dienes method" is theoretically well-established and supported by many experiments (Dienes & Jeeves, 1965, 1970; Jeeves & Greer, 1983) but its true beauty can only be revealed to those who pay attention to their practice, especially the *many games he constructed*. The essence of this method is a "mathematical environment" in which the main source of learning is the children's own experience (Klein et al., 2023a). This is in stark contrast to the traditional method of teaching mathematics: "taking a symbolic funnel through which you mix the knowledge and pour it into the brain of a child and then you test him and see if he gives the right response" – said Zoltán Dienes in a conversation with Sándor Klein (Klein, 1987, p. 60).

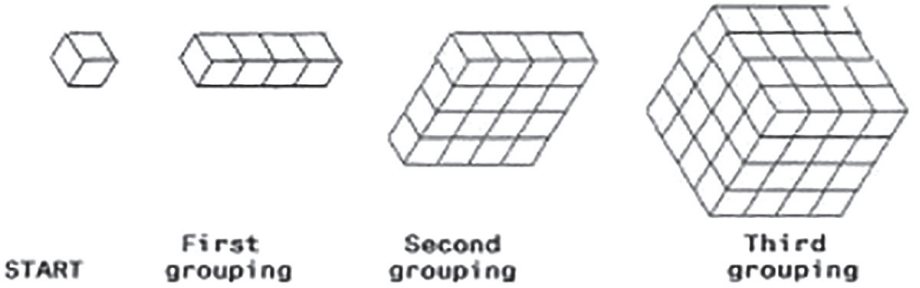
The first "Dienes games" had been designed to help children understand some "traditional mathematics problem, they had difficulties in the school (Benedek, 2018; Tuska, 2018).

The one which is probably the most famous is the *Multibase Arithmetic Blocks* (MAB; Dienes, 1964), aimed to help the process, the end point of which would be the acquisition of the concept of *power* (e.g. 23). This concept includes two variables: the *base* and the *exponent*.

The MAB embody the different powers of various basis. For example, in base three we would have the pieces (Dienes, 2007):



If the base was four, we would have the pieces:



and so on with bases four, five, six, up to and including base ten.

Here we can't go into details about how to use MAB, only mentioned it for two reasons:

- it is a typical "*educational game*" (more "educational" than a "toy")(a "manipulative"),
- it is a good example of how the embodiment of an excellent idea can deteriorate, left to its business application: after 60 years of its origin, one can still buy MABs (now on the internet), but they represent only *base 10* – the essence (being able to vary the bases) is lost.

The other famous early "Dienes game" is the *Attribute Blocks* (Logiblocks). It was probably first used systematically one hundred years ago by the Russian psychologist Vygotsky for testing of logical thinking (concept formation), and William Hull (1963) has been the first to show with it, that five-year-olds could indeed engage in some high order thinking, "provided the tasks were suitably chosen and adjusted to the stage of development of

such children, and provided that great care was taken that excessive verbalism did not stand in the way of the concept formation" (Dienes & Golding, 1966/1976, p.17).

The Attribute Blocks is a set of blocks consisting of a 4x3x2x2 system, the variables being shape (circle, square, rectangle or oblong, triangle), colour (red, yellow, blue), thickness (thick, thin), and size (large, small). But again, to learn about the structure (and not about the "noise": shape, colour etc.), we need to use other embodiments of the same structure (e.g. People Logic Set: males and females, standing, walking and sitting, adults and children in green, red, blue or yellow dress).

People Logic Set

People Logic Set – the set embodies 48 elements, each piece having one of the following attributes: male or female; adult or child; sitting, standing or walking; green, red, blue or yellow.

It is also important having simple and complex games available with this structure, so that we can begin to play these games with very young children and can continue to play with this material up to the university level (Benedek & Tuska, 2019).[2]

2 Two books showing a rich selection of the Dienes games are Dienes, 2003 and Thomas 2009.

4. The Heritage of Zoltán Dienes

Zoltán P. Dienes died in Canada on January 11, 2014 at the age of 97, and the Faculty of Culture and Sciences, Education and Regional Development of the University of Pécs proudly undertook the management of the intellectual heritage of the renown professor, its honorary doctor. In recent years we have made serious efforts to revive the "Dienes games" from their sleeping Beauty dream: we have redesigned some of them and strive to spread them domestically and internationally. Among them are (Klein et al., 2023b):

- *Who gets to the castle?* A version of Logic tracks, based in simple logical operations (and, or if and only if, negation) (Dienes & Golding, 1966/1976; Dienes, 1976).
- *Forest Game.* A game with 13 prisms and 13 property cards. Trees are painted on the prisms according to certain regularities: both visible sides having 0,1 or 2 pines, oaks or willow (if there is one pine on one side, then two on the other, if there is no pine on one side than there is no pine on the other side etc.). The number of trees can be added together, but in this game, you have to subtract three (or multiples of trees from numbers larger than two – for example, 2+2=1, 2+2+2=0. Each prism has four properties, and each property is characteristic of exactly four prisms. Both prisms and property cards can be turned into 3×3 "magic squares".
- *Abraka Dabra.* In this game we visit the land of Abraka-Dabra, where everything has two sides: one is ABRAKA and the other is DABRA. The players have to recognize the connections between the two sides of the cards. Those who observe carefully and think logically, can figure out DABRA from ABRAKA and vice versa.
- *Pearls.* This is a game of 21 discs (each divided into 3 parts) and 21 property cards.

There are various games children and adults can play with these games: some are quite easy, others are fairly difficult.

More "new" Dienes games are in the "production line": we strive to gradually establish "Dienes math labs" in schools, which can develop into centers for the development of creative thinking.

5. Motivating Mathematical Learning (the bigger picture)

Dienes had been interested early in his career in "the merits and demerits of certain types of motivation used in inducing children to learn mathematics "(Dienes, 1964, p. 182). 35 years later he clearly stated: "To create a state of mind which would be conducive to learning mathematics, must involve mathematics itself […] Once children realize the fascination of the emerging structures as they learn mathematics, they tend to want to know more, and they are *hooked*. Curiosity is a great driving force, and when children begin to want to know how things fit together, they will not rest until they find out […] Here are a few aspects of mathematics which has been known to excite children and induce them into learning mathematics with great energy:

- symmetrical aspects of the structure being learned,
- unexpected developments,
- the infallible predictive nature of systems,
- discovery of links between widely differing areas (including interchangeability of elements such as one encounters in dealing with duality)." (Dienes, 1999, p. 98)

He built these aspects into his educational games: making them both enjoyable and educational.

A few other ways in which the learning environment can be made more conductive to learning, according to Dienes:

- the sociability of working in groups with peers,
- the teacher being a source of help rather than of authority,
- the classroom furniture arranged in a decentralized way,
- the availability of choice activities,
- the availability of much concrete learning material,
- more tasks requiring organizing than memorizing. (Dienes, 1999, p. 89)

On of the most important message of Dienes is that "We must not forget the *teacher* as a source of information nor the children, who are well able to help each other. It is probably safe to say that *no help should be offered unless it is asked for*." (Dienes, 1999, p. 95) And later: "It is crucially important that elementary school teachers should have a full understanding of the foundations of mathematics as well as the dynamics through which it is best learned. This means that we should aim at passing on to children and understanding of mathematics, rather than a parrot like repetition of procedure usually only half understood, and which can in any case carried out much more effectively by machines. There is no further excuse for teaching children mathematical procedures *which they do not fully understand, or which are not interesting to perform."* (Dienes 1999, p. 117)

In a conversation with the 90 years old Zoltán P. Dienes Bharath Sriraman asked him about his thoughts on *constructivism*. "My answer to that is simple really – he said […] I do not care very much for *isms* […] What really matters is that actual learning can take places with the proper use of materials, games, stories and such, and that should be our focus. Ultimately, *have they learned anything that is useful and made them think?* "(Sriraman & Lesh, 2007)

Richard Skemp (1983) nicely expressed something similar: "For most of us mathematics, like music, needs to be expressed in physical actions and human interactions before its symbols can evolve the silent patterns of mathematical ideas (like musical notes), simultaneous relationships (like harmonies) and expositions or

proofs (like melodies)." His final question in this paper is still valid: "But can anyone tell me how we may get this message to those who need it most… the many who teach mathematics to children in their early years?" (Skemp, 1983).

6. Conclusion

The study of Zoltán P. Dienes's contributions to mathematics education through cognitive development games reveals the profound impact of his innovative approach on young learners. By emphasizing experiential learning and the integration of structured games, Dienes not only makes mathematics more engaging but also fosters a deeper understanding of mathematical concepts.

His principles of dynamic learning, constructivity, and variability encourage children to explore and construct knowledge actively, transitioning from playful exploration to formal mathematical reasoning. The revival of Dienes's games in contemporary educational settings, such as the establishment of „Dienes math labs," underscores the ongoing relevance of his methods in promoting creative and critical thinking. Ultimately, Dienes's legacy serves as a powerful reminder of the importance of making mathematics accessible and enjoyable, challenging traditional pedagogical practices and inspiring future generations of learners.

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DYSLEXIA IN ESL – GAMIFICATION AND NOVEL APPROACHES OF MULTIMODALITY SERVING NEURODIVERSITY IN EDUCATION

Zsuzsanna Schnell[1]

Abstract

The present article focuses on dyslexia and its special cognitive features that are essential in second language learning, ESL. We introduce the major features and symptoms of dyslexia, suggest methodologies to tackle special needs in overcoming language learning issues and give concrete tips for success in language teaching especially in ESL settings. We offer a perspective for both typical and atypical students in the course of learning a foreign language with a playful interactive, yet efficient manner.

We see play as an essential tool for all age groups, and a framework for interactivity and constructive participation especially in language classes. For communicative success easing stress and activating vocabulary is crucial, and the introduced methodology relying on multimodality proves to be a fruitful platform for such goals. We offer a novel approach to support these purposes in general and in English as a Second Language (ESL) education.

1. Introduction

Dyslexia is a type of learning difficulty, stemming from a language processing disorder. It concerns the comprehension of written text in the reading process. The difficulty lies in their effort in breaking up written code. The mapping of sounds, operations with sounds, eventually arriving at the intended meaning

1 University of Pécs, Hungary, Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary.

is what is a challenge for individuals with dyslexia (Bryant, 1991). The problem is not a general comprehension problem because their comprehension of heard linguistic stimuli via listening or discourse is not affected that significantly as their comprehension based on reading (Crombie, 2000; Csépe, 2014; Pléh & Lukács, 2014). Is difficulty in processing language exists along a spectrum, one that doesn't necessarily fit with labels like "normal" and "defective".

The main message of our study is to emphasize we need to think again about dyslexic brain function and to celebrate the neurodiversity of the human brain. These individuals are more visual learners, as images can enhance their understanding and aid their retention. They often rely excessively on the right hemisphere of the brain in processing written language where the visual code needs to be broken up *(Fig. 1.a.)* and transformed *(Fig. 1.b.)* in order to arrive at the meaning.

Figure 1.a. Steps of processing written language in the course of reading

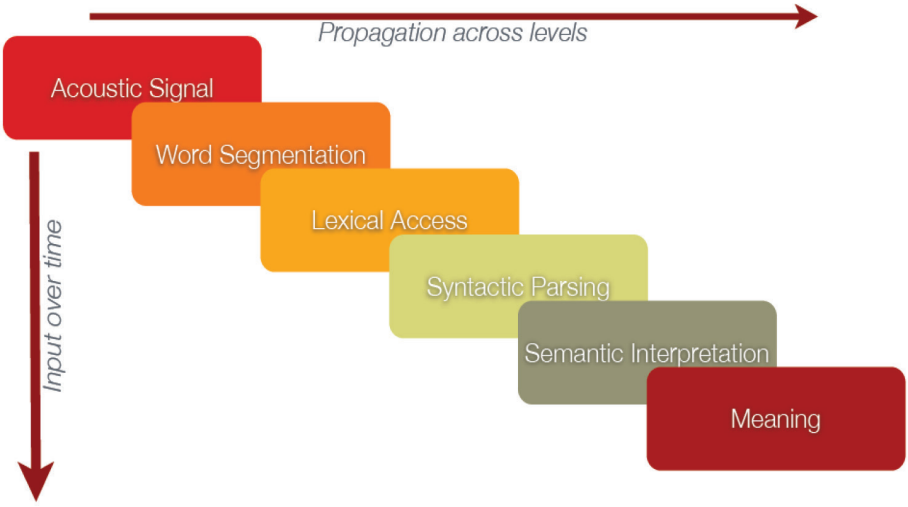


Figure 1.b. Detailed steps of processing written language including syntactic parsing and semantic interpretation

1.1. Misbeliefs

There are several misbeliefs concerning dyslexia, among them the view that they see words backwards. They also do not have lower IQs, as commonly believed. In fact: the problem is not with their seeing, but with the *phonological processing* of visual linguistic stimuli: with manipulating it (Geiger et al., 2008).

1.2. Dyslexia in Society

Dyslexia runs in families, affecting more boys than girls. Women: have more diversified cortical regions (centers) for language. Women also heal better from aphasia, as they compensate with other areas. Some signs of developmental dyslexia include:

- They omit or add letters (*fesh instead of fresh freash)*
- Mix up the order of letters (*nep* for *pen)*
- They do not read full word but complete it with letters in incorrect ways (*pencil* for *pen*)
- Often read very *slowly*
- Comprehension and *coherence* problems
- Dyscalculia, dysgraphia
- short temporal memory problems (*following instructions*…) problems or delays with motor development: clumsiness

2. Cognitive Difficulty in Dyslexia

Dyslexia as versatile as it is, still, generally known to have some cognitive difficulties and challenges in mental operations that serve as the basis for reading smoothly. Such skills include an ability for flexibility in thinking, attributing thoughts and representing one's and others' mind or mental states, thoughts, beliefs or intentions.

2.1. Explanatory Theories of Reading

Traditional, Cognitive and Metacognitive theories highlight different aspects and steps in the reading process. In the traditional view the text is in the center of attention, whereas interactive views emphasize the simultaneous integration of all domains of language and meaning including not only the linguistic input but also interpersonal factors and social cognition like attributing intentions and relying on common ground and background knowledge for the effective derivation of meaning (Pléh, 2013).

In the cognitive view the person, the interpretation, the mental process in in focus, which integrates background knowledge and lexical knowledge. Today most theories represent a metacognitive approach *(Fig. 2.)* here control and operations are in the center of attention, and in view of these several cognitive skills and strategies play a crucial role in smooth reading ability.

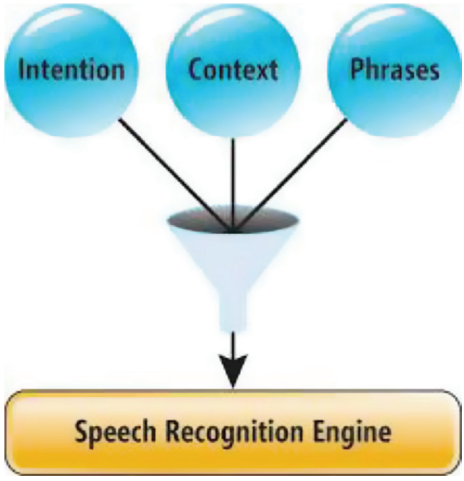


Figure 2. The cognitive underpinnings of comprehension

The ability to break away from one's own thoughts and see another perspective entails the ability to switch views, and as such is an important element of a cognitive flexibility needed for the comprehension of greater texts and discourse especially where one has to read between the lines. This entails the integration of intention reading (social aspect), of the context (textual and situational), and an analysis of utterances (input-based stimulus processing).

One such cognitive step is the ability to do operations in the mind, a skill of abstraction, crucially important in being able to distinguish letters especially the ones that look similar. This skill is known as *mental rotation*, the ability to imagine the letter or object at hand in different angles, forms, which also contributes to doing formal, mental operations in abstraction in the mind *(Fig. 3).* This is essential in identifying the letters that look similar but are rotated (e.g. p–b-d) and thus stand for different sounds and letters *(Fig. 3).*

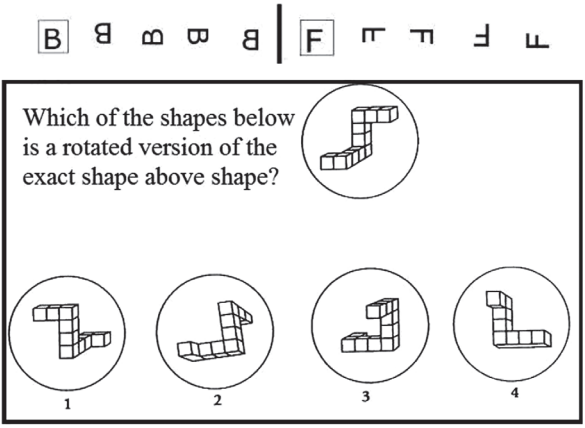


Figure 3. Mental rotation

Mental rotation is also a core component of reflectivity in language known as metalinguistic competence. This skill mirrors intuitive knowledge about the basics of linguistic analyzability. It proves their *phonological awareness* (pumpernickel). e.g.: nursery rhymes, rhymes, early language development. This is crucial in successful reading and writing development (for the distinction of similar letters like p/b, or similar sounds for the place of articulation (f/v). The distinction is also of key importance for the differentiation of sounds and also for verbal argumentation. Metalinguistic competence is a skill we rely on in abstractions with words essential in grammar skills, word formation like adding suffixes, taking or deleting prefixes etc. A question like remove the letter „h" from the word „hat", what have you have left? – is often very difficult for dyslexic individuals, as they need to do operations in their imagination and this abstraction as challenging as it requires mental abstraction.

Words themselves are abstract, and thus a symbolic activity is necessary for basic reading comprehension skills. Metalinguistic competence, a general flexibility of the mind and thinking and reflectivity on our own language use thus gives the basis for the representational ability of language (Karmiloff-Smith & Karmiloff, 2002; Schnell, 2016; 2024).

Similarly, Piaget (1966) identified a concept he named 'nominal realism": he asked children if the word „needle" can pinch you. Children around age 3 answers yes, whereas children with a metarepresentational ability who can reflect on language and can see words as symbols with their own traits separating it from their meaning answer no, because a word cannot pinch, and this they already understand. These older children with metalinguistic ability have symbolic skills that enables them to separate the name (signifier) and its meaning (signified) and they can represent the abstract concept (sign) of the word and the abstract, corresponding (but symbolic) meaning.

Lateralization is also important to understand language processing in dyslexia: the left hemisphere is classically in charge of analytic thought, language functions, science, logic and maths, while the right is typically responsible for holistic thought, including spatial activities, creativity, intuition, music, art. Language areas and analytical processing is known to take place in the left hemisphere, being more focused on logic and analysis, also known as the male hemisphere, whereas abstractions, artistic and holistic meaning construction is often paired with the right hemisphere, aka the female hemisphere. This lateralization is important as reading skills develop in several phases (Csépe, 2014), the first phase focusing more on the analysis and connection of sounds, whereas the second phase being a more holistic processing. The different phases of reading demonstrate different signs of dyslexia.

3. Reading Phases

The first phase of reading concerns more general skills like identification of letters and sounds, their transformation and applied levels of language use in general, a reflective and symbolic ability in handling language and its words and sounds, detaching from their meaning, whereas the second stage, typically in place by 4th – 5th grade and prepuberty, concern skills of seeing the word-form and an automatization of word-form reading, a more holistic ability building on more basic steps of reading from the first phase.

3.1. Disturbances in the First Phase of Learning to Read

- Letter-sound correspondence (switching between modalities of written and auditive stimuli).
- The difficulty of learning these rules, as the rules are abstract and require imaginative mental operations and a retention and retrieval then application from the memory.
- The differentiation of similar sounding sounds (t/d) and letters that are visually similar looking (p/b). This difficulty requires a skill of inhibition where unnecessary information shall be suppressed, and relevant information retrieved and applied. The inhibition of homogenous forms, letters and sounds is a typical cognitive difficulty dyslexic individuals experience.
- The second step of metalinguistic competence: breaking up words into sounds and letters, a decompositional ability that again requires abstraction (as seen above with our example of h+at=hat).
- And the connection and reading of syllables and letters as strings of words.

3.2. Cognitive Disturbances in the 2nd Stage of Reading

In the second phase of reading disturbances commonly concern temporal disturbances in pacing and articulation, manifesting themselves in problems of fluency and pace. These include:

- Lack of the automatization of the word-form (no word-form reading stabilizes by prepuberty as in healthy individuals).
- Processing difficulty of larger units of texts.

These unfortunately all pile up and cause cumulative disadvantages in reading after elementary school through middle school and beyond. Even after years of reading children do not become fluent as normally the fluency of word-form, automatic reading stabilizes in 4th-5th grade, which makes readers able to read scrambled content as well *(Fig 4).*

> "Aoccdrnig to rscheearch at an Elingsh uinervtisy, it deosn't mttaer
>
> in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is that the frist
>
> and lsat ltteer is at the rghit pclae. The rset can be a toatl mses and you
>
> can sitll raed it wouthit a porbelm. Tihs is bcuseae we do not raed ervey
>
> lteter by it slef but the wrod as a wlohe."

Figure 4. Word-form picture-like holistic reading – automatized by prepuberty (grade 5)

This is known as the Bathtub effect *(Fig. 5.)* in developmental psycholinguistics (Juhász & Pléh, 2001), getting its name from the picturesque situation that the beginning and end of the word is salient but the middle is opaque, like the chest and body immersed

in the bathtub. Saliency at the beginning and end of word eventually function like described: it is easier to read the word even if it is erroneous if the beginning and end is correct, the middle may be opaque or mixed up, the important is that the beginning and end are clear. This automatic holistic reading builds on a lot of experience and basic reading skills acquired in the first-phase. Reading such scrambled texts nonsense cannot be expected under 4th-5th grade, and it may be significantly more difficult for people with dyslexia.

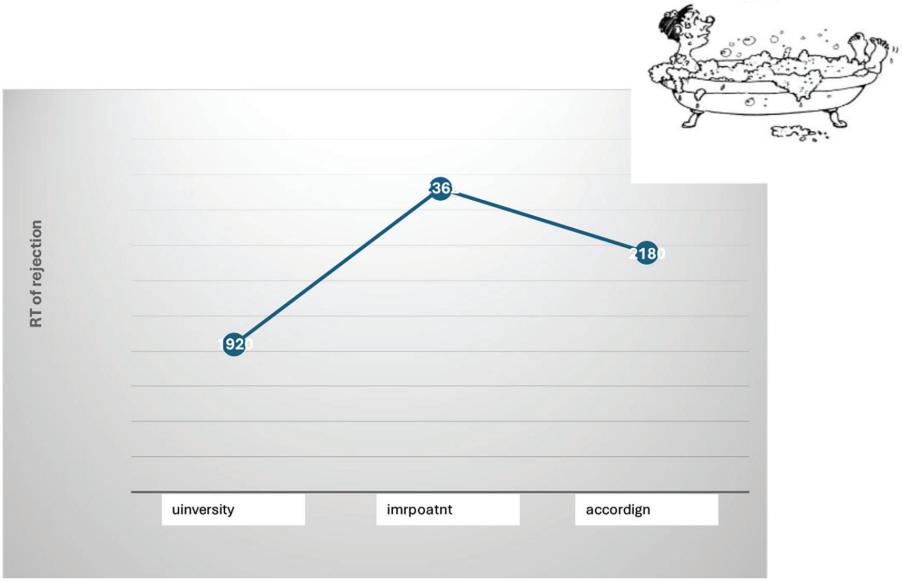


Figure 5. Bathtub effect in rejecting erroneous words (Juhász & Pléh, 2001). illustration of effect: Aitchison (1987). Middle of the word cannot easily be deciphered, just as the bathing person

4. Metacognition as Inhibition – Key Steps in Efficient Reading

As *Fig. 2* above illustrates, today cognitive science considers the process of meaning construction highly metacognitive, where beyond the sheer linguistic input (phrases) psychological factors, social cognitive factors (intention, mindreading) and situational factors (context) also play a role. This interactive

process yields a constructive interactive process of speech recognition and reading comprehension. This is based on an important ability of reflection, metacognition / metarepresentation, in that one can differentiate the word and its meaning, separate behavior from intent, a speaker from the listener, and one's mental state from another person's mental state (Schnell 2024). Access to our own or others' mental state is thus, crucial, and if it is missing, interpretation might not be fully successful.

4.1. Mental Lexicon and Priming

We efficiently read larger texts, understand discourse because we can rely on our mindreading ability to understand someone's mental state (desire, belief, intention) and use this to predict their behavior. Our mental lexicon looks like this *(Fig. 6.)*. Words related in situations, context are closer to each other and may be put in a stand-by mode by a target word activated in the situation (or script, see Schank & Abelson, 1977) at hand (e.g. when we read/hear doctor, the surrounding related concepts (words) get activated: nurse, hospital dentist), which are equally relevant and of primary relevance and importance.

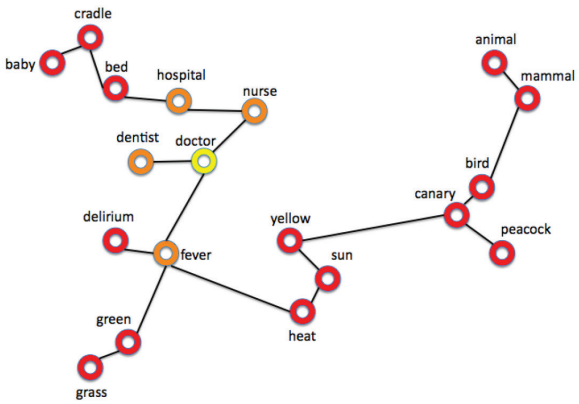


Figure 6. Priming in the mental lexicon

The less related words are further in the matrix but still may get activated to some extent (e.g. doctor may activate fever, thus yellow). This may cause slips of the tongue or often irrelevant

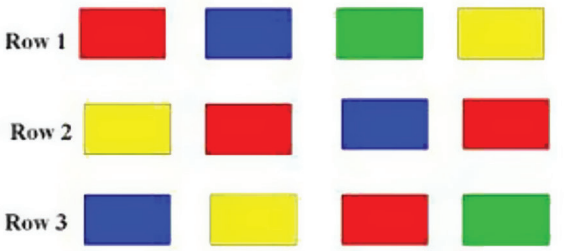
activations which may hinder access of intended meaning and efficient reading. Therefore, for clear messages and interpretations both in discourse and in reading one must be able to *inhibit* irrelevant activations, just like in homogenous, similar letters *(Fig. 3.)* that may be overly activated and thus cause confusion. This is exactly what happens in the dyslexic brain.

4.2. Inhibition as an Advantage

The activation may be an advantage as we can access relevant words quickly, due to scripts in the long-term memory, but if one cannot inhibit irrelevant activations, cannot efficiently distinguish similar (related) letters words or concepts (p–b) and activating *p, b* and *d* at the same time will cause confusion in the reading process. The core ability of inhibition, therefore, is an ability to *block out* what is not needed, *focus* on the important, relevant, *selecting* what's important and targeting attention there, and importantly, involves careful *planning*, evaluation, integration, holistic view.

4.3. The Stroop Effect – Inhibition in Practice

To understand what inhibition means we can resort to a famous test of inhibition known as the Stroop test. It capitalizes on the automatic reading explained above, that stabilizes in the second phase of reading and sets in by prepuberty. The automatic reading also here sharply contrasts with the word processing naturally done in reading, as instead of reading and processing the word we encounter a clash of selective attention because of the mental switching needed in the task. Testing is done by showing participants how easy and fast it is to name the colors in a picture *(Fig. 7.a),* then make them read color terms *(Fig 7.b),* and eventually asking them to name the colors of the words in Fig 10, not read the words. This latter task efficiently shows the cognitive effort and difficulty of overcoming competing (incongruent vs congruent) stimulus and of the mental switch needed to do the task correctly.



Red	Blue	Yellow	Green
Blue	Green	Yellow	Red
Green	Red	Blue	Green
Red	Yellow	Red	Green
Green	Blue	Red	Yellow
Blue	Green	Blue	Red
Red	Blue	Red	Yellow

Figure 7.a., 7.b. First- and second phase of the Stroop test in the testing procedure

In the Stroop test the task is to name the color of the words, not read the letters themselves *(Fig. 8.)*. The brain automatically reads the word (the name of the color), and this takes time and effort to overcome the clash of attentional states. Inhibition of irrelevant stimulus can help overcome this and be faster and more successful in naming the colors (and not reading their names) first.

BLUE	RED	YELLOW	ORANGE
GREEN	BLUE	PURPLE	RED
PURPLE	YELLOW	RED	BLUE
ORANGE	BLUE	YELLOW	RED
RED	GREEN	ORANGE	BLUE
PURPLE	YELLOW	BLUE	ORANGE

Figure 8. The Stroop test

The Stroop effect demonstrates that we are influenced in different ways by different stimuli, be it visual, written code or letters, words that shall be transformed into meaningful terms or terms to be names. This context awareness (Schnell, Varga & Járai, 2021) is essential in understanding the difficulty of dyslexic people in the reading process: the automatization of homogenous letters or sounds blocks the retrieval of the correct letter or sound and thus inhibits access or anchoring of meaning, eventually hindering the whole reading process. The Stroop effect *(Fig. 8.)* mirrors the cognitive effort and difficulty of overcoming inhibitory

excess-activation in dyslexic meaning construction and thus mimics dyslexic reading characterized by similar struggles throughout in the reading process. Their difficulty in the breaking up of the written code is essentially based on such cognitive processes demonstrated in the example, so understanding their inhibitory distortion may help us understand their difficulty and become more tolerant and open for solutions in the classroom, and in the foreign language classrooms.

5. Cooperative Therapy in Overcoming Cognitive Difficulties in Dyslexia

Dyslexic individuals tend to rely excessively on their right hemisphere, despite the fact that language regions are classically in the left hemisphere. So when they read a word, that has to travel across their frontal lobe and take a longer trip to get to the left hemisphere. This causes processing to be delayed, which can make their reading and processing slower. But through intervention and therapy, those with dyslexia can physically change their brain circuits and their use, and thus improve their reading with an intensive multisensory intervention that teaches the reader to decode through syllable types and spelling rules (Meixner, 1993). The dyslexic brain begins using the left hemisphere more efficiently while reading and thus their reading improves.

5.1. Targeted Multisensory Therapy

As described above, dyslexia's greatest difficulty lies in breaking up the written code, transforming letters and sounds, word through meaning, thus in the flexible and smooth handling of linguistic information through the different modalities, especially switching between them. The different modalities entail multisensory stimuli that one needs to handle for efficient reading. Multimodality *(Fig. 9)* is key, i.e. providing multiple modalities, not only sheer linguistic elements, but including visual, auditory, tactile (kinesthetic) and motoric information. Below we delineate techniques and methodologies for this purpose.

Figure 9. Some modalities in information processing

Targeted multisensorial therapy (Meixner 1993) emphasizes the following methodologies and strategies in teaching dyslexic students: Teach reading targeting dyslexic needs (Daloiso, 2012): employ a cooperative stance and strategy where multiple channels and modalities allow students to connect to the type of information they can process more easily, and pick up on information possible in more channels, not only sheer linguistic, but also auditory, visual, imitative social and motoric elements as well. Integrating these will enrich their decoded information and give them more chance to deal with the information at hand.

5.2. Therapeutic Solutions: Multisensory Intervention

Multimodality is key in targeting attention of students and in finding the efficient channels for their understanding and processing. Auditive students favor auditive stimuli and excel in processing it, motoric learners tend to remember more if they can move during learning and do activities, therefore, doing by learning and museum pedagogy can be very fruitful in their teaching (Schnell 2022). Cognitive learners enjoy playful activities of pairing, memory games or boardgame based interaction during tasks, while imitative learners tend to be very social and enjoy learning in pairs or teams, do role-play activities and learn together, instead of alone. They are also very successful in learning by imitation, so capitalizing on the social community learning aspect can also yield effective solutions in finding novel methodologies in teaching dyslexic students in general (Ganschow & Sparks, 2000).

Dyslexic students tend to be very visual, so all techniques recommended to visual learners can be useful and efficient in their education, among these using different colors, highlighter markers in dealing with exercises and readings, the involvement of visual aids like pictures, graphs, charts, images, photos and even videos, artifacts or handouts with brief and very structured outlines of topics or chapters at hand.

Multimodality applied will ensure that we handle and present information the following way:

- Break the language down into syllables and letters, sounds.
- Teaches to decode (based on syllable types and spelling rules).
- Involve many modalities (senses: visual, motor, auditive, tactile)->
- Students thus begin to use their left hemisphere, i.e. this intervention can physically change their brain circuits.
- Recommended especially for motoric learners: TSMT (Individual Targeted Sensory-motor Therapy) where a trainer will combine cognitive and physical activities in order to improve concentration and processing information through multimodal, motoric pathways.

5.3. Evidence from Multisensory (MS) Intervention

MS intervention works because it locates dyslexia appropriately and handles it the right way: seeing it as a functional *variation* of the brain circuits (Csépe, 2014). Variations occur in all of us, thus dyslexia is a variant, and shall not be seen as an anomaly. It follows an atypical pattern of development, where some skills are even more pronounced, like creativity, and social-interpersonal aspects of communication, which however contribute to successful language learning to a great deal. Therefore, acknowledging some strengths, even benefits of dyslexia where some areas are highly talented can give new insights into new techniques in the pedagogy of language

and give new ideas for project-based learning where the atypically developing students can equally contribute, since class participation requires so much more than in traditional methods, namely creativity, social skills, motoric experimental learning and applied activities (Schnell, 2022; Schnell & Fóti, 2024).

Recommended games include: *Ubongo* and *Blokus* boardgame to train *mental rotation* skills, and *Dobble* card game to practice *inhibitory* control, while multimodality at all times in all tasks, targeting multiple sensory modalities, not sheer linguistic channels, and emphasis on visual stimuli and clear structure at all times in reading comprehension and segmenting tasks for better processing. It is recommended to give tasks that require one skill at a time preferably (Daloiso, 2012). e.g. in listening comprehension ideally no requirement to read and write in order to give answers as this generates a performance limitation (Schnell, 2024) and does not truly reflect the competence of students in the given listening comprehension task, undermining the validity and reliability of the testing procedure.

6. Conclusions – ESL in Dyslexia

Based on the cognitive background outlined above, we recommend a multisensory basis and structure and congruency at all times (Ganschow & Sparks, 2000), which aids cognitive processing and elevated motivation in the classroom environment (Aitchinson, 1987; Helland & Kaasa, 2005). We believe that language specific interventions and solutions are needed, therefore a strategy which aligns to the mother tongue of the dyslexic child (transparent vs non-transparent languages), and integrates multimodality in practice, highlighting applied aspects of the learning process.

Neurodiversity emphasizes this spectrum of brain functions in all humans and suggests that to better understand perspectives of those around us, we should integrate dyslexia readers in teaching methodologies, with targeted strategies to capitalize on strengths, eliminate difficulties avoid pitfalls and support the language processing system and cognitive architecture with multimodal interventions to improve efficiency of processing.

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EMPATHY IN INTERGENERATIONAL INTEGRATION ACTIVITIES USING PLAY-BASED LEARNING

Halina Oster[1]

"The greatest hazard of all, losing one's self, can occur very quietly in the world, as if it were nothing at all."[2]

Abstract

This article explores how empathy drives intergenerational integration and social capital through play-based learning at the KLANZA "School for Adults." Launched in 2016, this Polish initiative brings together socially disadvantaged, marginalized, and elderly adults committed to lifelong learning and personal change. The innovative KLANZA method uses playful learning—including integration dance and laughter therapy—as a core tool in adult education. This approach boosts inner motivation, provides a safe, protective environment for self-discovery, and helps meet psychosocial needs. By fostering trust, respect, and shared goals, the program effectively reduces tensions, strengthens empathy and self-esteem, and tackles barriers like low self-esteem and prejudice. Ultimately, the school acts as a catalyst, transforming participants from passive recipients into active shapers of their own lives and local culture, thereby promoting social cohesion and strengthening civic skills.

1 Affiliation: KLANZA Association of Polish Educators, Poland.

2 Kierkegaard, S. A. (1989). *The sickness unto death: A Christian psychological exposition for upbuilding and awakening*. Penguin.

1. Szkoła Dorosłego Człowieka (School for Adults)

In 2016, the Polish Association of Educators and Animators KLANZA launched the School for Adults (hereinafter SFA) as part of the "Educational Innovations" project. In its 10 years of activity, KLANZA has developed its own method based on play-based learning. As trainers and animators for the association, we have also been using play-based learning methods for many years in our work with preschool and school children. We have taught teachers how to apply this method in their work. Participants are primarily recruited through direct contact, conversations, word-of-mouth advertising, information events, and social media, often through education students, municipal organizations, and NGOs.

The SFA brings together people of different ages with different characters, experiences, and expressive needs at different levels of education. Their presence at our school shows that they want to embark on a new path in life, strive for change, and take on the effort of learning again after a long break. The SFA not only helps to meet needs but also awakens them where they are lacking. The prerequisite for this is the fulfillment of lower needs. It supports this process by establishing a community self-help group. Mutual support among course participants strengthens the desire for group membership and deepens relationships.

SFA fulfills the principles of lifelong learning as described in the Delors Report and other UNESCO and EU documents. The aim is to "improve all lifelong learning activities, knowledge, skills, and competencies from a personal, civic, social, and/or employment-related perspective." (Definition of the Lisbon Strategy for Lifelong Learning).

The target audience includes both people with latent development needs and those with a clear thirst for knowledge who want to educate themselves and integrate with others, who feel the need to be active and participate in rewarding activities for personal and social development. SFA is a lively place that stimulates local activity and builds bridges between different groups

– young and old, civil servants and citizens, the wealthy and the disadvantaged. The people who participate in educational innovation do not just consume culture, they actively shape it. They are not just spectators or passive recipients. They themselves become creators and animators of the action. Our school invites non-governmental organizations, informal groups, artists, and independent cultural workers to help shape our program and collaborate with us. It does not view them as competitors, but as natural partners. All efforts are aimed at facilitating access to education and culture for hard-to-reach groups.

SFA is a project that does not select participants—the main thing is that people are willing to learn new skills and competencies and to get involved. The development of civic skills and shared responsibility is also a goal. Groups often need special support to awaken and satisfy their learning needs. The School works according to a pre-determined plan. The focus of our activities is to motivate and involve people who are marginalized, disadvantaged, or withdrawn from social life. The ultimate goal is to develop and expand social, cultural, and educational needs in order to ultimately promote the development of social capital. Cultural education is an important part of our school program.

Education and psychophysical activity aimed at supervised social groups is currently one of our priority tasks. People should be given the opportunity to use their free time wisely to learn, expand their knowledge, improve their psychophysical condition, be active in a broad sense, and build self-help groups. SFA attaches great importance to making its participants aware that good social relationships with others improve their comfort and quality of life. We achieve this by teaching interpersonal communication skills. Participants should be convinced that this is crucial for their development. An important part of learning is increasing self-esteem through lifelong experiences, which must always be treated with understanding and respect. The group often confides various secrets to each other, which brings the team closer together and strengthens it. SFA sees its main tasks and results as creating a community, developing skills, acquiring new competencies, bringing about a positive change in the participants' attitude to life, and promoting their quality of life.

2. Game-Based Learning

The brain has its own internal reward system – it is designed to reward itself! Play-based learning fits perfectly into this system, because playing and laughing are elements of intrinsic motivation. Everyone wants to participate in something that brings joy. "Play as a form of learning – that is our motto." When we turn lessons into a good game, we gain participants who enjoy learning. The results of this learning are visible and remain in the memory for a long time – they are therefore more sustainable.

The approach of using game-based learning methods in working with adults – including older, socially excluded, or disadvantaged people – is innovative. The current tools of game-based learning are thus finding a new application. Through its mode of action, the KLANZA method opens up opportunities to recognize new things and make changes in schematic thinking and acting.

Building on theories of humanistic psychology and the Gestalt pedagogy that emerged from it, play pedagogy attempts to implement theoretical approaches in situations in which group members can develop their best qualities without fear. However, the simplicity of the method requires a great deal of commitment on the part of the facilitators. Participants have the feeling that everything happens by itself, but the initiators and designers are specialized course instructors, animators, and experts in play-based learning methods.

Activities using play-based learning methods offer a kind of protective shield – everyone can hide behind it safely. The form – play as a learning effect – is a safe way to get to know oneself and the surrounding world. The variety of scenarios proposed is based on educational experience gained from numerous guided workshops and allows the appropriate methods to be chosen for each group.

All our behavior depends on the moment and state we find ourselves in. Play-based learning, especially its specific tools, helps us recognize such states and choose appropriate measures. We obtain important information about the group members—their position in the group, the hierarchy, how they feel, what their needs are, and how we can help them meet those needs.

What relationships exist between the individual group members, how can they be strengthened, when does it help to reduce tension and aggression? With its multidimensional approach, game-based learning enables such solutions. Theatrical, dance, and visual arts activities enrich game-based learning. The creation of small works of art is used for the healing effect of these activities.

Games appear in varying intensities in workshops and bring different areas of knowledge, content, and skills closer together. Play-based education is inherently a good tool for working with socially marginalized people, giving them the opportunity to fight back and stop isolation.

3. Integrative Dance: A Tool for Psychosocial Development

According to American dancer and choreographer Anna Halprin (1920-2021), there are four elements that share common characteristics and should play an important role in every lesson: sensation, movement, feelings, and self-expression through various means of expression. (Halprin, 1995; 2000) There is constant interaction between these elements. They cannot be separated from one another. Movement influences how we feel, and how we feel influences the way we move, which in turn creates images within us.

Central to KLANZA's play pedagogy is the use and profound valuation of integrative dance. We apply this powerful tool across all age groups, convinced it has a truly beneficial and essential influence, especially for those who are socially disadvantaged or marginalized. Encountering dance as a holistic art form ignites a deep, new sense of self-awareness in participants.

This work directly engages the relationship between sensation, feeling, and emotion. Participants are guided to sense their immediate physical reality ("What do you feel when you close your eyes?") before moving to understand mood-based feelings (sad, angry) and finally, the deeper, primary emotions (love, fear,

grief). This exploration, where our sensations reconnect us to our body, allows us to locate and illuminate our "dark areas" or internal psychological blocks.

The resulting process is intensely nonverbal, facilitating the release of emotions, profound self-discovery, and the flourishing of creativity. As Daniel Goleman (1995) noted, "Dance is harmony of movement and communication of feelings." Integrative dance harnesses this collective, ancient human impulse for emotional expression, using easily learned choreographies and frequent partner changes to maximize social contact, promote integration, and cultivate shared joy. Engaging with music and movement restores the body's natural healing powers and allows participants to experience a wider, liberating range of motion. Ultimately, integrative dance provides manifold benefits, profoundly strengthening the entire body while harmonizing psychomotor development.

4. Laughter Therapy: The Power of Joy

The School for Adults (SFA) utilizes diverse, engaging tools to capture participants' attention and activity, with Laughter Therapy being a cornerstone. This focus on pleasure, humor, spontaneity, and play is a vital element in the healing process. Laughter is powerful: it transports us back to a time when learning was pure play, restoring feelings of security and lightheartedness. Being present in these "trust zones" naturally builds trust among participants.

Laughter is genuinely a blessing, lowering stress hormones and acting as feedback for the facilitator. Participants explore laughter's profound role, confirming its numerous benefits: it cultivates a positive outlook, alleviates pain and muscle tension by inhibiting stress hormones, and promotes mental balance and happiness, thereby offering a natural antidepressant effect. The SFA ensures participants are convinced of this activity's importance, often using group discussions to explore its value.

5. Educational Dynamics and Leadership

In the School for Adults (SFA), the educator adopts a highly flexible role, shifting seamlessly from teacher, trainer, and supervisor to animator who actively organizes group activities. The teaching methodology intentionally combines didactic and educational processes, emphasizing holistic, personalized learning driven by voluntary participation and mutual developmental interests. Crucially, the educator must focus on understanding each learner as a person to effectively fulfill their multifaceted role.

The leadership approach focuses on community activation. A successful leader's primary task is to identify community needs, formulate a vision for change in collaboration with residents, and coordinate implementation. This involves building and guiding a motivated team with clearly distributed tasks, thus activating the community's inner energy and inherent resources to solve problems. The community leader is a practitioner who uses education and motivation to enable residents to organize and satisfy their own needs.

A core principle of the SFA's work is communicating meaning and purpose, which is essential for adult learners. Trainers must skillfully address common barriers—namely, fear of the new and aversion to playful learning. Our scenarios are designed to overcome this by focusing on introductory activities: exploring personal values, likes, and dislikes, and normalizing the daily challenges that connect participants.

6. Building Community: The Group Formation Process

Establishing a functional group at the School for Adults (SFA) requires careful attention to foundational elements: setting clear goals, rules, norms, and structures, and actively addressing any initial feelings of separation. Our philosophy is rooted in seeking gratitude and appreciating the value found in shared experiences and new relationships. The play-based learning methodology is perfect here, as its inherent gentleness and lightness disarms fear and powerfully drives motivated action.

Following Lao Tzu's wisdom to "start with small things," formation begins with targeted, individual outreach. The group journey starts small, guided by individual invitations and personalized contact. Success is determined early on by establishing an immediate sense of security and gentling introducing participants. The first critical phase centers entirely on building mutual trust and respect. Recognizing common ground quickly warms the atmosphere, facilitating team building and leading to the crucial step of members identifying with the project's mission.

Formalizing commitment occurs when the group collaboratively drafts a "contract." Participants must create and adapt this document themselves—and new members must agree to it—to ensure it reflects genuine needs and fosters ownership. This process is vital for forming the "social brain," recognizing that the brain's primary requirement for effective learning is a feeling of safety and acceptance within the collective.

Long-term success depends on the group dynamic and leadership. Members must feel secure, which requires the leader to be credible, trustworthy, and accessible, supported by positive group relationships. However, leaders must respect boundaries, as preserving individual privacy is key to a healthy sense of belonging. The rewards of choosing to belong are substantial: the group provides security, purpose, energy, and synergy, empowering individuals to discover new life roles and experience the joy of shared success and responsibility.

7. Addressing the Needs of Seniors

A foundational element of the School for Adults (SFA) involves recognizing the unique challenges of adult education, specifically the social needs of seniors and the critical role of their immediate environment in individual development. Unlike children, adults are primarily driven by the important life task of social, political, and cultural engagement.

The stage of older adulthood—often mistakenly viewed as a time of calm—presents profound challenges. Seniors must adapt to rapid lifestyle changes, a possible decline in abilities, and a shrinking social circle. They are simultaneously searching for new activities and a lifestyle that provides meaning and purpose.

People in this life stage face the difficult necessity of redefining their social contacts, preparing for the loss of family members, and assuming new roles (e.g., grandparent, retiree). Involvement in social communities, such as charity work or educational groups, is key to adaptation. Crucially, social activity and community involvement at the local and cultural level serve as a vital remedy for these problems.

The SFA's work directly addresses these needs. By helping seniors acquire and expand their knowledge, we foster a better understanding of the world and other people, which is essential for counteracting the disturbed self-confidence and low self-esteem that often lead to harmful coping strategies.

In everyday work we actively confront several further barriers to participation as well. These include the widespread reluctance toward formal and informal education and the lack of acceptance for the concept of lifelong learning aimed at personal and professional growth.

7.1. Navigating the Zones of Change

Creating meaningful change requires individuals to leave their comfort zone and enter the effort zone. This demands significant perseverance. The SFA provides crucial support for those who, upon leaving their safe routine, risk entering the zone of challenges. Crucially, if individuals in this zone do not receive timely help and the phase is prolonged, they will often retreat to the comfort zone, leading them to abandon change attempts entirely.

However, with proper preparation, restored security, and professional support, participants can consciously enter the effort zone without undue stress to achieve their goals. When facing long

processes or slow results, the temptation to return to the comfort zone is strong. Therefore, conscious action and a deliberate choice between "fight or flight" are essential for sustaining motivation and ensuring future attempts are better prepared.

7.2. Overcoming Fear and Prejudice

Fear of the new and the different is a natural, protective neurological response. Diversity is often frightening because it demands constructive thought, analysis, and the development of new social behaviors. This includes the effort required to choose our words carefully to avoid hurting others when entering a new group. The work of overcoming prejudices and stereotypes and learning to coexist with diversity is challenging but profoundly rewarding. Where individuals lack skills, contact, shared experiences, and role models are essential sources of learning and support.

The SFA emphasizes the importance of abandoning judgment and labeling. Labeling others (e.g., good/bad, normal/abnormal) creates a destructive, splitting attitude that obstructs healthy interpersonal relationships and fuels hostile attitudes. Participants learn that while it is acceptable to discuss personal values, it is unacceptable to use them as a basis for moral judgment of others.

7.3. Tackling Low Self-Esteem and Isolation

Individuals from disadvantaged backgrounds often struggle with low self-esteem. Complexes are frequently masked by behaviors intended to deceive or through outward arrogance or aggression, which are often expressions of underlying group fear. An exaggerated self-image is presented to hide the fearful true self. Furthermore, sharp criticism of others often simply reveals the critic's own unfulfilled needs and rigid value systems. The SFA addresses this by first building group security, which allows participants to gradually shed these protective masks.

Finally, socially withdrawn individuals typically exhibit distance from and a lack of interest in cultural life. They require support in the form of guidance, appropriate materials, and a joint "introduction" to cultural assets to help them overcome internal resistance and stereotypes like "That's not for me." This intentional process of awakening sensitivity and preparing for artistic experiences unlocks new inner possibilities for the participants.

8. Conclusion: Empathy as a Driver of Social Transformation

KLANZA's "School for Adults" has impressively demonstrated that play-based learning is an effective and innovative tool for intergenerational integration and lifelong learning among disadvantaged groups. Contrary to common preconceptions, the playful approach—reinforced by methods such as integration dance and laughter therapy—offers a safe space (a "zone of trust") in which barriers such as fear of the unknown, low self-esteem, and social isolation can be overcome.

The core of its success lies in the empathy-led development of a safe community that enables participants to awaken their individual needs, strengthen their civic skills, and become active shapers of their own lives. This model confirms that building social capital and improving quality of life are closely linked to the ability to empathize and create inclusive spaces for encounter.

SFA thus serves as an important example of how cultural and social education can lead to a positive change in attitude towards life through joy and playful activity, helping individuals to actively combat the danger of "losing oneself" described by Kierkegaard. Future educational initiatives should make greater use of this potential of play-based learning to achieve more profound social inclusion.

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ChatGPT was used to enhance legibility and coherence of the text as the author is non-native speaker of the English language.

CHAPTER 4
THE ROLE OF PLAY IN EARLY CHILDHOOD EDUCATION

INCLUSION – EASY AS A, B, C? SCHOOL DEVELOPMENT PROCESSES AS AN OPPORTUNITY TO IMPLEMENT INCLUSIVE PLAY PHASES IN PRIMARY SCHOOLS

Sylvia Cizek[1]

Abstract

Due to the multidimensionality of children's play, the opportunities and possibilities for participation are much higher for pupils with special educational needs than in other activities that take place at school. For example, children can meet each other in shared play, explore each other's interests, abilities and needs, and create something together. In inclusive play processes, pupils stimulate each other's development, experience intensive processes of 'learning from each other' and can therefore experience inclusive educational moments (Heimlich, 2017). School development processes enable the implementation of inclusive play phases in primary schools in a special way, as schools in Austria have been given more leeway to shape school development according to location-specific needs through the introduction of the 'QMS' (quality management system) in 2021/22. The implementation of differentiated play phases through school development processes in primary schools is to be scientifically accompanied by a mixed-methods approach: as part of participatory observation, vignettes will be written and then analysed, and expert interviews will be conducted with teachers, which will be evaluated according to aspects of inclusion and exclusion. This qualitative research approach will be supplemented by the use of Ulrich Heimlich's (2017) play cooperation scale as a quantitative measurement tool before and after the implementation of inclusive play phases in order to gain a deeper understanding of the

1 Affiliation: Kirchlich Pädagogische Hochschule, Wien, Austria.

following research question: *To what extent do school development processes enable the implementation of inclusive play phases and therefore the realisation of inclusion and participation of children and young people with special educational needs?*

1. Introduction

1.1. Insights Into the Field of Research

Children's play has a 'democratic character' (Zimpel, 2014, p. 120), intertwining participation and sharing. Children interact with each other with a high degree of mutual attention during play. According to Heimlich (1995, p. 98), various types of play can be distinguished in the area of social play, including observation play, solitary play, parallel play, associative play, cooperative play and collaborative play.

Inclusive play moments can expand into inclusive play processes, in which case a common theme is played out over a longer period of time and continuously revisited. In inclusive play situations, consideration must be given to the play materials, space and time provided, but also to the role of educators, who must reflect on their active and passive patterns of action (Heimlich, 2019, p. 23). Heimlich emphasises that inclusive play environments should allow for as many different forms of play as possible, such as movement and exploration games, construction games, but also fantasy and role-playing games. Inclusive play areas should be accessible to all children, regardless of their sensorimotor abilities, and should also offer stimulating experiences in the areas of hearing, touching, grasping and seeing. Inclusive play environments encourage interaction and can be flexibly designed to enable change and make it tangible. (Heimlich 2019, p. 26)

James Youniss points out the immense importance of peers for learning processes and cognitive development. Children encounter each other in play on the basis of 'symmetrical reciprocity' as equal partners; they learn to put themselves in the other's

perspective and 'co-constructions' can emerge (Youniss, 1994, p. 51). Gerald Hüther and Christoph Quarch refer to this as 'co-creativity' in play (Hüther & Quarch, 2016, p. 17).

In order to promote school development, the School Quality Management System (QMS) was introduced in Austria, through which further development processes are not only prescribed or recommended from 'top down', but are initiated and implemented 'bottom up' by the school (BMBWF, 2024).

If a school wants to implement inclusion in its entirety as part of its school quality management (QMS), the Index for Inclusion developed by Tony Booth and Mel Ainscow (2017) is a suitable guide for implementing various principles of inclusion. The Index for Inclusion is a multi-layered guide that schools can use to become more inclusive as part of the school development process. In this research project, schools that implement inclusive play phases through school development processes based on the Index for Inclusion will be scientifically monitored and their measures evaluated in terms of inclusive and exclusive mechanisms.

Inclusive play phases incorporate a wide variety of learning and expression forms, which means that, based on the current challenges of heterogeneity and diversity in the coming years and decades, they can be increasingly used as a way of putting inclusion into practice. 'By designing play-based learning processes, all children are given new opportunities for participation' (Klein, 2023, p. 39).

1.2. Research Question

The research question that has arisen in recent years in Austria in the context of the school quality management system (QMS) is: *Do school development processes enable the implementation of inclusive play phases and therefore the implementation of inclusion and participation of children and young people with special educational needs?*

2. Research Design and Conduct of the Study

Initially, only a multi-method approach was planned, but this was expanded in the course of the research process to a mixed-methods design.

2.1. Initial Research Design in the Multi-Methods Methodology

Based on a review of the current literature, a multi-methods approach combines vignette research (Agostini 2019) and qualitative content analysis of guided expert interviews (Mayring 2022). The vignettes are written after observational documentation during individual inclusive play phases at primary schools and validated intersubjectively. An example of a written vignette can be found in the document 'Rain Break' in Appendix.

The interviews are conducted in person at the schools using a specially developed guide and are evaluated according to Mayring's qualitative content analysis. The data is evaluated and integrated using a multi-method approach (Schoonenboom 2024).

2.2. Second Research Design in Mixed-Methods Methodology

Judith Schoonenboom and R. Burke Johnson define a *mixed-methods design* as follows: 'Mixed methods research is the type of research in which a researcher or a team of researchers combines elements of qualitative and quantitative research approaches' (Schoonenboom & Johnson, 2017, p. 108). John Creswell characterises mixed methods methodology as the 'third movement' following the development of quantitative and qualitative research (Creswell, 2011, 3:41) and explains the significance of mixed methods as follows: 'What has given rise to this recently is that it has become a methodology that has wide applicability.' (Creswell, 2011, 0:44). Creswell describes mixed methods methodology as a 'very intuitive way' (Creswell 2011,1:26) that spans many disciplines and fields of research, 'especially in the social sciences and the human sciences' (Creswell, 2011, 2:39).

In the following subchapter, research opportunities relating to the research project on the implementation of inclusive play phases will first be described in more detail in the quantitative area, before the entire mixed methods research design is examined in the next subchapter according to the seven dimensions defined by Schoonenboom and Johnson.

2.2.1. Expansion Into the Quantitative Research Area

The focus of existing multi-method research was then expanded to include quantitative research methods: according to Udo Kuckartz, a research project benefits 'when both sides are examined, the quantitative side of counting and the qualitative side of understanding meaning' (Kuckartz, 2014, p. 53).

Looking at the research project of implementing inclusive play phases, there are various quantitative options available: Heimlich recommends play diaries, play logs, play cooperation scales and team case consultations for observing and documenting inclusive play processes.

In play diaries, the names of the children playing in inclusive play situations are noted down and the course of the situation is recorded narratively. In addition, the play materials and play areas used are always written down. In contrast, play logs also note the involvement of the teacher or their interaction with the child and additionally interpret the observed play activity. When compiling play logs, Heimlich recommends recording the children's verbal expressions verbatim, as well as the negotiation processes involved in joint play. According to Heimlich's play cooperation scale, at 60 second intervals over a 20-minute observation period, the children are assigned to categories of social play activity using the dimensions of 'self-occupied play, observation play, solo play, parallel play, associative play, collaborative play and cooperative play'. However, the categories 'self-occupied play' and 'solo play' have very overlapping and often indistinguishable characteristics (Heimlich, 2017, p. 44). In the guide to team case consultation, Heimlich first suggests a report on an observed, inclusive play phase, then a quick round of

feedback from all participants, an interpretation of the situation by the team, and then the development of proposed solutions and possible interventions.

With regard to the research question, the use of Heimlich's play cooperation scale as a quantitative measurement tool before and after the implementation of inclusive play phases appears to be useful in order to document significant changes in the play behaviour of the observed pupils and therefore to be able to evaluate the changes through school quality management.

2.2.2. Illuminating the Research Project Using the Seven Dimensions of Mixed-Methods Research

In this section, the mixed-methods research design will be presented according to the seven dimensions defined by Schoonenboom and Johnson (2017):

Purpose

First and foremost, the purpose of a mixed methods study is to answer the research question at hand: 'One can use mixed methods to examine different aspects of a single research question, or one can use separate but related qualitative and quantitative research questions' (Schoonenboom & Johnson, 2017, p. 111).

The research purpose of this mixed-methods study is to demonstrate that implementing inclusive play phases through location-based school development processes promotes moments of inclusion. The combination of quantitative and qualitative research methods allows for a more comprehensive view, but one that can be repeatedly refocused during the research process.

Theoretical Drive

The 'theoretical drive' of mixed-methods research refers to the underlying theoretical motivation or research paradigm that influences the decision to combine both quantitative and qualitative methods. (Schoonenboom/Johnson, 2017, p. 112).

Janice Morse and Linda Niehaus (2009) distinguish between a core component and a complementary component in research design. The mixed methods study developed in this research paper could be represented as follows in Morse's notation system:

quan => QUAL + QUAL

This means that the combination of methods from two qualitative studies follows a quantitative study, which demonstrates the effect of the implementation as a pre- and post-study, but the actual core is the qualitative aspect, which allows a precise zoom-in on the qualitative moments of inclusion or exclusion.

Timing

Schoonenboom and Johnson distinguish between a sequential and a parallel design in data collection, and they also describe the interdependence of the data in the evaluation. 'It is also possible to let the interview questions depend upon the outcomes of the analysis of the questionnaire data' (Schoonenboom & Johnson, 2017, p. 8). In the case of the present research, the design is sequential, with the data analysis of the second, qualitative study depending on the results of the first, quantitative study.

Point of integration

'Each true mixed methods study has at least one point of integration, at which the qualitative and quantitative components are brought together.' (Schoonenboom/Johnson, 2017, p. 115)

Timothy Guetterman et al describe method integration as 'the heart and soul of mixed methods design' (Guettermann et al, 2020, p. 430).

'Integrative mixed analysis is often an iterative process, with analysis and interpretation going hand in hand.' (Vogl, 2023, pp. 5-6), data analysis and data interpretation are carried out step by step, repeatedly, in overlapping processes, therefore enabling a deeper, very comprehensive view. 'Through data integration, the results have the potential to produce insights that would not be possible through merely combining data' (Vogl, 2023, p. 7).

In the present research, the 'point of integration' would take place in the data evaluation. The quantitative results of the game cooperation scales must be examined after inclusive moments have taken place, and any increase or decrease in frequency after the implementation of inclusive game phases must be discussed by zooming in on individual qualitative research results according to their scope of influence and future principles of action.

Typical vs. Interactive Approaches

According to Schoonenboom and Johnson, there are systematic and interactive research designs: A systematic approach is structured and planned, with the research steps clearly defined in advance. An interactive approach, on the other hand, is more flexible and deliberately allows for exchange in the collaboration between researchers and participants. Here, insights and suggestions that arise during the research process are immediately fed back into the research cycle. 'Typological and interactive approaches to mixed methods research have been presented as mutually exclusive alternatives. In our view, however, they are not mutually exclusive.' (Schoonenboom & Johnson, 2017, p. 15). According to this view, the research design of the present study would be systematic, but it is open-ended so that adaptation of the research process within the research cycle is possible and desirable. This is illustrated by describing research as an 'ongoing conversation' (Jarrat, 2025, 6:10) according to Lindsay Jarrat, who compares her role as a researcher to that of a dinner party host, whose tasks range from introducing the participants, finding interesting and congruent topics of conversation, to facilitating an exchange among them, the insights from which can be taken to the next party (Jarrat 2025, 6:54 – 7:53).

Jarrat also compares the research process to cooking: when someone learns to cook, they initially follow the recipe very precisely. 'But as you acquire skills as a cook or researcher, you become somewhat better at selecting and developing systematic methods more fluidly, while still being able to explain how these decisions affect the final results.' (Jarrat, 2025, 8:50). Jarrat vividly describes this development from beginner to master by saying that cooks will ruin a few meals before routine application enables creative and innovative creation.

Planned vs. Emergent Design

Another dimension of research design that Schoonenboom and Johnson consider is predictability versus emergence: an emergent research approach evolves during the research process, while a planned design proceeds strictly according to the research project and plan. Certain research designs inherently involve a degree of emergence, especially when further research is to be conducted in the area of unexpected results. In relation to the present research project, the dimension of predictability predominates without losing sight of Schoonenboom and Johnson's advice: 'In general, the advice is to be prepared for the unexpected' (Schoonenboom & Johnson, 2017, p.16).

Complexity

With regard to complexity, Schoonenboom and Johnson often describe mixed-methods studies as 'interdependent'; in this sense, they are interrelated. In integrated designs, the components are often interdependent: 'integrated designs are the more complex designs' (Schoonenboom & Johnson, 2017, p. 17).

John Creswell and Vicki L. Plano Clark distinguish between three different mixed-methods approaches, namely 'the convergent design, the explanatory sequential design and the exploratory sequential design' (Creswell & Plano Clark, 2017, p. 66): The convergent research design allows quantitative data to be combined and compared and interpreted, while an explanatory sequential design first involves quantitative research, whose results are then linked to and explained by qualitative research, leaving room for interpretation. In contrast, the exploratory sequential design begins with qualitative research, which enables suitable quantitative measurements and instruments to be developed for subsequent quantitative research.

In addition to these three core mixed-methods research approaches according to Creswell and Plano Cark, the present research design is neither 'explanatory' nor 'exploratory' in nature. Instead, a fourth approach could be created in this seminar paper by first conducting quantitative research to confirm a hypothesis

and then zooming in on individual research situations to uncover the complexity of the phenomenon, in our research project, for example, the connection between inclusion and exclusion. This could be represented graphically as follows:

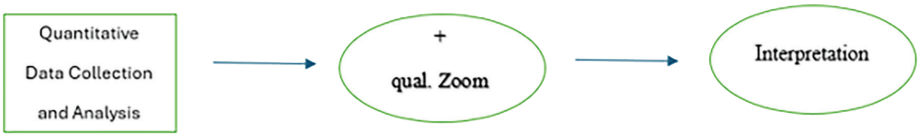

Figure 1: An Iterative Mixed-Methods Approach to Investigating Complexity.

'Complexity, then, not only depends on the number of components, but also on the extent to which they depend on each other.' (Schoonenboom & Johnson, 2017, p. 17).

3. Presentation of Results

Both the pre-test interviews and the vignettes that have already been evaluated point to the added value of inclusive play phases in the context of inclusion. However, in order to adequately answer the research question, a research design with a more comprehensive database is urgently needed.

Mixed methods research shows convincing advantages over multi-methods methodology, for example, a mixed methods methodology enables a deeper understanding. 'Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration' (Schoonenboom & Johnson, 2017, p.108). A mixed-methods methodology can expand and strengthen the study, providing a more in-depth answer to the research question.

Kuckartz summarises some of the criticisms of mixed-methods methodology, citing, for example, the greater time commitment, the possibility of low recognition among reviewers, and the frequent need to work in larger teams or groups of researchers.

He also explains the difficulty that researchers often do not have sufficient knowledge in both quantitative and qualitative areas, and that sometimes the mixed studies only represent a 'pseudo-mixed method' (Kuckartz, 2014, p. 157), as the studies conducted sometimes have nothing to do with each other. Another point of criticism is a possible lack of methodological integration. Kuckartz sees it as 'a practice of not really integrating the results of the two sub-studies, but rather listing their results one after the other without any connection' (Kuckartz, 2014, p. 157).

In addition to the points of criticism mentioned and the fact that mixed methods methodology is still in its infancy as a very young scientific field, it also requires very comprehensive training and further education in methodological knowledge, especially at university level. It should also be recognized that uniform quality standards are still lacking (Kuckartz, 2014, p. 161). However, the advantages of a mixed methods approach outweigh the disadvantages for the research project, namely the implementation of inclusive play phases in primary schools, especially with regard to the in-depth understanding of the very complex topic and the possibility of being able to act with a very broad research perspective and greater flexibility in the research process.

4. Closing Remarks

In order to comprehensively answer the research question 'Do school development processes enable the implementation of inclusive play phases and therefore the realisation of inclusion and participation of children and young people with special educational needs?', this thesis first provides a brief insight into the field of research and then outlines a multi-method research design, which in a second step was transformed into a mixed-methods approach by expanding the quantitative area.

In this way, mixed-methods research in the area of implementing inclusive play phases could confirm the presumed opportunities for inclusive education, and this could enable the development of an action manual for school development processes based on the principles of scaffolding (Heimlich, 2019, p. 26) as a potential next step towards promoting a more inclusive educational landscape.

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Appendix – Vignette "Rain Break" (Sylvia Cizek)

The bell rings, finally break time! Josef, Kevin and Stefan rush out of their small group class. Stefan is happy: "Now it's break time!" It's raining, so they can't go out into the schoolyard today. Thank goodness – the building corner next to the stairwell is still free. Excitedly, they rush to the cardboard building blocks. 'Let's build a castle!' Josef calls out and immediately starts stacking the blocks on top of each other. Meanwhile, Eric and Paul from the fourth grade approach. Eric casts a mocking glance at Kevin, who is sitting next to the castle gate they are building, shouting and rocking his upper body. Eric stops, waiting, with a thoughtful look at Paul. 'We need more towers! Really tall towers!'Josef calls out energetically. Eric looks at Paul with a raised eyebrow, unsure, hesitating briefly, but Paul already grabs the first stones and starts building. Eric hesitates for a moment longer, glancing sideways at Kevin, when Paul calls out, 'Are you building the keep?' Kevin has now laid down, smiling at the hustle and bustle around him.

WHAT WE PLAY WITH CHILDREN, WE WILL REAP IN SOCIETY: REASSESSING FRÖBEL'S LEGACY IN EARLY CHILDHOOD MATHEMATICS EDUCATION AMIDST PLAY, STRUCTURE, AND DEMOCRACY

Gerhard Friedrich[1]

Abstract

Early childhood play is not just a pastime—it is foundational for learning and for democratic culture. This paper re-examines Friedrich Fröbel's educational philosophy in the context of early childhood mathematics learning through play. We argue that play, as the source of discovery and agency, holds fundamental significance for both cognitive development and democratic education. Drawing on historical analysis and current empirical findings (including PISA and the LOGIK longitudinal study), the paper highlights the long-term impact of high-quality early education on children's later academic and civic competencies. Two practical examples—a construction activity using peas and toothpicks, and a physical "number path" for walking through numbers—illustrate how structured play can cultivate mathematical thinking (recognizing patterns, understanding relationships) alongside social negotiation and autonomy. The paper concludes that early mathematics education through play is not merely preparation for school, but an essential arena for nurturing structured thinking, problem-solving, and self-efficacy—key dispositions for engaged citizenship in a democratic society.

Keywords: early childhood education, play-based learning, educational philosophy, Fröbel's legacy, democratic education

1 Affiliation: Bielefeld University, Germany.

1. Education Begins in Play

"The source of all that is good lies in play." This quote by Friedrich Fröbel is more than a pedagogical motto; it is a statement of educational philosophy—and a sociopolitical appeal. Fröbel saw in play the origin of insight, creativity, and autonomy. For him, education was a process of self-activity and inner coherence—not one of direct instruction.

In an era in which early childhood education is increasingly subjected to efficiency and outcome pressures, the question arises: *How can the original power of play be preserved —and at the same time further developed? What does it mean today to play with children —in a society that needs participation, sound judgment, and critical thinking?*

This paper pursues these questions. The starting point is the historical figure of Friedrich Fröbel, whose work and influence founded the kindergarten as a site of education—and who, with his play gifts and pattern materials, created early concepts for structured, hands-on learning. But Fröbel is not to be celebrated here as a museum piece; rather, he is critically revisited as a thinker ahead of his time who must be read anew in light of contemporary educational research and democratic imperatives.

A special focus is placed on early childhood mathematics education—not as a test of numeric knowledge, but as an opportunity to discern structures, form patterns, and understand relationships. Mathematical thinking begins not with textbooks, but with movement, with materials, with language—and with play.

Using two exemplary practical formats—a "pea work" construction activity and the "number path"—the article illustrates how early childhood educators can design play-based learning that fosters both cognitive development and democratic competence. In this approach, play is not seen as the opposite of didactics, but as its original experiential realm.

General didactics—understood as the science of teaching and learning—is concerned with the conditions, goals, and forms of successful educational processes. When children explore

structures, negotiate rules, and create meanings through play, that is precisely what is happening: teaching and learning in its most elemental, co-constructive form.

2. In the Spirit of Fröbel—and Beyond

Friedrich Fröbel (1782–1852), the founder of the kindergarten, viewed play as the most fundamental form of children's engagement with the world—as an expression of freedom, self-activity, and creative power. For him, education was not the accumulation of knowledge but the development of independent judgment. Children were not to be lectured to, but stimulated to think, act, and judge on their own.

This idea was not only pedagogically revolutionary, but also politically subversive. Fröbel's kindergartens were banned in Prussia in 1851—not because play was rejected per se, but because the government perceived in them a threat to the authoritarian order. Children who could think for themselves were seen as potentially unruly citizens. Education became a political question: giving children room for free development lays the cornerstone for a democratic society—or, conversely, threatens an authoritarian one.

Today, over 170 years later, Fröbel's insight seems more relevant than ever: "What we play with children, we will later reap in society." In an era when democratic principles around the world are under pressure, we should not treat children's play as a minor educational topic—but as a venue for shaping society's future. It makes a difference whether children learn to negotiate rules together or merely to sit still; whether they experience that their questions count or go unheard; whether they are able to see through structures—or only to adapt to them.

3. Early Childhood Education, PISA, and LOGIK—an Empirical Justification

Education begins early—and it has long-term effects. International comparative studies like PISA have for years shown that the quality and breadth of early childhood education exert a decisive influence on later educational outcomes. In particular, countries with well-designed concepts of early education fare significantly better in areas such as reading literacy, mathematical thinking, and problem-solving ability.

The Organisation for Economic Co-operation and Development (OECD) underscores this with notable clarity: "Early learning matters. Investment in high-quality early childhood education is one of the most effective strategies to promote success in education and equity in society." (OECD, 2017, p. 3) Early childhood education is thus not only a pedagogical endeavor but also a sociopolitical responsibility. Those who are serious about educational equity and participation must start in the early years. Early support for children is not a "preparatory program" for school, but an autonomous educational phase with central importance for the development of individual and societal resources.

The fact that early differences in thinking and learning have long-term effects is evidenced by the LOGIK study, one of the most extensive longitudinal investigations into the development of cognitive competencies in childhood. Led by Franz E. Weinert at the Max Planck Institute for Psychological Research in Munich, this study followed around 200 children over several years—from preschool age through the early years of elementary school. The study assessed a wide range of developmental dimensions—including logical reasoning, memory, language comprehension, basic mathematical knowledge, and self-regulation. The central finding: "Differences with far-reaching consequences for educational trajectories appear not only in the classroom—but often years before." (Weinert et al., 1998)

Particularly striking was that early mathematical competencies—such as recognizing quantities, comparing numbers, or understanding simple arithmetic operations—were among the most

reliable predictors of later educational success. Early mathematical thinking turned out to be an "early diagnostic field," but also a space for cultivating joy in learning, pattern recognition, and structured thinking.

In this sense, one can say: Early mathematical education is an early warning system—and at the same time a key to individual and societal development. Its importance does not lie in preparing children for school as early as possible, but in equipping them with thinking tools that allow them to structure, test, and actively shape their world. Especially in an era when algorithmic thinking, data competence, and information evaluation are increasingly central, the ability to understand patterns, relationships, and structures is a fundamental prerequisite for autonomous action.

Early mathematical education is therefore also relevant to democracy—not as a mere academic subject, but as an expression and practice of orientation, judgment, and self-efficacy.

4. Experiencing Structure—The Pea Work

Mathematics is more than arithmetic; it is a way of approaching the world—through patterns, forms, and relationships. Early childhood pedagogy should therefore not be limited to narrow notions of number skills, but should give children the opportunity to discover structural connections: by doing, creating, and engaging the senses.

One particularly suitable format is the so-called "pea work"—a constructive activity in which children build geometric solids using softened peas as connectors and toothpicks as rods. This technique originally goes back to Fröbel, though today it is less well-known in early education than his Gifts or pattern-making materials. Yet it follows the same principle: perceiving form, creating in space, and bringing together material, hand, and imagination.

Children discern the properties of geometric solids—cubes, prisms, pyramids—not through instruction but through active exploration. They experience stability and balance; they

test hypotheses: What holds? What might collapse? What can I change to make something work? In doing so, mathematical thinking processes emerge that are linked with language and social interaction—for example, when planning together or explaining their solutions.

In an especially aesthetically impressive variation, pea work is combined with soapy water. Children dip their constructed shapes into a basin of soap solution and observe how transparent films form across the faces of the structure—so-called minimal surfaces. These surfaces arise naturally in a way that minimizes energy—a principle that is not only physically fascinating but also makes a geometric optimum visible. This creative addition is not part of Fröbel's original concept, but is a modern enhancement—very much in line with a contemporary extension of his ideas.

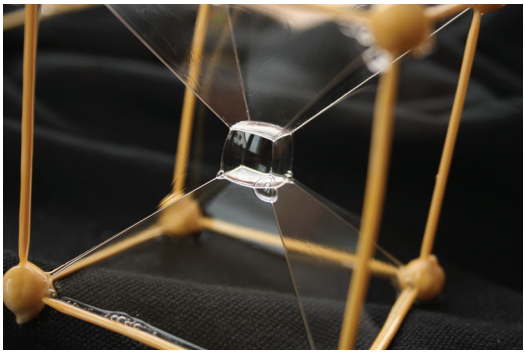

Figure 1: Fröbel Construction with Soap Film.

This extension makes the invisible visible: where before there were only edges, suddenly faces appear. The material becomes a medium for mathematical imagination. At the same time, it opens up a creative space of experience in which mathematical precision and childlike creativity meet.

In this combination of doing, marveling, and understanding lies the educational potential of pea work. It is not a pre-structured learning toy, but an open field for thought—and thus an ideal example of how early mathematical education can also encompass aesthetic experience, social interaction, and self-directed activity. It is not the correct result that matters, but the path of discovery itself.

And it is precisely this path—the exploratory questioning, the testing of one's own solutions, the collective reflection—that is not only mathematical but also democratic. It makes mathematical thinking an experience embedded in a culture of inquiry and creation, where independence and shared thinking are encouraged from the very start.

5. Thinking in Movement—The Number Path

Early learning is inseparably linked with movement. Particularly in the first years of life, children apprehend their environment largely through physical-spatial experiences. This realization underpins the concept of embodied cognition, which posits that cognitive processes—especially the formation of concepts—are closely tied to sensorimotor experiences.

The number path builds on this insight. Instead of conveying numbers abstractly, it makes them literally walkable: children step along the sequence of numbers, linking each step with a number word, experiencing changes in quantity as changes in direction, recognizing numerical structures through movement. In this way, the so-called mental number line is not just imagined but physically constructed in space—as an order structure that can be experienced through the senses.

The didactic possibilities are numerous: by counting rhythmically in steps of 2, 3, or 4, initial notions of multiplication emerge. Counting backward reinforces subtraction. Games like "number poker" or "red versus yellow" foster strategic thinking in space and support the development of a mental number line (see Friedrich, 2024). Particularly instructive is the distinction between even and odd numbers, which is experienced not only verbally but also spatially as a classification.

Recent developmental psychology studies confirm that a robust construction of the mental number line in the preschool years is an important predictor of later arithmetic understanding. The number path makes this concept tangible—not through drill in the narrow sense, but through playful exploration, making mistakes, correcting, and repeating.

Figure 2: Number Line in Motion.

In this blend of movement, pattern, language activity, and reflection lies the special quality of the number path: mathematics is not taught—it is experienced.

6. Mathematics as Democratic Practice

Early mathematical education is much more than preparation for school requirements. It enables children to discern order, make comparisons, and scrutinize propositions—and it challenges them to try out their own ways of thinking. To think mathematically is to think in a structured, inquisitive, hypothetical manner. This is exactly where its societal relevance lies: mathematical thinking is not specialized knowledge—it is a cultural technique of doubting, comparing, and reasoning.

In democratic societies, we need people who can discern connections, see through patterns, and use concepts clearly—who are willing to question viewpoints, assess probabilities, and think through logical relationships. Children who early on experience that they "count"—in both senses: as part of a numerical order and as acknowledged members of a community—develop not only cognitive confidence but also a sense of self-efficacy. For mathematical thinking does not stop at counting. It nurtures the ability to recognize relations, understand structures, and draw reasoned conclusions—capabilities that also underpin societal thought and action.

From this perspective it becomes clear: early mathematical education is a contribution to education for democracy. Not because it directly imparts political content, but because it cultivates modes of thinking that are needed in plural, open societies: structure, clarity, critical distance—and the willingness to learn from mistakes.

Activities like the number path or pea work are not merely didactic illustrations, but serious learning arenas: in them, movement and thinking, language and structure, freedom and rule are united. Precisely because they do not serve a narrow utilitarian purpose, they allow for learning that reaches deeper—and that takes children seriously as active thinkers.

What we play with children today will shape how they later interact with others, how they manage complexity, and how they orient themselves. Those who, in early educational processes, give children the confidence to discover and question patterns on their own lay the groundwork for a social climate in which difference, responsibility, and participation are not abstract concepts—but become lived reality.

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PLAYING WITH SILENCE

Claudia Kocsis-Farkas[1]

Abstract

Intense noise is a relevant environmental problem of our time, negatively impacting all aspects of society, including educational institutions. In contrast, silence is a multifaceted phenomenon and an integral part of pedagogy, supporting reflection, concentration, and cognitive processes. This study aims to provide an overview of the playful pedagogical use of silence, more specifically the so-called *silence games*, to enrich knowledge about their historical and contemporary contexts. The research is qualitative in methodological terms, based on an analytical-interpretative and synthesizing strategy. It seeks to answer the questions of the conceptual basis of *silence games*, what makes them unique, and what experiences can be outlined from the institutions that use them. Drawing on literature in Hungarian and foreign languages, pedagogical journals, and institutional websites, the study first examines Maria Montessori's method and historical examples from the Hungarian educational press between the two world wars. The paper then analyzes the application of *silence games* in current Hungarian educational institutions, including nursery schools and kindergartens. Findings reveal that these games are not exclusive to Montessori institutions and are effectively used to develop key competencies of the individual and to shape the wider community and society. It concludes that *silence games* are a valuable pedagogical tool with a significant developmental impact on children's education and are a key element of modern institutional methodology.

1 Affiliation: University of Pécs, Faculty of Cultural Sciences, Education and Rural Development, Pécs, Hungary.

1. Introduction

Intense noise around people is identified as a relevant environmental problem of our time. High noise levels have a negative impact on all aspects of society, and educational establishments are also affected by noise pollution. Its opposite, silence, opens the way to new dimensions and experiences, supporting reflection, concentration, cognitive processes and refreshment (Alerby, 2020; Itten, 2018). Silence is an integral part of the world of pedagogy (Zembylas & Michaelides, 2008). It is a multifaceted phenomenon that has taken diverse forms in pedagogical practice over historical perspectives. I argue that *silence games* can make the educational endeavour and the educational process more productive, which can be supported by a valuable investigation of contemporary practices that takes into account the historical dimension. *Silence games* develop multiple competences of the individual and can therefore be used to shape the wider community and society.

The aim of the study is to provide an overview of the subject of the playful pedagogical use of silence, more specifically the so-called *silence games*, to enrich the knowledge about silence games in historical and contemporary contexts, and to offer examples of their application in current Hungarian institutions. It seeks to answer the question of the conceptual basis of *silence games*, what makes them unique, and what opinions and experiences can be outlined from the side of institutions using *silence games*. The research is based on literature in Hungarian and foreign languages; articles published in pedagogical journals and institutional websites. The research is qualitative in methodological terms, based on an analytical-interpretative and synthesizing strategy.

2. Approaches to Silence

The range of attempts to define the meaning of silence is almost endless. Max Picard, in his "The Empire of Silence", approaches the subject as follows: "Silence is nothing merely negative; it is not the mere absence of speech. It is a positive, a complete

world in itself. Silence has greatness simply because it is. It is and that is its greatness, its pure existence. There is no beginning to silence and no end […] One cannot imagine a world in which there is nothing but language and speech, but one can imagine a world where there is nothing but silence." (Picard, 1948, p. 1.) In his work, Picard believes that in the incessant flow of information and words, one can find oneself in silence. Theorists of silence view silence as a complex, positive phenomenon that is not merely the absence or antonym of speech, but a constituent of discourse. According to Zembylas and Michaelides (2004) when language ceases, silence begins. But it does not begin because language ceases. The search for its essence is an exciting challenge. Silence can be understood as a force that permeates the dimensions of life. Through silence, the inner self can be discovered, thus serving personal development and self-reflection. Silence is the place of the *I* in the universe, a mirror for the subject, inspiring a conscious contemplation of oneself and the world (Voegelin, 2010).

Within its various forms, silence holds a distinct pedagogical significance (Zembylas & Michaelides, 2004). In the school environment, silence can be a negative tool of power and control, yet certain applications can significantly enhance teaching and learning. Beyond its disciplinary function, silence can be linked to one of the most vital pedagogical concepts: play. As the organic medium through which children explore the world, play is an activity undertaken "for its own sake" (Mérei & V. Binét, 1975, p. 118). It is both a joyful and a developmental activity, enriching a child's knowledge, senses, and emotions. For teachers to be effective in providing the conditions and organization for a child's play, they must be knowledgeable about and open to various types of play, making a deep understanding of silence-based play essential.

3. The Silence Game by Maria Montessori

Silence education plays a fundamental role in Maria Montessori's pedagogical system and in the Montessori method. The so-called *silence game* is one of the specific activities of the Montessori method. The famous Italian teacher discovered the idea

of using silence by chance. One day, on his way to a 'Children's House', he met a mother in the courtyard with her baby, a few months old and in a swaddling clothes, in her arms. Montessori took her from the mother and brought her to the Children's House. The children surrounded the infant and were amazed to see how quiet and calm she was, listening to her breathing. Montessori recalled that "The little girl left behind her a kind of charm that envelops the soul: there is nothing in nature sweeter than the silence of a newborn's breath. [...] And even children can feel the poetry of the silence of peaceful, nascent human life." (Montessori, 2024, p. 237–238).

From this experience, Montessori developed the method of the so-called *silence lesson* or *silence game*. She used it in the following way: after the children had settled down comfortably and quieted down, he darkened the room, instructing the children, "Now listen for a soft voice calling your name. Then, in a room near behind the children, I called them in a whispering voice through the wide-open door." (Montessori, 2024, p. 234.) He called the children to him one by one in a low voice, and they tiptoed to him in silence. The children were surprised to meet the silence. Montessori wrote that this game "fascinates the little ones: their attentive faces, their patient stillness, reveal a search for a great joy." (Montessori, 2024, p. 234). Initially, she thought of rewarding the children's efforts with sweets and toys, which were expressed during the silence lesson, but the children did not demand them. Their real reward was the experience of silence itself, which filled them with happiness (Montessori, 2024).

Montessori silence is known to have many benefits: it provides an experience of relaxation and regeneration, helps thinking, concentration, supports understanding, listening skills, developing relationships with others and calmness. It allows you to experience the joy of listening and speaking. Silence gives not only the child, but also the teacher, the experience of surprise and a change of perspective.

4. Silence Games in the Educational Press: A Historical Overview

Silence games were also reported in the Hungarian educational press between the two world wars. A few examples illustrate that teachers were concerned about the pedagogical use of silence, and tried to publish information about their own experiences, while at the same time following practices abroad. The May 1925 issue of the journal "Kisdednevelés" drew attention to a playbook by Ida Doby, a gymnastics teacher at the Budapest Kindergarten School, which included an exercise for preschool children called "Silence Game", originating from the United States. According to the choreography of the game in the book "Sunset Games", the participants are arranged in a line and then a separate player designates someone who must stand in the middle, silently, without smiling or laughing. If the child succeeds, he becomes the middle player and can challenge the next (Anon, 1925, p. 94; Doby, 1925).

The "Kisdednevelés" (Toddler Education) periodical has published a thought-provoking article on how the silence of Montessori institutions can be overwhelming. In the experience of Mrs. Aladár Sajó, who tried the method, "The child here plays by himself, does not exchange his thoughts, cannot rush to the aid of his companion" (Rojkó, 1927, p. 164). This journal also published Montessori's reflections on the silence lesson, showing readers that the silence lesson is "the mirror of teaching", because it shows that it is possible to educate not only with words and commands, but also with calm behaviour, by example, and with the power of the environment (Burchardt-Bélaváry, 1930, p. 205). The journal "Néptanítók lapja" (Journal of Elementary School Teachers) described the practice of a Montessori institution in Berlin: "The morning time is preceded, however, by the so-called silence lesson, which is ordered unobtrusively by the teacher." (Anon, 1931, p. 19.) It was used to introduce children newly arrived in the group by whispering their names to the person sitting next to them in the circle, followed by a playful exercise and a delicious breakfast. Some teachers creatively adapted the silence lesson on their own.

The practice of one educator, who published in the "Evangelical School of the People," involved a unique adaptation of the silence exercise. The children would engage in a one-minute silence exercise every half hour, followed by two to three minutes. The author commented that these exercises "also serve as exercises in strengthening the will" (Marosfalvi Müntz, 1935, p. 211). The children were praised, and then "a kind of competition was started among them, each one quiet." (Marosfalvi Müntz, 1935, p. 211). To conclude the historical examples, it is worth noting the work of Mrs. Becsky, who, writing in the journal "Tanító" (The Teacher) in the mid-1970s, adapted the Montessori method. She found that silence exercises develop listening and attention, strengthen self-control, and break the monotony of the classroom. In her practice, she had children perform the exercise with an open window, in half-minute intervals of "still silence". The children were tasked with identifying sounds from outside, after which they discussed who could identify the most. This approach demonstrates a creative adaptation of the classic method for new pedagogical purposes.

5. Silence Games in Current Hungarian Institutional Practice

Montessori's silence practice is no longer confined to Montessori institutions in Hungary; it is also being adopted sporadically by other educational settings in the spirit of methodological innovation and enrichment. This section of the paper focuses on the use of silence play in current Hungarian nursery schools and kindergartens, examining their institutional documents.

To investigate this, eight institutions (one nursery school and seven kindergartens) were selected through random sampling. The institutions involved in the study were LámaCuka Montessori Family Nursery School, Rainbow Kindergarten in Algyő, Budapest Montessori Kindergarten, Ficánka Kindergarten, Angolpalánta Montessori Kindergarten, Hajnalcsillag Lutheran

Kindergarten, Gyöngyszem Kindergarten, and the Don Bosco Catholic Primary School and Kindergarten in Albertfalva. The research aimed to answer questions about *how and why these institutions use silence play* and *to summarize the experiences and insights gained from its application*.

In the Lamacuka Montessori Family Day Nursery, silence game is used every day, during the same period. This takes place in front of the courtyard. Children sit around a small carpet, close their eyes and quiet down to silent music and experience the silence together. After a while, the children walk around the carpet, taking small steps while holding an object in their hands. They pass the object to the next person to indicate whose turn it is. The silence game concludes with a talking circle (LamaCuka Montessori Family Day Nursery, 2025).

In the Budapest Montessori Kindergarten, the silence game starts with a signal from the teacher, usually with soft music. The children sit in a circle on their small cushions. The kindergarten teacher guides the exercise by personal example, using facial expressions and eye contact. The children perform balance exercises, such as walking on a taped line, holding a bead, bell, water glass or candle in their hands for weight. The child is careful to keep quiet and performs well if, for example, the bell does not ring or the object is not dropped. Another method of silence practice is to listen to silence with closed eyes (Budapest Montessori Kindergarten, 2024).

The silence game at Ficánka Kindergarten is very similar to the one described previously. It begins with a signal from the teacher, typically soft music. The children then gather, sitting with their pillows in a quiet and silent manner. The teacher guides the activity through a combination of exemplary behavior, mimicry, and eye contact. The game is further enhanced with more complex tasks that require children to balance and carry objects such as a bell or a candle (Ficánka Kindergarten, 2024).

The English Montessori Kindergarten uses silence game in several ways, “One possible way is to pass a candle or any object around, passing it to each other.” (At the Hajnalcsillag Lutheran

Kindergarten, they play the silence game daily and always gather at the same time. The children walk in a circle, with a pillow, a bell and a coloured water glass on their heads. According to the teachers, the most rewarding form of silence game is when the children listen to the silence with closed eyes. In this way, they can recognise that there is no such thing as perfect silence and are able to hear sounds that would otherwise escape their attention (Dawn Star Evangelical Kindergarten, 2024).

At the Don Bosco Catholic Kindergarten in Albertfalva, the silence game typically begins with soft music. After the children are settled, the practice continues through the teacher's exemplary behavior, which includes quiet movements and whispering. In these games, a special Montessori mat is used as part of a Montessori toolkit, and objects related to the current school project are incorporated into the circle-moving silence games (Don Bosco Catholic Primary School and Kindergarten in Albertfalva, 2025).

The Hajnalcsillag Kindergarten starts the day with the silence game: "This is how our day begins." (The teacher signals the start with soft music. The children settle in a circle without noise, doing playful tasks while experiencing the silence. Here again, silence is combined with small tasks. Walking on the line at Gyöngyszem Kindergarten is extended with balance tasks, carrying a candle or a bell and a glass full of water. The kindergarten also practises observing silence with closed eyes (Gyöngyszem Kindergarten, 2024). According to the Rainbow Kindergarten in Algyő, the aim of the silence exercise is to achieve the greatest possible state of calm. In the kindergarten, children are first taught to be able to move objects and tools in silence, with the practice of the circle of silence being applied at a later stage. At the Rainbow Kindergarten in Algyő, the silence circle begins with a signal, such as music or a silence cue. The children then sit in a circle on the floor or on small chairs. If they are seated on chairs, they are instructed to pay close attention to the silent movement of their instruments. The kindergarten teacher whispers each child's name one by one, and they quietly come to her to play the game until everyone is gathered. The activity is made more engaging by having the children pass a small bell around, taking care to maintain

the silence. The children can also retreat to a designated 'quiet corner' , where a small board with the word "Silence," an electric candle, and an hourglass are placed on a carpet. A child who wants a moment of quiet can turn over the hourglass and relax while watching the grains of sand fall and the candle flame (Rainbow Kindergarten, 2025).

Based on the analysis of institutional documents, we can identify the primary and general benefits that motivate institutions to adopt silence play as part of their pedagogical practice. According to the experiences of these institutions, silence offers children a positive experience and serves as a form of play, with the silence lessons themselves providing a period of relaxation. A key effect of silence game is that it supports conflict resolution while effectively aiding the development of sensory and motor skills. Other beneficial outcomes include improved attention, increased knowledge, and the cultivation of tolerance.

The positive impacts of silence games can be broken down into those that are *personal* and those that are *community-related impacts*. It can be concluded that, in relation to the individual, silence games support the development of self-discipline, attention, and concentration. They also promote beautiful and harmonious movement, develop hearing and other senses, and make children calmer, quieter, and more patient. Furthermore, forward-looking impacts can be identified for the community. Through the analysis of documents and websites, it emerges that silence games foster the development of a sense of community, as they require full and conscious cooperation and help to develop community behavior. Silence game provides a shared experience for the group, which also fosters a sense of belonging. In educational institutions that use silence play, there is less conflict, and children respect their peers. Other positive effects include the opportunity to experience silence and the play itself as a valuable opportunity.

In the institutions included in this research, silence games are creative and constructive, following the Montessori method but adapting it. These institutions view silence games as a specific element of their programs, with many developmental effects for children.

6. Conclusion

In summary, silence games are a specific and complex developmental activity that shapes knowledge, will, and social skills. While not exclusive to Montessori institutions, it can be used effectively in both nursery and kindergarten settings. Silence games are a pedagogical tool with a profound experiential impact on children's education and are a key element of innovative educational methodologies. Therefore, it is highly worthwhile for institutions to enrich their teaching practices with silence play.

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THE IMPACT OF FREE PLAY ON THE HOLISTIC DEVELOPMENT OF CHILDREN IN EARLY CHILDHOOD EDUCATION

Astrid Kircher[1]

Abstract

Free play is a central element of early childhood education and makes a significant contribution to the holistic development of children. Even at preschool age, children spend a substantial portion of their time playing, thereby gaining extensive learning experiences across cognitive, social, emotional, and physical domains. In contrast to structured, adult-led activities, free play allows children to independently choose their materials, play partners, as well as the time and place of play. This autonomy fosters independence, decision-making skills, creativity, and the ability to solve problems and manage conflicts. Notably, the experience of self-efficacy during free play is a key factor in the development of resilience and the capacity to cope with challenges. Projects such as the "toy-free kindergarten" demonstrate that, even without predetermined toys, imaginative, creative, and cooperative play emerges, strengthening innovative thinking and social skills. By purposefully integrating free play into educational settings, educators can help reduce educational inequalities and provide all children with the opportunity to develop a broad range of abilities. Free play not only promotes individual growth but also cultivates socially relevant values such as empathy, justice, and a sense of community. In this way, it prepares children to become resilient, creative, and socially responsible adults who are equipped to actively address future societal challenges such as climate change, social justice, and technological change. Thus, free play is far more than mere leisure activity—it is a fundamental prerequisite for social change and a more equitable society.

1 Affiliation: Kirchliche Pädagogische Hochschule Wien, Austria.

1. More Than "Just Playing" – On the Educational Significance of Children's Play in Early Childhood

"Did my child just play again in kindergarten today? How are they supposed to learn anything useful for life that way? And when does early childhood education actually begin to prepare my child for school?" These questions are commonly reported by professionals in early childhood education and strikingly illustrate the prevailing normative ideas and expectations regarding early childhood education held by many parents and guardians. Particularly common is the fundamental question of whether kindergarten constitutes "education" in the narrower sense at all—and whether it is capable of adequately preparing children for future societal challenges.

However, this perspective fails to recognize the foundational role of early childhood education institutions as the first formal educational environments in a person's life. Kindergartens and toddler groups make a vital contribution to social, emotional, linguistic, and cognitive development, and serve as the starting point for lifelong learning (OECD, 2022). Findings from developmental psychology and educational learning theories further affirm that play is the most fundamental form of learning for young children. From a constructivist perspective, play and learning are inseparable: Play initiates processes of meaning-making, the acquisition of social skills, and the development of cognitive structures. The two are mutually dependent and form the core of all educational processes in childhood (Vygotsky, 1978).

This pedagogical-psychological viewpoint is also supported by international legal frameworks. The UN Convention on the Rights of the Child explicitly affirms in Article 31, Paragraph 1, the right of every child to rest, leisure, play, and age-appropriate recreational activities: "States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts." (UNCRC, 1989) This legally binding recognition of

play as a fundamental right of the child highlights its educational and developmental relevance—and necessitates corresponding consideration in the design of early education programs.

Research on play suggests that children play for approximately 15,000 hours by the age of six—roughly eight hours per day—through which they gain holistic learning experiences in cognitive, social, emotional, and physical domains (Franz, 2023). Thus, the importance of play in early childhood education cannot be overstated.

Ulrich Heimlich (2015) emphasizes the essential role of play as a foundational form of action and learning for both individual and collective development in a democratic civil society. Through play, children are granted spaces for active participation, engagement with social norms, and the development of autonomy and responsibility—core competencies for meaningful social participation. Despite its significant pedagogical and sociocultural relevance, play is often trivialized in institutional educational contexts. Frequently, its function is reduced to mere relaxation or "reward" after formal learning periods—an instrumental misunderstanding that fails to do justice to the complex educational value of play (Heimlich, 2015).

Within the context of early education, play also constitutes a holistic form of learning that engages emotional, cognitive, social, physical, and aesthetic dimensions simultaneously. Especially through free play, children are able to engage with their environment in a self-directed, sensory, and meaningful way. It represents an educational process in which perception, emotion, cognition, action, and creativity are inextricably intertwined (Tietze, 2023).

As Gerd E. Schäfer points out, children's learning is a process of self-education, which does not proceed linearly or by subject area, but rather through subjective meaning-making based on personal experience. Free play serves as a central medium for this: It allows children to experiment with materials, movement, symbols, and language, to pursue their own questions, and to relate their inner and outer worlds (Schäfer, 2005).

2. Cognitive Development

Whether building structures with blocks, engaging in fantasy role play, or exploring the natural environment—children employ their cognitive abilities in diverse ways. This enables them to experience a sense of self-efficacy from an early age. And it is precisely this self-efficacy that plays a crucial role in the development of resilience (Obermaier, 2024). During free play, children are given the opportunity to engage in activities that stimulate critical thinking, problem-solving, and creativity. These competencies are essential for later academic success, as they form the foundation for focused and goal-oriented learning. Moreover, research has shown that unstructured play supports the development of executive functions such as planning, memory, and attentional control. These abilities are key to academic achievement, as they underpin self-regulated and sustained learning (Diamond & Lee, 2011).

3. Social Development

Free play offers a dynamic space for social interactions in which children learn to negotiate, cooperate, and resolve conflicts. In peer-directed play, children assume roles, share responsibilities, and practice communication skills. These interactions are not only essential for forming friendships, but also promote empathy, collaboration, and an understanding of social norms. Through interactions with peers in playful contexts, children develop emotional intelligence and learn to navigate the complexities of social relationships (Pfeffer, 2017).

From the perspective of sociocultural learning theory, it becomes evident that the zone of proximal development is especially activated and expanded in social interplay with other children. Language, facial expressions, gestures, and emotional responses serve as central tools for negotiating meaning. In this sense, play functions as a natural framework for the development of social self-regulation, communication skills, and community-oriented awareness (Vygotsky, 1978).

4. Emotional Development

One of the most significant benefits of free play lies in its positive impact on emotional development. Play offers children the opportunity to express and process their emotions in a safe and supportive environment. When engaged in role play or creative activities, children not only interact with their external surroundings but also process inner experiences, desires, fears, and conflicts. This form of play acts as a symbolic space for action in which they can explore, enact, and shape various emotional scenarios. In doing so, they experience themselves as capable, able to learn, and emotionally understood—key prerequisites for the development of emotional resilience (Ginsburg, 2023).

Free play also supports self-regulation, as children learn to cope with frustration, disappointment, and other emotions that arise during play. These experiences help them build a sense of self-worth and emotional well-being, both of which are essential for their overall development (Petermann & Wiedebusch, 2016).

5. Physical and Sensory Development

Unstructured play not only encompasses cognitive, emotional, and social learning processes but also serves as a central driver for physical and sensory development in early childhood. Movement and play are inseparably linked to learning in this phase of life, as children explore and understand the world through bodily activity. Jean Piaget (1952) already emphasized that motor experiences form the basis of sensorimotor development and, thus, lay the groundwork for all later cognitive achievements.

Activities such as running, climbing, jumping, balancing, or swinging promote gross motor skills, strengthen muscle groups, develop balance and coordination, and support complex movement sequences. These physical activities are not only beneficial to health but are also essential for spatial orientation, body awareness, and the development of a positive physical self-concept.

Fine motor tasks such as drawing, cutting, threading, or building also play a significant role: they enhance hand-eye coordination, improve finger dexterity, and lay the foundation for more complex motor tasks—particularly in preparation for writing skills, which are central to later academic success. Physical activity is not merely a compensatory activity to "real" learning, but rather an integral component of children's educational processes. In this context, one can speak of "education through movement," in which children experience self-efficacy and develop practical competence through physical activity (Zimmer, 2020).

Moreover, movement during free play contributes significantly to physical health and prevention. It positively influences metabolism, the cardiovascular system, bone density, and the immune system. In times of increasing sedentary lifestyles among children, this aspect gains particular relevance: a lack of movement can lead not only to physical but also to emotional and social developmental risks (WHO, 2019; Zimmer, 2021).

6. The Role of Educators in Free Play

While free play is self-directed by the child, educators play a critical role in creating an environment that fosters and supports such play. This includes providing a variety of materials, designing stimulating learning spaces, and creating opportunities for both individual and group play. Educators also observe children's interactions and offer subtle guidance when needed, ensuring that children retain the freedom to explore while their safety and social development are supported.

In these self-initiated play scenarios, children's individual strengths, interests, needs, and developmental potentials become particularly apparent—whether in solo play or in pairs and group settings. Observation during play provides valuable insights for participatory, child-centered, and situationally responsive educational planning, as advocated by a process-oriented understanding of education (Schäfer, 2005; Fthenakis, 2012).

In this context, educational professionals assume a facilitating and stimulating role. Their task is to create an enriching play environment—both materially and socio-emotionally. A respectful and open atmosphere in which children feel safe not only encourages their enjoyment of play but also their willingness to learn and explore. The design of space and materials is of particular importance here: spaces act as the "third educator" and significantly influence the quality and variety of play experiences (Forum Reggio Pedagogy, 2025).

When educators actively support free play and develop innovative approaches within this framework, they can inspire positive transformations in how children perceive themselves, their communities, and the world around them (Wood, 2014).

7. Early Childhood Play and Social Relevance

To what extent can free play, as an expression of holistic learning processes in early childhood, contribute to the development of fundamental social, emotional, and cultural competencies that form the long-term foundation for social cohesion, democratic participation, and societal transformation? This question logically extends the previously discussed significance of play as a holistic form of learning, while expanding the focus toward a sociotheoretical perspective. It explores how individual educational processes within free play can translate into collective future potential.

7.1. Social Skills, Awareness of Diversity and Inclusion

One of the primary ways in which free play can contribute to social change is by promoting the development of social skills. In play situations, children negotiate, share, cooperate, and resolve conflicts—abilities that are vital for any society. By designing play environments that encourage diverse forms of interaction, educators can ensure that children from varying individual, cultural, ethnic, or socioeconomic backgrounds are motivated to engage with one another (AGJ, 2025).

Innovative play formats such as collaborative storytelling, role play, and inclusive games help challenge stereotypes, foster empathy, and promote inclusion from an early age. When children are exposed to a broad spectrum of perspectives and experiences through play, we nurture future generations that are more open, tolerant, and compassionate. These behaviors, acquired during early childhood, can contribute to the emergence of more just and equitable communities (AGJ, 2025).

7.2. Participation: Empowering Children as Agents of Change

Purposeful free play contributes to independent thinking and action and empowers children to become active agents of change in the world. Activities that involve problem-solving, creative expression, and engagement with real-world issues such as sustainability or social justice enable children to understand their roles within society and recognize the impact of their actions. For instance, play that engages with environmental themes can inspire a sense of responsibility for the planet and motivate children to carry these values into adulthood. Through nature-based free play, children can form a relationship with the environment, learn about sustainability, and appreciate the significance of nature for our world. As they explore natural settings, children learn firsthand about ecosystems, conservation, and the consequences of human actions—potentially cultivating a generation better equipped to address climate change and environmental degradation. In this regard, the educational model of the forest kindergarten offers a valuable opportunity for direct engagement with and within nature (Kobler, 2024).

Innovative play environments that integrate themes such as community building, equality, and activism can serve as microcosms of the society in which children live. Within these spaces, children can experiment with concepts like fairness, leadership, and cooperation—experiences they can later translate into real-life actions as they grow older (Majcen, 2020).

7.3. Life Skills Through Emotional and Mental Health

Social change often begins with individuals feeling empowered, self-confident, and connected to others. By purposefully using free play to support emotional regulation and mental health, early childhood educators can foster resilience and self-awareness in children. Play that encourages mindfulness, self-expression, and emotional exploration can equip children with tools to navigate a complex and sometimes stressful world. Particularly unstructured play supports children in coping with stress, developing self-regulation, and managing emotions—key elements in building mental health resilience. Early intervention through play can lay the foundation for emotionally healthy individuals and potentially alleviate future societal burdens related to mental health. The skills developed during childhood contribute to a society composed of individuals better equipped to handle challenges, relate to others with empathy, and actively contribute to positive social transformation (Masten & Barnes, 2018).

By its very nature, play is an interactive or self-directed process. It is no coincidence that all children, regardless of when and where they live in human history, use play as a means of developing essential skills. It is the way children learn to master their environments. Children explore and test limits. They are driven by curiosity—a kind of innate urge to understand and master their world. And that is what resilience is fundamentally about: "mastering one's environment." It involves developing coping strategies, regulating responses, and gaining a sense of control over one's surroundings. None of this would develop as effectively if we relied solely on being taught how to be resilient. The innate capacity to play is one of the most powerful developmental strategies we have for building resilience in the face of adversity (Shonkoff, 2022).

At this point, it is worth highlighting the "toy-free kindergarten" project—not only as an example of free play but also as a program that emerged in 1992 from an addiction prevention initiative and has since evolved into a broader preventative model for

children. The approach is rooted in a salutogenic understanding of health, where health is not merely the absence of illness but encompasses a broader, more holistic definition (Max Planck, 2021).

A recent study by Hart, Keller, and Perren (2024) investigates the effects of the toy-free kindergarten on promoting life skills and emotional regulation in children aged four to six. During an eight- to ten-day intervention period, all pre-made toys were removed from participating kindergartens to stimulate developmental processes through free play and creative social interaction. The aim was to strengthen core life skills—particularly task orientation, empathy, and self-regulation. The findings indicate significant improvements in task orientation and empathy across the entire group of children. Notably, children with initially low levels of emotional regulation exhibited the most pronounced developmental progress. The study thus provides empirical evidence for the potential of the toy-free kindergarten as a preventative pedagogical intervention for fostering social-emotional competencies in early childhood. It offers a valuable foundation for further developing early childhood education concepts (Hart & Keller, 2024).

7.4. Fostering Creativity and Problem-Solving Abilities

Not only the toy-free kindergarten project but unstructured play in general encourages children to explore their surroundings, experiment, and think critically. Creativity, resilience, and problem-solving abilities are strengthened—skills essential for confronting complex social challenges in the future. Through imaginative play, children also develop innovative and solution-oriented thinking. And the future will indeed require solutions—regarding climate change, social justice, and technology-driven transformations (Bateson & Martin, 2013).

In conclusion, free play in early childhood education not only supports individual child development but also offers a collective opportunity to address broader societal challenges. By

supporting free play, educational institutions and policymakers can foster well-rounded, emotionally intelligent, and socially conscious individuals who are better prepared to contribute to a more inclusive, resilient, and sustainable society (UNICEF, 2023).

8. Rethinking Education and Educational Equity

On a broader level, more conscious and innovative applications of free play can challenge the current structures of traditional education. In many parts of the world, educational systems remain dominated by rigid, standardized approaches that prioritize academic performance over creative, social, and emotional development. By purposefully integrating free play into the curriculum, educators can advocate for a more holistic, child-centered approach that values diverse forms of intelligence and learning. This shift has the potential to address educational inequalities by creating more equitable opportunities for all children to develop a wide range of skills—whether cognitive, emotional, or social—instead of focusing solely on narrow academic benchmarks.

Moreover, incorporating innovative approaches to free play that engage with topics such as social justice, identity, and global citizenship can foster a generation of children who are not only knowledgeable but also socially responsible (Hirsh-Pasek et al., 2020).

Although educational policy developments in recent decades have shown a trend toward prioritizing standardized testing and academic achievement as supposed indicators of learning success (OECD, 2023), it is all the more important to remember that some of the most significant learning experiences do not occur in structured lessons, but in moments of unstructured, imaginative play (Moss, 2022). Today's children are, as is well known, tomorrow's adults—and nourished by early experiences of free play, they may grow into resilient individuals who carry forward the values of justice, empathy, and community and are prepared to face the challenges of the future (Masten, 2014).

To the question "Did they just play today?", the answer is: "Yes—and in doing so, they learned holistically and for life."

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CHAPTER 5
PLAY AND CHILDHOOD AS HISTORY

CHILDHOOD, MOTHERHOOD, AND PLAY IN VORARLBERG AROUND 1900

Gerhard Wanner[1]

Abstract

The article explores the social history of childhood in the westernmost region of the Austro-Hungarian Empire. The study fills a gap in existing research, which has largely focused on specific topics such as child labor. It examines the ideological conflicts and societal conditions that shaped the lives of children during this period. The research analyzes the "Kulturkampf" between conservative Catholicism and liberalism, the influence of political Catholicism and nascent socialism on education and social norms, and the evolving concepts of childhood and pedagogy, influenced by figures like Rousseau and Fröbel. The article delves into social realities, including the widespread phenomena of "Schwabenkinder" (migrant child laborers) and "factory children," who were exploited for economic reasons. It also investigates the high rates of infant mortality and the perception of illegitimate births in a morally strict society. By examining motherhood ideals, welfare institutions, and daily life, the article reveals a stark contrast between the traditional, distant parent-child relationships of the lower classes and the emerging ideal of a nurtured, protected childhood among the bourgeoisie. The study concludes that the lives of children in Vorarlberg around 1900 were overwhelmingly defined by socio-economic class, religious ideology, and a pervasive culture of labor, with a protected, playful childhood being a rarity.

1 Affiliation: University of Innsbruck, Austria.

1. Introduction

Despite the richness of its social history, childhood in 19th-century Vorarlberg, the westernmost crown land of the Austro-Hungarian Empire, remains an under-researched subject. Existing scholarship has largely focused on isolated phenomena, such as the plight of the "Schwabenkinder" (migrant child laborers) and factory child labor. This study aims to fill that substantial gap by offering a comprehensive social history of the period, moving beyond specific topics to examine the ideological, economic, and cultural forces that defined children's lives.

Defining the exact boundaries of childhood is a complex task, as the concept varies significantly across somatic, psychological, and historical perspectives. However, it is clear that in Vorarlberg, childhood was a historically contingent, class-dependent category. In general, it can be said that children remained children in legal terms until the end of compulsory schooling, i.e. until the age of 14. If childhood is linked to sexual maturity, this did not begin in Vorarlberg until the age of 16/17 for girls and probably also for boys in the mid-19th century! Until the age of 18, at least in middle-class circles, people were still considered "children" who needed the "protection" of adults. Childhood ended earliest in the lower social classes, where children worked in textile factories. (Ecker, 1994)

2. Vorarlberg at the Beginning of the 20th Century

Around 1900, Vorarlberg covered an area of 2,601 km^2. It was the westernmost region of the Habsburg Monarchy, bordering Germany, Switzerland, and Liechtenstein. The region, which had been legally autonomous since 1859, had a population of 130,000, of whom approximately 5% were immigrants from Trentino and Veneto, a consequence of industrialization, which was the highest in the entire monarchy. A special feature is the Alemannic dialect as a characteristic of collective cultural identity. The region's affiliation with the Austrian rule of the Habsburgs was a

long process that lasted from the 14th century until 1765. Barren and inhospitable mountain landscapes make up about three-quarters of the region's area. The population was concentrated in the Rhine Valley and the Walgau region with the industrialized small towns of Bregenz (capital), Feldkirch, and Bludenz.

2.1. The "Kulturkampf" and the Battle for the Child

In the 1870s, a public debate began in Vorarlberg between two hostile ideologies, conservatism and liberalism, which sought to win over children and young people to their politics and values. This was referred to as the "culture war." (Tschegg, 1979) The previously dominant conservative Catholic socialization with its corresponding family structures declined in influence or was even perceived as contradictory. The liberal-influenced Constitution of 1867 contributed decisively to this. It ended the decades-long massive influence of the Catholic Church with its "old school" and replaced it with the secularized "new school." The liberals also advocated a strict separation of church and state and reduced the influence of the church in schools to religious education. This reduced the church's control over everyday life and the "moral" behavior of the "faithful." The result was the so-called "Kulturkampf" between the ideologies. (Oberkofler 1969, pp. 23-31) Ultimately, most children in Vorarlberg came under the dominant influence of the Catholic Church and groups ideologically close to it. (Strohmann, 2011)

While the liberals steadily lost influence, wore themselves out in internal struggles, and lacked young talent in their former "progressive party," the conservatives formed a powerful and socially committed party in 1893 under the name "Christian Socialists." Their ideological basis was the so-called Workers' or Social Encyclical of Pope Leo XIII from 1891. (Wanner, 1995)

Catholic clergy wielded substantial political and ideological power in Vorarlberg. In this predominantly rural and agricultural region, priests were often viewed as "absolute" authorities. They were typically the only individuals possessing a comprehensive higher and university education, which bolstered their claims to

spiritual and moral dominion over society and culture. Consequently, they considered themselves the legitimate educators of the people. Through a finely meshed network of associations and sympathizers, the clergy strictly monitored required moral standards, believing society was otherwise "doomed to ruin." With the exception of nuns, most members of the clergy were actively engaged in party politics, serving as the representatives and leaders of "Political Catholicism." (Haffner, 1977)

From the 1890s onward, the Christian Socialists faced a rival in the Social Democrats. This small party lacked a financial base, and its politicians were mostly "foreigners" (non-Vorarlberg natives). Their worldview was rooted in the theories of Karl Marx and Friedrich Engels. The few party members were recruited from the proletariat in factories, crafts, and small businesses, or from railroad workers. Within the established power structure, the party remained a socio-political and cultural "marginal phenomenon."

However, the Social Democrats became the declared and demonized opponents of the conservatives, inciting panic among the majority of the Vorarlberg population. Their radical stance centered on anti-religious revolutionary materialism, the rejection of private capital, the practice of strikes, and their perceived "close relationship" to Judaism and "alternative" lifestyles and norms. Conservatives denied them any legitimate socio-political claims, often dismissing their sympathizers and members as criminals or mentally ill. From the viewpoint of the conservatives and the Catholic Church, they were regarded as the "scum of society," or even of humanity itself. (Mittersteiner 1984; Johler, 2002; Petsche-Rüsch, 1960)

3. Education in Vorarlberg

Educational theory only became a significant field of study once childhood was recognized as a distinct stage of life, a perception that was the exception during the Middle Ages and early modern period. This view began to shift gradually from the mid-19th century onward. The critical impulse for this change originated with the Enlightenment ideas of Jean-Jacques Rousseau.

In contrast to the aristocratic society he criticized, Rousseau advocated for a pedagogy "based on the child," emphasizing a response to individual needs and natural development. This philosophy met with complete rejection from conservatives. His treatise, *Émile, or On Education*, became the model for the reformist and, in the Conservatives eyes, reprehensible liberal "new school" movement. Conservatives dismissed the core idea—that children should be allowed to develop their natural talents freely, without interference from society—as "pedagogical nonsense". (Breuss, 1993)

In rural Vorarlberg, which possessed a tiny educated upper class, Rousseau's ideas were both irrelevant and categorically rejected by the Catholic Church. The enlightened innovations there were in schools, mostly during the brief Bavarian occupation between 1805 and 1814, met with widespread resistance. In the first half of the 19th century, the roles of children began to be questioned in Vorarlberg only due to the rampant exploitation of child labor in factories. Factory owners and the lower social classes widely regarded these children, some as young as seven, as "little adults." Adherence to a strict work ethic constituted the only "pedagogy." Only a small number of liberal-minded administrative officials and priests protested for educational and humanitarian reasons. The clergy's primary concern was the potential erosion of the "children's" religiosity and morality (Wanner, 2008).

The theoretical and state-mandated path to a broader understanding of childhood as a distinct stage of life did not begin in Vorarlberg until the liberal Reich Elementary School Act of 1869. On this basis, state-trained "professors" attempted to introduce a pedagogy grounded in child-friendly and contemporary "scientific" criteria. However, this "modernism" was rejected by conservatives, the Catholic Church, and the majority of the rural population, who considered knowledge of the Bible and catechism to be sufficient teaching and educational tools for life.

3.1. Teachers' Associations

In 1870, the "Teachers' Association of the Vorarlberg" was founded. It was liberal in its outlook and had set itself the goal of promoting and enforcing the teaching and educational tasks of the state laws of 1868/69. (Oberkofler, 1969**;** VF, August 2, 1895) From the outset, it met with great resistance from conservatives and the Catholic Church, as these laws had brought about a far-reaching separation of church and state, abolished ecclesiastical school supervision, and made independent "scientific pedagogy" the norm.

Despite their alignment, the initially liberal school authorities and the Teachers' Association avoided developing original educational objectives. Instead, they repeatedly emphasized that their sole aim was to comply with and uphold the provisions of the Reich Elementary School Act. In Vorarlberg, adhering to these regulations was itself a demanding undertaking (VF, August 30, 1910; Mittersteiner, 1984, p. 362).

The conservatives responded to this liberal challenge in 1884 with the founding of the Catholic Education Association for the Province of Vorarlberg. This organization was tasked with formulating, disseminating, and ultimately implementing religiously-based educational methods and goals. The motto adopted at its founding meeting clearly articulated its focus: "Everything with God and for God for the good of youth" (VV, November 21, 1884). The Association actively educated and informed parents about theories and methods through public meetings and lectures (VV, October 27, 1891). They asserted that parental education was a "natural law duty" and an "inalienable right of the family," yet crucially maintained that the family could not successfully raise a child in the Catholic faith without the direct guidance of the Church (VV, September 7, 1894).

3.2. Socialist Education and Working-Class Children

Christian Social opponents generally denied the Social Democrats any pedagogical competence. Initially, there was a lack of understanding and interest in educational issues in working-class

circles, and conscious, targeted education was absent: children typically grew up on the streets, largely "naturally." In this milieu, the father's authority prevailed far more than in the middle-class, and punishment and corporal punishment were the norm. Parents often showed no understanding for their children's formal schooling and supported child labor.

The upbringing of working-class children, inadequate as it was, was primarily left to the mothers. In Vorarlberg, a few self-confident Social Democrat women began to address issues of child-rearing and pedagogical education after the turn of the century. They organized children's and family outings and drew inspiration from the Swedish writer and educational reformer Ellen Key (1849–1926), promoting the importance of "educational play."

The activities of these women were fiercely attacked by the Christian Socialists. They labeled the leisure activities with children as illegal political gatherings, claiming they contravened the Reich Elementary School Act. These activists eventually formed a "children's council" (Bundschuh, 1993; Mittersteiner, 1984).

4. Children's Social Situation in Vorarlberg

The first welfare institutions for children were those for preschoolers. These were orphanages, kindergartens (nurseries), and daycare centers. In Austria, the first kindergarten was established in Vienna in 1830, and in Vorarlberg in 1853. The legal basis for this was the ministerial decree of June 22, 1872. This decree uniformly regulated the establishment, organization, management, educational supervision, and spatial design of kindergartens in Austria. In 1898, there were nine daycare centers and four kindergartens or children's homes in Vorarlberg. All of these institutions were run by nuns. (VV, February 16, 1898; Friedmann, 1906)

It is no coincidence that all of these institutions were located in settlements with highly developed industry. The distinction between nurseries and kindergartens arose because the former were created primarily for children from the "working class" in

industry, home embroidery, and day laborer families. In these classes, women were forced to work to ensure the survival of their families, which meant they had little time to care for their children. The few kindergartens that existed were primarily for children of the "upper classes."

4.1. Orphanages

Orphanages and foundling homes already existed in Europe in the 18th century. It was not only orphans, but also children of socially disadvantaged parents and abandoned and unrecognized illegitimate children who were placed in such institutions. The daily routine was strictly regulated. In the morning there were lessons, in the afternoon there was work – idleness was considered the cause of all vice. Of course, there were religious exercises, church services and prayer hours, corporal punishment was carried out, and actual free time with purposeless play was rare. Placement in orphanages was also a form of "birth control" – if a woman did not want to kill or "give away" her illegitimate child after birth. However, such cases were rare in Vorarlberg compared to large cities. (Fertig, 1984)

In Vorarlberg, orphans were usually accommodated in hospitals, municipal poorhouses, and an educational institution founded in 1884. Education was provided by the Sisters of Mercy and, from today's perspective, it was harsh and quite "religious." In summer, the children got up at 5 a.m., followed by half an hour of communal morning prayer and, after breakfast, morning mass. Disciplinary measures included confinement, withdrawal of food, and physical punishment. (Volaucnik, 1988)

4.2. Nurseries, Kindergartens and Special Institutions in Vorarlberg

Nurseries were primarily established to supervise the children of the working class and other lower economic classes. Their core mission was to organize appropriate activities and, crucially, to "accustom them to cleanliness, order, and good manners and

instill in them a love of work." These institutions were located predominantly in industrial settlements, addressing the needs of families where mothers were forced into labor (in industry, home embroidery, or as day laborers), leaving little time for childcare. The first nursery in Vorarlberg was founded in Bregenz in 1862. By the turn of the century, the industrial boom increased admissions to 265 children (VV, February 29, 1896). According to the "Austrian Law" of 1906, nurseries were intended mainly for personal hygiene and supervision; they were explicitly forbidden from providing school lessons (Friedmann, 1906).

Vorarlberg's conservative educational elite were aware of contemporary child education theories, including the writings of the German kindergarten pioneer, Friedrich Fröbel (1782–1852). Fröbel's ideas, which advocated for the independence and self-development of young children—and which had been criticized in Prussia for leading to "irreligiousness"—were met with concern and suspicion in Vorarlberg (VV, September 17, 1872; VV, October 22, 1875).

Fröbel's philosophy directly contradicted the Church's authoritarian educational patterns and its dogmatic ideas about the innate sinfulness of children (Fertig, 1984). The local focus instead aligned with the model of Pope Pius IX, who introduced kindergartens in the Papal States with a didactic content made up exclusively of religious and moral education, valuing discipline and order. The Catholic Church actively supported kindergartens, driven by Christian charity and the hope of stopping the "brutalization" of children (VV, January 26, 1900).

Arguments against kindergartens were often political and ideological, especially when they were administered by liberal state legislation rather than religious orders. Critics argued that liberalism—labeled the "opposite of God"—sought to claim the whole child for itself through non-denominational institutions without religious instruction and, consequently, without nuns (VV, July 20, 1872).

After 1900, these ideological resistances waned. New legal provisions stipulated that kindergartens should support parents education and, through physical and mental development, prepare children for successful elementary school education (Friedmann,

1906). The institutions, which required school authority approval for admission, were operated daily for short periods by the Catholic Sisters of Mercy (VV, January 23, 1900; Friedmann, 1906; Ulmer, 1926).

In 1884, the "Verein zur Rettung sittlich verwahrloster Kinder" (Association for the Rescue of Morally Neglected Children) was founded, and in 1886, an association institution was opened. (Albertani, 2007) Neglected, poor, and orphaned children between the ages of 6 and 14 were to be cared for and taught. The future "capable members of human society" were to be trained for professions as servants and craftsmen. (Lampert, 1996)

Despite all the fine words and good intentions, the education provided there was largely punitive in nature and served as harsh atonement for "transgressions." The pupil was a kind of convict, and what justified this was the Catholic idea of the "free will" of man, who was fully responsible for his bad deeds and had to atone for them, if not on earth, then in the hereafter. Few people asked about the social causes. The organizers saw the solution to educational problems exclusively in turning to the commandments of the Church and God.

5. Child Labor and Demographic Realities

5.1. The "Swabian children" Migration Phenomenon

The migration of the Swabian children (Schwabenkinder) was a significant socio-economic phenomenon affecting the entire central Alpine region, including Vorarlberg, Tyrol, Liechtenstein, and Graubünden. These children, primarily schoolchildren, were sent to work in the southern German states of Baden, Württemberg, and Bavaria. The root cause lay in the severe economic hardship of the Alpine low mountain ranges, where agricultural poverty was acute. This region suffered from small, subdivided farms and severe overpopulation, leading to a profound process of impoverishment where over half the population lived below subsistence level and daily calorie consumption was barely sufficient to survive. (Kasper, 2011; 2012)

Economic desperation was the primary driver of this 19th-century "child migration." Peasant agriculture was in deep crisis due to causes including fragmented and unprofitable farmland, high mortgage debt, the cessation of income from home spinning/weaving due to the textile industry, and a lack of operating capital. These factors were compounded by free trade, high taxation, and strong population growth. In contrast, "Swabia," the agricultural region north of Lake Constance, benefited from flourishing agriculture and a chronic labor shortage (Weitensfelder, 1991).

Girls were predominantly employed in the household, and boys in the fields and stables, with long harvest working days often starting at 4 a.m. Accommodation was provided in segregated farmhands' or maids' quarters. The migration began to decline from the 1890s due to two factors: the local embroidery industry increasingly required children as laborers, and there was a rising general awareness of child protection and compulsory schooling (VV, September 10, 1895). Although the Tyrolean provincial government imposed a total ban on child migration at the start of World War I, Vorarlberg appears to have followed a different policy, as the migration continued even during the war. (Uhlig, 1979)

5.2. Factory and Home-Based Child Labor

In the first half of the 19th century, child labor shifted from domestic and agricultural spheres to the emerging textile factories in the Walgau and Rheintal valleys. Children were preferred by employers because they worked for the lowest wages, maximizing profits. An often-overlooked factor was the negative attitude of the rural Vorarlberg population, especially men and young people, toward industrial work, which created a labor shortage filled by local children, women, and low-class immigrants from Italian-speaking South Tyrol (Weitensfelder, 2001).

Factory child labor was widely seen as positive by the local majority; it was deemed the "poor man's capital," providing essential income to children who would otherwise resort to begging—an argument often used by manufacturers to secure factory permits

(Wanner, 1990). State governments and various moral authorities supported the practice, citing ethical motives: diligence and a strong work ethic were framed as prerequisites for adulthood, good citizenship, and deterring immorality. Industrialists were often lauded as benefactors (Johansen, 1978).

These children generally came from emotionally distant, loveless families where children were not the center of attention. Education was "natural," not aimed at developing individuality, and was secondary to the primary concern of nutrition. The years between 1820 and 1840 marked a period of severe, unrestrained exploitation, with children under the age of 16 constituting about half of the wage laborers in spinning mills (Rühle, 1911; Oberkofler, 1984).

The Trade Regulation Act of 1885 curtailed child factory labor, prohibiting it under age 12 and limiting work for 12- to 14-year-olds to eight hours daily. However, the subsequent decline was driven less by regulation and more by the advent of modern, complex machinery that required technical knowledge children could not master.

Despite the factory regulations, child labor persisted in small, family-run businesses, particularly due to the boom in machine embroidery since the 1880s. Since this was largely home-based work, it operated outside official control. The home worker family was hyper-focused on income; the parent-child relationship often resembled that of foreman to unskilled worker. Children's work was expected if physically possible, often beginning at preschool age (Volaucnik, 1988). Resistance to this "self-exploitation" was minimal, due to political parties fearing a loss of votes, awareness of economic hardship, and the long-held tradition of viewing child labor as a "moral" necessity.

5.3. "Street Children" and Immigration

A renewed economic upswing in the late 19th and early 20th centuries—fueled by the cotton industry, mechanical embroidery, and major infrastructure projects (railways, Rhine regulation)—created a local labor shortage. This resulted in the immigration

of Italian-speaking Tyroleans, the "Welschtiroler," from the economically devastated region of Trentino (Burmeister-Rollinger & Kaser, 1995).

The Vorarlberg population's attitude toward these seasonal workers was predominantly negative. Viewed as foreign proletarians without property or land, they were brought in by industrialists as cheap labor, driving down wages and creating unwanted competition. As these families often migrated together, their children became a significant, immediate social problem requiring decades for cultural integration (Getzner, 1995).

5.4. Nutrition Issues

Until the 1890s, the links between childhood, school, and nutrition were not a topic of concern for the general public or teachers. The majority of the population was happy if they could feed themselves from their work in agriculture and industry (VV, November 7, 1871). At the turn of the century, breastfeeding became a hotly debated topic in Vorarlberg. Middle-class women employed wet nurses, while women from the proletarian and peasant lower classes fed their babies cow's milk or milk porridge. A doctor was the first to point out that there was a connection between the high infant mortality rate in Vorarlberg and the diet of newborns. He interpreted the high death rates exclusively as the effects of stomach and intestinal diseases caused by the administration of cow's milk. He had found that seventeen times more children died on this diet than on breast milk. (VF, November 21, 1908)

In order to give mothers who were not breastfeeding the opportunity to feed their babies milk that was suitable for infants, "new sterilization devices" for infant milk have been available on the market since the 1890s. The milk was guaranteed to keep for four months. (VV, June 5, 1892) However, women from working-class backgrounds could not afford such expensive devices, so the social democratic women's movement drew attention to other methods, primarily to prevent "summer diarrhea" in young children.

6. Children's Play

Public educational interest in play arose in Vorarlberg in the last third of the 19th century. Play differed fundamentally depending on the child's class. For working-class and peasant children, there were no ready-made toys, and play took place mainly outdoors. In middle-class circles, a supervised play culture emerged. Educators and society were mostly dismissive or skeptical of play, believing it to be a distraction from necessary work and service and a means of evading normative parental control and influence. Playing for pleasure, as a pastime, or simply for the joy of the activity itself was hardly widespread. (Kemmerling-Unterthurner, 1998)

In the second half of the 19th century, there was a small class of middle-class families in Vorarlberg in which women and children were exempt from gainful employment and where the woman's central task was to raise her children. Children were no longer to be left to themselves and exposed to immoral influences on the "streets," but were to grow up in protected spaces under parental supervision. As a result, "children's corners" and even children's rooms were created in their houses and apartments. Those who were well-behaved were said to have "good manners." Toys were not only meant to bring joy, but also served educational purposes—namely, normative preparation "for the world" of adults. Toys were also intended as consolation for the forbidden play contact with other children outside the home. Since there was a strict separation of female and male role models in bourgeois society, the respective toys also differed. (Novy &Dressel, 1969)

The closed bourgeois "ideal world" of childhood for a social minority stood in contrast to the harsh reality of farmers and workers. Leisure and play were not desirable, as they kept people from working and caused "harmful" idleness. Children from the lower social classes of the factory worker proletariat did not have toys. They had no children's rooms and, in most cases, no loving maternal upbringing and care. Play took place on the streets and, as immigrant Italian children in particular demonstrate, was associated with begging, food procurement, and petty crime. (VV, June 13 and 26, 1883; Novy &Dressel, 1969)

Even around 1900, leisure and play were still the privilege of a small-town minority in Vorarlberg, where capital and luxury goods were available. But even in "distinguished households," playing was not an everyday activity for children: it was limited in time, usually only allowed on weekends, and there were special toy cupboards where things were kept and locked away. Children were only allowed to play with certain precious dolls with "care."

The Catholic Church had a complex and ambivalent attitude toward children's play. As early as the 1970s, it recognized its enormous importance for religious, moral, and ethical education and emotional, social, and cognitive development. It did not want to leave play to the ideological influence of "unbelieving" liberals. It even publicly addressed the ideas of the German play educator Friedrich Fröbel: for him, play was more than "mere playfulness"; it was a means of early childhood self-education and, together with "play gifts," the most effective method of personality development. (VV, September 20, 1872)

Initially, toy shops were only found in the two small administrative towns of Bregenz and Feldkirch. After the opening of the Arlberg railway in 1884, Vorarlberg also became an interesting sales market for Viennese toy retailers, who advertised in Vorarlberg's newspapers. (VV, November 27, 1890; VW, December 23, 1910)

The range of toys on offer was gender-specific. For girls, there were doll's prams, doll's rooms, furniture, stoves and cookware, doll's jewelry, sewing boxes, and even "baptismal dolls." Boys played with horses, building sets, and toolboxes. To prepare them for their masculinity and "future heroism," forts, metal soldiers, rifles, sabers, helmets, knapsacks, drums, trumpets, and whips were supplied. (VV, December 11, 1885; December 13, 1887) Toys thus had a clear educational function for the middle classes, preparing children for "life" in a playful way rather than through the harshness of early involvement in the world of work, as was the case with farmers and workers.

It was especially on St. Nicholas Day and Christmas that children received toys. But even on these occasions, toy gifts were a rarity, a pipe dream for most children from rural backgrounds in Vorarlberg. (Barbisch, 1922)

An expression of a new and loving devotion, especially to "poor" children from the lower social classes, were "Christmas gift-giving" and "Christmas-tree celebrations," which had been practiced since the 1860s and were also materially supported by manufacturers. (VV, December 29, 1868). Such celebrations later took place throughout the country, mainly "for the benefit of poor schoolchildren." They received "gifts," but it seems that these did not usually include toys. (VV, January 5, 1877)

However, the absence of toys as gifts was not only the result of most families' meager finances but was also deliberately controlled: in small farming communities, they did not think much of them for "educational" reasons. People did not want to spend money unnecessarily, so as not to encourage the "unhealthy" playfulness and laziness of the little ones. (VV, December 30, 1898)

7. Conclusion

The social history of childhood in Vorarlberg around 1900 reveals a complex and often harsh reality, a stark contrast to the idyllic, protected childhood we understand today. The lives of children were overwhelmingly defined by socio-economic class, religious ideology, and a pervasive culture of labor. This study has demonstrated that the concept of a nurtured, playful childhood was a privilege enjoyed by a small minority of the bourgeoisie, while for the majority of children from the lower classes, childhood was simply a period of early labor and survival.

The "Kulturkampf" between conservative Catholicism and liberalism was not a distant ideological battle but a direct struggle for the hearts and minds of children. The Catholic Church, with its deep-seated authority and finely meshed network of associations, sought to maintain control over education and moral

norms, viewing childhood as a battleground against the secularizing influences of liberalism. This ideological conflict directly shaped the landscape of welfare and educational institutions, with the Church favoring a punitive, morally rigid pedagogy that contrasted sharply with the liberal, child-centered ideas of figures like Friedrich Fröbel.

The lives of the lower-class majority were governed by economic imperatives. The widespread phenomena of the "Schwabenkinder" and "factory children" were direct consequences of extreme poverty and agricultural crisis. Children, seen as "little adults," were valued for their labor and their ability to supplement family income, not for their individuality or potential for self-development. The parent-child relationship in these circles was often a pragmatic, emotionally distant one, resembling that of a foreman and an unskilled worker.

Furthermore, societal realities like high infant mortality and the social disgrace of illegitimacy underscored the precariousness of life for children. Even basic needs like hygiene and nutrition were major challenges, leading to a high rate of infant deaths that was often attributed to a "lack of understanding" among mothers rather than to systemic poverty and inadequate medical care.

The final element of this analysis, play, serves as the most powerful illustration of the class divide. For the few middle-class children, toys and play were supervised, educational tools designed to reinforce gender roles and prepare them for adult life. In contrast, for working-class and peasant children, play was a luxury. Toys were a rarity, and leisure often meant unsupervised time on the streets, sometimes associated with begging or petty crime.

In conclusion, the child in Vorarlberg around 1900 was not a universal figure. Their identity, education, and social reality were fundamentally divided by class. While a nascent, progressive ideal of a protected and developmental childhood began to emerge, it was confined to a small, privileged social stratum. For the overwhelming majority, childhood was a brief, harsh, and utilitarian stage of life, defined by economic necessity and moral discipline rather than by nurturing, education, or joy.

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REMEMBERING THE UNREMEMBERED: PLAY-BASED EDUCATION ON NAZI EUTHANASIA

Wolfgang Weber[1]

Abstract

The article explores the political and educational significance of games in representing historical events, using the Nazi euthanasia program as a case study. Although games have a long history of depicting historical subjects, they are rarely used to reflect on dramatic historical events, such as Nazi war crimes. This paper presents educational approaches using the example of remembrance work in the Austrian federal state of Vorarlberg, aimed at empowering communities to engage with their challenging local history. The study contrasts two distinct initiatives: a digital game from the Alfred Landecker Foundation with an academic focus, and a play-based youth program with social and political education goals. It argues that a successful remembrance culture, inspired by Eric Kandel's theory of memory, should be a dynamic, participatory process that extends beyond traditional memorials. By examining various memorial projects, including a participatory online list and upcoming escape room initiatives, the article demonstrates how game-based interventions can foster a more active and inclusive engagement with history, ensuring that the experiences of all victims—including survivors—are remembered and used to shape a more informed future.

1. Introduction

The representation of historical topics has been part of the digital gaming industry from its beginning in the 1960s. As Tobias Winnerling points out, it was IBM which launched the first

1 Affiliation: University of Innsbruck, Austria.

historical digital game entitled "Sumerian Game" in 1962 (Winnerling, 2018). The US company did this "to protest against the growing tendency in school curricula to ignore the pre-Greek civilizations, in spite of the growing weight of scholarly evidence as to the important role which this pre-history and early history should play in our understanding of the processes by which our society has come to be what it is" (Moncreiff, 1965, p. 10). This quote of the leading project manager about the IBM intentions to introduce a new historical game indicates how huge the political content of such a game may be. No matter if they are analog or digital: Games contribute to contemporary politics.

Although a disturbingly high number of contemporary digital games such as "Fortnite" or "Call of Duty" have World War II as their background only a few reflect on Nazi War Crimes. (Nolden, 2023, pp. 20–21) Euthanasia simply did not appear on that stage until the 2020s. In September 2022 the *Alfred Landecker Foundation* sponsored a first digital game which addressed Euthanasia (Mattern, Groschek, & Bassermann, 2023). It uses the biography of one victim to tell the story of this specific Nazi crime. At the same time, the *Offene Jugendarbeit Hohenems* (Open Youth Work) started its remembrance work for local teenagers with mixed ethnic background. On contrary to the Alfred Landecker Foundation, it did not target academic, but social work and therefore political goals (Weber & Bildstein, 2024). So did a social space remembrance initiative 14 years before in the Vorarlberg village of Langenegg. The latter did not use any game-based tools in historical communication. But the first used play-educational interventions to work through the Nazi past.

2. A Biographical Approach to Nazi Euthanasia in Vorarlberg

„It was a female living fetus, 32 cm long and weighing 500g." With these words, the head physician of the Dornbirn Municipal Hospital, Dr. Bruno Rhomberg, informed the Bregenz district medical officer Dr. Theodor Leubner on 18 April 1944 that

he had carried out the abortion of a six-month-old fetus as ordered by the so-called Hereditary Health Court (*Erbgesundheitsgericht*) of Feldkirch, with 27-year-old Anna F. from the village of Alberschwende. Anna F. had been diagnosed at the time as "feeble-minded." (Rüscher, 2008, p. 116).

In 2009, a memorial site for the local victims of Nazi euthanasia has been opened in Alberschwende. It does not commemorate Anna or her unborn daughter. It is explicitly dedicated to remembering the "fatal victims of Nazi euthanasia from Alberschwende." (Berger, 2009) Because Anna had survived Nazi euthanasia, but her daughter was never born, neither of the two are included in the discourse of victimhood that emerged in Vorarlberg after the liberation from Nazi rule in May 1945. Sadly, this discourse only commemorates those victims of the Nazi dictatorship who were actually born and later murdered. Not the ones who survived; neither the ones aborted. (Weber, 2009)

This guiding principle of talking about the Nazi dictatorship—to primarily remember those murdered under Nazi rule as the main victim group—shaped historiography in Vorarlberg well into the 21st century. (Weber, 2025) As recently as 25 October 2019 and 4 November 2021, two memorials were erected in the Vorarlberg market town of Götzis. They commemorate the victims of Nazi euthanasia from the Kummenberg region. (VN, 2019b; 2021) Victims of forced sterilizations and forced abortions, such as Anna F., are not represented on these memorials. Apparently, such victims are only included in public remembrance when they lost their lives. This is indicated, among other examples, by the following life story:

Two years before the forced abortion and sterilization of Anna F., Dr. Rhomberg had performed these two procedures on 23-year-old Rosa F. from Egg. She died of pneumonia twelve days after the two operations at the municipal hospital in Dornbirn. (Rüscher, 2008, p. 59) Rosa F. is remembered by a memorial erected in 2013 in her home village Egg for the local victims of Nazi euthanasia. Her name does not appear on the object itself, but she is included in an entry in the Digital Memory Landscape hosted

by the University of Graz. (DERLA, 2025) Her five-month-old unborn child, however, is not remembered—neither at the physical site nor in the digital memorial. As with 27-year-old Anna F. only the 2008 diploma thesis by Thomas Rüscher, approved at the University of Innsbruck, commemorates her. In his study, Rüscher not only highlights murdered individuals with disabilities in the Vorarlberg region Bregenzerwald but also remembers those who suffered physical mutilation through sterilization under Nazi rule and whose children were aborted without their consent. (Rüscher, 2008)

With reference to the research conducted by Austrian-born medical scientist *Eric Richard Kandel* who has been working in the U.S.A. and was awarded the Nobel Prize in Medicine in the year 2000 the fact of such non-remembrance as shown in the cases of Anna and Rosa allows for certain conclusions about such local commemorative narratives.

3. Remembering Towards the Future: The Example of Langenegg

Eric Richard Kandel, born on 7 November 1929 as the second child of a Jewish toy merchant in Alsergrund, Vienna and raised there, fled Nazi rule with his family to New York in 1939. He became an U.S. citizen in 1945 and, due to his exceptional talent, won a scholarship to study at Harvard. Starting in the 1950s, Kandel practiced as a psychiatrist and psychoanalyst in New York while conducting research at top universities in the U.S.A. on the human brain. In 2000, he was awarded the Nobel Prize in Medicine, along with two other scientists, for their pioneering work on signal transmission in the nervous system.

Through his decades-long studies of the human brain, Kandel became convinced that remembering is a fundamentally human activity. However, he argues, this act of remembering is not merely a backward-looking activity, directed solely at the past. It does not take place exclusively in the present either. Instead, Kandel states remembering is a central activity in shaping the future. By

looking into the past from the present, human beings are planning for the future based on their memories and the experiences associated with them. (Squire & Kandel, 1999)

From this perspective, it can be a significant signal for society if only a specific group, namely the murdered victims of Nazi euthanasia, are commemorated in the public space, while other victims, such as survivors, are forgotten in the memory discourse. According to Kandel, there can be no shaping of the future without considering the past—neither as individuals nor as a society. However, when parts of this past are excluded from the collective memory of a community, their perspectives are missing when it comes to shaping the future of that community. In 2011, the village of Langenegg in the Vorarlberg Bregenzerwald Valley took this insight into account when designing its memorial site for the local victims of Nazi euthanasia.

In Langenegg, after World War II, two memorials for the victims of the Nazi dictatorship were installed outside the western cemetery wall, along the central through road. These were a war memorial for the soldiers of local men who served in both World Wars of the 20th century; and secondly, a little plaque with the names of six men from Langenegg. They died on 1 May 1945 fighting as partisans against *Wehrmacht* and *Waffen-SS* units stationed in their home village. Langenegg was thus the only municipality in all of Vorarlberg that responded to the call of the Allies in its Moscow Declaration of 1 November 1943 by taking up arms against the Nazi dictatorship in Austria. Furthermore, it also commemorated the dead of this armed resistance in the public space after 1945. (Weber, 2006, p. 170)

In a process guided by a professional contemporary historian and moderated by Mayor Georg Moosbrugger, the Langenegg Council reached a decision on 28 February 2011. It declared to relocate the two memorials outside the cemetery facing the main road into the cemetery and place them there alongside a new memorial for the Langenegg victims of Nazi euthanasia. However, in order not to let these three places of remembrance become stagnant in their admonition of the past, but to make accessible the power of the

past in the shaping of the future, the Langenegg Council decided the following: In the cemetery, within the new trio of memorials to war and dictatorship, a fourth place of public remembrance would be created. This shall be the so-called social grave, which would be accessible to people in the present who live in the area but have no familial connections and who are materially poor.

In this way, Langenegg opened the remembrance of the dead from the past to include the dead of the present, and both memories were directed towards the future. The dedication of the so-called social grave enables continuous use of this public space and dissolves the chronological frameworks that traditionally govern the narratives of remembrance of individual victim groups. In my view, such progressive remembering thus created a space in the public space that is not isolated and forgotten. But it is instead anchored as part of a larger whole, namely the cemetery, within the community and parish. It can therefore serve as a guarantee that the act of remembering and commemorating the terrible National Socialist past e.g. through Nazi euthanasia and war memorials becomes one of many factors contributing to local identity formation. Therefore, it may be used in spatial unity with the so-called social grave to shape the future of the community as Kandel would have phrased it.

4. Remembering as Ongoing Participation: The Example of Hohenems

For the Lions Club of the Vorarlberg town Hohenems, the creative power of remembering towards the future was the reason to initiate a memorial for the local victims and survivors of Nazi euthanasia. Its initiative took place within the celebrations of the anniversary year "One Hundred Years Austrian Republic" in 2018/19. The site chosen for the memorial was the garden of the former Christian old people's home next to the Hohenems Municipal Hospital. During the Nazi dictatorship, residents from this home had been deported via the so-called Mental Hospital Valduna in Rankweil to the Nazi killing center in Hartheim, Upper Austria. (VN, 2019a)

Among the submissions for the design of the memorial, the Lions Club Hohenems nominated a project by the artist *Udo Rabensteiner*. Using a regional stone, his sculpture reflects the crack that the Nazi euthanasia left within the Austrian population for decades. This crack, which is also a fracture, runs through the entire society. It was caused by humans against other humans. It deliberately broke something that once was a unity into separate parts. These parts are not completely isolated from each another. In some places, the broken pieces still touch each other. There, and in the open spaces between the cracks, natural processes over time will help close the existing gaps: wind may bring earth, insects may bring seeds. Both settle into the cracks, thus bonding the existing fractures. New growth emerges from this. The existing elements, however, serve as the foundation for the new. (Neue Vorarlberger Tageszeitung, 2019)

In line with Eric Kandel's ideas, Rabensteiner's sculpture reflects his insight that both the present and the future are only possible through the remembrance of the past. This is symbolized by the stone and its cracks. They remain, just as the ideological and material framework in which the memorial is embedded remains. These are e.g. the neighbouring hospital and the former old people's home. Yet, between and on top of the cracks and fractures of the past, something new may grow, through the work of nature and humanity. The memorial, the stone, was broken by the artist and shaped at the breakpoints by his hands. It serves as a reminder of the crack that the Nazi euthanasia caused within the Hohenems community and in at least 13 families from the area, from which the victims came. It also points out that something new can emerge without needing to forget the old.

Two reactions to the opening of the memorial on 27 November 2019 are symptomatic of the lasting impact of the Nazi past on the families of the victims. While one family, with many descendants, was personally present and read a message of greetings from the 93-year-old son of a war veteran and Valduna patient who was murdered in Hartheim in 1941, the nephew of a Catholic nun who was also deported to Hartheim through Valduna in 1941 and murdered there rejected the invitation to the

commemoration ceremony. He campaigned against the event and the memorial in advance. In his view, this memorial was inappropriate because it was designed without naming individual victims.

In fact, after extensive debates and a mutual briefing session with a professional contemporary historian in the spring of 2019, the Cultural Committee of the Hohenems City Council decided that the victims of Nazi euthanasia — which included both the murdered individuals with disabilities and the surviving individuals with disabilities who were forcibly sterilized and/or subjected to involuntary abortions — would be commemorated collectively rather than individually on the sculpture of Udo Rabensteiner. To honour all these victims — the murdered, the survivors who were forcibly sterilized, and those subjected to forced abortions — Hohenems chose a general wording for its memorial. It reads: "In memory of the Hohenems victims of Nazi euthanasia and persecution."

However, Hohenems does not commemorate all victims of Nazi euthanasia entirely without names. Those 13 individuals who were known at the time of the memorial's unveiling in 2019 are listed with their first names, life dates, and places of death on the Hohenems Town website. (Hohenems, 2025) All victims, those who were murdered and those who survived are named there, including the men and women with disabilities who were forcibly castrated or sterilized or whose pregnancies were terminated against their will.

This Hohenems approach — a digital open memorial book that can be continuously expanded through new research findings or information from contemporary witnesses and relatives — enables a participatory culture of remembrance. With the biographical details of those persecuted and murdered under Nazi euthanasia made globally accessible through a digital list on the Hohenems town's website, it is possible to reconstruct these individual identities through public archive records, such as civil registries, many of which are also available online. Such an approach, however, requires participation in the research process. And it is

precisely this that is desired in the Hohenems model of participatory remembrance — in contrast to other static memorial sites in Vorarlberg. By involving anyone interested in the research process, the responsibility for remembrance is not assigned solely to an anonymous society or to historians appointed in the public sphere, but instead returned to where it truly belongs: to the people themselves — to the relatives of both victims and perpetrators, to the bystanders of history, and to those who help to shape remembrance. (Weber, 2019)

If remembering is a fundamentally human activity — as Eric Kandel demonstrated — then it is the task of historical memorial sites to stimulate that activity. They can do so, for example, by turning those who are part of history into active participants in remembrance culture — in the spirit of the imperative coined by Sven Lindqvist in 1978: "Dig where you stand!" (Lindqvist 1991) Historical games use this cognition, too. In general, they demand participation, potential and agency as crucial factors for the player's motivation. (Groschek, 2023, p. 63) So does the Hohenems open memorial book.

In the case of Hohenems, this concept proved effective within the first three years after the establishment of the memorial site for victims of Nazi euthanasia. The related victims list on the town's website had already reached version 3.0 three years after its initial publication. In other words, the list first published in 2019 had been updated twice within that time due to new research findings. They were made possible through the digital open memorial book. Anyone interested can participate in this local history research and experiences agency. Therefore, he or she is empowered to support the shaping of the narrative about Nazi euthanasia. According to German experiences this is a condition how remembrance may become playable. (Groschek, 2023, p. 64)

Such a playable remembrance was also made possible because the Hohenems memorial for the murdered and surviving victims of Nazi euthanasia was integrated into the broader social space of its surroundings through various initiatives. For example, in addition to school-based programs, historians carried out

educational projects with community-based youth work programs, and the memorial was established as a stop-on at a medical history walking tour through the town of Hohenems. It may be booked through the Hohenems Jewish Museum guide.

5. Remembrance Work as a Play-Pedagogical Intervention in Youth Work in Hohenems

On 9 May 2024 the participants of a city rally organized by *Offene Jugendarbeit Hohenems* (OJAH) used the digitally available biographical sources on the town's website mentioned above to learn about those individuals who were persecuted and murdered by the Nazi regime because of mental and/or physical disabilities. At the site of the memorial, the OJAH city rally participants spoke about their lives, drew comparisons to life of people with disabilities in the present, and transformed a nearby tree into a temporary memorial. They did so by writing messages to the deceased and murdered victims on small postcards and hanging them on the tree. By doing so, the teenagers who took part in the OJAH city rally created a fleeting monument that interacted with Udo Rabensteiner's permanent stone sculpture. With their handwritten cards, they filled it with present-day life. Ultimately, the rally participants also responded to the guiding question of the OJAH event which was: *How do we remember as a society as well as individuals?* Their answers were multi-layered. The only agreement was that such a "How" must be open and not closed. It should be in motion and not stable. And it cannot be static, but dynamic. In general, such a "How" must be as diverse as the people who approach remembrance from the present. Each of them does this with his/her own biographical background and an individually framed interest in the discovery of the human past.

In the winter of 2025/26, OJAH plans to expand remembrance work for the murdered, persecuted and surviving people with disabilities in Hohenems by adding another present-day dimension through play-based educational workshops. For example, by designing an escape room they aim to complement the

participatory approach taken by the Hohenems Euthanasia Memorial since 2019 with a playable form of engagement and education. This initiative will reflect German experiences such as the ones of the Memorial Brandenburg an der Havel and the Memorial Hadamar. Both were Nazi killing center for disabled people. Brandenburg launched a first ever website in Easy Read about the local history of the Nazi mass murder of disabled people in February 2022. (Mansfeld, 2024, p. 74) Hadamar opened a first ever digital exhibition about teenage victims of mixed German-Jewish background in September 2023. (Jost, 2024, p. 56)

6. Conclusion

The involvement of young people such as the OJAH visitors and through them in addition their families and both digital and physical social communities in a participatory culture of remembrance of Nazi euthanasia was first realized in Vorarlberg in 2008 through an exhibition project at the Egg Museum. This project, guided by a professional contemporary historian and carried out in cooperation with the Bregenzerwald Cultural Forum, engaged students from several regional secondary schools and the High School (*Bundes-Oberstufenrealgymnasium*) of the region. The exhibition team tasked the students with using victim lists it had compiled to visit their home communities and, through oral history, trace the life stories of people with disabilities who had been harmed by Nazi euthanasia in various ways. (Weber, 2008)

Based on this assignment, a physical "Book of Victims" was created, which was presented as an independent station within the Egg Museum exhibition. It was mounted on a wall in the form of a large-format wooden book, inviting visitors to browse and look up information. It symbolized the diverse ways in which young people and villagers engaged with the industrially organized mass murder of people with disabilities in the Nazi era from a contemporary perspective. At the opening ceremony, one class performed their page as an action theatre, commemorating the deported and murdered victims.

What no one openly spoke about in the communities were the stories of those people with disabilities who were forcibly sterilized and survived like Anna and Rosa mentioned at the beginning. Fates such as these were therefore not documented in the physical "Book of Victims" displayed in the Egg Museum exhibition. The shame was too great or the medium too public. When the exhibition was dismantled, this open wooden memorial book disappeared from the public space and withdrew from the region's collective memory. As a result, in the sense described by Eric Kandel, it could no longer serve as one of several foundations for dynamically and participatorily shaping the future from the past and present.

The digital open memorial book of Hohenems for all victims of Nazi euthanasia—the murdered and the survivors, the forcibly sterilized and the forcibly aborted—keeps this possibility open as long as it remains digitally accessible. It also offers the opportunity to remember the perpetrators alongside the victims. Until now, this perspective has only been implicitly present in all memorial discourses or narratives or (digital) games through a historicizing view of the victims.

Naming the perpetrators, who caused the suffering and death of the victims, at memorial sites or in historical games will significantly expand dynamic and participatory remembrance into the future. The so-called New Media offer many possibilities to do this, which can be proactively utilized in the 21st century. They have the ability to transform participants in a culture of remembrance into active contributors in an ongoing memorial process. So have digital games. The OJAH escape room plans are targeting exactly this level of a dynamic and playable remembrance. They will offer the possibility of a play-based intervention in a civil discourse about recent local history. This may empower people to write their own history and experience agency, both still based on academic foundations.

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THE ROLE OF PLAY IN EXTREME LIFE CONDITIONS: INSIGHTS FROM THE PLAYWORLDS OF CONCENTRATION CAMPS AND GHETTOS

Beatrix Bianka Bauman[1]

Abstract

During the Holocaust, Jewish and Roma communities endured profound social and familial crises, as the inhumane conditions in ghettos and concentration camps—characterized by hunger, overcrowding, terror, violence, and disease—radically transformed their lives. Despite the limited scholarly discourse on the relationship between play and the Holocaust, this research explores the complex meanings that play assumed under the extreme circumstances of ghettos and concentration camps. The study aims to investigate the role of play within this critical historical context, viewing it as a manifestation of humanity that served as a means of survival, social interaction, and the preservation of hope. By analyzing historical sources and survivor testimonies, we can reconstruct patterns of play that reflect a cultural framework responsive to camp life and illustrate the community-building role of resistance. This research contributes to expanding interpretative frameworks in historical scholarship and, to some extent, in educational science, with a particular focus on examining children's perspectives and how traumatic experiences are represented through play.

1 Affiliation: University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary.

1. Introduction

Children's play represents a crucial aspect of the human experience during the Holocaust. However, examining this subject raises significant historiographical questions related to the complexities of studying such a tragic period. Despite the temporal and spatial distance from these events, discussing the unique cruelty of the Holocaust—especially when it involves children—evokes deep emotional responses. The immense suffering endured by victims and their struggle against death defies rational analysis. This absurdity, which permeates Holocaust research, compels us to confront questions that resist straightforward answers.

The relationship between children's play and the Holocaust is both conceptually confusing and emotionally fraught. In Vilna (Vilnius), for instance, many believed that "there is no place for entertainment in a cemetery" (George, 1990). This raises a critical question: Is play, and it study compatible with the Holocaust? While some may argue that play is disrespectful in such contexts, this perspective is overly simplistic.

Indeed, the association between children's play and the Holocaust is a relatively new area of scholarly inquiry. For children in ghettos and concentration camps, play was not merely a recreational activity; it served as a vital survival mechanism and a form of psychological resistance. This study seeks to address this gap in the literature by foregrounding the significance of play within these extreme historical conditions. Specifically, it aims to elucidate how play influenced the daily experiences of children, identify the forms of play that emerged, and explore the broader psychosocial and cultural implications of these activities in environments marked by systemic violence.

2. The Conceptual Convergence of Play and the Holocaust

The definition of play lacks a unified scholarly consensus and encompasses a multitude of meanings. It can refer to an activity, an act of playing, a physical object, or even an artistic expression, such as the performance of stage actors or a violin virtuoso. Furthermore, the concept of play extends to various manifestations of everyday life.

Play has been studied across numerous academic disciplines and has held significance throughout various historical periods. Consequently, theories of play can be categorized based on interpretations of the concept—either as a phenomenon or as an activity. Interpretations of its function diverge, giving rise to biological, aesthetic, psychological, and pedagogical approaches to play theory.

Konstantin Dmitrievich Ushinsky (1824–1870), a Russian educator and theorist of play, viewed play as a reflection of reality, which children supplement and animate through imagination based on lived experiences. This perspective aligns closely with the forms of play observed in extreme life circumstances and stands in conceptual opposition to Johan Huizinga's theory of play. Huizinga (1949), a Dutch scholar, defined play as a free sequence of actions, consciously situated outside the bounds of ordinary life, which he characterized as inherently unserious. This definition suggests that play exists in a realm of carefreeness, devoid of purpose. However, if play were truly outside the realm of ordinary life, one must question its capacity to reflect reality and survival strategies.

In this context, positioning play beyond everyday life does not imply an escape from reality; rather, it signifies a functional adaptation to an irrational world. Play is not a frivolous activity; it can emerge even in the most extreme environments. Thus, the interpretation of children's play cannot be reduced to notions of lightness or lack of seriousness. Instead, play is inherently bound up with seriousness and reflects the society in which it occurs. In extreme circumstances, the forms of play that emerge may create situations where individuals can "practice" survival.

While this assertion may seem to contradict the interpretation offered by internationally recognized physician Endre Grastyán (1983), who described play as a means of occupying the nervous system's idle states and making life more bearable, the two perspectives are nonetheless interconnected. The adaptation required for survival links them: in this context, play fulfills an adaptive function not in the conventional sense, but in terms of existential sustenance. It is crucial to reiterate that play, as an activity, is not merely a form of recreation; over time, it has evolved into a survival strategy. The forms of play that emerge in extreme circumstances contrast with Grastyán's (1983) definition, which asserts that play lacks adaptive utility concerning existential sustenance.

The term "Holocaust" appears multiple times within the Greek translation of the Bible, originally denoting "completely burnt" and referring figuratively to a burnt offering. Beyond its religious connotations, it signifies the singular genocide perpetrated during World War II—the systematic annihilation carried out by the Nazis in extermination camps, resulting in the deaths of Jews, Roma, homosexuals, communists, and Jehovah's Witnesses. Over time, however, the semantic scope of the term has expanded. In contemporary usage, it is often employed in broader contexts, such as "Roma Holocaust" or "eco-Holocaust," which refer to genocide and catastrophe, respectively. Another term, less widely used, is "Shoah," derived from the Hebrew word "hashoah," meaning calamity or disaster. It is notable that "calamity" appears first in interpretive contexts, as the Hebrew Scriptures contain passages where God punishes His chosen people with affliction. Historians also refer to expressions such as "Final Solution" (Endlösung), highlighting the racial policies of the Nazi era (Kisantal, 2018).

The broader semantic application referring to genocide is problematic, as it often highlights certain ethnic groups as exclusive victims (e.g., "Jewish Holocaust," "Roma Holocaust"), thereby implicitly marginalizing other social groups that perished during the Holocaust. While it is indisputable that the mass extermination primarily affected Jewish and Roma communities, this approach may distort the overall picture of the events and the diversity of the victims.

3. Children in the Holocaust

A nuanced understanding of children's play during the Holocaust necessitates a historically situated depiction of the environment in which these children lived and were shaped. Historical documents and archival sources substantiate the claim that the treatment of children in ghettos and concentration camps was a direct consequence of National Socialist racial ideology.

This ideology, while lacking cognitive coherence, functioned as a pseudo-scientific framework constructed by the Third Reich. Importantly, it is crucial to emphasize that anti-Jewish hatred and authoritarian arbitrariness intensified when children became designated targets. Noah Zabludowicz, a witness at the Eichmann trial, provides a historically grounded and visceral account of this brutality, recounting an incident in Ciechanów where an SS officer lethally assaulted an infant by forcefully striking the child against the edge of a curb (Gideon, 1966). German authorities viewed children as impediments to the daily labor operations within concentration camps. During the deportation wave known as *Kinderaktion*, pregnant women and young children were systematically removed and transported to extermination centers, where mass executions occurred. This process of deportation was part of a broader systematization of ghettoization: beginning in 1940, ghettos of varying sizes, camps, and segregated Jewish residential quarters were established in large numbers (for more details, see Rukowiecki, 2012).

The population of the ghettos, especially children, faced complete social and economic isolation, which drastically reduced their chances of survival. Hunger had the most profound and destructive impact on children, affecting them physically, mentally, and emotionally. While starvation severely compromised their physical health, the social and spatial conditions of ghetto life imposed significant psychological and cognitive stress. Overcrowding and the relentless struggle for basic necessities further eroded their emotional resilience. In these dire circumstances, children internalized the belief that their survival depended on being perceived as fit for labor. This existential struggle led to

an accelerated emotional and cognitive maturity, a phenomenon vividly illustrated by the poetry of Avremek Koplowicz, one of the youngest child-authors in the Łódź Ghetto. His poignant poems were discovered in 1983 by his half-brother, Eliezer Greenfelt, who later entrusted them to Yad Vashem (Metzger, n.d.).

Figure 1. Children assembled during the "Gehsperre" action in the Łódź ghetto. They are being transported by trucks from the ghetto in September 1942. (United States Holocaust Memorial Museum, 2007)

To an external observer, the ghettos of Nazi-occupied Europe presented an unfathomable sight, with children in ragged clothing standing in streets ravaged by destitution, highlighting the cruelty of their conditions. The disparity between the Warsaw and Theresienstadt ghettos was primarily in the severity of living conditions: Warsaw faced markedly harsher circumstances. Despite this, parents risked retaliation to provide their children with opportunities for movement and play, often through clandestine exits (George, 1990).

The Wiener Holocaust Library provides a comprehensive account of the Warsaw Ghetto's conditions, where extreme overcrowding—over 400,000 individuals in just 1.3 square miles—led

to a severe sanitary crisis. Most residential units lacked running water, and essential hygiene items were scarce and of poor quality. Public health infrastructure was inadequate, with only five bathhouses serving approximately 17,000 individuals per month (The Holocaust Explained, n.d.).

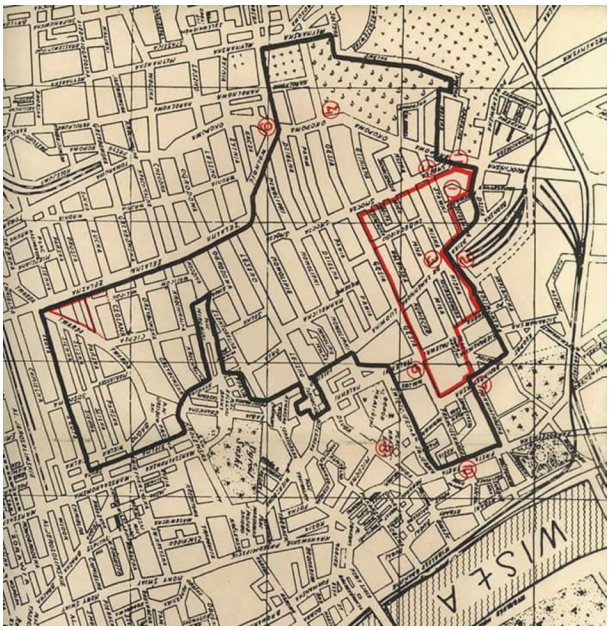

Figure 2. Map showing the boundaries of the Warsaw ghetto, where 400,000 people were confined. (The Wiener Holocaust Library)

Despite the harsh conditions, residents sought to preserve cultural aspects of their pre-ghetto lives. Numerous schools operated clandestinely, and adults participated in lectures by specialists, including Professor Ludwik Hirszfeld, who provided medical instruction to aspiring physicians (The Holocaust Explained, n.d.). Educational initiatives, however, engaged only a limited number of youths. Up to 1942, the Warsaw Ghetto supported bookstores and theaters, representing significant cultural resistance. The Bersohn and Bauman Children's Hospital, established in the 1870s and incorporated into the ghetto in 1940, conducted research on starvation's effects on children and adults. Findings were transmitted to the ‚Aryan' side, and a report with photographs and testimonies was smuggled out in 1942 or 1943. Most physicians

involved in the project perished during the war, except for Professor Emil Apfelbaum, who intended to publish a volume titled *Maladie de Famine* but died before it could be printed.

Figure 3. Children and institutional staff having their lunch at a school in the Warsaw ghetto. (Ringelblum Archive / Jewish Historical Institute)

In spring 1941, schooling in Warsaw partially resumed, though most schools operated under difficult, often secretive conditions. Children frequently roamed the streets unsupervised while various organizations worked to alleviate their burdens. For new institutions, securing spaces for educational and recreational activities posed challenges. Educators believed that play and physical movement were essential for children's cognitive development, particularly in mitigating the effects of trauma (George, 1990).

While these documents might seem only tangentially related to the theme of play, they provide invaluable insight into the everyday life of the ghettos and highlight differences among them, which are relevant when considering the camps. The presence of play in the inhumane conditions of ghettos and camps may initially appear paradoxical, given the dire circumstances that made

children's survival precarious. However, evaluating the effectiveness of extermination plans extends beyond mere statistical analyses of victim numbers. Understanding the role of play invites a deeper examination of the broader implications of survival strategies during this period. It is crucial to explore aspects of ghetto society that reveal deeper social and cultural realities. This exploration prompts the question of why this study emphasizes these facets more than those of various camps.

This analysis begins with the understanding that play was not universal; its occurrence depended on specific circumstances. Generally, children in ghettos had more opportunities for play than those in camps. However, significant differences existed not only between ghettos but also among various types of camps, raising the question of whether ghettos can be compared to certain camps. For instance, comparing the Warsaw ghetto with the Vienna residential camp (Wohnlager) may not yield a nuanced understanding of children's play opportunities, especially considering the unique conditions of each. While it might seem straightforward to conclude that the Vienna camp offered better conditions for play, the reality was that such opportunities were largely determined by chance. This is illustrated in the testimony of Holocaust survivor Zsuzsanna Klein, who recalled being taken to an old school building in the Vienna camp where the local Lagerführer displayed a relatively lenient attitude. However, this leniency did not apply uniformly across all areas of the camp (USC Shoah Foundation, 2001). Thus, comparisons may be misleading, as the environments for play in ghettos and camps were shaped by individual circumstances.

4. Cognitive Capacity within the Dimensions of the Holocaust

During the Holocaust, the preservation of an individual's intellectual and physical autonomy was as significant as access to food necessary for survival. This inner struggle is evident in the educational and cultural initiatives within the Warsaw Ghetto and the Łódź Ghetto, where a playground and a kindergarten

operated—demonstrating the community's commitment to preserving human dignity and intellectual engagement. The concepts of human dignity and intellectual participation are closely intertwined; thinking and intellectual involvement are, in themselves, expressions of human dignity. When examining the sequence of events during the Holocaust, it is crucial to consider this aspect for a deeper understanding, as neglecting it may distort the exploration of this complex historical reality.

In the ghettos, educational activities often had to be disguised as play to avoid attracting the attention of the authorities. Children frequently exhibited a form of apparent "respect" in the presence of SS soldiers, and these behaviors often included ironic or humorous elements, serving as acts of resistance against authority through mockery. Such opposition can be interpreted as one mode of coping, although it manifested in various forms—not all individuals in the ghettos responded with humor. In her work, Sheva Glas-Wiener (1983), a teacher active in the Łódź Ghetto, documents children's intense, angry reactions, suggesting that silent, nonverbal forms of response were also part of the spectrum of reactions.

Resistance to the violent acts perpetrated by German authorities was prominently reflected in the diversity of children's play. These playful activities were not merely reactions to trauma; they served as a vital means of coping with everyday internal tensions, significantly shaping their psychological and social development (George, 1990).

The behavioral patterns observed during play illustrate children's adaptive learning mechanisms, enabling them to adjust effectively to the demands imposed by their environment in order to survive. In this context, Endre Grastyán's (1983) assertion—that play does not contribute to adaptation regarding survival—seems questionable, as the behaviors associated with play may have indeed facilitated successful adaptation to environmental challenges. For instance, Holocaust survivor Barry Spanjaard (1981) recounts an episode in which a boy's life was saved by playing chess in Bergen-Belsen—a game for which he exchanged his daily bread ration. Similarly poignant testimony is found in the preserved manuscript of Genia Silkes, a teacher in the Warsaw Ghetto, held by the YIVO Institute

5. Children's Play Activities in Ghettos and Concentration Camps

"To say it plainly, once and for all: a human being only plays when they are truly human – and they are only fully human when they play." (Schiller, 1960, p. 221). This poignant quotation from Schiller encapsulates the foundational premises of the present study.

For child victims of the Holocaust, the initial phase marked by segregation orders and ghettoization likely represented the most severe psychosocial strain. The war radically altered their living conditions, dismantling the emotional and physical security previously afforded by the family environment. The alienating and oppressive conditions of ghettos, camps, and hiding places profoundly impacted children's development, undermining both their emotional stability and cognitive balance.

Despite social, age-related, and environmental differences, children exhibited an instinctive ability to recognize the psychological significance of play. The need for play persisted even under the most extreme conditions, highlighting its importance for mental well-being. Diaries and memoirs indicate that play was crucial in helping children endure the hardships of life in ghettos and concentration camps.

It is difficult to fathom that forms of children's play could emerge amid the extreme conditions of extermination camps. Due to severe restrictions on freedom and the ongoing deterioration of living conditions, these play activities underwent significant transformation. Children were compelled to adapt to their socio-economic realities, leading them to develop new activities. Demonstrating remarkable creative agency, they not only devised new play structures but also reinterpreted existing games, reflecting the profound changes in their lives (George, 1990).

Play, therefore, authentically responded to the specific conditions of ghettos and concentration camps, serving as a psychological coping mechanism in the face of traumatic realities—a fact strongly substantiated by the writings of Holocaust survivors Mark Dvorjetski (1963) and Dawid Wdowiński (1963).

For these children, death was an ever-present aspect of daily life. Yet, even under such dire circumstances, play found expression—despite the grim reality that, in most cases, death awaited them. The autobiographical notes of Auschwitz commander Rudolf Höss (1959) reveal that even perpetrators involved in the killings experienced emotional conflict, creating a tension between human sentiment and the sense of duty imposed by orders: "On one occasion, two small children were so absorbed in some game that they quite refused to let their mother tear them away from it. Even the Jews of the Special Detachment were reluctant to pick the children up. The imploring look in the eyes of the mother, who certainly knew what was happening, is something I shall never forget. The people were already in the gas chamber and becoming restive, and I had to act. Everyone was looking at me. I nodded to the junior noncommissioned officer on duty, and he picked up the screaming, struggling children in his arms and carried them into the gas chamber, accompanied by their mother who was weeping in the most heart-rending fashion. My pity was so great that I longed to vanish from the scene; yet I could not show the slightest trace of emotion." (Höss, 1959, pp. 170-171).

Children's efforts to construct self-contained worlds through play were evident across nearly all ghettos and camps. Endowed with remarkable imaginative capacities, they created alternative realities—not merely as an escape from harsh conditions, but as a purposeful strategy for adapting to profoundly inhumane circumstances.

Play activities manifested in a diverse array of forms; however, role-emphasizing games appeared to dominate. These forms corresponded most closely to the affordances of their environment and provided the greatest scope for symbolic and creative expressions of resistance. It is essential to note that other types of play were also present.

6. Types of Play in Ghettos and Concentration Camps

The following types of games and playing activities are documented by George Eisen (1990), however not systematically classified. In view of this lacuna, the present study seeks also to establish a typology of the various forms of play in terms of Jean Piaget.

Constructive play:

- *Bunker building*: This form of play cannot be categorized as constructive play in the conventional pedagogical sense, as children lacked access to toys in the traditional understanding of the term. Nevertheless, this absence did not inhibit their creative engagement: children independently gathered wooden planks and bricks, and undertook the excavation work themselves. The bunkers constructed in this manner exhibited such a high degree of realism that members of the SS units mistook them for actual hiding places.

Symbolic Play as Role play:

- *Playing Family (in various forms):* Family games in the ghettos presumably differed little from contemporary notions of familial play. Although historical records are limited, it may be inferred that each child engaged with the cruelty of their environment in a highly individual manner. For instance, one child in the Łódź Ghetto consoled their toy doll during play to prevent it from being 'taken by the Germans'; for this child, managing hunger also assumed a central role, as they informed the doll that no more food could be given that day. Considering that children's behaviors – often embodying subtle forms of resistance – manifested in diverse ways, whether ironic, emotional, angry, quiet, or silent, it may be inferred that such behavioral patterns were likewise reflected in their play.

- *Playing war:* This category encompasses bunker demolition games, action games, and the game titled "Ponary" (Liberation), which was played in the Vilnius ghetto. In this game, children reenacted scenes from the persecution. Those assigned the role of "Jews" were taken to Ponary – a wooded area near Vilnius – by peers playing "Gestapo" officers, where the scenario simulated an execution. The climax of the game occurred when the children playing the role of "Jews" attacked the "Gestapo" officers and retaliated using their weapons – sticks. The "Gestapo" officers were then tied up and dragged to the execution site, where they were lined up and symbolically executed. This role reversal within the play constitutes a specific form of processing traumatic historical experiences.

- *Checkpoint Gate:* The scene depicted the difficulties experienced by Jews returning from forced labor, as well as by workers subjected to inspection by the German police. Within the role-play, two central figures were represented: "Levas", the widely reviled commander of the Jewish gate guard, and "Franz Murer", one of the Gestapo's notoriously brutal officers. Other children assumed the roles of returning Jewish laborers attempting to smuggle food into the Vilnius ghetto. While the gate guards conducted thorough inspections of all participants, the appearance of "Murer" provoked panic among the children portraying "workers". In response, the children attempted to conceal the food they were carrying, but "Murer" discovered it on some of them. He set aside those playing the roles of "workers" and had them symbolically whipped.

- *Waiting in line (the play had no specific name):* The girls, imitating their mothers and other women, acted out standing in line, clutching food ration coupons in their hands. The scene was exceptionally realistic; the children shouted and fully immersed themselves in the role of misfortune.

- *Chairman of the Jewish Council:* This game portrayed Chaim Rumkowski, head of the "Judenrat" in the Łódź ghetto. One child took on the role of Rumkowski, marked by affected mannerisms and abuses of authority: he punished his opponents and lavished his supporters with privileges. The other children played his followers, who initially obeyed him but later refused to remain subordinate after Rumkowski began to exhibit an authoritarian demeanor. The game symbolically underscored both the necessity and the potential for resistance.

- *Gas Chamber Game:* During the play, the children dug holes in the ground and, one after another, threw stones into them – each stone symbolizing a person sent to the gas chamber. In the meantime, they imitated the screams of those being sent to the gas chamber.

- *Blockade:* In the course of this role play, the children formed distinct groups. Some played "police officers", other "Germans", while a third group took on the roles of "Jews", who were required to hide in imagined shelters and bunkers – under tables and chairs, inside barrels, or in garbage bins. The role with the highest prestige was "Kommandant Kitel", the Gestapo commander, typically assigned to the strongest boy or girl. If a child playing the role of a "police officer" came across a child portraying a "Jew", they handed them over to the "Germans", thereby reinforcing the hierarchical structure established within the play. The play was originally rooted in hide-and-seek, but both its name and its structure underwent transformation.

- *Appel:* This play depicted the daily roll call conducted in the concentration camps. It became an integral part of everyday life in Auschwitz-Birkenau.

- *Lagerältester and Blockältester:* This game involved the imitation of the camp's senior prisoner (Lagerältester) and the senior block leader (Blockältester). The "Blockältester" was subordinate to the Lagerältester, whose

responsibility was to maintain order within the camp. Further documentation concerning the manner in which this game was played is not available; however, it is clear that these two games were closely connected and formed a single, coherent activity.

- *Grave Digging:* The children dug a pit into which they placed one of their peers, who was symbolically referred to as "Hitler" during the course of the play.

Games with Rules:

- *Card game* (made from cigarette boxes): Following the collection and categorization of cigarette boxes according to color and number, the children independently developed games, consciously striving to ensure that these games formed a coherent system. The structural logic of these systems was likewise determined by the children themselves, relying on the creative power of their imagination. It should be emphasized that no further written or material documentation of these games has been preserved.

Other types of play:

- *Klepsi-Klepsi*: It was a social game that derives its name from the group language, where „klepsi" means „theft" or „to steal." The essence of the game lies in determining who can deliver the strongest slap to the blindfolded child standing in the center. When a player strikes the central participant with force, the group erupts in laughter while the blindfolded child attempts to identify the culprit—usually indicated by the one making grimaces and appearing most "guilty." If the blindfolded player guesses correctly, the grimacing player takes the blindfold and moves to the center, allowing the game to continue in this manner. This game was traditionally played in Birkenau, creating a lively and playful atmosphere among participants.

- *Castanet Game*: The game required two flat wooden pieces: one positioned between the index and middle fingers, the other between the middle and ring fingers. The resulting sound resembled the clicking of castanets; the louder the sound, the more successful the game was deemed. It was played with great enthusiasm in the Łódź Ghetto.
- *Clothing Collector Game:* In this game, children collected the clothes of the deceased. No further documentation survives; it can only be inferred that the act of collecting was transformed into a competitive activity. (George, 1990)

In examining these various forms of games and playing activities in ghettos and concentration camps, we not only uncover the resilience and creativity of children in the face of unimaginable adversity but also gain insight into the psychological mechanisms through which they processed their traumatic experiences. The categorization of these play activities, as informed by Jean Piaget's typology, highlights the multifaceted nature of childhood play, even in the direst circumstances.

7. Conclusion

Based on the available sources and observations, it can be concluded that children's behavior during the Holocaust can be viewed as "usual" to the extent that the prevailing environmental conditions allowed for it. Within the behavioral and play patterns observed, a distinctive cultural structure emerged—specifically adapted to the harsh realities of camp life. Notably, many play activities exhibited motifs of resistance, serving as a crucial factor in fostering communal cohesion among the children.

The prominence of role-playing games in ghettos and concentration camps suggests an interpretive framework that supports the notion that children's learning mechanisms function adaptively, particularly concerning survival strategies and the processing of trauma. The significant presence of role-play thus offers new perspectives for understanding how trauma is processed, highlighting the need for further research in this area.

The frequent occurrence of role-playing games among children in these contexts suggests a research direction focused on identifying the factors that influence the preferred forms of role-play. This raises important questions about the additional significance that role-play may hold within such specific historical contexts.

Given the profound historical backdrop, it is crucial to emphasize that evaluating these forms of play from a traditional pedagogical standpoint is not warranted. Instead, they should be understood as authentic reflections of children's imaginative worlds, shaped and informed by their historical experiences. This perspective underscores the complexity of childhood play during the Holocaust and the resilience of children in navigating their dire circumstances.

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CHAPTER 6
PLAY AND REALITY

THE THIRD MISSION OF CYBERTOYS

László Z. Karvalics[1]

Abstract

Typically, we look at cybertoys as parts of digital culture and parts of the age-sensitive toy business. From an industry approach, cyber toys are new channels of profit-production[2], forming a new, innovative cluster of products with growing popularity, designed for kids. From a totally different, fresh perspective, cyber toys constitute the first encounter of children and digital ecosystem. I have great confidence in the coming birth of a future superplatform, a personified entity (I call it Artificial Lifetime Compeer, ALC), which is growing up and improving together with its one and only human counterpart. But before starting the design of the architectural basics of this emerging relation between machines and humans, we should understand the motives and reasons behind the fears and repugnance about cyber toys.

1. Introduction

In the case of cybergames (designed for users aged 8-88), it was relatively quick to light on the "progressive" side, identifying their positive effects as a special source of joy and delight ("first mission") and as a generative tool, augmenting cognitive development, supporting educational functions, and promoting the advent of serious games ("second mission"). Finally, the third mission also became recognizable: cybergames can be excellent tools to facilitate the production of new knowledge, awareness, and competencies (Z. Karvalics, 2018), inspiring and motivating gamers to participate in civilization-level and local problem-solving (McGonigal, 2011).

1 Affiliation: Institute of Advanced Studies, Kőszeg (FTI/IASK)

2 The global smart AI toys market was valued at USD 12.143 billion in 2022 and is projected to reach USD 36.377 billion by 2030. See: Smart AI Toys Market Size, Share & Trends Estimation Report https://www.contrivedatuminsights.com/product-report/smart-ai-toys-market-230581/?utm_source=Dhananjay&utm_medium=Li

It is time to draw up the same inventory of cybertoys, designed for the youngest digital citizens (years 1-7), since the interlocking scientific narratives are in embryonic phase, and the social resistance is strong against the proliferation of these tools. We can see strong similarities between the missions of cybergames and cybertoys.

The first mission of the cyber toy universe (virtual pets, animated toys, interactive dolls, intelligent dinosaurs, remote-controlled ducks, funny digital gadgets, cyberteddies, and more) is to propagate the number and types of amusing, enjoyable, loveable artifacts for kids.

The second mission is to add plus abilities to these artifacts, carrying educative functions, supporting the cognitive and/or mental development of their juvenile owners. At this moment, the third mission is almost invisible and under-highlighted.

The goal of this paper is to formulate a strong hypothesis about this "third mission": cybertoys are entry points of a lifetime connection, cooperation and co-habitation with the digital ecosystem, as first representatives of its life-supporting tools and services.

2. Grok and Friends: Has the Era of AI-Powered Plush Toys Arrived?

Grok and *Grem* are the flagship products of a company called *Curio*, which has rapidly gained popularity since December 2023. They are tiny, rocket-shaped, lithium-ion battery-powered interactive creatures with interchangeable plush covers, drawn mouths, ears, and eyes, and collectible stickers that come with their boxes. The first generation still requires a Wi-Fi connection, but their developers hope that they will eventually be able to function without a network.

Offered at an introductory price of less than $100, the toy can talk to children in the voice of Canadian singer (and one of the company's founders) *Grimes*. It tells stories, gives instructions on how to fold paper airplanes, entices its human partner to compete in

bizarre walking contests, names constellations after they have been identified together, explains why giraffes have long necks, and, among many other things, is always ready to create doodles, magical creatures, or superhero stories together. He tries to answer all of the child's questions.

Many people believe that Grok has brought about seismic changes in consumer electronics (Sehdev, 2023). However, this trend began back in 2015. To start with, Google patented a furry toy bear equipped with cameras, microphones, and an artificial intelligence module. The process itself began in February 2012, and the patent covered not only teddy bears, but also "any *doll, toy, animal, mythical creature, or inanimate object that resembles a human being*." (Sehdev, 2023) It could do almost everything Grok could do. It recognized when someone looked at it. It responded to speech and (with the help of its image recognition module) to sights. It carried out instructions (but only obeyed the voice and face it recognized). If necessary, it would start playing music on its own, turn on the television, or (via its Wi-Fi connection) activate a "smart home" application. And you could hug its softness just the same.

That same year saw the debut of Mattel's internet-connected talking doll, *Hello Barbie*, and *Elemental Path's* "smart dinosaur" got off to a sensational start on Kickstarter. Except for the camera and remote control, it could do everything Google's teddy bear could do, but much more: Watson's soul was transferred into the fabric-textured rubber toy. IBM's question-and-answer, speech-recognition system, already proven as a pinnacle of artificial intelligence development, could converse with its little owner. It told him stories, gave him puzzles, expanded his vocabulary, taught him to count, and answered all his questions beginning with "where, why, when, who, and what." It does all this in a way that is always tailored to the child's age and previous performance, and can be supervised by parents. Meanwhile, the *cute Codie robot, a Hungarian-developed piece of hardware (and software) resembling a tank and packed with sensors, has been teaching children to program from preschool age by having them overcome obstacles and perform tasks, just like with a toy car.*

"Smart dolls" are capable of only a few operations, and their "dumber" predecessors (dolls that make sounds when buttons are pressed or respond to touch) were once met with disdain. Cyber teddy bears and cyber dinosaurs, on the other hand, have provoked hysterical reactions from parents, educators, and journalists. Thanks to this stormy and disruptive "grand debut" of cyber toys and games (*"evolving from society's love affair with technology"),* leading university professors and thinkers also joined the counter-club, beginning to detect and vehemently describe the *"deficits in social, physical, cognitive, and emotional health, fitness, and wellbeing"* of children, *"abandoning outdoor play for sedentary, indoor cyber play"* and simultaneously, *"finding means to reverse these patterns"* (Frost, 2011, p. 121).

All this set back for many years the developments that pointed in the direction of this special, animal-shaped digital companion offering a natural user interface for children.

Yet animal figures are an excellent choice—as opposed to, say, personified humanoid robots (Kahn, 2012)—as they make it absolutely clear that they are not substitutes for parents, but complementary actors. It can also play a key role in coexisting with the digital world: it is no coincidence that animal figures, in an astonishing variety, are among the earliest cybernetic developments to enter the world of schools (Képes, 2025).[3] The animal humanizes learning and makes it interesting. In the company of real animals (especially baby animals) and animal figures, children can be themselves. (It is no coincidence that bibliotherapy dogs, to whom young schoolchildren read, are so popular: they are enthusiastic and do not constantly correct the reader when they make a mistake.)

That is why the creators of Grok have taken great care to eliminate any points of attack, reassure all parents, and comply with the Federal Children's Online Privacy Protection Act in every respect. The game records every conversation it has with the child. Parents can not only delete the recordings at any time, but also block certain words or topics from appearing. Offline use provides protection against unauthorized access.

3 If you are curious about the 1959 Sverdlovsk cybernetic turtle or the ice hockey cybernetic mouse, also from 1959, as well as more than a hundred of their later counterparts, visit Reuben Hoggett's website https://cyberneticzoo.com/about/

Of course, these arguments did not convince those who see Grok and Grem not as an extension of parental tools, but as usurpers of the parental role, who channel the satisfaction of curiosity away from adults and toward themselves. Many would prefer to remove the speech module from it so that we can return to charming stuffed animals without extra intelligence (Hess, 2025).

However, it is striking that the messages accompanying Grok do not focus on the game's role as a source of joy, a helper and supporter for parents, or the shaping of children's abilities through their parents, but rather emphasize that these *"cute-looking plushies offer a viable alternative to screen time for kids"* (Ha, 2015). What's more, whereas these toys were previously accused of entering children's lives unnecessarily early, reinforcing the negative effects of digital culture, now the opposite is true: they can be seen as an alternative, an escape route. *"Grok isn't just a plush toy, it steps up as the ultimate screen-time disruptor, rebelling against the digital overdose turning our kids into zombies"* (Sehdev, 2023).

This approach further reinforces a long-discussed important direction in game development. Until now, solutions have been created separately for a wide variety of functions, in almost excessive abundance, whether it be "smart" and furry animals, mini-games that can be played on some platform, or interactive story environments. In the case of mini-games, the past decade has been dubbed the "indie apocalypse," and many have speculated about the consequences of the superabundance of games caused by the dramatic reduction in barriers to entry in game production and distribution.

Grok and its peers offer integration opportunities for businesses designing the digital device and service environment of the future. Sehdev (2023) sees this clearly: *"Grok isn't a solo act; it's a maestro orchestrating a future symphony of AI toys playing off- -each other."* However, this integration role may apply not only to toys, but to all solutions that can be classified as "children's informatics." Let's take a look at perhaps the very first type of application, the smart crib. The AI-enabled bassinet manufactured by Bosch, the *Revol*, which will soon be on the market, is a true multimodal

AI infant-care solution.[4] In this, a console arm monitors the baby's heartbeat, breathing, crying, and even if, for example, a blanket or stuffed animal covers its face—in which case it immediately alerts the parents. If the baby cannot fall asleep, the crib starts rocking on its own. If someone whose face is not yet recognized approaches the child, a security alarm is triggered. The data can be stored in the cloud in encrypted form, but it can also remain offline—the parents decide.

But what happens when the era of the smart crib comes to an end and the parent does not delete all the data, but copies it to Grok or Grem's memory? The baby's physiological data and fluctuations in its condition can be useful inputs for any future artificial intelligence device whose task is to intelligently monitor the physiological data of a specific person. And there is no stopping: if it makes sense to think in terms of data continuity with any object in the digital environment, then this is an *extended integration*, only in time. As people change age, the devices are not replaced, but *contaminated.* What is important from the old lives on in the new. Successive generations of devices thus build on each other, feed each other, and there is nothing to prevent the user from being in constant contact with a quasi-identical machine partner that knows more and more. I promote this possibility in my writings as Artificial Lifetime Compeer (ALC). This is the basis for the third mission of cyber toys mentioned above.

Typically, we look at cyber toys as parts of digital culture and parts of the age-sensitive toy business. From an industry approach, cyber toys are new channels of profit-production, forming a new, innovative cluster of products with growing popularity, designed for kids. From this totally different, fresh perspective, cyber toys constitute *the first encounter of children and the digital ecosystem*. Cyber toys are entry points for a lifetime of connection, cooperation, and cohabitation with the digital ecosystem, as the first representatives of its life-supporting tools and services.

4 Bosch Smart Life. (n.d.). Revol: The first AI-enabled crib from Bosch. Retrieved from https://www.bosch-smartlife.com/web/en/baby-crib.html

3. The Toy Carried Over into Adolescence – and Its Civilizational Stakes

When parental supervision and education are supplemented by nursery, kindergarten, and school education, it is well known that curious children who are eager to discover the world face a sharp transition when they have to become part of an educational environment, largely replacing play activities. Here, their education is the institutional objective, and learning is their primary activity. And although public education and schooling have undoubtedly been an important component and driving force of modernization since the end of the 19th century, those who weighed the pros and cons from the child's point of view consistently warned of the counterproductivity and anti-child nature of the prevailing pedagogical regime. Ellen Key went so far as to call what was happening "soul murder" in her legendary turn-of-the-century bestseller, The Century of the Child (1900), published in Swedish.

And strange as it may sound, there has been no institutional and normative return to play to this day. The gamification of education puts play at the service of education. In the hope of greater educational efficiency, it "lets" play into the school walls, but only to meet its knowledge production indicators and plant the elements of the world of knowledge that Freire called necrophilic into people's heads. Paradoxically, humanoid robots, which are becoming increasingly common in schools (and even universities), are also merely educational tools. Rab (2025) reports *that "the French-developed NAO robot is now the world's most widely used educational robot, present in at least 13,000 educational institutions in more than 70 countries. NAO is a charming 58 cm tall humanoid robot used worldwide to teach programming, promote STEM subjects, and assist students with special educational needs ... It engages children in learning through dance and interactive storytelling, while students also learn how to program the robot. The Pepper robot is also used in classrooms: it can recognize students' emotions and modify its communication accordingly, so they are experimenting with how it can help teachers maintain attention and provide differentiated instruction."*

However, a real turning point will only come about if the learnification of gaming takes place while maintaining appropriately structured gaming environments, situations, and tools. This would be a true paradigm shift, *"using games for by-the-way learning ... design, build, or buy games which, apart from the fun factor, are also equipped with the learning factor"* (Hyla, 2015). In a gaming environment, children are "intrinsically motivated to turn their ideas into immersive playable games, social spaces, and even learning experiences" (like in the Roblox universe) (Kleeman, 2022). Learnification makes knowledge selection free. However, in order to create a common set of knowledge that results in an epistemic community and a cooperating generation, game worlds can be "filled" with appropriate sets of knowledge if new knowledge needs to be mobilized for a full gaming experience (or the desired reward). Sehdev (2023) has an exciting sense of the possibilities inherent in this, warning the leaders of the cybertoy industry. *"Leaders should envision a world where your products don't just exist; they coalesce, creating a symphony of joy, a vision for the future—a future where creativity knows no bounds."*

4. Conclusion

A recent archaeological study adds a special message to all this. Meyer and Riede (2025) were able to prove that after 1300, the Norwegians had to leave Greenland because they were unable to cope with the harsher conditions caused by the Little Ice Age. However, the Inuit, who settled in the same place shortly after them, successfully overcame this obstacle and were able to persevere much longer.

Researchers sought to shed light on the reason for this difference and came to a surprising conclusion. They believe that the Norwegians' forced change in lifestyle was not supported by games that strengthen adaptability: Norwegian children simply had access to few and poorly chosen games. The Inuit's rich play culture, on the other hand, helped them to become more creative and adaptable, and to thrive as adults even in harsh environments. Inuit

children had access to more and more varied games, and the differences in the number and diversity of games increased dramatically over time.[5]

In other words, creating a suitable play environment also has survival value. In our world, which has been swept into a polycrisis, riding the current wave of the artificial intelligence revolution, it is by no means irrelevant in what form, how often, and in what configuration digital culture and the world of play encounter each other. But before starting the design of the architectural basics of this emerging relation between machines and humans, we should understand the motives and reasons behind the fears and repugnance about cyber toys.

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5 Seventy-two toys have been found among Scandinavian children, and 2,397 have been found in Inuit settlements. Between 1000 and 1200, eight board games (dolls and figurines) were used by the Scandinavians and 23 by the Inuit, but over the next 200 years, this difference grew dramatically: the former had 11 and the latter 158. The trend was similar in the other four identified game categories: weapon games (including harpoons, arrows, and swords), tools (cooking pots, lamps, and saws), transportation games (boats and sleds), and skill games (such as balls).

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WHAT IS REALITY? A PHILOSOPHICAL INVESTIGATION OF REALITY AND SIMULATION

László Halász[1]

Abstract

The nature of reality has been a central question in Western philosophy since its beginnings. Previously, philosophers developed purely speculative theories, but the development of information technology now allows these theories to be examined in concrete terms. This was the aim of the well-known philosopher David Chalmers in his highly successful book *Reality+*. In this paper, I present and examine the key findings of Chalmers' book. Plato's allegory of the cave was the first work in Western philosophy to address the existence of another, truer reality beyond the one mediated by human senses. Immanuel Kant, in his *Critique of Pure Reason*, argued that a reality beyond the senses remains inaccessible to human cognition. The Kantian idea gained a strong foundation when Nick Bostrom postulated the existence of computer-simulated worlds. Simulation can create a virtual reality in which, according to Chalmers, we must consider the emergence of consciousness. Such beings are no longer zombies without feelings, but moral entities like humans. I argue that consciousness and intelligence are different. It is incorrect to assume that consciousness will naturally emerge when machines reach some unknown threshold of intelligence. I also argue, using a Kantian perspective, that human beings, who are by definition rational and conscious, are completely different from intelligent machines. Human consciousness is *a priori*, accompanied by the first-person perspective, teleological thinking, free will, and morality. An intelligent machine might be *a priori* intelligent but this is computational intelligence which fundamentally differs from the rationality of humans, which is transcendental.

1 University of Pécs, Faculty of Cultural Sciences, Education and Regional Development, Pécs, Hungary.

1. Introduction

The nature of reality has been a central question in Western philosophy since its beginnings. Philosophers' previously purely speculative theories can now, thanks to the development of information technology, be examined in concrete terms. This was the aim of the well-known philosopher David Chalmers, whose highly successful book *Reality+* was published in 2022. In this paper, I present and analyze the main findings of Chalmers' book, with a special focus on those related to the philosophy of Immanuel Kant.

2. The Conscious Mind

The Australian philosopher and cognitive scientist David John Chalmers became world famous with his 1996 book, *The Conscious Mind*. Chalmers argues for an "explanatory gap" between the objective and the subjective. He criticizes physicalist explanations of mental experience, which makes him a dualist. Chalmers characterizes his view as "naturalistic dualism." He calls it naturalistic because he believes mental states supervene "naturally" on physical systems, such as brains. He calls it dualist because he believes that mental states are ontologically distinct from, and not reducible to, physical systems. He has also described his view using more traditional formulations, such as *property dualism*.

His initial thesis is this (Chalmers, 1996, p. 71): "*[...] conscious experience is not logically superordinate to the physical and therefore cannot be explained reductively.*" The direct consequence of this lack of logical supervenience is that materialism is false. To prove this, he argues as follows (Chalmers, 1996, p. 123):

1. There is conscious experience in our world.
2. It is logically possible to have a world physically identical to ours, in which the positive facts about consciousness in our world do not hold.

3. Therefore, the facts about consciousness are additional facts of our world that point beyond and above the physical facts.

4. Therefore materialism is false.

In support of this, Chalmers (1996, p. 94) developed his now famous thought experiment of the twin zombie, physically identical to his normal twin, and even identical in behavior and psychology, but without conscious experiences to accompany his behavior. Consciousness, if an emergent property (1996, p. 129), is a much stronger version of emergence. *The Conscious Mind* can be seen as a direct predecessor of his latest book, *Reality+,* Chalmers (2022).

3. Reality+

Different scenarios are possible using AI. Chalmers, in *Reality+*, discusses two of them. The first, which we can call *Scenario A*, involves the appearance of intelligent entities in computer-generated environments. These entities could ultimately be conscious. The second, *Scenario B*, involves humans entering computer-generated virtual reality environments. Both scenarios have reached the threshold of technical realization. *Scenario A* can be seen as an enhancement of today's video games. *Scenario B* is a further development of current virtual reality headsets. The ultimate questions that arise in these scenarios are fundamentally different. In *Scenario A*, the question is how to treat those conscious entities, which are our own creations. In *Scenario B*, in contrast, the question is whether humans can live a normal life there.

4. Chalmers' Motivation

On his website https://consc.net, Chalmers summarizes the motivations behind his book. He wanted to introduce and explore some of the oldest and deepest problems in philosophy in the context of virtual worlds. Namely:

- Is there a God?
- What is the relationship between mind and body?
- What is reality?
- How can we live a good life?
- How can we create a just society?

In reflecting on virtual worlds, these questions are partly illuminated in new ways and partly transformed.

5. Intuited Reality

One of our most basic intuitions is that the world outside is really as we perceive it. We see it, hear it, and feel it. The perceived world is the real world, that is, reality. We may think that the chair outside us, with its four legs and its brown color, exists exactly as it appears in our minds. Even the distinction between being outside us and being in our minds may seem unnecessary, because the chair exists only once. However, idealist philosophers often made this distinction. This led realists to devise various experiments to prove their point. In connection with Berkeley's (Halász, 2022, pp. 7–8) principle *esse est percipi* (to exist is to be perceived), the lexicographer Samuel Johnson (1709–1784) believed that if he kicked a large stone that hurt him, he had already disproved Berkeley. More recent "refutations" of idealism include Moore's hand-raising experiment (Chalmers, 2022, p. 63).

Neither Johnson nor Moore can be blamed for living in an age before virtual reality glasses. Today, Moore only needs to put on a pair of Meta Quest 3 glasses to feel his arm being raised and to see that he is on a tennis court. He can raise his arm and hit a tennis ball back to his opponent from the other side of the court, all without leaving his own living room.

6. Tampered Reality

Skepticism about the external world first appeared, and remains influential, in Plato's cave theory. This was the first writing in Western philosophy to suggest that, beyond the reality mediated by human senses, there is another, truer reality. René Descartes is credited with the idea that an evil demon may control our world and prevent us from gaining true knowledge through experience. This idea is known as Cartesian skepticism. It has also appeared in other forms in contemporary philosophy, for example, in Putnam's *Brain in a Vat* thought experiment.

7. Interface Theory of Perception (ITP)

As Chalmers writes (2022, p. 435), the cognitive scientist Donald Hoffman also bases his theory on skepticism about the external world, known as the ITP. Hoffman (2019, p. 201) claims that consciousness is the fundamental nature of objective reality. The basic question of the theory is whether natural selection promotes the perception of truth. The answer is no because, as Hoffman states (2019, p. 50): "Our minds evolved by natural selection to solve problems that were life-and-death matters to our ancestors, not to commune with correctness." Tests using mathematical simulations suggest that, from an evolutionary point of view, fitness beats truth (Hoffman, 2019, p. 61). This means that, according to Hoffman (2019, p. 191), there is a filter between objective reality and us. This filter hides the details of reality that are irrelevant for survival.

Hoffman argues (2019, p. 75) that every perceptual system is a user interface created by natural selection. As a result, perceptual systems can vary across species and even among individuals. He calls his theory the Interface Theory of Perception (ITP). Hoffman uses a technical metaphor for information: an icon on a computer desktop. For example, consider a blue square icon that appears on the computer screen and represents the email application. The shape and blue color of the icon have nothing to do with the shape or color of the file it symbolizes. The file itself has neither

shape nor color; it is a set of bits on the hard disk. The icon is, therefore, fundamentally different in a physical sense from what it symbolizes. However, this difference does not mean that the icon is a poor representation of the file. In fact, the icon serves as a model of the file. The purpose of the icon is to hide details that do not interest the user, such as the hardware and software architecture, which would only add unnecessary complications when writing an e-mail, for example.

Reality as it exists independently is different from how we perceive it. Colors, smells, and sounds correspond to electromagnetic waves, chemical compounds, and air waves, respectively. Not only are these so-called secondary qualities subject to this difference, but space and time are also affected. Does this mean that science is completely wrong? Certainly, does not. As Hoffman claims (2019, p. 196), science is not a theory of reality, but a method of inquiry.

8. The Kantian Reality

Immanuel Kant, in his *Critique of Pure Reason*, provided an exhaustive solution to the problem of the nature of reality, which had concerned Western philosophy for more than two millennia. He postulated that the world beyond the senses is inaccessible to human cognition. In the human mind, reality exists only as a phenomenal world, not as a thing in itself. He called his view transcendental idealism. At first reading, this appears very similar to the ITP theory, but there is a striking difference between them. For Hoffman (2019, p. 82), objective reality, unlike for Kant, is not an unknowable realm. This is because ITP postulates a causal connection between subjective and objective reality, whereas transcendental idealism does not.

Kant himself defined the phenomenal and noumenal world as follows (1787/2009, p. B306): "*Nevertheless, if we call certain objects, as appearances, beings of sense (*phaenomena*), because we distinguish the way in which we intuit them from their constitution in itself, then it already follows from our concept that to these we as it were oppose, as*

*objects thought merely through the understanding, either other objects conceived in accordance with the latter constitution, even though we do not intuit it in them, or else other possible things, which are not objects of our senses at all, and call these beings of understanding (*noumena*).*"

It is worth noting that a problem regarding causality led Kant to write his *Critique of Pure Reason*. The empiricist Scottish philosopher David Hume denied the existence of a causal connection because it is not observable. Kant showed that a consistent solution requires abandoning the earlier metaphysical approach by placing the subject and the mind of the subject at the center of philosophical inquiry. With this turn, Kant interpreted causality as an *a priori* category. This means that causality is not to be sought in the world outside the mind, but in the mind itself. The human mind examines the phenomena that appear to it based on *a priori* causal relations. This approach rendered Hume's problem obsolete. Kant's transcendental idealism can account for the acquisition of empirical knowledge using sensuousness, reason, and judgment (Halász, 2022, p. 163).

9. Are We in a Simulation? / Bostrom's Argument

The modern version of tampered reality originates from Nick Bostrom, a Swedish philosopher working in the USA. In a 2001 article, he put forward his simulation hypothesis, claiming that "We are living in a computer simulation." (Chalmers, 2022, p. 29).

Bostrom's argument is as follows (Chalmers, 2022, p. 98):

1. If there are no sim blockers, most humanlike beings are sims (simulated entities).
2. If most humanlike beings are sims, we are probably sims.

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3. Therefore: If there are no sim blockers, we are probably sims.

Chalmers argues that we will never be able to prove that we are not in a simulation. Skepticism about the external world can be formalized in the following way (2022, p. 56):

1. You cannot know you are not in a simulation.
2. If you cannot know you are not in a simulation, you cannot know anything about the external world.

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3. Therefore: You cannot know anything about the external world.

In essence, this forms the basis of Kantian metaphysics. However, Kant did not consider himself skeptical. On the contrary, he aimed to counter Hume's skepticism by claiming that strict lawfulness exists in the phenomenal world. Today, computers can generate simulated worlds, which appear as reality to those who interact with them. This is known as virtual reality.

10. Are We in a Simulation? / Russell vs. Bostrom

It is unlikely that we will ever know whether the simulation hypothesis, or any of its above-mentioned variants, is true. It is even less likely that we will discover who or what controls the simulation. Like any information system, the human brain can process incoming information in many ways. However, it cannot determine the source of this information unless the external system provides that information, but such meta-information is simply not available to us.

As we have shown above, Bostrom provided arguments for the simulation hypothesis. However, there are also arguments against it. Chalmers (2022, p. 77) mentions the British philosopher Bertrand Russell, who argued against the idea of tampered reality. Any form of tampered reality, such as a dream or simulation, is more complicated than simply assuming that things are real as they appear. Philosophers widely use the appeal to simplicity, which is called Ockham's razor. This principle comes

from the 14th-century English philosopher William of Ockham, who first argued that if there are competing but equally convincing explanations, one must prefer the simplest.

11. What is Virtual Reality?

Until the 21st century, people experienced no reality other than the one in which they lived. Philosophers considered other realities only as thought experiments. Today, anyone can use a virtual reality headset to enter a virtual reality environment. Chalmers (2022, p. 187) defines virtual reality as having three properties: it is computer-generated, interactive, and immersive, with immersion being the key property. This means that we experience the generated environment in a way similar to how we experience the world around us, with ourselves at the center. Immersion can vary in degree, with full immersion as the highest level. Full immersion means that users perceive the environment with all their senses, as if they physically inhabit it, and no trace of the ordinary physical environment remains.

12. Consciousness in a Digital World

With the appearance of consciousness in virtual realities, these environments reach a fundamentally new level. In virtual reality environments, we must expect the emergence of consciousness. Chalmers (2022, pp. 274-293) argues that simulated brains can be conscious. More precisely, if a system with a biological brain is conscious, then a perfect simulation of that system will also be conscious and will have the same conscious experiences. This possibility requires a whole new approach to simulated beings. They are no longer zombies without feelings, but moral beings like humans.

Chalmers (2022, pp. 274-293) further writes that neuro- and cognitive science concentrate on explaining human behavior and do not provide insights into the hard problem of consciousness. At best, these fields provide a correlation between brain processes

and consciousness. Neuroscience is gradually evolving in the direction of what is called "neural correlates of consciousness". However, Chalmers states that correlation does not mean explanation. For the time being, there is no explanation of why and how brain processes produce consciousness.

13. Ethics and Consciousness

Chalmers begins the ethics chapter (2022, pp. 331–349) by discussing four women philosophers: Elizabeth Anscombe, Philippa Foot, Mary Midgley, and Iris Murdoch. These philosophers worked closely together during the Second World War. They devised a thought experiment known as the trolley problem. In this scenario, you are the trolley driver and have two options. You can either run over one human or five zombies who look exactly like humans but lack consciousness. The lesson is that you should choose to kill the five zombies rather than the one person, because only the person has moral status, while the zombies do not.

Simulated worlds raise ethical problems even if they do not yet contain moral beings. However, their appearance changes the nature of ethical considerations. Chalmers (2022, pp. 337) considers the categorical imperative from Kant's *Fundamental Principles of the Metaphysic of Morals* to be authoritative, especially its formulation: "Act only according to those rules that you can also will as universal laws." This principle forms the basis of rule-based ethics. Chalmers argues that we should combine this approach with utilitarian ethics. As a result, a rule-utilitarian ethics emerges, where applying a moral rule as a universal rule should lead to the best consequences. However, we can construct examples where this hybrid ethics produces poor results.

As an alternative, Chalmers also describes Elisabeth Anscombe's essentially Aristotelian, virtue-based ethic. This approach works mostly well, but it does not always provide clear instructions on how to act. Chalmers does not commit himself to either ethic.

He asks whether Kant would extend the categorical imperative to sims (simulated entities). Chalmers answers this question affirmatively. We must respect the personhood of those we have created. He does not elaborate on this point, but suggests that there should be an ethic for creators. E.g., he proposes that the simulation of full-scale wars should be prohibited.

14. Chalmers' Theses

Chalmers' main theses formulated in *Reality+* can be summarized as follows:

1. We cannot know whether we are living in a simulation. Chalmers is agnostic in this respect; it is not a probabilistic question, as Bostrom argues.
2. However, he is certain that humanity will be able to construct full-fledged simulated worlds.
3. In these simulated worlds, a consciousness of the same level and value as human consciousness may appear.
4. The existence of consciousness is the only criterion for measuring another entity/being by human standards.
5. Entities/beings with consciousness similar to human consciousness are subject to the same ethical standards as humans.
6. As technology advances, it is possible to live a full life in simulated worlds.

The first five points of the above list concern *Scenario A*, which refers to the scenario in which conscious beings are our own creations. Point six concerns *Scenario B*, where humans enter a virtual reality environment.

Chalmers's thesis about the possibility of living a full life in simulated worlds is controversial. We live in an extremely fast-changing world. Our traditional values, such as home,

family, religion, and even our biological sex, are under fire. In a virtual environment, we can change everything, including our entire identity, in one moment. Chalmers expresses no concern about this. For him, the two environments are of equal value because, ultimately, both are, or at least may be, the product of a simulation. I can put on the headset and enter an environment where everything is different. In *Reality+*, I might be Napoleon+, defeating the Russians and winning the Battle of Waterloo. These are new opportunities that very few people have had before. In the past, those who experienced such possibilities were often treated as having schizophrenia.

15. Consciousness vs. Intelligence

The British neuroscientist Anil Seth, in his 2021 book *Being You*, claims that consciousness and intelligence are different. He argues that consciousness is not determined by intelligence, and intelligence can exist without consciousness. Seth represents these concepts in a Cartesian coordinate system. He places current AI very low on the intelligence scale, with consciousness equal to zero (Seth, 2021, pp. 251). Ava, the main character from the American movie *Ex Machina*, who surpasses humans in both intelligence and consciousness, is purely fictional. If consciousness and intelligence are different, then the assumption that consciousness will naturally emerge once machines reach a certain, yet unknown, threshold of intelligence—a kind of singularity—is incorrect. Another assumption about consciousness is functionalism. This view claims that consciousness does not depend on the material composition of the system, whether wetware, hardware, or anything else. Seth expresses suspicious agnosticism toward functionalism. I go a step further and claim that the biological layer between the inanimate and consciousness is necessary. The only form of consciousness we know exists in the living world, as a continuum that starts with very simple creatures and ends with humans.

16. Human being vs. Intelligent Machine

Comparing human beings, who, by definition, are rational and conscious, with intelligent machines reveals striking differences. Human consciousness is *a priori*. It is universally and necessarily accompanied by the first-person perspective, teleological thinking, free will, and morality.

An intelligent machine might be *a priori* intelligent, in the same way that a bit, as an elementary unit of information, is intelligent. However, this represents computational intelligence, which differs from the rationality of humans that is transcendental. The intelligent machine does not have consciousness, and all the attributes mentioned above are simply built in. Therefore, it might have an *a posteriori* first-person perspective, pseudo-teleological thinking, pseudo-free will, and pseudo-morality.

17. Under and above Consciousness

Consciousness arises from a biological substrate, which is fundamentally different from anything found in inanimate nature, such as AI-based systems built on mechanistic principles. Self-preservation, reproduction, and adaptation are three properties of all living things that cannot be fully understood without reference to teleological principles, such as Kantian purposiveness. In this way, a hierarchical structure emerges, consisting of the biological substrate, consciousness, free will, and morality.

Morality, rather than intelligence, is what makes a human being truly human. There are significant differences in the intelligence of individual human beings. However, their morality, and the freedom that enables it, are *a priori* the same in all human beings. This fundamental characteristic is what distinguishes us from any artificial intelligence.

The problem of free will is a highly contested concept in both philosophy and neuroscience. Given that the experience of free will is a given, the question is whether this experience is real or

an illusion. Searle (2001, p. 505) provides a good summary of the problem. He writes: "*The problem of free will is whether the conscious thought processes in the brain, the processes that constitute the experiences of free will, are realized in a neurobiological system that is totally deterministic.*" To investigate this, he proposes two hypotheses. First, hypothesis 1 states that the physical state of the brain would be causally sufficient for conscious thought processes. This means determinism at the neurobiological level, which implies psychological libertarianism. This hypothesis would also imply both epiphenomenalism and that evolution has thoroughly deceived us, because free will is an illusion. According to hypothesis 2, if free will is real, it must have a neurobiological explanation. This is only possible if consciousness is related to quantum indeterminism, because:

> Premise 1: All indeterminism in nature is quantum indeterminism.
>
> Premise 2: Consciousness as a manifestation of nature exhibits indeterminism.
>
> ———————————————————————
>
> Conclusion: Consciousness has quantum indeterminism.

Searle, as he remarks, is not really satisfied with either of these hypotheses, but he leans strongly toward the first one.

From a Kantian perspective, there is no contradiction between the determinism of nature and the freedom of will. As Kant stated (1785/1988, p. 88), "*[…] it is just as impossible for the subtlest philosophy as for the commonest reason of men to argue away freedom. Philosophy must then assume that no real contradiction will be found between freedom and physical necessity of the same human actions, for it cannot give up the conception of nature any more than that of freedom.*"

18. Conclusion

Chalmers' 500-page long book *Reality+* is written in a very readable style. It is easy to understand even for non-native English speakers. He wrote his book not only for philosophers, but also for the general public. Therefore, reading the book does not require any prior knowledge of philosophy. For those with a philosophical background, much is already known. However, even they may find Chalmers' interpretations interesting. This is also the case with Kant. It is striking that, unlike many Anglo-Saxon authors, Chalmers does not merely appreciate Kant's philosophy, but he finds the metaphysical foundations of *Reality+*, and even to some extent the ethics, mostly in Kant.

Both scenarios he presents are more than just thought experiments; their technical realization seems possible. However, in *Scenario A*, as I have shown, it is not clear how any advancement of current technology will be able to produce consciousness. On the other hand, in *Scenario B*, humans who live in a virtual reality environment must give up their entire mental and physical identity, which is bound to our world.

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ON THE VERSATILITY AND MEANING OF "RE-" IN GAMES GENERATING NEW REALITIES

Alpaslan Ertüngealp[1]

Abstract

In this paper, I argue that games in general and the experiences of those partaking in games (digital or analogue) are governed by rules that can be described and classified by Wittgenstein's ingenious approach through "language games." This helps direct or lead explorers of new realities into worlds (physical or digital) governed by their own and mostly unique rules, which can be grouped using the concept of "family resemblance." This tool also allows us to create a similar understanding of art(s) through artworks and a new conception of realities, of which the limits or boundaries are hard to delineate. My research contributes to the Play and Society conference from a theoretical perspective by looking into mental, experiential, and societal structures underlying realities (in plural).

1. Reality with a capital R?

My attempt to (re)discover the position and meanings of words starting with the prefix "re- "in games, whether digital or not, can be seen as evident from a linguistic point of view. Most words in English starting with re- are loanwords from Latin; thus, the application is a clear indication of something being repeated or withdrawn, with meanings similar to "again" and "back." This linguistic understanding presents digital (and analogue) game creators opportunities to (re)create events, occurrences, and situations in physical reality (as we know it conventionally) as well as digital worlds (to be understood as new

1 Affiliation: University of Pécs, Faculty of Cultural Sciences, Education and Rural Development, Pécs, Hungary.

realities) where human experiences can be reflected onto different realities. In this paper, I will focus solely on digital games. My focus will be rather on Reality however we may understand it, and I will forego a merely linguistic conceptual analysis.

It may not be a mistake to claim that reality has become a concept that has gained new meanings (in plural) through recent advances in technology. Our understanding of the concept has been altered and modified in ways unimaginable a few decades ago. What is Reality? How many realities are there? One or many? These are questions asked today, which do not sound nonsensical to many of us, whereas similar questions asked several decades ago, not to mention centuries or millennia, would have appalled many.

2. Conceptualizing Reality

Since the ancient Greeks for many thinkers, and also commonsensically, that is, refraining from philosophy, there is and has been only one reality in general: that in which we find ourselves, into which we are born, or rather in which we claim ourselves to exist. We come to be and we cease to exist according to this one reality, which we may call a mental state. According to some thinkers, including Immanuel Kant, this reality is purely mental. According to Kant, the world is not knowable in itself as it is, but only as we create (or re-create) it mentally. "Mentally" because without us humans, capable of thinking about reality and placing themselves into the postulate, which we call reality, there would be no need, nor any possibility of a reality we can talk of.

Our understanding of reality demands that we are conscious beings, capable of thinking and aware of our own thinking, as well as thinking about our awareness. Without going deep into discussions of the self in the history of philosophy and that of self-consciousness, and putting aside the psychological aspects of the self and self-awareness, one can claim and accept that thinking (which is unique to us humans) is the origin and the possibility of the self; its different meanings, theories of self, abound, they become possible because thinking is possible, moreover necessary.

The mental processes that lead to conceptual thinking, and thinking as a mental occurrence, are intertwined with the reality of the self and its sorts (e.g., self-awareness and similar). What we call real is what we experience. Even hallucinations, phata morgana, illusions, and dreams can be called real because they belong to the experiencing self, and after they are experienced, they can become part of the experiencing self's one, unique function, that of thinking. The reality of whatever we experience is only valid to the experiencer and may not necessarily be universally valid. What do I mean by this? My reality is valid only to me, as long as it is how I experience whatever I experience. Others (other selves, self-aware conscious beings) may not share all my realities, my experiences, which I think of being real to me. My hallucinations, illusions, and in total how I experience the world, however we may understand the word world, including how we get to know the world, are unique to me and are not mentally shareable with others, perhaps through actions and spoken languages.

3. Conveying and Sharing Realities

Although these thoughts may seem to be hinting at a type of solipsism, they are not. There are ways to convey these realities (one's own realities), which make these realities partially shareable, not in the way we experience them, but through analogies that are based on similar experiences of those with whom we intend to share them. While they are open to debate, I do not seek answers to any questions that may arise from these claims.

If we accept that experiences can be shared, or at least conveyed or described in different ways, the realities (one's own realities) become shareable as well. If the mental domain is not extendable, sharing or conveying becomes impossible. On the other hand, we may call works of art and human products in general extensions of the mind, when the mental extends towards the physical world and leaves some imprints in the form of works of art, architecture, and a versatility of products. What is produced as an imprint of the mental with the intent of persistence can be placed opposed to those products of commerce, where the intention behind their production is to be consumed.

Experience is a two-way process. The world somehow strikes us through our senses, and we create a mental representation of it, which can be followed by actions directed toward the world. We can say that this is what intentionalism discusses, but it is debated whether all mental states are intentional. Leaving the debates behind, it is not unacceptable to claim that most philosophical ideas, trends, or theories support intentionality. If we extend the mental domain into the world and create mind-independent realities (a debatable claim, but one that can be argued), these realities will be shared by all who come into contact with them.

4. Types of Digitized Realities

As the world "touches" the mental through the senses, the realities created by us (not realities standing as they are independently of us) can become part of individual experiences, unique to each experiencing subject, therefore unique to each mind. The realities with which we are concerned here are all within digital domains. Digital worlds are created in a way that they can be experienced in the exact same manner (formally), but not always under the exact same conditions. One may argue that this is not true, and this would align with those who criticize intentionalism, suggesting that the qualia of those experiences may (and will) differ. Qualia can be considered as the phenomenal character of experiences. They can be considered properties of sense data or intrinsic non-representational properties. Another explanation for qualia is *intrinsic, nonphysical, ineffable properties*. I think of quale (singular form of qualia) as a concept that can stand for the "thus and such" of an individual's single experience.

Let us discuss the types of realities that can be the subject matter of this paper. Nowadays, we talk of VR (virtual reality), AR (augmented reality), XR (eXtended reality), MR (mixed reality), and who knows how many different versions of Reality we will talk of in the near future. XR can be considered an umbrella term for the types of fully or partially digitized realities listed above, but it can also refer to a reality where one can extend

one's senses into previously inexperienceable domains, such as seeing the infrared light waves, hearing the ultrasound soundwaves, and others, by making them experienceable; but also crossing and overlapping sensory domains, by making sounds visible, light audible, and so on.

These domains, as experienced, will remain unique to the experiencer in their quality, in their "thus and such", but within these domains we can claim that what is experienced is created on clearly describable, definable physical and theoretical grounds, that are not parts of unique experiences, but as something underlying the experiences, which is not experienced directly. Let us give an example. Code is typed by humans, converted into digital signals, and registered in electrical currents, and so on. This is the underlying structure of what will later be part of a digital experience, where the underlying structure itself is not experienced. A parallel can be given through musical notation. Musical notes are written by humans and lead to actions by musicians, which later become part of the listener's musical experiences, where the musical notation, the score itself, is not experienced.

5. Philosophical Implications of Multiple Realities and the Creation of AI

Returning to philosophical theories, we can talk of non-existing realities, and we can postulate that there will be realities (or perhaps already are realities) that are yet to be discovered or created. Due to the limitations of our conceptual framework, our physiology, and our mental demarcations, we cannot exclude the possibility of realities to which we have no sensory and mental access. One may argue that these are not realities to us humans, as long as they cannot be experienced, but who has the right to deprive any intelligence of the possibility of realities that may remain undisclosed to us humans for a while or forever?

This statement will demand amendments as we progress through technological advances and expand our cognitive perceptual framework. Our perceptual framework forces upon us the notion

of physicality. All experiences, even mental ones, are somehow bound to the physical. According to David Chalmers (Chalmers, 1996, 2022), the mental supervenes on the physical. Without the physical, there cannot be the mental. The same can be said of the digital (i.e., AI), which is not mental but is already competing with it. It is based on the physical, but it may not supervene on it. It can be called part of it. Alternatively, we can call it emergent if we include the *possibility* of digital consciousness (perhaps not far into our future). Digital consciousness may supervene on the physical, but it will be more closely tied to the digital, which in turn is based on the physical. Therefore, we can consider a three-layered structure for AI, compared to the two-layered structure in humans.

6. The Relation of Conceptuality and Realities

It follows that the realities of different sorts – although those mentioned above are created or encountered through digital means – are physical, not purely digital, because they belong to our physical experiences and also to our conceptual dictionary. We humans do not possess digital perceptual affordances; we may, in the future, when the so-called transhumans may describe their experiences not purely sensual but also digital. At the moment, we only have physical (sensory) access to these digital realities, even though they "seem" to be in a digital domain, and we know that they originate from the digital domain.

David Chalmers, in his recent book Reality+, argues about simulations and the layers or levels of simulations within simulations. For each case, he discusses realities and claims that, regardless of our claimed level of existence (i.e., whether we are in a simulation and unaware of it), we must acknowledge the realities that we exist in, as well as those that are above and below ours. What we call virtual today is another type of reality, nevertheless, a reality. Without listing his theses from his 300-page book, I add my chain of thoughts to the notion that there are (or can be) multiple realities, simultaneously in a layered structure.

As intentional beings, a significant question regarding the case of multiple realities is: What happens to our concepts and their usage in different realities? In other realities, our concepts (the concept of Reality being one of them, and perhaps an umbrella concept for a space-time delineated domain encompassing many similar types of experiences) are deformed, degenerated, and distorted, as if the space-time we know is being distorted by forces that cannot be sensed. These concepts, with their meanings evolving over time, become integral to, or components of, new realities. In contrast to our analogue reality, an expression that is often misused, but here refers specifically to our traditional understanding of reality prior to the digital era, non-analogue access to new realities is poised to play an increasingly crucial role in our everyday lives. Analogue, according to Merriam-Webster dictionary, is borrowed from French, which originates from the Greek *análogon*, meaning "proportion, correspondence," a noun derivative from the neuter of *análogos, meaning* "proportionate, analogous." Today, we do not use it in the sense of proportion, but rather in the sense of correspondence. This is likely a result of the digital era, when the technique of digital recording was introduced. A distinction had to be made between the digital and the non-digital recordings made before the digital era. The word "analogue" was adopted to make the distinction. Some older recordings, referred to as analogue ones, were later digitized. This presented us with three different versions of digital recordings compared to fully analogue recordings: AAD, ADD, DDD. These abbreviations were used to indicate how older and newer recordings were created and processed. Similar to the word "analogue", there are many words now used in conjunction with the digital domain that had different meanings in earlier times. Another term that gained a new meaning with the invention of the digital domain is "conceptual state," which can be explained as "analysing the procedural state of the concept's referent" and not as "an analysis of the states and changes in within the process." These are just a few examples to illustrate the richness and vastness of the possibilities for expanding our understanding of realities and the flexibility of our conceptual faculty.

I am not sceptical that we will carry our worldview, our experiential selves, our knowledge, and our narratives into new digital realities. At the moment, it is science fiction, but not an impossibility that our *selves* will be transferred to digital domains and will continue to "live" there (or exist) in digital forms. Perhaps those selves will not call themselves digital but will use a new concept yet unknown to us to describe their reality, their existence. Being in a digital domain will be different than being in physical spacetime as we currently know, describe, and understand it.

Once we arrive at the possibility of the multiplicity of realities, it is not difficult to see that in digital worlds, our concepts can be tried in new contexts and new realities through novel experiences. These new realities may offer new uses and meanings to concepts that may be reintegrated into our physical, non-digital realities. This is a two-way possibility: not only will our analogue use of concepts evolve into others within digital domains, but those newer concepts will also be reintroduced to analogue domains with new meanings and uses than their original.

7. The Philosophical Function of "Re-": From Language to Games

Following the opening remarks of this paper, I will summarize how games affect individuals as philosophical subjects (or agents) and the society as an amalgamation of these subjects, human actions, thoughts, and perhaps more abstract entities, occurrences, and states. I will list several words that are more prevalent in this interrelation of worlds, realities, and their conceptual differentiation: re-live, re-write, re-enact, repeat, and retreat. In digital games, within digital worlds that serve as realities in which we live, we can relive experiences that would otherwise be impossible in our analogue world. We can rewrite history, traditions, and events in digital realities without direct consequences for the analogue world, but they may have indirect causal effects. We reenact what may have happened in our own histories or others' histories. We can play through a battle, a campaign, or "embody" (albeit in a digital way, but also physically in our mental

domain) characters of the past and imagined future. We can repeat what we did, but have not succeeded, or what we have succeeded in a better, or a different way. And finally, we can retreat to another reality when our analogue reality offers nothing but suffering, unpleasantness, and social disadvantages. We can become a recluse. The list I prepared for this study, but did not include, is not exhaustive. The few examples above are intended to provide some ideas on how words starting with 're-' in English can be applied to new realities that are tied to our analogue realities. This is also valid for non-digital games, such as role-playing games (RPGs) and tabletop games.

I claim that games in general and the experiences of those partaking in games (digital or analog) are governed by rules that can be described and classified by Wittgenstein's ingenious approach to language through the idea or concept of *language-games*. This approach helps direct or lead explorers of new realities into worlds (physical or digital) governed by their own and mostly unique rules, which can be grouped using the idea of family resemblance, as proposed by Wittgenstein (Wittgenstein, 2009). This tool also allows us to create a similar understanding of art(s) through artworks and a new conception of realities, of which the limits or boundaries are hard to delineate. I propose that family resemblance can be applied to realities, thus reversing the process. Games have a family resemblance, according to Wittgenstein's theory, and languages are like games with specific and unique rules. However, there are no universal rules for all languages; this is a parallel I can draw to games. When discussing digital games, it is self-evident that each is and must be governed by rules unique to that game, as they were *created* by the game's developers (creators) to serve specific purposes. The consideration of these purposes is outside the scope of this paper. When we apply the family resemblance to realities of sorts (in games, especially in the digital domain) we have a similar case as with languages, that although every reality is personal, subjective and unique, and they belong to subjective experiences, they have (or must have) similarities, because they are shared in some peculiar ways with other experiencers of (presumably) the same realities; presumably because we have no way of knowing what the

experiences of another mind are like, if any. If we ask the question "Given that I can only observe the behaviour of others, how can I know that others have minds?" we stumble into the *epistemic problem of other minds*. The traditions of this epistemological problem go back to Descartes. Is it possible that every person I interact with is void of a mind, although they behave and act similarly to me? Can they be zombies? David Chalmers asks similar questions in his book *The Conscious Mind*. For a thorough discussion, especially on zombies, a thought experiment renowned as Chalmers' Zombies, see Chalmers (1996).

8. Closing Remarks

Combining my thoughts so far on realities, family resemblance, languages, games, and concepts, I argue that concepts are to be understood as placeholders for words in languages; they serve as cocoons or shells that dictate how we use words in specific languages. This understanding comes from the *Critique of Pure Reason* by Imanuel Kant, where he claims that concepts are given by understanding (intellect), and that concepts are governed by rules for their use in bigger structures (which he calls judgments) and also for the synthesis of mental representations; he also claims that concepts themselves give rules to how the sensory input, the multitude of representations are to be synthesized (Kant, 1997).

In our digital era, we can claim that the sensory input, or perceptual data, is already reaching beyond the physical toward the digital; the source of what "touches" the mind is becoming digital, which will have a causal effect on how understanding will use concepts in order to make sense of the new input. We do not overlook creativity as a mental ability that plays a crucial role in these mental actions. Kant uses the term in several different ways: the ability to represent an object with its presence in intuition, and the ability to carry the multitude into a picture. It can be re-productive; it can be productive; it is necessary for perception; it binds intuition and intellect.

As I mentioned above, for the purposes of writing this paper, I read through words that start with 're-' in the English vocabulary. I stopped after several hundred; there were many more. I

have observed that many words, not just tens but hundreds, are candidates for gaining new meanings in digital realities, some of which are already being used with new meanings.

These types of words, in most cases, refer to a repeat or reversal of an action, and as such, hint at a multiple occurrence of an event, phenomenon, or process in our analogue reality. Their introduction to digital realities will empower them with the potential of gaining new meanings. When we follow this process, we can also postulate that these new meanings will be carried into new concepts, albeit with the same meaning in a language. The result will be that we will have new concepts that are placeholders for the same word in a language. This will lead to a split in their usage. Either we will keep the word as is and have multiple meanings that correlate to different concepts (in different realities), or we will invent new words that may correlate to new concepts to limit the multiplicity of meanings related to one single concept. Applying this thought to digital games, it is not hard to imagine and observe that digital games will enrich (or are already enriching) our languages and the way we use them. At the same time, they will lead (or perhaps already have led) to ambiguities in both practical and conceptual terms. It is up to us to find a way to solve the problem of ambiguity in the chain of "words to concepts to meanings" in languages and vice versa.

We live in a world where our concepts are rapidly changing shape and form and are displaced from one context to another. The processes in which the meaning of a concept changes lasted centuries or even millennia in their analogue use. In the 21st century, this process has accelerated due to the introduction of digitization. We see concepts changing, meanings being replaced within years, sometimes months. In 2025, more than 6000 new words were added to the Cambridge Dictionary of English. "Internet culture is changing the English language..." says Colin McIntosh, Lexical Programme Manager, Cambridge Dictionary (Cambridge, 2025). It is an interesting observation that the French influence on English, which occurred during the Middle English era, contributed new words to the modern English vocabulary. Approximately 39% of modern English originates from French. Now, in the 21st

century, through anglicization, these so-called English words are returning to their origin, back to French. Some have fine-tuned meanings that exhibit nuances and differences compared to their original French use and their English equivalents.

It is an unstoppable process that digitalization is creating new worlds and new realities. One danger we are facing may come from the rapid utilization of AI in its infancy, uncontrolled, unregulated, neither locally nor globally. What we truly need is not worlds generated by AI, which will lead to a median usage of language and content, simplification of expression, drawbacks to creative work, as well as underdeveloped cognitive human faculties, mainly underdeveloped (unused) imagination, but rather more analogue products and a constrained, confined working domain for the functioning of AI.

Thinkers, philosophers, linguists, and other scholarly researchers are obliged to consider the unwanted consequences and take steps to maintain a clean and rich conceptual domain in their work, output, and daily communications. Educators and pedagogues must be *re-educated* about the problem, and aided by philosophical and other scholarly research, must be encouraged to raise better-thinking, conceptually richer generations who can resist the mediocrity and median use of language and thinking, thereby becoming the experiencers of newer and newer realities.

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THE ROLE OF PLAYFUL ELEMENTS IN DAVID LYNCH'S NARRATIVES AND THE FREUDIAN UNCANNY

Tímea Deák-Kovács[1]

Abstract

This year we lost one of our greatest filmmakers, and this paper pays tribute to his dark yet playful work. Across his oeuvre, David Lynch persistently returns to a guiding question: what do dreams and reality have in common, and how do they refract one another in the experience of spectatorship? Self-awareness through play recurs throughout his films, with characters navigating surreal environments where rules are elastic and meaning remains in flux. Self-discovery through play, and play as a way of processing trauma, is a central thematic strand in Twin Peaks (Lynch & Frost, 1990–91; 2017), where humor, ritual, performance, and repetition establish the texture of an uncanny everyday life. Lynch's work is frequently analyzed from a psychoanalytic perspective because his images, narrative strategies, and soundscapes consistently probe the thresholds of the conscious and the unconscious. He is a multi-faceted artist: beyond directing, he often edits, writes scripts, designs, or supervises special effects, and, outside cinema, he paints, photographs, and creates music. This paper examines what Lynch chose to highlight, what he observed in his time, and how he transformed anxiety into art in its social and historical contexts. In doing so, it approaches the Freudian "Unheimliche" as a dynamic aesthetic and psychological strategy that appears on multiple fronts in Lynch's oeuvre and invites sustained study.

1 Affiliation: University of Pécs, Faculty of Humanities and Social Sciences, Pécs, Hungary.

1. Introduction

To understand David Lynch's work, it is essential to engage with the concept of the *Unheimliche*, or the uncanny. This term, as theorized by Sigmund Freud, names a mode of experience in which what is most intimate and familiar returns as strange, displaced, or threatening. Interpreting Lynch's film through this lens requires attention not only to textual detail but also to shared historical conditions that make uncanny experiences legible.

In recent years, the Covid-19 pandemic provided precisely such a collective frame, altering perception and everyday practices in ways that rendered the familiar world both recognizable and estranged. This study introduces the uncanny through that recent context and subsequently extends the discussion to Lynch's filmic and televisual work. By aligning psychoanalytic theory with film analysis, the paper traces how Lynch sublimates anxiety through creative play and how the uncanny becomes both theme and structure in his narratives. The argument proceeds by defining the uncanny and its mechanisms, mapping these to pandemic experience, and then using that framework to read specific Lynchian strategies of image, sound, temporality, and performance.

2. The Uncanny and the Pandemic

2.1. Freud and Jentsch

The centenary of Freud's *Das Unheimliche* (1919) coincided with the global outbreak of Covid-19, an overlap that foregrounded the relevance of Freud's question: what produces the uncanny, and how does the familiar return in disturbing forms? Freud describes the uncanny as arising when the boundaries between reality and fantasy become blurred, when we are actually confronted with something we had hitherto considered fantastic (Freud, 1919/1955). Lockdowns and quarantines, sometimes voluntary, sometimes imposed, reshaped daily life in ways that made the ordinary world feel like a movie set. On the street one encountered

distanced, masked figures; in shops one confronted emptied shelves and provisional rules of movement; at home one inhabited digital rooms where bodies were reduced to faces framed by webcams. Technical glitches in audio or video fractured interaction and elevated imaginative reconstruction: the absent body, the cropped desk, the frozen smile, the voice out of sync.

In his essay, Freud acknowledges his debt to Ernst Jentsch, who, in 1906, emphasized the primacy of lived experience for analyzing the uncanny. One must first undergo uncanniness before one can conceptualize it; otherwise, analysis risks abstraction detached from affect. Freud and Jentsch each note the difficulty of finding suitable examples in their time. The contemporary situation, by contrast, offered an abundance of such moments, saturating everyday life with ambiguous cues, ambivalent signals, and oscillations between reassurance and threat. Freud proposes two complementary analytic paths: to trace how language has built meaning into the word uncanny, and to catalogue the situations and impressions that evoke uncanny feelings. He ultimately argues that both paths converge on the same center: the uncanny derives its force from the return of something once familiar that has become estranged and repressed. Levine (2020) observes that Freud's solution risks generality and should be supplemented by comparative frameworks; Masschelein (2011) therefore calls for systematic conceptualization that unfolds the uncanny point by point.

2.2. Conceptualizing the Uncanny

Dragon (2017) suggests rendering Unheimliche as creepy, distressing, or unsettling strangeness, translations that indicate affective color, while also signaling how fragile the borders are between ordinary anxiety and the specific shock of the uncanny. These suggestive glosses already resonate with the pandemic's textures. For Jentsch (1906/1997), uncanniness is bound to undecidability: one finds oneself unable to tell whether a figure is alive or automaton, whether a place is safe or dangerous, whether a sign is literal or ironic. Disorientation is not incidental but constitutive. In the first wave of Covid-19, uncertainty exceeded

medical and logistical domains, touching even basic temporal and spatial routines: how long would closures last, what would count as essential movement, which surfaces were safe to touch, and when would the threat end? Even years later, some of those uncertainties persisted in transposed forms, proof that the uncanny leaves residues in habit and memory. A conceptual analysis that follows Freud and Jentsch thus finds, in the pandemic, a laboratory of ambiguous perception and suspended judgement.

2.3. Homelessness and Estrangement

Lubinszki (2006) draws an experiential link between Heidegger's notion of homelessness and the Freudian uncanny: both name an indeterminacy that erodes one's sense of dwelling within a secure world. In the pandemic, hospitalization often made this link painfully concrete. Patients were removed from the familiar textures of home and placed in cold, overburdened wards, where routines were dictated by scarcity, risk, and the choreography of protective gear. Yet a form of homelessness also emerged in domestic spaces: rooms turned into offices, dining tables into desks, and kitchens into makeshift studios. Boundaries between work and rest, public and private, were redrawn by necessity, often erasing the comforting distinction that makes a house feel like home. The uncanny thus took hold not only in dramatic spaces of crisis but also in the rearranged corners of everyday life, where the world appeared both too close and too far, both intimate and unrecognizable.

3. Boundaries of Reality and Illusion

Freud notes that uncanny effects are "often and easily produced" when imagination and reality exchange properties. Pandemic scenes illustrated this claim with disturbing clarity. Queues outside shops resembled frames from dystopian films: tape on pavements marking distance, masked faces scanning for risk, security protocols staged like minimalist performances. Inside, one encountered empty shelves and strange surpluses, as if logistics had

been scripted by a director of absurdist theatre. Simultaneously, life migrated online, and screens took on the weight of reality. Meetings were convened in windows; classrooms appeared as grids; therapy sessions unfolded in mediated proximity; and sociality turned into a choreography of microphones and chat boxes. The uncanny here lay not simply in technology but in the shape of attention: we looked and listened in new ways, filling gaps, guessing contexts, and co-producing coherence.

Morlock (2020) observes that if the uncanny is everywhere, it is also nowhere: ubiquity undermines coordinates. Covid-19 epitomized that paradox. An invisible agent structured decisions, movements, and intimacies, yet remained elusive. Periods of seeming stability, vaccination drives, declining case numbers, were punctured by the emergence of new variants, each rearranging the map of risk. The world took on a dreamlike logic, sliding between reassurance and alarm, a rhythm that both resembled and generated the kind of repetition that Freud links to uncanny dread. If the uncanny blurs boundaries, the pandemic etched that blur into the habits and expectations by which one measures a day.

4. The Uncanny in Lynch's Work

4.1. Lynch and the Uncanny Tradition

In 2019, to mark the centenary of Das Unheimliche, the Freud Museum in London organized The Uncanny: A Centenary, a three-month programme that included a course focused on Lynch's work as exemplary of uncanny aesthetics. The suggestion that, were the Unheimliche a person, it might take the form of Lynch's cinema, is less hyperbole than a way to register how his films stage uncertainty. Even a single film communicates the tone: a scene lingers too long; a face holds an expression that will not resolve; a sound swells from ambience into signal and back again. In Lynch, the uncanny is not simply content but a mode of narration that trains attention to thresholds rather than answers.

4.2. Olympia and Artificial Life

Freud develops a key strand of his essay through E.T.A. Hoffmann's *The Sandman* (1816), in which the automaton Olympia appears as a living woman and disorients the protagonist Nathanael, who falls in love with her. For Freud, the collapse of the boundary between animate and inanimate is one of the most effective sources of the uncanny. The automaton, perfectly mimicking human presence, embodies mistaken identity and revives childhood fears that objects might come to life. Even though Freud ultimately emphasizes the motif of threatened eyes in Hoffmann's tale, Olympia reinforces the uncanny atmosphere: she is crafted to be flawless and emotionally empty, and thus functions as a double who fascinates and terrifies. Freud also connects Olympia to Rank's (1914) theory of the double, which at first signals reassurance, an image of self-continuity, before tipping into ghostliness and threat.

Lynch revisits the Olympia problem through cinematic means. He populates his works with figures who are too perfect or too hollow, too stylized or too smooth, and he pairs them with textures, curtains, mirrors, screens, neon signs, that invite viewers to ask whether what they are seeing is animate or animated. In *Mulholland Drive* (2001), the staged performance at Club Silencio makes the collapse of live and recorded explicit: the singer's voice continues after she drops to the floor, a demonstration that what felt vital has all along been a perfect reproduction. In *Twin Peaks: The Return* (2017), doubles proliferate and identities shimmy, neither stabilizing nor fully dissolving, thereby leaving spectators in a suspended state that feels precisely uncanny. The Olympia figure thus migrates into Lynch's cinema as a repeated inquiry: what counts as a person in a world where performance and playback barely differ?

5. Dreams, Repetition, and Collective Experience

Royle (2020) proposes that Freud's essay itself exhibits a dreamlike form. It poses questions only to leave them partially answered, moves at uneven speeds, circles back, and refuses the satisfying closure expected of conceptual prose. The text

performs the elusiveness it analyses, and Freud's attempt to pin down the ghostly often slips away in the very moment of definition. This observation offers a valuable bridge to contemporary conditions. During the pandemic, individuals encountered contradictory guidance from state authorities, public-health experts, and media outlets. Without direct access to settled truth, people patched together workable routines from fragments, adjusting expectations as contexts shifted. Reality appeared intermittent, as if society had slid into a shared dream in which logic held just long enough to set the next scene.

The sense of repetition made this dreamlike structure palpable. András (2013) ties uncanny dread to the compulsion to repeat, a mechanism in which the psyche returns to distressing forms in an effort to master them. Covid-19 illustrated this at scale: waves of infection repeated with variations; new variants reorganized fear and precaution; vaccination cycles generated their own rhythms of hope and doubt. Each recurrence reactivated uncertainty, even as adaptation slowly consolidated. In this pattern one finds the double face of repetition: it normalizes and unsettles at once. The uncanny thrives on that ambiguity, where familiarity becomes estrangement by degree rather than by rupture.

The clinical scene offers another vantage point on this dynamic. Leader (2020) proposes that an uncanny atmosphere may be recognized in therapy when something strange presents itself that resists narrative integration. Such moments, he argues, should not be ignored, or domesticated by premature explanation; they warrant naming and careful attention, because analysis concerns precisely those phenomena that exceed ready storytelling. Bokor (2021) adds that, in a pandemic, the analytic setting takes on an experimental quality: patient and analyst occupy the same field of constraint and threat, and thus carry into the session parallel and overlapping experiences. In this shared situation, naming uncanny textures, silences, repetitions, glitches, absent bodies, hovering fears, becomes part of therapeutic work.

The link between art and the psyche further clarifies why Lynch's cinema so often appears to think psychoanalytically. Halász (1968) argues that art represents social existence directly

or indirectly and therefore offers rich empirical material for psychology. Freud's essay on Leonardo da Vinci (1910/1957) similarly contends that artistic cognition springs from the energies and conflicts of childhood and that creativity bears structural resemblance to dreaming. In Freud's formulation, intense present experience awakens early memories, and the initial wish is fulfilled in the work. Lynch's films repeatedly enact this structure: present scenes echo earlier ones, wishes surface in distorted forms, and the work itself stages a movement from cryptic impact toward partial illumination. The uncanny accompanies that movement like a guide who both points and misdirects, making the interpretive journey itself a kind of play.

6. Playful Elements in Lynch's Narratives

Lynch's narratives deploy play not as decoration but as method. Playfulness here names an attitude toward rules, a willingness to suspend stable categories, and a commitment to keeping multiple meanings in circulation. These elements organize perception and interpretation, implicating spectators as co-players rather than passive recipients. Several strategies recur across the oeuvre and articulate the uncanny with play.

First, Lynch consistently subverts expectations about genre and causality. A detective premise opens Twin Peaks only to spiral into spiritual and metaphysical zones in which the search for a killer becomes a search for a community's soul. Cause-and-effect chains are loosened so that implications carry as much weight as events. Viewers are encouraged to hold hypotheses lightly, because narrative payoff may arrive as atmosphere rather than revelation. This subversion produces a felt instability, a subtle tilt that makes the familiar grammar of storytelling appear slightly "off", uncanny in Freud's sense of the word.

Second, Lynch blurs the boundaries of dream and waking life in *Mulholland Drive*, *Eraserhead* (1977), and *Inland Empire* (2006). Scene transitions mimic dream logic: identities dissolve and reconfigure; and sequences play out like fragments carried over

from another life. The spectator is not merely told that a character dreams; rather, the film asks the spectator to experience dreaminess as a mode of attention in which details and coincidences acquire disproportionate charge. Uncanny affect follows, because what seemed securely part of the world's furniture begins to glimmer as if coded from elsewhere.

Third, Lynch manipulates time and space with playful severity. In *Lost Highway* (1997), the protagonist transforms into a different man halfway through the film, inaugurating a new thread that neither simply replaces nor fully explains the first. The cut functions as an ontological switch. What would ordinarily be an error, or a rupture becomes, in Lynch's playbook, a rule: identities may fork and recombine; places may host multiple temporalities; and continuity may be a felt effect rather than a recorded fact. The uncanny emerges where the viewer senses structure without being able to lay it flat.

Fourth, sound operates as a field of play unto itself. Lynch's collaboration with Angelo Badalamenti produced scores that do not simply illustrate emotion but sculpt it, often by introducing gentle discordances that jar against the image. Distorted voices, mechanical hums, and environmental drones saturate spaces that appear otherwise neutral, giving the sense that rooms and corridors have intentions. A familiar domestic interior may thus vibrate with menace, as if the walls were listening. When sound leads image, the spectator's confidence about what counts as signal or noise collapses, another classic mechanism of the uncanny.

Fifth, Lynch establishes emblematic motifs, curtains, electricity, fire, owls, red rooms, not as fixed symbols that point to stable referents but as circulating tokens whose meanings are context dependent. Curtains both conceal and reveal; electricity both animates and threatens; owls both witness and misdirect. The motifs accumulate force through recurrence rather than through definition, enlisting the viewer in a game of pattern recognition that never resolves into an answer key. Interpretive play is thereby not optional but integral: to watch a Lynch film is to enter a system in which meaning is generated through use rather than decree.

Sixth, grotesque humor threads even the darkest scenarios. In *Wild at Heart* (1990) and across *Twin Peaks*, comedy punctures solemnity and opens side doors to vulnerability. The laughter induced by incongruity does not cancel dread; instead, it supplies an oblique route into it, as if acknowledging that terror and silliness are sometimes neighbors. Freud's account of jokes as detours for forbidden content resonates here: Lynch's humor functions as a playful escort into spaces that would otherwise repel or overwhelm.

Seventh, Lynch uses reflexive devices to foreground cinema's artifice without collapsing affect. The Club Silencio scene in Mulholland Drive is paradigmatic: the performance announces that "there is no band" that what we hear is a recording, yet the scene's emotional impact intensifies. Rather than breaking the spell, the revelation sharpens it. Similarly, *Twin Peaks: The Return* stages its own mythology with a self-awareness that borders on parody, yet the uncanny remains intact. Reflexivity becomes another mode of play, one that recruits the viewer into thinking about how images work while still letting the images work.

Finally, Lynch withholds definitive explanation. Interviews rarely close interpretive loops: commentary tracks are absent; and statements resist tidy mapping. This authorial reticence is not coyness, but a formal choice designed to keep spectators in motion. The game, if there is one, is open-ended, and the rules are few: attend, compare, listen, trust patterns, doubt them, and begin again. In this way, Lynch aligns most fully with Freud's uncanny: meaning returns as if familiar and then trembles; what seemed settled shows its seams; and the spectator discovers that play is not the opposite of seriousness but its necessary companion.

7. Conclusion

Viewed through Freud's *Das Unheimliche*, Lynch's work appears not only to represent the uncanny but to enact it as a narrative and aesthetic principle. His films and series collapse distinctions between fantasy and reality, loosen causal threads, and people their worlds with doubles, hollow figures, and perfect surfaces that turn suddenly opaque. The automaton Olympia finds multiple cinematic analogues in Lynch's lifeless-yet-human presences and in his cultivation of thresholds where perception cannot decide. The uncanny here is not gimmick but grammar: it shapes how scenes begin and end, how sounds tilt rooms, and how motifs accrue charge.

At the same time, Lynch's method is fundamentally playful. He treats spectators as collaborators in meaning-making, gives them motifs to juggle, and invites them to try on hypotheses without promising resolution. Play does not dissolve anxiety; it recasts it as movement and experiment. In this sense, Lynch's cinema exemplifies the psychoanalytic idea of sublimation: raw affect is transformed into form, and form, in turn, becomes a way of encountering what cannot be addressed head-on. The collective dreamlike disorientation of the Covid-19 era sharpens the relevance of this oeuvre, because it reveals how uncanniness migrates from the exceptional to the everyday, from the horror setpiece to the kitchen table, from sealed fiction to lived routine.

Ultimately, Lynch converts the Freudian uncanny into a participatory aesthetic. His films compel viewers to confront what is familiar yet strange, real yet illusory, intimate yet terrifying, and to do so through practices of attention that are themselves playful: looking again, listening otherwise, following echoes, and dwelling in ambiguity. In asking us not merely to watch but to play, Lynch offers a cinema that resembles analysis: it names without closing, repeats without exhausting, and brings to the surface what hums beneath. The Unheimliche thus becomes not only an object represented on screen but also an experience that reorganizes perception and, in doing so, teaches us how to inhabit uncertainty with curiosity rather than despair.

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