

UNIVERSITY OF TECHNOLOGY SYDNEY, AUSTRALIA  
LUND UNIVERSITY, SWEDEN  
THURSDAY 8 OCTOBER 2015

# WHO DARES WINS



or

# PARADOX OF RISK IN PLAY

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## WHO DARES WINS

- The motto of Special Forces Units around the globe
- What does 'who dares wins' mean?



## DISCUSSION

- ❑ It has long been acknowledged that play provides a context that fosters all aspects of children's learning and development
- ❑ For the child, the exploration and taking of managed risk is critically important for healthy childhood development
- ❑ Learning, perception and judgement will be impeded if the child is not exposed to situations that involve an element of risk



## DISCUSSION

- ❑ Concerns have been raised by researchers, educators and health practitioners about the implications of curbing free play activities and they have argued that risk reduction strategies in playground management adversely impact on the quality of physical play
- ❑ We need to correct the risk-averse counter-productive negative mindset and replace it with a mindset that includes the benefits of risk
- ❑ More importantly the provision or application of positive risk needs to be embedded into playground design



## DISCUSSION

- ❑ Risk in our society is generally associated with something negative, if you mention the term risk most people associate risk only with negative thoughts and consequences
- ❑ What a lot of people fail to realise is that risk can have both positive and negative consequences
- ❑ Within the engineering profession risk is something we manage whether it is positive or negative
- ❑ ISO 31000 defines risk management as the *effect of uncertainty on objectives*

## DISCUSSION

- ❑ The reality is we live in a world that is full of risks
- ❑ In any one day we are constantly exposing ourselves to the risk of physical injury
- ❑ Although we face situations where we expose ourselves to negative outcomes, there are also many situations where we take risks in order to achieve positive outcomes
- ❑ As adults we depend on our ability to adapt to new situations and problems and conquer challenges

## DISCUSSION

- ❑ We obtained these skills by engaging in risk-taking behaviour during our formative years
- ❑ If we never took a risk we would never have learnt to walk, to climb stairs, swim, ski, ride a bicycle, boil an egg, ask someone out on a date, drive a car, go to university, and many more far 'riskier' activities
- ❑ All these activities have one common element – for each there are unknown factors that make success uncertain
- ❑ Therein lies the risks

## DISCUSSION

- ❑ Risk is not always about being reckless but rather about engaging with uncertainty in order to achieve a particular goal
- ❑ Risk events require us to weigh up our likelihood of success or failure based on relevant knowledge or information related to each particular situation
- ❑ It is only through facing challenges such as these that we learn to appraise risks and make appropriate judgments about our likelihood of success (or failure)

## DISCUSSION

- What is it that gives us the courage and the wisdom to expose ourselves to day-to-day risks without the fear of physical, social and mental damage?
- How did we develop these skills and learn to automatically incorporate them into our life?

## DISCUSSION

- Most of us learnt to appraise and manage risks through our childhood experiences
- We made decisions based on our ability and judgment to assess each situation and then determine whether it would have negative or positive effects on our lives
- We developed this through past experience and a history of taking risks and managing the consequences
- We gained and honed these skills as children and now apply them in adulthood

## DISCUSSION

- ❑ We climbed that little bit higher, swung that little bit faster and mentally defended ourselves against adversity in play activities
- ❑ We are better able to assess risk because we have been doing it since we were children
- ❑ Increasingly opportunities for children today to have these types of experiences are restricted

## DISCUSSION

- ❑ For several decades the playground industry and Local Government were driven by the constant threat of litigation and an over zealous need to remove all risk from children's playgrounds
- ❑ As a result a large percentage of existing playgrounds are dull and boring with no opportunities for risk-taking and challenge
- ❑ Fortunately there is a growing understanding that we got it all wrong and that children really do need to be exposed to risk-taking activities and challenges as part of healthy childhood development

## DISCUSSION

- Consequently, playgrounds should be designed and maintained so that they are as safe as necessary, not as safe as possible
- What are the costs of a child growing up without exposure to risk?
- Do we really want to unintentionally create a society that puts safety so high that it deprives our children of the opportunities to be creative and to grow?

## DISCUSSION

- Conversely, we do not want to expose children to unnecessary risks
- The argument is not black or white
- Children need both safeguards and opportunities; we must recognize that keeping children safe involves them taking risks so that they can learn

## PSYCHOLOGY OF CHILDREN AT PLAY

- ❑ Children have a natural urge to explore in order to find out things for themselves, to experiment with primary materials, to develop skills through play, and test themselves in activities that include a degree of challenge and risk
- ❑ Play provides a vehicle for children to both develop and demonstrate knowledge, skills and concepts
- ❑ Play allows children to actively construct their own understandings of their physical and social world and to understand their own capabilities in relation to their developing skills

## PSYCHOLOGY OF CHILDREN AT PLAY

- ❑ In order to achieve this children require opportunities to challenge themselves, move out of their comfort zone and explore risk
- ❑ Research studies on children's experience of risk in their everyday play activities highlight that children are naturally drawn to activities that involve height, speed, balancing precariously, and G-forces such sliding, rocking, swinging, spinning...
- ❑ Activities such as these allow children to learn about themselves, and their capabilities in relation to both the environment, task demands and their changing abilities



## PSYCHOLOGY OF CHILDREN AT PLAY

- ❑ Studies have shown that even young children can recognise hazards in their environment and identify behaviours that could potentially lead to injury
- ❑ The ability to appraise risks is developed in the context of children's everyday play experiences

## PSYCHOLOGY OF RISK

- ❑ Risk is the effect of uncertainty on objectives
- ❑ The objectives will vary depending on the stakeholder
- ❑ A parent will see risk differently from a child, just like a child will see risk differently from their parents
- ❑ Regardless of this, a risk can be both a positive and a negative experience
- ❑ A negative consequence can be an injury of the child; in which case the positive is often hard to see

## PSYCHOLOGY OF RISK

- ❑ The balance has shifted to controlling negative risks at the expense of providing opportunities for positive risks
- ❑ This has resulted in a negative mindset towards all risks
- ❑ What has happened to a nothing ventured, nothing gained mind-set?
- ❑ In saying this, it would seem irresponsible for a parent to expose their child to risk when it can be avoided, but, restricting a risk in one instance might expose the child to risk in another

## PSYCHOLOGY OF RISK

- ❑ Unless we can provide play facilities that will hold the child's interest and provide the necessary challenge and stimulation that children require, they will play somewhere else, usually on the streets or other more hazardous places thus exposing themselves to even greater, and uncontrolled, risk
- ❑ A child's exposure to risk has lowered in society
- ❑ In 1971, eight out of ten children aged 7 or 8 years went to school on their own, by 1990 this figure had dropped to less than one in ten...

## PSYCHOLOGY OF RISK

- ❑ It is often hard to see the positive side of taking risks, especially when a child is involved
- ❑ However, if a situation can be created where a child can take risks without the potential for harm then parents can still maintain control
- ❑ They will be able to weigh up the benefits using the resources available to them, whilst trying to reduce a potentially negative outcome

## PSYCHOLOGY OF RISK

- ❑ The question of the level of control and the significance of this to a child's development within different settings should be considered
- ❑ Whether it is inside the home or outside in the playground environment, the perception of responsibility by an adult has added a new dimension and significance to childhood play
- ❑ Similarly, playgrounds are no longer seen only as a place for risky play

## PSYCHOLOGY OF RISK

- ❑ The perceived dangers of child violence, kidnapping, bullying, molesting and other fears have given more reason to impose greater control on a child's daily life than there was before
- ❑ This can be seen as a mechanism that further complicates the risk prevention role of adults

## PSYCHOLOGY OF RISK

- ❑ However, a recent study found that whilst parents expressed concern for their children's safety in relation to factors such as increased traffic and 'stranger danger', they recognised that opportunities for children to engage in challenging physical play that involved an element of risk was important for skill development, confidence building and for learning about risk and how to avoid injury

## RISK DEFICIT DISORDER (RDD)

- ❑ RDD describes the growing and unhealthy trend of attempting to remove all risk from within our community and the problems that this risk removal indirectly creates
- ❑ The absence of childhood risk is leading to many problems both directly and indirectly
- ❑ Problems such as obesity, mental illness, lack of independence, and a decrease in learning, perception and judgement skills within our children have been cited in the literature

## RISK DEFICIT DISORDER (RDD)

- ❑ RDD can be described simply as a lack of risk taking that leads to an absence or lack of ability and knowledge to then perceive and deal with risk
- ❑ A risk deprived child would be one who has not been exposed to risk, and as a consequence is unable to challenge him- or her- self to a level which allows continual development
- ❑ This risk deficit is being driven by a culture of fear about the safety of children even though they are statistically safer than at any point in human history



## THE RISK PARADOX

- The risk paradox states that one will take greater risks as a result of one's perception of a risk being lowered. This paradox is equally applicable to children as it is to adolescents and adults
- There are many applications of this risk paradox in society including:
  - Adults driving cars on roadways that have imbedded safety systems installed
  - Children playing sport whilst wearing safety equipment
  - Children playing on impact attenuating surfaces where they perceive the surface to be safer therefore taking greater risks



## THE RISK PARADOX

- The extent to which people's compensating behaviour is counterbalanced by a safety measure
- Behavioral adaptation to a perceived lower risk situation, especially when the lower risk is brought about by an accident countermeasure
- The risk paradox for children at play is simply another type of risk management in society

## CHILDREN NEED EXPOSURE TO RISK

- ❑ Contemporary studies of children recognise their capacity to initiate and lead their own learning
- ❑ However, as adults we have a duty to ensure that children have safe and secure environments as a context for their learning and development
- ❑ As Tovey argues a safe environment... is one where safety is not seen as safe from all possible harm, but one that offers safety to explore, experiment, try things out and to take risks

## CHILDREN NEED EXPOSURE TO RISK

- ❑ From this perspective, a child requires some control and structure, but should still be able to have the freedom to make discoveries
- ❑ This perspective should be incorporated in the design of a playspace
- ❑ We know that for children, play is an instinctive and voluntary action
- ❑ They do not foresee risk like adults do

## CHILDREN NEED EXPOSURE TO RISK

- ❑ They do not identify, assess, control and monitor risks in the same way as an engineer does
- ❑ A child sees life as an ideal world where anywhere and everywhere is an area for play
- ❑ It is important that we maintain some control over how and where children decide to undertake play
- ❑ As long as they have variety and are challenged to their limits they are content, children need access to a variety of different landscapes... no one playspace can fulfil all the play needs

## CHILDREN NEED EXPOSURE TO RISK

- ❑ So do children need exposure to risk to develop into competent adults? The author's answer to this question is absolutely yes. However, as discussed earlier, this risk must be managed and it needs to have a positive outcome.
- ❑ Gill outlines four main arguments for a child's exposure to risk:



## CHILDREN NEED EXPOSURE TO RISK

1. Certain risks allow children to learn how to manage it, such as practical skills that promote self protection; swimming, cycling and road safety
2. Children have an appetite for risk taking. If it is not satisfied then they will seek situations in which a greater risk might exist
3. Children gain other benefits as a side-effect of being exposed to risk; the benefits of outdoor play far outweigh the risks
4. The final argument outlines the longer-term benefits. Children build their character and personality when facing adverse circumstances where there is possibility of injury or loss

## CHILDREN NEED EXPOSURE TO RISK

- The discussion tends towards the idea that all risk is good and necessary, however it is hard to contend with a parent who has lost their child in a tragic playground accident
- It is important to note that a safe playspace design includes the removal of all hazards that can cause death or serious injury
- It is the author's opinion that risk exposure should be layered, allowing children of different ages and abilities to explore and take considered risks

## CORRECTING THE RDD MINDSET

- ❑ There is a common notion that risk has a negative consequence for outcomes
- ❑ However, risks are part of everyday life and should be regarded as an 'opportunity cost' that can provide advantages
- ❑ The positives of risks in life are often obscure or clouded
- ❑ Also, the positive risks involved in play are not tangible and easily measureable

## CORRECTING THE RDD MINDSET

- ❑ Risky activities can have positive implications in terms of children's developmental, social and emotional needs, as well as their overall health
- ❑ Without risk there is no sense of overcoming real life hurdles
- ❑ Denying children this opportunity could result in a society of risk-averse citizens, unable to cope with everyday situations; or in children simply finding more dangerous locations to carry out their risk-taking behaviour

## RISK IN PLAYSPACE DESIGN

- ❑ Ideally, playspace design and safety should be based on the principle that play equipment should be as *safe as necessary* (remove the hazards with exposure to managed risks) thus allowing children to engage in experiences that offer challenge and excitement
- ❑ In order to maintain this it is best practice to engineer out all possible hazards while maintaining the perception of risk

## GOOD PLAYSPACE DESIGN

- ❑ The Darling Harbour Adventure Playground in Sydney is a good example of the new generation of playgrounds which have a mix of challenge embedded in the design together with a feeling of freedom
- ❑ This feeling of freedom and challenge comes with some additional negative risks that are more than compensated for by the benefits of the positive risk exposure to the child
- ❑ Opened on 24 September 2011

## GOOD PLAYSPACE DESIGN

- It covers half a hectare, 40 per cent of which is devoted to water play
- It features a large spatial web climber over 10 meters high
- The climbing structure has been designed so that if a user falls they are progressively slowed down by rope elements beneath
- Other equipment includes:
  - Water wheels and channels;
  - Hand Pumps;

## GOOD PLAYSPACE DESIGN

- Synchronised water jets
- Climbing rope structures
- Balancing beams
- A spinning wheel
- A large sand pit with digging implements
- Large swings
- A giant slide
- A flying fox
- Together with play equipment for smaller children and amenities for all

## BAD PLAYSPACE DESIGN

- ❑ The *Dirty Dozen* as adopted by NPSI, identifies twelve hazards as the leading causes of injuries in the playground
- ❑ This list provides designers with situations to avoid potential hazards within the playground
  - ☑ *Inadequate surfacing*: The ground surface around the playspace is not provided with loose fill material to attenuate impacts. The fall onto hard surfaces has a higher probability of an accident
  - ☑ *Inadequate circulation space*: The area around the playground equipment which is less than 2.5 m in all directions from the edge of stationary play equipment

## BAD PLAYSPACE DESIGN

- ☑ *Protrusion & entanglement hazards*: A component or piece of hardware that protrudes in open areas where it is capable of catching items of clothing worn by children. This can cause strangulation eg clothing, toggles, hair, laces etc. Example: bolt ends that extend more than two threads beyond the face of the nut
- ☑ *Entrapment*: Openings on playground equipment are not large enough to allow the child's body to pass through the opening when entering feet first. If openings are measured between 89 to 230 mm
- ☑ *Insufficient equipment spacing*: Play equipment with no proper spacing causing overcrowding of a play area, resulting in unsafe play conditions
- ☑ *Trip hazards*: Play structure components in the circulation space

## BAD PLAYSPACE DESIGN

- ☑ *Lack of supervision:* No supervision of children while playing. Play area not properly designed to make easy access for parents/carers to observe children while playing
- ☑ *Age-inappropriate activities:* Equipment settings not appropriate for the different ages
- ☑ *Lack of maintenance:* No regular preventive maintenance on play equipment
- ☑ *Crush, shearing and sharp-edge hazards:* Components of equipment having sharp edges or points and moving parts
- ☑ *Platforms with no guardrails:* No rails for children to climb or hold onto securely when moving around on elevated surfaces
- ☑ Equipment not recommended for public playgrounds: Not recommended equipment used in the playspace which exposes children to much greater risk





## CONCLUSIONS

- ❑ Risk in play should not just be viewed for the developmental opportunities it offers children, but rather as 'life's training for the unexpected'
- ❑ Children need to be given frequent opportunities to engage in activities where they will be able to learn from their mistakes



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