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RISK – A PLAGUE OR JOY? SOME REFLECTIONS ON THE DUAL NATURE OF RISK IN PRESENT SOCIETY?

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INTRODUCTION

Modern society is obsessed with risk. Newspapers and media are filled with news and stories of all that goes wrong. Complex states bureaucracies are developed to monitor and control open and hidden dangers. Programs are developed to implement safety measures both in private and state sectors. Has it gone too far? Are we too concerned about the negative aspects of life? Is risk always something negative? Can risk also be a positive factor? After all humans survived on this planet because our forefathers and – mothers climbed down from the trees and started a risk life as bipedals on the savannahs exposed to new and hidden dangers. Our ancestors were not always prudent and risk averse but showed risk accepting and risk taking attitudes and behaviors. Is there also inside modern humans a *l'homme sauvage*, a wild animal lurking beneath the polished surface of the civilized homo sapiens sapiens? In this article I will discuss the dual nature of risk and balance the negative aspects of risk against the positive aspects. I will first sketch the historical background of modernity and its focus on safety before I critically examine the problems of too much safety and sketch some of the benefits of risk taking. I then go on to show that both societies and individuals have a dual nature with a tension between the need for safety and a desire for risk. I give both an evolutionary background and a present day illustration of the risk side before I present theories that explain risk taking behavior in present society. I end by summing up my position and the consequences of the dual nature of risk.

MODERNITY AND THE NEED FOR SAFETY AND CONTROL

In many ways modern industrial society is obsessed with safety and control. We are not only obsessed with control but we have also developed a culture of fear. Frank Furedi (1997) points to the increasing risk consciousness in modern societies. People are afraid of hidden dangers everywhere. This is in sharp contrast to the fact 'that despite the many problems that face humanity, we live in a world that is far safer than at any time in history' (Furedi 1997:54). Furedi thinks that "The exaggeration of problems and risks is only matched by the denigration of the problem-solving potential of people. On the basis of such a negative representation of people, it is difficult to motivate or inspire society (Furedi 1997:164). Even if the problem-solving capacity of people is denigrated and undermined the solution of the problem for many still seems to lie in the direction of rational control. According to Lupton (1999)

the emphasis in contemporary western societies on the avoidance of risk is strongly associated with the ideal of the 'civilized' body, an increasing desire to take control over one's life, to rationalize and regulate the self and the body, to avoid the vicissitudes of fate. To take unnecessary risks is commonly seen as foolhardy, careless, irresponsible, and even 'deviant', evidence of an individual's ignorance or lack of ability to regulate the self (1999:148).

The need for control is even more salient in society at large. Modern society has become a huge industrial, technological and economic monster structure that simply must not collapse. One doesn't play with an atomic reactor. Therefore modern society can only survive if it succeeds in taming humans into rational safety-seeking creatures. Such a view of human beings emerged during the Enlightenment period in the 18th century. The idea of modernism encompassed progress, science, rationality and control as central factors (Harvey 1991). The goal was to create a Dominion of Man that could control Nature and bring Happiness to all human beings. The new industrial and technological society that was developed in the 19th and the 20th century, presupposed the docile and tamed 'animal rationale'. Without control over impulses and needs and a rational, long-term perspective on one's own behavior and thinking, it is impossible to run a complex, fragile technological society in a safe way. Accordingly there has been in most Western societies a growing focus on safety. Children need seatbelt and helmets, cars are built safer and with air bags, traffic is controlled and monitored by policemen, helicopters and video cameras. Houses are built with burglar alarms, fire detectors, and high insurance premiums. Children are continuously supervised in the kindergartens, sports get new regulations and injury protection devices. Industry and commerce have a growing list of rules and safety regulations that must be followed and complied with. Some industries operate with 24 hour security which means that the employees have to behave safely not only at work, but at home, during leisure; everywhere and always. In a way this is the final triumph of the idea of a rational safety-oriented human being with focus on prudence and self-control. But maybe this is not the whole story. Maybe even modern man has a *l'homme sauvage* inside that is not content with security and full control. This means that whereas the prudent human being seeks safety and avoids risk there is a part of us that wants challenges and risks. But what is risk? Is it by definition something negative?

THE CONCEPT OF RISK

'Risk' is a concept that is used in many scientific as well as non-scientific contexts but with varying content. The concept first appeared in the Middle Ages, relating to maritime insurance (Lupton 1999). In most cases risk seems to involve a loss of some kind (Yates & Stone 1992). The loss may be related to economic or material factors, to social and personal factors, or to physical and mental factors (Breivik 1999; Breivik 199b). According to a long tradition in philosophy it is also possible to speak of existential risk that puts one's total life project in danger (Tillich 1952).

Basic assumptions of the good and what is good for humans spill over into the definition of risk. In many theories in different scientific disciplines there is a concern for safety and control that becomes evident in the construction of the risk concept. As Mary Douglas has repeatedly pointed out, the concept of risk has strong social and cultural underpinnings. It is not neutral or objective in any sense (Douglas & Wildavsky 1982; Douglas 1992). Several basic assumptions about what constitute 'normal' or 'acceptable behavior' are embedded in the construction of risk. Humans are, for instance, often supposed to be 'risk avoiding' and 'safety seeking'. 'Risk taking' is accepted as rational only under very special circumstances. In the discussion of the risk construct Yates and Stone point to the fact that several authors have stated that 'in isolation there is no such thing as acceptable risk; because by its very nature, risk should always be rejected' (Yates & Stone 1992:3). But there are authors, like Adams (1995), who think that people are not in general risk-averse: 'Zero-risk man is a figment of the imagination of the safety profession. *Homo prudens* is but one aspect of the human character. *Homo aleatorius* – dice man, gambling man, risk-taking man – also lurks within every one of us' (Adams 1995:16).

To identify the cultural and normative underpinnings, it may be a good idea to make explicit the alternative levels of risk tolerance such as risk-avoidance, risk-acceptance, risk-taking, or risk-seeking. These levels refer to varying situational and personal constraints and possibilities. In some situations we must face risks that are imposed upon us. In other situations we can choose freely which level of risk we want, as when we are skiing in the mountains. In some situations we are aware of taking risks, in others not. There are a lot of other variations around the risk-taking situation. Risk-taking is not a natural kind but a many-layered construction.

THE COSTS OF SAFETY

If risk is ambiguous, safety seems to be much simpler. Safety is important for human beings. The success story of safety is that lives are saved, money is secured, accidents avoided and dangers prevented. The focus on safety creates new jobs, develops agencies and businesses specializing on safety programs and risk management. Safety is a good and it has its benefits both for the individual and society at large.

But I will argue that safety, or rather too much focus on safety, is not an unambiguous good. Safety also has its costs. Let me mention a few. The increasing number of laws, rules and regulations concerning safety passed by national governing bodies leads to an oversized state bureaucracy that incessantly produce new safety regulations. On the recipient side this leads to a heavy burden on institutions in the private, voluntary and state sector that must comply with the regulations and must report back to the safety bureaucracy. In the institutions the individual employee must use an increasing amount of time and energy to become safety conscious not only at work but also when home. The zero tolerance for accidents makes many people and institutions kneel heavily under the safety burden.

Safety is not always positive and risk is not always something negative. Safety has its costs and risk has its benefits. In modern societies there is an increasing support for safety and an increasing aversion towards risk. Ideally risks should be totally eliminated or at least be minimized. I want to argue that there are good reasons to support to a more risk accepting attitude. This does not mean that we should not try to make people more rational in their dealing with risk. On the other hand we should be careful to transfer scientific ideals of risk and uncertainty to ordinary life. It may not be a good idea to make people into risk-processing machines or to give an illusion of too exact information about the future. As Bernstein says about the economist Keynes, 'Rather than frightening us, Keynes' words bring great news: we are not prisoners of an inevitable future. Uncertainty makes us free' (Bernstein 1996:229). Uncertainty may be better than probability. 'Where everything works according to the laws of probability, we are like primitive people - or gamblers - who have no recourse but to recite incantations to their gods' (Bernstein 1996:229). Also Adams thinks that uncertainty is important. 'We respond to the promptings of *Homo aleatorius* because we have no choice: life is uncertain. And we respond because we want to: Too much certainty is boring, unrewarding and belittling' (Adams 1995:17). Like Keynes he thinks uncertainty makes us what we are. 'Only if there is uncertainty is there scope for responsibility and conscience. Without it we are mere predetermined automata' (Adams 1995:18). This means according to Keynes and Adams that we are free, our decisions matter, we can change the world. In order to master the world we should not rely upon our probability calculus but upon our skills and mastery. We should confront danger and take calculated risks, but only when we have developed the necessary skills and tools.

TWO COSMOLOGIES

The concern for safety and control and the openness to challenges and risks are two opposite attitudes that run as strains through Western history and have roots back to Greek philosophy and cosmology five hundred years BC. Heraclitus from Ephesus thought of cosmos as a dynamic process where everything was moving, changing. For Heraclitus the essence of cosmos is captured in metaphors like the streaming water in a river, the licking flames of a fire, the opposite sides of a 'polemos', a fight, the dynamic tension between the bow and string which makes the arrow fly. The world is a world of opposites, of light and dark, up and down, sweet and sour, pleasure and pain. This dynamic tension between opposites is the 'dynamis', the power of change. The deep nature of cosmos is that 'panta rei', everything flows or runs.

Parmenides from Elea, 500 B.C., thought that cosmos was a huge round ball, which was in complete rest. Change and movement are illusions. 'Trust your thinking and not your senses'. Thinking tells us that the world is perfect and therefore it has to have the perfect shape of roundness and it has to be still. The thought forms of Heraclitus and Parmenides shaped our Western tradition. We find the tension between the two views in a lot of contexts as a tension between movement and rest, process and structure, the dynamic and the static, growth and stability, risk and safety. The paradigmatic views of the two Greek philosophers are to differing degrees realized in historical societies. An interesting study by the climber and anthropologist Mike Thompson (1980) showed how different environments and ways of living shape different risk strategies in two different cultures. The Hindu culture of sedentary cattle farmers south of Himalaya is quite different from the sheep herding nomads on the North side of Himalaya. The Hindus are safety-seeking and try to spread both risks and rewards. One should help one's neighbour and one should expect help in return. The Buddhists are risk takers who concentrate both risk and rewards. It is typically the Buddhists that have raised and equipped caravans over the high mountain passes in order to trade from South to North and from North to South. One needs to take economic, physical and social risks to do this and one may become very rich or very poor. Interestingly enough Thompson found that the Hindus were in many pessimists in their outlook and the Buddhists were optimists. In many ways the Buddhists seem to represent the Heraclitean world view. The world is a changing, uncertain place where one has to master risks in order to stay alive. One has to be alert. The Hindus seem to have more of a Parmenidean world view, which includes the wish for stability and predictability, but with a pessimistic undertone since the world after all is unstable.

Differing social cosmologies are not only represented in different societies but may run as opposite strains through strains through one and the same society. Norway has on one hand a 'coast culture' based on fishing, shipping, trade, and oil industry. This culture in many ways expresses a risk accepting attitude. On the other hand we have an 'inland culture' based on farming and industry that express a more risk aversive attitude. Church and state in support and underscore risk aversion and seek to develop safety and security as fundamental values. In a survey of peoples' attitudes we actually find that the coast people are more willing to take risks (Norsk Monitor 2003). One reason for this is probably the long adaptation to a shifting and insecure environment that favors the open and risk accepting attitude.

We can even go further. Maybe risk and safety are complementary factors, not only in worldviews, between cultures, inside a culture, between individuals (as we shall see later), but also inside individuals or persons. Moxnes (1989) has developed a psychological theory, where not only the need for safety and control is stressed, but the need for growth, challenges and risks. Each person needs a basic safety, an ontological security, which one should get during the first years of life. On the other hand humans undergo a fabulous development from conception, through birth, when growing up and till we die. It is impossible to grow and develop under full security. Therefore we need to accept chances and risks. This factor is, according to Moxnes, closely tied to our need for freedom. On the other hand our need for security is tied to our search for meaning and roots. Our life should according to this view, make a spiral from one level of security, through risky leaps and stages of growth, to higher levels of stability. This means that there should be a place in people's individual lives as well as in societies for challenges and risks. There is also an evolutionary background for the human need, not only for safety, but challenges and risks that modern societies have ignored.

EVOLUTIONARY BACKGROUND

Evolutionary anthropology shows how humans were adapted to, and formed by, shifting environments through the last millions of years from *homo habilis*, or earlier, to the present human being (Staski & Marks 1992; Buss 1988). The general picture given by these evolutionary approaches is very different from the picture of humans that in varying shapes have been presented in the last 2-300 years by the Bourgeois culture in Europe. The Bourgeois picture projected the human being as a frail and weak creature that had to compensate the lack of bodily strength through a well-developed brain and the use of symbolic powers like language, communication, and abstract thinking. The evolutionary picture portrays humans as beings with a lot of bodily strength and robustness. Humans developed as hunter-gatherers through 2 million years of evolution, from *homo habilis* to *homo sapiens sapiens*, and spread to more extreme climate zones, to more diverse environments, and to higher altitudes than other animals. Human beings have capabilities that make it possible to lead an elegant life in extreme conditions. Even today we witness the extreme skills and faculties of the 'human animal'. The quest for challenges, the breaking of records, the test of human limits, the exploration of wilderness, is, at least partly, explained by our past. Humans obviously combined exploration with willingness to take chances. They took the chance to leave the life in the trees, stepped down on the ground, and then spread out to all climate zones and geographical areas. Humankind is adapted to a life that involves challenges and risks. This fact must, through selective mechanisms, have become hardwired into our genes. It is therefore not surprising that the first personality-related gene that was identified as part of the big human genome project was a risk-taking gene (Cloninger, Adolfsson, Svrakic 1996). This means that certain people have a genetic predisposition to take risks. Most people need challenges and are willing to take some chances. In the Norwegian study mentioned earlier (Norsk Monitor 2003) we found that around half of the population were completely or to some extent willing to take big chances. The hard core risk-takers constitute a smaller part of the population. 4 percent agreed completely and 10 percent agreed to some extent to the statement 'I am interested in doing things that are dangerous or forbidden, just to experience something exciting and risky' (Norsk Monitor 2003:16). This means that 10-15 percent are typical risk-takers that do dangerous or forbidden things. It seems that under the skin of the soft rational modern human we have a 'beast within'; one that thrives on strong stimulation and that is willing to take chances to get what it wants in life. This beast is not present to the same extent in all of us. There are some variations due to age and sex. Men are willing to take bigger chances in most areas than women; the young are more risk-taking than the old. And as we saw earlier some cultures encourage risk-taking whereas others instill safety-seeking behaviours in their members. Family values and the risk climate among peers and in the environing local milieu play a role. We can influence risk dispositions through interventions, programs and campaigns. But it seems that our genetic heritage make all of us interested in stimulation and change. People need challenges, not only the young but also the old.

THE PRESENT PASSION FOR RISK

I would thus contend that the beast within is alive also in the rational modernist society. It is easy to observe both in positive and negative versions. A list of some examples suffices to make the point:

- Children are involved in rough and sometimes risky play in streets, gardens and woods.
- Young people explore a variety of dangerous sports.
- Young people are members of gangs and groups that fight each other, use drugs, and race cars.
- Young as well as old love tivolis with carousels and rollercoasters.
- People are attracted to modern playgrounds with trampolines, bungee jumping and water slides.
- People tend to drive too fast with cars and motor bikes.
- People like to travel to exotic places and spend holidays in faraway countries.

Most of these activities have a long history but they have been further developed and expanded (Apter 2007). Activities that include excitement and risk have been cultivated and organized into new and more specific forms of adventure sports:

- There has been a further development, differentiation and specialization of older risk sports like climbing. Traditional mountain climbing has been differentiated into indoor climbing, big wall climbing, bouldering, ice climbing and so on.
- Air sports like paragliding, hang gliding and sky diving have been transformed since the 1970s by new types of equipment and suits, new activities and competitions, new styles and events like base jumping, sky boards and acrobatics.
- Skiing has been transformed and developed by Telemark, ski extreme, use of twin tip skis, kites and sails.
- Various board sports have been developed; snow boards, skate boards, wake boards, sky boards and new styles, events and competitions have appeared.
- New sports have appeared on the scene. The X-games that started in 1995 brought in new activities like street luge, eco-challenge, sky surfing, barefoot water skiing, in-line skating, mountain biking, BMX. New activities have been introduced regularly.

The development of new forms of excitement and risk has also taken place in areas targeting the broader public. The leisure parks introduce more exciting roller coasters, new types of bungee jumping. The family can experience wilderness trips with rafting, top-rope climbing and rappel. It makes possible strong thrills and excitement without a long learning process, but also with less possibility for mastery and self-fulfillment. Tourism to exotic places increases. Sixty year old people can go to the South Pole or North Pole or to Everest Base Camp. Commercialized trips are available almost anywhere if you can pay. And risky activities can also be used for more serious purposes. Adventure sports are used for character building and personal development by schools like Outward Bound. Challenges in nature are used by companies to build teams, train on decision making, and learn stress mastery.

In many ways the risky activities have become a metaphor for important aspects of modern society. Risk sports are used in marketing and sale, in newspaper ads, and in cinema commercials. Films and TV-programs focus on extreme expeditions and dangerous activities. Specific channels and programs show the most extreme stunts and the worst accidents.

These various developments and trends show that adventurous activities and risky sports are parts of a broader picture. The idea of prudence and control is leaking. There is an intrusion of excitement and risk in modernity. It may be discussed whether this is the peak for modernity, the high modernity or whether we have landed in post-modernity (Giddens 1991). But how should we understand and how can we explain the fast development of risky and exciting activities over the last 30 years? There are several theories that can contribute. I will come back to these. But in general I think we can discern two or maybe three main types of explanation. One explanation seems to be that there is an increasing uneasiness and dissatisfaction of some aspects with the modern control and safety-oriented society. There is a need for compensation that risky activities partly fulfill. But it is also a fact that the society has become more exciting and colorful in many ways. An alternative theory could maintain that we have got more stimulation, more entertainment, more leisure parks, more TV-channels, more cafés, a more diversified society. If that is the case we need an adaptation theory. In the same way as alcoholics adapt to alcohol and need more or stronger doses in order to experience the same effect, the population needs more excitement and risk to experience the same effect. This explains why new adventure sports appear every year, why more extreme activities are developed. The entertainment and leisure parks need higher and faster roller coasters. The white water kayakers paddle higher water falls. The climbers climb more difficult routes.

A counterargument to a compensation theory could be that we have got more stimulation and excitement but it is only on the surface. The information, the media and the entertainment channels are more exciting, but

relatively superficial. They are not the real thing. They do not challenge us in a deep personal way. But that is what risky activities do. We seek bodily challenges in adventurous activities because we want to experience the real world, not only images of the real. It may be that both the compensation and the adaptation theories have something to offer. It may be true that most people need adventures to counteract the control in modern society. And when people have found a relevant risk arena they need stronger doses of thrills in order to experience what they want. But this does not explain all. In addition risky activities seem to function as a metaphor for deeper aspects of modern society. When Beck (1992) and to a certain extent Giddens (1991), use the concept of risk to identify the negative, hidden dangers that we are exposed to in modern societies, this is only one part of the full picture. Risk is not only connected with negative dangers. Risk also points to possibilities and freely chosen opportunities for life fulfillment. Thus adventure sports in many ways function as an example or metaphor for entrepreneurship, decision-making, transcendence and freedom. Adventure sports are therefore a pure expression of some central aspects of post-modern society.

SAFETY IN A RISK SOCIETY OR RISK IN A SAFE SOCIETY?

Compared with earlier times life has become safer. We live longer, are less exposed to accidents and early deaths. Medicine, economy and technology have increased standards of living and also for many people life quality. At least this is so in the richer societies in the west as well as the east. But we still have to confront natural hazards and disasters. Nature has not changed, and if so, for the worse. Earth quakes, storms, floods and avalanches are as unpredictable and risky as before. New technological disasters appear on the scene, the last one in the Mexican Gulf. Parts of the sociological theory of Giddens, and especially Beck's idea of a risk society, point to the unexpected consequences of an advanced technological society (Giddens 1991; Beck 1992). Due to the complexities, size and dramatic consequences of failure, many industrial and technological devices and plants put people and environment at risk to a higher degree than before. Nuclear waste, chemical substances, biological warfare products, are just symptoms of possible runaway processes. In such a context the quest for safety seems to be a good and rational strategy. The problem is when the quest for safety spills over into other or to most areas life and becomes the only dominant strategy.

Elias and Dunning (1986) have shown how life since the Middle Ages has become more and more controlled and predictable. People took control over their bodies and minds. Speaking, eating, dressing, and behaving took more cumbersome forms. Etiquette, manners, and games got stricter rules. In the end it became too much. If society gets too safety-oriented people will find arenas during their free time to get the thrills and challenges that belong to human life, as they did it with soccer and rugby in 19th century England.

Elias and Dunning's theory may be interpreted as a risk homeostasis theory. If the risks and challenges in some areas of life are reduced, there is a relevant increase in risk taking in other areas. The empirical support for such a general theory is difficult to get, because of the difficulties in assessing the relevant risk parameters. But some authors, like Apter go to quite extreme conclusions in their willingness to develop arenas for risk: 'The safer we make life, the more people may take risks and court danger' (Apter 1992:191). Apter suggests that when we are in a certain mood or state we are looking for the opposite. If we are bored or secure we look for excitement and danger and vice versa. His reversal theory implies that modern society with its extreme focus on safety and control need risky arenas. He writes:

I am suggesting that we should allow people to play with fire, generate new games of violence, duel, crash cars in specially prepared runways, climb the outside of the skyscrapers, swim where there are powerful currents, and undertake other even more imaginative and dangerous activities. We should perhaps permit aggression between consenting adults. We should allow danger where only the individual who chooses the danger is at risk (Apter 1992:194).

Apter, following Elias and Dunning presents, examples from sports and outdoor activities. But risk may sit deeper in modern existence than the physical risk taking exemplifies. Risk may also be placed at the core of human existence. Giddens (1991) thinks that modern life has a personal or existential risk. Whereas health risk has been reduced during the last 100 years, the personal risk has increased. More than earlier we are free to choose our life course, plan our life, and develop our life as a 'Gestalt'. We are not victims of social background, class, cultural constraints, economic poverty, to the same degree as earlier, at least not in the well developed welfare societies. But this means also that there is no excuse if one's life becomes a failure or a misery. One of the paradoxes in present society is that as life becomes tougher and more risky, in the existential sense, we raise children, educate youth and influence adults to get softer with less tolerance for pain, injuries, stress and problems.

CONCLUSION AND CONSEQUENCES

Humans want safety, control, and predictability in a lot of areas of life. We want technological risks to be as small as possible. Bridges, cars, atom reactors, airplanes, should be safe. We want other people to behave in a responsible and predictable manner in traffic and transport. At the same time people want to take risks. But risks should be taken in the right or relevant manner. We do not want to get hurt or die by uncontrollable and irrelevant risks. Risks must come in the right or relevant way. If I go climbing I want the rope to be secure, the equipment to be dependable. I know that there are risks in climbing but they must come in the right way, be relevant. And which risks are relevant? The relevant risks are those that can be predicted, controlled, mastered and dealt with by me through use of my skills. It is like the relation between truth and knowledge. My belief that it is snowing on the North Pole at a certain time may be right. But unless it is the snowing on the North Pole that causes my belief we do not say that I have knowledge. If I guess something and I am right my belief is true, but I do not have knowledge of it as such. Knowledge demands more than mere justified belief. In a similar manner my risk taking should be related to the relevant risks in a certain manner. I think people need challenges of the right sort and they want to master risks, in a relevant way. This is typically what we do in nature or environments that pose definable challenges to us. I think we need to develop a society where this is possible. Let me sketch a vision of society and human life where risks are included.

I think children should be given more opportunities to play outdoors, be active, explore the world, develop skills, and get strong bodies. We should let the children freeze a bit, get wet, starve a bit, get hurt, face problems, in order to develop resistance to stress and pain. It is not in their interest that we overprotect them. Our kindergartens and schools should give more opportunity for vigorous play. The adolescents should be given opportunities to take part in challenging sports and activities, trips into nature or new environments. For the adult population we need arenas where people can test themselves, get challenges, develop skills, get to know themselves, who they are and what they can do. They should, if possible, get a taste of real nature, of solid earth, running water and natural elements like sun, rain, desert or snow. These are the challenges and environments we are built to live in and to handle. We need to save the wilderness around us, but also the wilderness within us. We need to let *l'homme sauvage*, the wild human being, get a fair share of our life. I think it is in this way that we can get some of the problems out of the sectors where they do not belong. People should drive fast at the motor sport arenas and not in the traffic. They should 'get high' in sky diving instead of by cocaine, they should fight in games like soccer, rugby or American football, instead of in the streets or in wars. People are already trying to get these sorts of experiences, but society is not yet ready to develop opportunities and arenas.

LITERATURE

- Adams, J. (1995) *Risk*, London: University College London Press.
- Apter, M. J. (1992) *The Dangerous Edge. The Psychology of Excitement*, New York: The Free Press.
- Apter, M. J. (2007) *Danger. Our Quest for Excitement*. Oxford: Oneworld.
- Beck, U. (1992) *Risk Society. Towards a New Modernity*, London: Sage Publications.
- Bernstein, P. L. (1996) *Against the Gods. The Remarkable Story of Risk*, New York: John Wiley & Sons, Inc.
- Breivik, G. (ed.) (1999) *Empirical Studies of Risk Sport*, Oslo: Norges idrettshøgskole.
- Breivik, G. (ed.) (1999b) *Sensation Seeking in Sport*, Oslo: Norges idrettshøgskole
- Buss, A.H. (1988) *Personality: Evolutionary Heritage and Human Distinctiveness*. Hillsdale, New Jersey: Lawrence Erlbaum Associates Publishers.
- Cloninger, C.R., Adolfsson, R. & Svrakic, N.M. (1996) 'Mapping genes for human personality' *Nature Genetics*, 12, Jan.
- Douglas, M. (1992) *Risk and Blame. Essays in Cultural Theory*, London and New York: Routledge.
- Douglas, M. & Wildavsky, A. (1982) *Risk and Culture. An Essay on the Selection of Technical and Environmental Dangers*, Berkeley: University of California Press.

- Elias, N. and Dunning, E. (1986) *Quest for Excitement. Sport and Leisure in the Civilizing Process*, Oxford: Basil Blackwell.
- Furedi, F. (1997) *Culture of fear. Risk-taking and the morality of low expectation*, London and Washington: Cassell.
- Giddens, A. (1991) *Modernity and Self-Identity. Self and Society in Late Modern Age*, Stanford: Stanford University Press.
- Harvey, D. (1991) *The Condition of Postmodernity*, Cambridge, Mass. and Oxford: Basil Blackwell Ltd..
- Lupton, D. (1999) *Risk*, London and New York: Routledge
- Moxnes, P. (1989) *Hverdagens angst i individ, gruppe og organisasjon (Everyday anxiety in individuals, groups and organization)*. Oslo: Forlaget Paul Moxnes.
- Norsk Monitor (2003) *Hovedrapport (Main report)*. Oslo: Synovate.
- Staski, E. & Marks, J (1992) *Evolutionary Anthropology. An Introduction to Physical Anthropology and Archeology*, Fort Worth et al.: Harcourt Brace Jovanovich College Publishers.
- Thompson, M. (1980) 'Risk', Paper delivered at the *BMC Buxton Conference 1980*.
- Tillich, P. (1952) *The Courage to Be*, New Haven: Yale University Press.
- Yates, F and Stone, E.R. (1992) 'The Risk Construct', in: F. Yates (ed.) *Risk-Taking Behavior*, Chichester et al.: John Wiley & Sons.