

**EQ
On
Play
&
Exploration**



This book is designed to be short.

When it's possible, we say things in a very direct way.

The things we say are based on our own detailed
research.

This is one of a series of books produced with the support of the Velux Foundations

At the centre where we work with young children we provide interactive resources for parents, educators and childcare professionals that provide a larger understanding of the material in this book.

THE VELUX FOUNDATIONS

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“The truth is that play seems to be one of the most advanced methods nature has invented to allow a complex brain to create itself.”

(Stuart Brown, psychiatrist)

Can we define play?

Some people have argued that play is an activity that is simply too complex to be defined in terms of the environment or circumstances in which it takes place or with reference to specific observable behaviors of those who are playing.

However, British educationalist Sue Palmer identifies 4 essential components of play that are generally agreed upon.

1. **It is freely chosen**
2. **It is personally directed**
3. **It is intrinsically motivated and is not provoked by external rewards (eg adult applause) or coercion (eg pressure to learn applied by adults)**
4. **It actively engages the child**

We can expand on these factors by drawing from the work of two researchers from the USA – Peter Gray (a psychologist who focuses on the evolutionary significance of play) and Stuart Brown (a psychiatrist and expert on the effects of play deprivation on healthy development).

Play is freely chosen: Brown indicates that “play is not required by duty. It cannot be undertaken by compulsion.” Gray adds that “(t)he ultimate freedom in play is the freedom to quit.” (However, Brown points out that (p)lay makes us want to keep on playing. We don’t want it to end.”) Gray also adds that play is “free” in another sense – “the means are more valued than the ends”. Play can be challenging but there is no ultimate purpose to create a sense of obligation.

Play is personally directed: Schedules, timetables and adult direction compromise play. Gray states that play is not a “freeform activity.” It is guided by “mental rules”. It always has a structure that “derives from rules in the player’s mind”. Even very young children are exploratory when playing. The pattern of stimulus and response allows for associative learning. Play can be heuristic - as babies grow, they move beyond being content to simply feel and ponder objects to wanting to find out what they can do with them. Heuristic play involves the practical adoption of experience gained in interacting with the environment and manipulating objects that are found there. Children learn natural rules and the limits of possibility. They learn that they can scoop up water or sand with a wooden ladle unless the ladle happens to have holes in it. However, a ladle with holes is good for sprinkling.

Play is intrinsically motivated: Gray says the same but Brown puts this in a slightly different way. He says play has an “inherent attraction”.

Play actively engages the child: Brown says that, when playing, we lose track of time and lose our consciousness of self. According to Gray, play involves “an active, alert, but non-stressed frame of mind”.

Some commentators refer to a fifth component. Play is non-literal, imaginative, marked off in some way from reality. Peter Gray says that play “is serious yet not serious, real yet not real. In play one enters a realm that is physically located in the real world, makes use of props in the real world, is often about the real world, is said by the players to be real, and yet in some way is mentally removed from the real world.

Imagination, or fantasy, is most obvious in sociodramatic play, where the players create the characters and plot, but it is also present to some degree in all other forms of human play. In rough and tumble play, the fight is a pretend one, not a real one. In constructive play, the players say that they are building a castle, but they know it is a pretend castle, not a real one. In formal games with explicit rules, the players must accept an already established fictional situation that provides the foundation for the rules. For example, in the real world bishops can move in any direction they choose, but in the fantasy world of chess they can move only on the diagonals.

The fantasy aspect of play is intimately connected to play's rule-based nature. Because play takes place in a fantasy world, it must be governed by rules that are in the minds of the players rather than by laws of nature. In reality, one cannot ride a horse unless a real horse is physically present; but in play one can ride a horse whenever the game's rules permit or prescribe it. In reality, a broom is just a broom, but in play it can be a horse. In reality, a chess piece is just a carved bit of wood, but in chess it is a bishop or a knight that has well-defined capacities and limitations for movement that are not even hinted at in the carved wood itself. The fictional situation dictates the rules of the game; the actual physical world within which the game is played is secondary. Through play the child learns to take charge of the world and not simply respond passively to it. In play the child's mental concept dominates, and the child molds available elements of the physical world to meet that concept."

“As we have no play days, so neither do we allow any time for play on any day; for he that plays as a child will play as a man.”

(John Wesley, 18th century educator)

What happens when children are deprived of rich and varied environments in which to play?

We know from research in biology, in neuroscience, in genetics and in developmental psychology that, aside from what a child inherits through her genes, the structural development of her brain depends on the experiences and opportunities she has as she grows.

Preschool years are not only optimal for children to learn through play, but they are also a critical developmental period. If children are not given enough natural movement and rich and varied play experiences, they start their academic careers with a disadvantage. They are more likely to be physically clumsy, will have difficulty paying attention and trouble controlling their emotions. They'll try to solve problems using inadequate methods and will demonstrate difficulties with social interactions.

Play is active learning that brings together the mind, body and spirit. Play deprivation means that life experience is somehow truncated. Experiences and opportunities are profoundly limited in terms of their richness and variety. Those affected will grow up to be fearful and dependent on narrow, rigid routines. They become preoccupied with micromanagement of their environment and those who occupy it.

Field biologist Mark Bekoff defines play as "training for the unexpected". On this basis, psychiatrist Stuart Brown argues that people "who suffer a deficit of play have missed the opportunity to train the feelings that make them stronger."

What are these feelings? Brown says that those who have been play deprived lack resilience and have a “shortfall in curiosity”.

Being resilient means having a positive attitude, optimism, the ability to regulate emotions, and the ability to see failure as a form of helpful feedback. Even after misfortune, resilient people can use this combination of abilities to change course and recover.

When a person is curious, (s)he has an urge to explore in order to make discoveries. Exploration is the act of searching and finding out about something.

Those who are play-deprived have difficulty regulating emotions and tend to be inflexible especially when something unexpected happens. They are rigid and easily startled. They substitute shock, fear and aggression for surprise or delight. Young or old, they may be bullies. In a supervisory role, they are likely to micromanage. They will be control freaks. The inherent message they provide to colleagues is “Mishaps or mistakes are unacceptable. Don’t dare expose me that that type of discomfiture. You are my scapegoat.”

Those who play rarely become brittle in the face of stress or lose the healing capacity for humor.”

(Stuart Brown)

Play deprivation: what factors prevent play?

David Whitebread is a psychologist from Cambridge University in the UK. He identifies two types of factors that influence the extent to which children are playful.

The first relates to the provision of opportunity.

The second concerns environmental or social factors that support or inhibit the child's natural playfulness.

Opportunity

American writer, Richard Louv coined a phrase. He refers to Nature-deficit syndrome. Officially, there is no such condition but, in his book, 'Last Child in the Woods', Louv argues that "(t)ime in nature is not leisure time; it's an essential investment in our children's health (and also, by the way, in our own)."

Many commentators refer to a cultural shift away from Nature. There is a condition known as "biophobia" that is sometimes characterized as a prejudice against nature or an antipathy towards natural phenomenon like bugs or muddy water. The Diagnostic and Statistical Manual of Mental Disorders includes a section on "natural environment phobias" that cover such things as "a fear of heights, storms, water, and of the dark".

Writing in the Los Angeles Journal in 2016, James Campbell noted that "biophobia research traditionally focused on specific categories of fear....Recently, however, researchers whose findings were published in the Journal of Environmental Psychology discovered that modern-day fears of the natural world have no such

focus. In children especially, anxiety can be evoked by the most unexceptional circumstances: a flock of noisy birds or a strong wind.

It has been noted that over 80% of those suffering from natural environmental phobia have a preoccupation with the danger or harm they might experience in the natural environment. Many children who fear nature also suffer from general anxiety disorder or depression.

Urbanization contributes to play deprivation. Part of this is attributable to the understandable risk aversion of urban parents who are exposed to heavy media coverage warning of the countless dangers that include human strangers, pollutants and traffic.

Commercial activity has tended to consume green areas and public space.

However, as far back as the 1970s, architect Simon Nicholson wrote about the tendency for public art installations, cultural events and opportunities for play and recreation to be shaped by specific individuals or institutions. Here is what Nicholson had to say about the situation:

“Creativity is for the gifted few: the rest of us are compelled to live in environments constructed by the gifted few, listen to the gifted few’s music, use gifted few’s inventions and art, and read the poems, fantasies and plays by the gifted few. This is what our education and culture conditions us to believe, and this is a culturally induced and perpetuated lie.”

Nicholson devised the theory of loose parts. He believed that the creative potential of any environment is directly proportional to the number of “variables” it contains.

What are variables? They are the things that places designed for human interaction tend to lack. Nicholson argued that such places were "clean, static and impossible to play around with" meaning that the "fun and creativity (has) been stolen: children and adults and the community have been grossly cheated."

Loose parts are items that can be manipulated – they are movable and have multiple uses.

Hunter-gatherers collect loose parts and adapt them – they become tools or weapons for hunting. In a traditional Bulgarian village, you’ll encounter collections of loose parts – objects worth keeping for their versatility.

In urban environments children learn to participate in a consumption cycle – acquire, use and discard. De-cluttering and minimalism have become fashionable and many have become more conservation conscious. They re-cycle and bemoan the homogenizing effect of corporate branding.

However, in some ways, this can defeat Nicholson’s purpose which is about interaction with the environment and using the objects you have at your disposal in order to (creatively) express yourself.

Look at the following image. You’ll get the message.



Environmental and social factors

If we talk about environmental and social factors that inhibit playfulness, we naturally focus on the impact of *stress*.

American writer Paul Tough identifies stress as the “key channel through which early adversity causes damage to developing bodies and brains”.

In 2005 the US National Scientific Council on the Developing Child differentiated between “positive stress” and “toxic stress”.

Positive stress is experienced by a child who lives in an emotionally supportive and stimulating environment that contains elements of uncertainty and provides developmentally appropriate challenges. Indeed, those challenges help the child to develop resilience.

Toxic stress arises from failures in emotional support and exposure to stressful situations that are severe and consistent.

Reviews on the impact of toxic stress present two dominant themes –

1. Significant shortcomings in the *attachment* between parent and child
2. The human reaction to *deprivation*

Reference to “child poverty” is not always useful. This isn’t just about income and material possessions. The problem derives from the deterioration of the quality of adult decision-making and patterns of behavior. The children of highly-stressed parents who behave erratically (and – perhaps – recklessly) are vulnerable. Material poverty is a major cause of this style of parental performance but there are quite a few other causes including mental health.

“I think every person – whether they are a Big C creative individual or a little c – is drawing not just on their knowledge and mastery, but drawing from childhood.”

(Howard Gardner, developmental psychologist)

Childhood Play and Adult Creativity

Here is how educationalist Sir Ken Robinson defines divergent thinking:

“Divergent thinking isn’t the same thing as creativity. I define creativity as the process of having original ideas that have value. Divergent thinking isn’t a synonym but is an essential capacity for creativity. It’s the ability to see lots of possible answers to a question, lots of possible ways to interpret a question, to think laterally, to think not just in linear or convergent ways, to see multiple answers, not one.”

It was important that engineers could think divergently in order to work in the NATO space program. In the book ‘Breakpoint and Beyond: Mastering the Future Today’, George Land and Beth Jarman refer to how tests first devised to measure the divergent thinking of those engineers were adapted and applied to children.

When tested at kindergarten level, 98% of the study's subjects scored at the genius level in divergent thinking. When they were ten, 32% of the same group scored as high, and by age fifteen, only 10% scored at that level. When 200,000 adults were given the same test, only 2% tested at the genius level.

What is going wrong?

Psychologist, Teresa Amabile identifies adult tendencies that kill creativity in children. These tendencies are commonly demonstrated in formal educational settings.

Surveillance or heavy supervision: This involves hovering over children making them feel that they are constantly being watched and / or judged.

Evaluation: This involves implanting a fear of having their accomplishments judged by others.

Competition: This involves placing children in win-or-lose situations (creativity to order) and not allowing them to act according to their own criteria.

Excessive control: This involves telling children the “right way” to do things and constantly interfering. It kills the desire to explore.

Pressure: This involves the ethos of *training* for superlative performance or performance worthy of public applause. It can provoke an aversion to the subject being taught or activity being undertaken.

Children also need time and space so that they can follow their own inclinations and use their particular talents. This helps them strengthen their capacity for internal motivation.

Strict scheduling means that children can be interrupted when doing something they enjoy and torn out of deep concentration. Scheduling destroys creativity.

Adam Grant, a professor of management and psychology, asks “what motivates people to practice a skill for thousands of hours?” He answers his own question – “The most reliable answer is passion – discovered through natural curiosity or nurtured through early enjoyable experiences with an activity or many activities.”

Note the reference to “many activities”. Many scientists who have won Nobel prizes have artistic hobbies. Here is how Grant compares Nobel prize-winners to other scientists -

“Nobel prize winners are 22 times more likely to perform as actors, dancers or magicians, 12 times more likely to write poetry, plays or novels, seven times more likely to dabble in arts and crafts, and twice as likely to play an instrument or compose music.”

Don’t rush off to enroll your child in a bunch of different clubs. Grant adds the following comment –

“No one forced these luminary scientists to get involved in artistic hobbies. *It’s a reflection of their curiosity.*”

The curiosity remains intact from their childhood.

Allow your children to sort out their own values and discover their own interests. Limit the rules. Focus on moral values. Set a positive example but allow your children to establish their own moral code.

Children love to learn when not being tutored.

Children play.

Adults should play more often.

Freedom to play

“Work consists of whatever a body is obliged to do. Play consists of whatever a body is not obliged to do.”

(Mark Twain)

Play is freely chosen, personally directed, intrinsically motivated and it actively engages the child.

Play provides learning experiences *as and when children choose to seek out these experiences*. It's their choice.

By playing, children engage with those experiences on their own terms learning the lessons that they are capable of learning at different stages of their development (as Nature intended).

When play is seen as an educational approach or teaching method directed at young children, there is a risk of destroying the essence of an activity that is natural, spontaneous and all-embracing by making it unnatural, scheduled and deliberately focused.

According to Peter Gray “(t)rustful parents enjoy their kids; they don't think of them as their 'project'.” This statement helps us consider our tendency to plan “suitable” or “educational” play activities and then to interfere, instruct and impose our agenda on children as they play.

The educationalist, Ken Robinson says that imagination is the source of all human achievement. Adult instruction and interference does not necessarily eliminate a child's imaginative engagement with an activity but it certainly curtails the child's ability to pursue her own path. The element of adventure is

diminished for the child when the grown-up is in the driving seat.

Explorative play should involve a scattering of happy accidents and unfortunate pitfalls.

“What if.....?”

The discovery can elicit joy or disappointment. Yippee or Oops.

Bekoff called play training for the unexpected. Learning to balance on the seesaw between joy and disappointment is the essence of resilience.

Try. Fail. Try again.

This sequential process builds resilience as does testing the boundaries of your own competence.

Adults should not implant lessons in too heavy-handed a fashion or try too hard to eliminate pitfalls.

The greatest risk is to take no risk at all.

