

Research Article

Toys and creativity¹

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Abstract

The historical, anthropological and developmental research shows that play has been universal in all cultures, and children's play is supported by toys and play materials produced by adults. Children are prepared to learn what they need to learn with passion and pleasure, and quality toys, when used appropriately provide children with a wealth of opportunities for creativity, social interaction with adults, and effective participation. Throughout history, children's play has undergone various changes due to cultural, political and socioeconomic factors without losing its virtues and importance. Therefore, research based evidence on specific types of play and toys which support learning and development most effectively, needs to be multiplied. This text emphasizes the aspects of toys related to creativity. Relevant to our day, the threats to the place of play and toy in the life of the increasingly lonely child are also discussed.

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“Having the sense of creative activity is a great joy and the greatest proof of being alive.”
Matthew Arnold

Toys as Objects of Creativity in History

The most brilliant feature of childhood is the opportunity for children to dream up entire worlds of their imagination, for them and for us. To that end, everybody likes to play, and everybody likes toys. Children create their own, personal legends using toys. Toys give children the opportunity to imagine and create. How does something truly novel form? The answer ultimately lies in play. To love, work and play are the three main motives that drive humans to think and act throughout their lives. Friedrich Froebel, founder of the formal concept of kindergartens, conceptualized twenty open ended handicraft projects that would allow children to create their own realities using a variety of plastic materials. In time, play and play objects/toys have evolved in accordance with the conditions of the times. Changes in societies and lifestyles have influenced the extrinsic conditions and partially the content of play. For example, in retrospective investigations into remembrance of play, playing with unique toys made from natural materials is more prominent in memories of play as the participant age increases (Sandberg and Vuorinen, 2008). Play and childhood memories researchers also found that participants remembered social play with friends or siblings more strongly than individual play (Sandberg and Pramling Samuelson, 2003, 2005; Wickerius and Sandberg, 2006).

Young children are extremely sense focused. Educators such as Montessori and Steiner strongly emphasize ‘senses’ in the education of children. Toys made out of natural materials, such as wood, clay, plants, etc. radiate a sense of warmth and comfort that is often lacking in synthetic materials. It is important to note that touch is a very strong

¹ The photographs are of the personal toy collection of the (chapter) author.

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sensory experience. Hence, the relaxing and destressing effects of natural materials for especially young children should always be kept in mind in the manufacturing or selecting of toys (Elkind, 2007).



Photo 1.

Indian Wooden Toys (Photo credit: Author)



Photo 2.

Wooden Horse from Munich (Photo credit: Author)

Why are toys important? What is the meaning of toys for societies? Why do toy museums exist prominently? Anthony Burton states as such: “The greatest attraction of toys is that they show us our world miniaturized.” (Onur, 2010). Toys help children realize their own strengths and adapt to the adult world. Toys have developed subject to

the socio-economic conditions of societies and can be thought as snapshots of cultural history; in other words, toys are witnesses to the age they were made in. It is often the case that toys are made by adults for the entertainment of children, and hence reflect the adult life of the age they were made in. This allows toys to reflect the past in many angles and be valuable historical artifacts passed on from generation to generation, besides their function of entertaining or educating children. Research indicates that the development of toys reaches its peak roughly between 1700-1850; this coincides with an increase in the awareness of the importance of the education of children. In 20th century, toys reflected largely the changing technology not only in the design but also the manufacturing and material content of toys.



Photo 3.

Portuguese Doll (Photo credit: Author)



Photo 4.

Puppets from Munich, Germany, (Photo credit: Author)

It is stated that a majority of toy designs of today are rooted in the past. However, despite their connection to the past and unchanged functions, toys are changing. That is due to the change in children and the understanding of childhood. Toys are increasingly mirroring individualism, ownership and consumerism, whereas toys of traditional societies would hold subsistence, productivity and creativity in priority. In evaluating toys in the context of their times, the criticism of toys is a criticism of their times. However, toys are nonetheless universal; an examination of toys, play objects and toy museums reveals this notion.

Play is a dynamic and vital activity of human life that has persisted throughout history. Archaeological, historical, anthropological and sociological research on children has shown play has been everywhere and child's play was supported greatly. Oftentimes, play was and still is simplified in thought. However, as scientific literature shows, the natural playfulness of children has vital function in physical and mental development. It is then imperative that parents and teachers be aware of this and provide space and time for free play.

For both children and adults, play has been a common activity throughout the ages. In all societies and cultures, the play was supported by adults as well as toys and play materials. Archaeological findings show the existence of play since prehistoric times. Excavations in ancient China, Peru, Mesopotamia and Egypt have revealed miniature models made of pottery and metal, most probably used as toys for children and drawings showing depictions of people playing and play objects such as tops, dolls and rattles (Frost, 2010).

The origin of toys is prehistoric. The oldest children's toys found to date are thought to be 4,500 years old ("Magical new 4,500 year old find," 2017). Dolls representing infants, animals, and soldiers, as well as representations of tools used by adults are readily found at archaeological sites. The earliest-known written historical mention of a toy comes from about 500 BC in a reek reference to yo-yos made from wood, metal, or painted terra-cotta. It is believed, however, that the earliest form of yo-yo originated in China as early as 1000 BC (Winner, 2017).

Cultural attitudes, transmitted to the children predominantly through the behaviour of their parents, affect how much play is encouraged and supported, to what age individuals are regarded as children who are expected to play, and the extent to which adults play with children.

Attitudes to gender in different cultures also impact upon children's play. In cultures in which there is rigid separation between adult male and female roles boys and girls are prepared for these roles through the toys and games provided, with boys play often being more competitive, physical and dangerous and girls play being more focused on their future domestic role, involving play with household objects, such as pots and pans, tea-sets, and dolls. Historically, children in all cultures consequently the children play more with other children unsupervised by adults, in spaces not especially structured for play, and with naturally available objects rather than manufactured toys Within this general position it is well established that materials and toys support play most effectively when they are open and flexible and provide children with a wealth of opportunities for creativity, for social interaction with their peers and adults, for authorship and for deep engagement (Gauntlett et al. 2010). However, beyond this there is currently a paucity of research as to the qualities of specific types of materials and toys, related to the different types of play, which most effectively support playfulness, creativity, learning and development.

Recent studies by Howard and colleagues, for example, have shown that a key factor in children engaging with and learning most effectively from activities with toys and other materials, is that they perceive the situation to be playful (Howard, 2002; McInnes, K., Howard, J., Miles, G., and Crowley, K., 2009, 2011).



Photo 5.

Korean Toys (Photo credit: Author)

Deprived of Play Means Deprived of Creativity

An extensive anthropologic study in the USA reported a direct correlation between the decrease in free play time within the last half century and the increase in mental health issues in children. Studies such as this focused on the relationship between opportunities of free play and mental health, as well as environmental and social factors supporting or hindering play, the effects on mental health of deprivation of play, and the therapeutic effects of play. Studies that investigated factors that support play and mental health have focused on secure connection and children's knowledge on stress. It was determined that in early childhood, play exerts influence on secure connection, healthy mental development, emotional control, empathy, managing emotional relationships (i.e. friendships with other children), determination and playfulness. Playfulness has major importance on healthy social and emotional development in terms of forming and maintaining friendships. Secure emotional connection, on the other hand, is fundamental in coping with stress and anxiety. In children who are deprived of emotional support and exposed to toxic stress such as poverty, insufficient parental attention, in-family stress, etc. such stress is characterized with mental health issues and lack of play. In contrast, children who are emotionally supported and provided a rich, stimulative environment experience 'positive stress' which is associated with playfulness and emotional flexibility.

It has been reported that in the UK there has been a 36% increase in children's mental health service referrals between the years of 2013-2016. According to the 2016 NHS Annual Report, 695.000 children between the ages of 5-16 (approximately 10% of the age group) were clinically diagnosed with mental health issues. The most reported issues consisted of anxiety, depression, behavioural disorders and tendencies to self-harm and suicide. These alarming results show the importance of approaches to improving and maintaining children's mental health. One important topic within this context is play and activities that the child will initiate and maintain on their own volition and spend in. It has been observed that properties of free time have changed extensively in the last few generations. According to a UK National Trust report, the indoors space used by children to spend unsupervised time in their homes has been reduced by as much as 90% from the 70s. On the other hand, rising stress levels in children due to changes in educational policies and 'exam pressure' has also been reported (Whitebread et al. 2012).

Results of animal research are greatly referred to while researching the effects of play deprivation on child mental health. According to neuroscientific studies on animals, deprivation of play negatively affects the development of the prefrontal lobe. The child's capacity of emotional and behavioural self-control, ability to focus and attention span is related to the maturation of anterior lingula, orbitofrontal cortex and DLPF cortex. Due to these considerations, it

may well be useless, even harmful to start structured, curricular education before the age of 6. In a review that investigates the effects of play therapy in children with autism, play has been found to facilitate development of friendly relationships, progress in coping behaviour, reduction in lonely play, and competence in social relationships (Lindsay et al. 2017).

There are different types of play that are categorized based on their various attributes. ‘Risky’ or ‘adventurous’ play supports the development of independence and contributes to positive stress. Studies show that this type of free play supports physical and mental development in children. During adventurous play in open space, children challenge themselves and test their limits, gain awareness and learn emotional self-control.

It is clear that play is ubiquitous among humans, both as children and as adults, and that children’s play is consistently sponsored by adults in all societies and cultures, most clearly in the manufacture of play equipment and toys.

A significant body of research asserts the importance of play in contributing to children’s physical, cognitive and social development (Else, 2009; Pellegrini & Jones, 1994; Singer, 1994; Trawick-Smith et al. 2011). The ‘right toys’, that are indispensable to children’s play, support early childhood development significantly and reduce the risk of developmental delays. Children are driven largely by play. Therefore, children’s experiences with toys and social environment through play constitute the contextual matrix that directly influences behavioural development and learning. Children with richer play experiences grow to be more attentive, responsible and resilient individuals (Bateson and Martin, 2013). Thus, toys in preschools should be carefully selected in accordance with children’s play needs and areas of interest, in a way that encourages meaningful and quality play.

Toys may serve as a context and influence the nature and content of play (Pellegrini & Jones, 1994). For instance, a child is more likely to play chef than to play doctor if s/he is given a pretend-play cooking set. More realistic toys that represent common objects in the home are often needed by very young children in order to facilitate imaginative thought and engage in make-believe play, even though such dependence tends to decrease as their language and thinking develop (Singer, 1994).

Children’s various styles of play also influence how toys are used as resources. Children seem to exhibit most sophisticated forms of play when they interact with toys they prefer and with children and adults they encounter regularly. In this sense, toys do not just have a unidirectional effect on young children; rather, toys and the social environment a child experiences form the aforementioned “contextual matrix (Pellegrini & Jones, 1994). Children develop skills of imitation and roleplay through toys, by experiencing various adult roles. This, in turn, enables toys to act as activators of children’s imagination and support their socialization within ‘adult culture’.

The importance of play in early childhood education has been stressed many times throughout this chapter. It is, then, perhaps important to note some factors that may be negatively affecting this important aspect. One major modern example would be the prominence of (multimedia) technology in our lives; the presence of ‘screens’ reduce the time babies use for self-directed, spontaneous experiments in learning (it should be noted that American Academy of Pediatrics strongly discourage screen time for babies younger than 2). Babies and toddlers spend a lot of the day in sleep; therefore it is very important that they spend their awake time in active communication with others (parents, caretakers, etc.) and exploring their emotional world via active play. Parents that play, talk and sing with their children give far more benefit to them than technological appliances ever could. The most important stimuli for healthy development of children are loving human interaction (Elkind, 2007).

In a globalizing world, creative and unique, simple, sincere and authentic toys and playtime, that a traditional life would allow children to produce, are being replaced by industrial toys that are products of global trends and business dynamics, and structured games that more often than not represent values such as competition, success and individualism that are valued in Western civilization (Inal, 2007). Most toys of today are made to be ‘products’ that are detached from childhood and are incompatible with a child’s naïve and innocent world. With complex user manuals, structural setting up that require certain skills, brands, patents, intellectual properties and copyrights, logos and images, catalogues, structured educational purposes etc. toys are frankly being produced more for adults’ interests—with their designers and marketing and outlets—rather than children’s. Toys are no longer majorly within the initiative of the child as in the rural child picture. As plastic toys (be it their material or their nature) become prominent, the childhood of the child is being deferred (Inal, 2007). Children that continually play with electronic or mechanized toys are being exposed to EM radiation and likely undergo deficiency in their neuromotor and cognitive skills (Inal, 2007), whereas development of the hands-brain connection, through manipulative play, is critical to facilitating creativity.

Developmental Functions of Toys

Toys train children to develop dedication for a single activity and focus on a particular occupation for a prolonged time. It is important to support and encourage children in their self-directed activities.

We see that learning via play and development go hand in hand in babies and young children. It is possible to summarize learning as a product of experiences that are derived from play, which is determined by the child's mental development level. Once children associate objects in a continuity, they begin grouping up similar and dissimilar ones; the start of 'classification'. If they are provided the materials and set free, children can keep on with these important mental activities for a very long time. On the other hand, toys also develop focus and concentration in children.

Play is also vital for child development because it contributes greatly to cognitive, physical, social and emotional well-being. Toys are an instrument within play that serves to establish a complete, interactive relationship between the child and the parents and/or other caretakers. As critical facilitators of (especially neural) development, the suitability of toys to children is a subject of importance. In the "American Academy of Pediatrics 2019 Report", the play-based interactions of adults with their children influence rich growth in various aspects of child development including problem solving, imagination, creativity, language skills, etc. Throughout the last 20 years, the effects of toys on children's development, self-regulation and executive functions have become more apparent for parents.

High quality toys, via adult-led play-based interactions, provide significant support on especially language development and skills such as creativity, imagination and pretending. Such rich interactions are proven in especially early years to be beneficial to brain neuroplasticity (Suskind, 2018). Suskind comments that research by Hart and Risley show that the size of the vocabulary spoken within a family may influence substantial differences in development.

Traditional toys are categorized in various ways. A categorization in functions is as follows: 1- Symbolic (dolls, toy cars, cooking sets), 2- Fine motor manipulation (blocks, puzzles), 3- Artistic (play dough, ceramic and clay), 4- Language and conceptual (card games), 5- Gross motor/physical (larger cars, bicycle, push-and-pull toys). Quality toys of any of these categories facilitate parent-child interaction and enhance imagining. Toys, from infancy, function to facilitate cognitive development, linguistic interactivity, imaginative and pretend play, problem solving, social interaction and physical activity. Toys, toy characters and other play objects in imaginative play provide opportunities for word usage, narration, imitation and portrayal, and coping with challenges and emotions. In addition, during imaginative play the child brings to life not only toys but also their own identity in other roles (Göncü, 2007).

Blocks and puzzles can be shown as main examples to traditional toys that allow for problem solving via play. Such toys, along with reinforcing fine motor skills, develop spatial and early mathematical skills. On the other hand, the usage of toys such as balls in physical activity is a potential opportunity for gross motor development as well as self-regulation and teamwork.

Conclusion

Without a doubt, the best toys are those that align with children's developmental skills and faculties and support the development of new skills. Some studies on the developmental functions of toys indicate that play that involves parents and parental interaction is more beneficial for development than playing alone; this is due to the involvement of verbal interaction and scaffolding. Toys, in turn, have been found to contribute significantly to learning via such interaction. Other mutual activities such as shared book reading have a similar effect as well. This leads experts to emphasize to parents and other caretakers the contribution of play involving toys and adult interaction to social, linguistic and other fields of development. However, unfortunately the limited free time of parents in our day is increasingly becoming unable to accommodate quality play time. In the absence of interpersonal interaction, alternatives such as electronic toys are far from having the potential to provide the adequate opportunities critical for healthy development that interactive play provides. It is hence important to give scientific and political efforts to enable children to benefit from the developmental effects of interactive play with their parents. This is all the more true for children in poverty, as they often have less access to appropriate toys. There are hence various programmes being developed that address these issues on a societal level.

As Rollo May recounts (May, 1975), Alfred Adler described creativity as part of a 'compensation' mechanism. This mechanism means that people 'create' in order to compensate for their shortcomings and issues. Child's play, and the process of acquiring life skills through creative play, also play a similar role in compensation. The creative process is the utmost expression of emotional wellbeing and self-realization. Then toys, as objects of creative and communicative value, facilitate both intrapersonal reflection and interpersonal communication.

As a final remark, adults, parents and educators often need to be able to look at the world through the eyes of a child, in order to ensure the wellbeing and healthy development of the child. Play and toys are the most powerful tools of this ability, since play is the art of growth for a child. Of course, it is crucial to remember that no toy can be more valuable than the social interaction it may facilitate.

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