SAFETY, RISK AND PLAY

Changing positions in the United Kingdom

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Abstract

For several decades a key driver in providing playgrounds in the UK has been a quest for safety from injury. This has been approached primarily by the use of environmental interventions involving rigorous compliance with manufactured equipment standards, widespread use of impact absorbing surfaces, age-segregation of children, and partitioning of play areas with fencing. Only in the present decade has it begun to be accepted that this quest for safety, as conducted, had undesirable consequences, and was in any case unachievable.

Recent publications by the Children's Play Council, the Play Safety Forum and other UK national bodies, while fully recognising the importance of reasoned injury avoidance strategies, seek to emphasise the numerous benefits of play, some of which are essential for human development, including physical and emotional health and wellbeing. These are at least as important as safety from injury if not more so. It is further said that children and young people actually want and need exposure to risk as they grow up. To deny them this opportunity when young may render them less capable of handling the inevitable dangers of adult life.

To further this 'quantum shift' in thinking on the priorities of play will not be easy. A huge industry has developed around the concept of injury avoidance, the legal system has been primed to scrutinise injuries according to the same doctrine, and it is less easy to measure the developmental, psycho-social, and physical benefits of encounters through play in more natural and wholesome environments than it is to count the number of physical injuries, as injury surveillance systems do. Nonetheless, those who believe that this is an important issue may find it useful to contemplate some of the forces which operate, intentionally or otherwise, to control the form of children's provision, and some of the ideas on how a more balanced approach may be achieved.

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The changing socio--political context

Up until the 1960s a fairly relaxed attitude to injuries on playgrounds existed in Britain. These were of course regretted, but were not on the whole seen as a major social concern. This began to change about thirty years ago when injuries on British playgrounds became a hot topic. This was prompted partly by data which were beginning to emerge suggesting that there were tens of thousands of playground-related injury cases every year (e.g. Illingworth et al., 1975). What was rarely said, even after these figures were confirmed, was that the actual annual risk of injury, especially serious injury, was very small on a per child basis. Nor was it often the case that the risk was placed in the context of the benefits, including health gains, which good play was able to provide. Nonetheless, the avalanche of concern which the injury statistics generated led to a deluge of propositions on how play could be made safe or safer. In the broader context of consumer safety this is not an uncommon occurrence. As one author has put it with regard to consumer safety in general:

> "There is no shortage of advice about risks. Let a potential risk be identified and soon all possibly relevant professions, agencies, and trade groups will offer public positions in order to protect established interests or proclaim new ones. Add the news appeal of risk stories, the availability of advertising dollars to defend and promote products, and the ongoing flood of scientific reports and there is a flood of guidance for the concerned." (Sapolsky, 1990)

Other forces were also coming to bear. At about the same time the impact of new legislation on workplace health and safety (the UK Health and Safety at Work Act (HSWA) of 1974) was beginning to be felt upon public activities and schools, including provision of play. While it might seem peculiar that a child playing in a sand pit or on a roundabout is covered by the HSWA, this is the currently-perceived situation in the UK. An implication of this has been that methods for risk assessment developed in the factory environment began to be used in public settings including play.

Furthermore, industry-style control measures were also applied to public activities without, it seems, much consideration as to their effectiveness or appropriateness in the non-industrial world. Thus, playgrounds began to look more and more like factories with their crash barriers, handrails, containing fences, rubber surfaces and similar paraphernalia favoured by

those who prefer environmental 'solutions' to safety, rather than behavioural solutions which, arguably, might be more suitable in the context of play and public life more widely.

There are various ways of understanding how this change occurred. One is to think of it in terms of memes. A meme is a term invented by the evolutionary biologist Richard Dawkins (1976) and refers to a theoretical unit of cultural information which can transmit from one person to another just as genes propagate genetic information between organisms. Examples of memes include food fads, advertising jingles, clothing fashions, all of which can spread across continents very quickly. Another example of a meme is an idea or an ideology, and thus the ideology of a certain way of conducting health and safety might be seen to have spread rapidly across the UK, and further afield too, and to have become deeply entrenched.

Another way of looking at this phenomenon is in terms of competing philosophies. Healthcare philosopher David Seedhouse (2004) has for example described a number of possible political bases of health promotion which co-exist and compete within the UK's National Health Service. The existence of competing philosophies within a single organisation is of course a recipe for confusion. Within play the analogy, based on Seedhouse's approach, can be very crudely sketched out as in Figure 1.

Hierarchists (reductionist approach)[2]	**Egalitarians (holistic approach)**
Belief in management systems	Faith in people (including children)
Safety (from injury) is paramount	Children's development is paramount
Risk of injury should be eliminated or at least minimised	Children need their own space to experience real life and encounter risk
This can be achieved by environmental (engineering style) solutions such as barriers, fences, gates, rubber surfaces, age-segregation, surveillance systems etc	Learning about life and being healthy requires experience of social processes which may be poorly served by engineering-style 'solutions.' Holistic approaches are needed which recognise and consider the full range of benefits and risks associated with play

[2] The terms 'hierarchist' and 'egalitarian' are borrowed from Cultural Theory (Adams, 1995)

Figure 1: Competing views (simplified) of children's play and safety

Figure 2: Nightmare in the park?

Figure 3: Safety assessor's nightmare?

In Figure 1 the left-hand column sets out an approximation of the way of thinking pursued by some health and safety practitioners. First and foremost they believe that management systems, often those of a more autocratic nature, are effective and should be implemented, and second that safety is paramount. However, and surprising though it may be, in society safety is seldom paramount. For instance, when individuals or families decide to go skiing or take part in sports they are obviously thinking about risk in a wider context, otherwise they would not participate in a clearly risky activity. This presumption about the importance of safety is consequently seen to be no more than that - a presumption. It may of course be important, but so are other objectives such as health, wellbeing, social and economic considerations, even having fun. So this position is not a fact but a political preference. However, if you subscribe to it this quickly leads to the currently popular belief that risk should be ether minimised or eliminated. This too is questionable. Under British law there is no requirement to either minimise or eliminate risk, rather the requirement is to do what is reasonable (or reasonably practicable) in all the circumstances. Finally, according to this way of thinking, there is a tendency to favour environmental (engineering) interventions. An example of a play space which follows this approach is shown in Figure 2. This satisfies all known safety requirements but in terms of play value can only be described as a nightmare, though not one which is necessarily recognised by exponents of this way of thinking.

The right-hand column of Figure 1 describes an entirely different perspective. Starting with the belief that one has to place some faith and give some credit to children, it moves on to the position that children's development is paramount (as opposed to safety, though not ignoring it), and further that children need space to be able to develop and even the opportunity to experience real risk. Finally, this results in the realisation that environmental controls may compete with or undermine the intent of this more holistic and developmental approach. For instance, it raises questions not asked in the left-hand column: why should children be placed in fenced enclosures; should they be age-segregated; would they not benefit more from exposure to more natural environments as opposed to engineered structures taken from the workplace and factory? Figure 3 shows the kind of play environment one could end up with through pursuing such a philosophy. This kind of environment would itself be its own nightmare for strict adherents of the first way of thinking - the hierarchists/reductionists. The situation is full of real and potential hazards. Thus, each sides' dream is the others' nightmare!

Which then is right? Cultural Theorists would respond that as soon as you ask this question, you have missed the point (Adams, 1995). Both positions are sustained by their own set of beliefs, to which their followers are entitled. However, some belief systems are more sustainable and plausible than others. So far as the hierarchist/reductionist approach is concerned, this became the dominant mode in the UK during the late 1980s and 1990s. During that time, in which huge resources were deployed in the form of environmental measures intended to increase safety from injury, the number of recorded injuries hardly changed, remaining in the region of 40,000 cases per year throughout (Ball, 2002). This happened despite a suspected reduction in playground usage because of other social trends and possibly some disenchantment with the less challenging nature of the sanitised provision. An obvious question is, how could there have been no significant injury reduction despite all of these measures?

One explanation would be the risk compensation hypothesis, namely in this case that children simply change their behaviour when confronted with apparently safer environments. There is plenty of evidence that adults do this. Morrongiello and colleagues (2007a and b) have recently produced evidence that children too adjust their behaviour in apparently safer circumstances, by taking more risks. A simpler explanation could be that the safety interventions do not work because they do not address the correct risks, as appears to have been the case with 'safer surfaces' (Ball, 2004).

Emerging perspectives

In 2002 the Play Safety Forum (PSF), a collective of around 13 organisations with interests in children, play and safety, agreed a position statement which was subsequently published by the Children's Play Council (CPC, 2002). This document challenged the then conventional hierarchist view of safety and proposed a radically different perspective:

> "Children need and want to take risks when they play. Play provision aims to respond to these needs and wishes by offering children stimulating, challenging environments for exploring and developing their abilities. In doing this, play provision aims to manage the level of risk so that children are not exposed to unacceptable risks of death and serious injury." (CPC, 2002)

The document went on to state, with an evidently holistic bias, that safety in play provision is not absolute and cannot be addressed in isolation. Play provision is first and foremost for

children, and if it is not exciting and attractive to them, then it will fail, no matter how 'safe' it is. This, it said, would require compromises to be made in the design of play space.

Six years later two follow up documents were published by the Department for Children, Schools and Families (DCSF), one about the implementation of these notions of compromise (DCSF, 2008a), and the other about design implications (DCSF, 2008b). The first document is notable in that it advocates that the kind of factory-derived risk assessment which is commonly used in assessing health and safety at work is not appropriate in the context of children's play, because it fails to take account of the benefits of play including health, wellbeing, a chance to develop, freedom, opportunities to experiment by oneself *et cetera*. What is needed instead, it says, is risk-benefit assessment, which is a transparent and overt balancing of the benefits of play activities against the risk of harm. Risk-benefit assessment is itself not a new philosophy. It is widely used in medicine, for example, because most medical interventions have harmful as well as beneficial effects and patients and doctors have to make choices about whether the benefit of some treatment outweighs the risk. Nonetheless, it raises a number of serious procedural questions for the play community.

First, though, it is worth noting that 'Design for play' (DCSF, 2008b) strongly advocates a shift towards more natural play environments incorporating equipment and natural features such as hills, vegetation, trees, rocks and water. This alone poses serious challenges to the status quo, because the mandatory requirement for risk assessment has heretofore largely been accomplished by the proxy of comparing manufactured equipment with industry standards, EN1176/7 and the like, rather than by conducting a proper on site risk assessment. There are a number of issues associated with this. One is that it is difficult, and probably nonsense, to try to apply these kinds of standards to natural features. Second, until recently the Standard (EN1176) stated unequivocally that "It is not the purpose of this standard to encompass the play value" (BSEN1176, 1998, Part 1, section 1).[3]

How such a standard could ever have been written without considering play value is beyond comprehension. Even if this statement were made in error, as some have since asserted, it points to a state of confusion and a likely failure to weigh up risk and benefits as risk-benefit assessment would require. A third and related issue is the make-up of standards committees.

[3] The newest version says the standard does include consideration of play value, but how such a change could have been made without additional extensive consultation is unfathomable.

These tend to be dominated by industry representatives and safety organisations, but are weakly inclusive of those agencies who are familiar with and knowledgeable about benefits. In a sense, benefits are sidelined by not adequately engaging with a broad enough community of expertise, a phenomenon which is well-known to lead to unsatisfactory decision making (Graham and Wiener, 1995).

So the first two implications of the new thinking are a) that because more natural environments are seen as desirable then the relevance of industry standards will necessarily diminish and b) that because play design is about balancing risks and benefits, then the expertise called upon to write standards needs to be carefully reviewed. This may in any case be no bad thing.

A third issue is that in a world which accepts, as that espoused by the PSF does, that some injuries are inevitable in order to achieve benefits, how can you be sure in providing a play opportunity that you have got the balance right? This question is all the more pressing if it is accepted, as the PSF says, that "children need and want to take risks" and yet more so if one includes teenagers - the forgotten generation[4] - who would presumably expect something of significant challenge. This is naturally an issue of some concern to play providers who care about children and also worry about their legal liability. The answer is that you never can be absolutely sure.

Although at first sight this is disconcerting, once grasped it is perhaps the key to the way ahead. One should, of course, design play spaces to the best of one's ability and use available expertise of appropriate kinds to conduct the kind of risk-benefit assessment as described by DCSF (2008a). But no guarantee can be given, nor should it, of safety. What should be done, however, is to monitor your provision to assess if the balance is reasonably set, as is described in DCSF's other publication (DCSF, 2008b). Thus, is it providing the benefits you hoped for? Is its safety record acceptable? If the balance is wrong, redesign or trim the sails. Only by doing this will it be possible to assess your provision with great confidence. The reason that monitoring and reassessment is so crucial is simply that play environments are a *complex system*[5]. By nature, the performance of anything that involves the interaction of

[4] There is a view that BSEN1176 is written with children of 8 years or less in mind.
[5] Examples of other complex systems include the behaviour of crowds and the performance of financial markets.

children and young people with natural and manufactures features in an ever-changing environment cannot be predicted with much confidence, even in the age of supercomputers and libraries of academic research.

It is not normal in the UK to approach play provision in this way, that is, to set aside budget for monitoring, reassessment and adjustment of play space. The usual practice has been described as the KFC (kit-fence-carpet) approach. That is, buy the equipment, put a fence around it, install a surface, and 'walk away.' This, it should be said, never was an adequate approach to managing risk of any kind, nor of benefits. If we really care about the welfare of children and young people it has to go. Obviously, it will require resources to do this, but its advantages are significant. Providers would then be in a position to optimise the benefits of their provision - giving children, young people and the public best value. They would also be able to monitor the safety record and arguably this is what managing safety in complex systems is properly about.

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Consultant for most government departments and safety regulators at one time or another, and for several international agencies and the private sector on safety issues. These include the Health & Safety Executive (HSE), the Department of Health, DEFRA, the European Consumer Safety Association (ECOSA), the World Health Organisation, the United Nations and the International Atomic Energy Agency. In 1995/96 served on an HM Treasury committee reviewing the setting of safety standards in Britain.[1]
Personally appointed by several Secretaries of State to lead risk assessment projects of national significance or participate on independent national advisory committees. Invited to join the UK Chief Scientific Adviser's review on High Impact-Low Probability events in autumn 2010.
Ten years ago completed a major project for the Consumer Safety Unit of the then Department of Trade and Industry on methods of gauging the appropriateness of safety measures to protect consumers.[2] Recently, in 2008-9, co-authored four reports for the Department of Business, Enterprise and Regulatory Reform (now BIS) on risks to the public, and two for the Department of Children, Families and Schools, and the Department of Culture, Media and Sport, also on risks to the public (children in that case) resulting from non-work activities. In 2006 wrote a book 'Environmental health policy' at the request of the London School of Hygiene and Tropical Medicine.[3]
During 2008-2009 was a member of HSE's Technical Working Group on Societal Risk.[4]
Prior to that produced reports for the HSE on societal risk, on societal concerns, a major review of the safety of children's play and its management, on risk ranking and prioritisation, and on the differing perceptions of the professions on how risk management decisions should be made. All of this work has been published and most is available via the HSE website or from HSE Books.[5], [6], [7], [8]. [9]
One recurring area of work for over 20 years, from a risk perspective, is outdoor sport and leisure activities. This includes children's play, the safety of a wide range of popular

sports including conventional sports like football, adventure sports, and countryside activities more generally. During the last year an invited keynote speaker at many conferences and seminars on these topics on behalf of agencies such as the Countryside Recreation Network, RoSPA (at their annual conference on water safety), Play England, and the Association of the Heads of Outdoor Activity Centres.

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David also often acts as an expert witness. Recent cases include R(HSE) v Porter, Uren v Corporate Leisure & MoD and R(HSE) v North Yorkshire County Council.

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