

Risk Regulation in the 21st Century – a think piece

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Summary

We live in a risky, litigious and all too real world, with non trivial consequences for any mishaps, whether we are caught up in a riot, or taking the children to school by car. We are brought up to recognise this instinctively and each of us naturally develops their own risk appetite or aversions, depending on context. Is it not then disingenuous to expect there to be general agreement on standard levels and norms for risk exposure? Even more unrealistic is to expect a regulator to be able to enforce non consensual rules. We should not be surprised by the resulting conflicts and uncertainties generated and the inadvertent opportunities exploited.

This note argues that we need to consider the highly complex nature of risks today and reassess the way we try to ensure a safer society. It suggests that more emphasis needs to be placed on supporting, rather than blaming, our decision makers. Instead of trying to prove the unlikelihood of an accident, make sure we can survive it.

In this twenty-first century , with increasing expectations of quality of life and longevity, we should move on from trying to avoid considering the consequences of actions; hiding behind tick box checklists. We need to accept reality and plan for it. The call here is to move from the impossibility of an “Acceptable Risk” approach and try instead, to ensure “Adequate Resilience”.

1. Background

Concerns about industrial “Safety” have resulted in a history of effective legislation in the UK, such as the 1850’s Factory Acts, which introduced a professional “Regulator” to enforce standards rather than rely entirely on the recourse to civil tort law to curb entrepreneurial excesses. This lasted some 100 years and was very successful! (E.g. It protected children from “Dark Satanic Mills” exploitation!). However when Industrial accidents started to infringe on communities (Aberfan, Flixborough), similarly far sighted legislation due to Robens (HSAWA 1970’s), established a pattern of occupational risk regulation that has persisted up to this day. The success of the tripartite Health and Safety Commission (Unions, Employers and Public) with its system of negotiating mutually agreed occupational risk “standards”, has enhanced its authority to the point where our, (no win no fee USA style), current propensity for litigation has lent unexpected weight and scope to its edicts across most fields of human endeavour, from social clubs to educational activities.

While not wishing to inhibit the responsible supervision of industrial behaviour, many are starting to question its suitability for another century where innovation, crucial to our National survival, is felt to be being stifled by the cold heavy hand of bureaucratic regulation. It is only fair to point out that this is mainly due to its exploitation in legal contexts such as “human rights” from EU laws and extension to professions such as the military, not envisaged at the time by the HSAWA legislators. It is perhaps timely then to review what this century thinks about risk and the context of how and where regulation of activities is required.

2. HSE in Context

The focus of the Health and Safety Executive (the inspectors actually doing the enforcement) has always been on the place of work. If people were protected here, they feel, outside the fence would be even more “safe”. Specification of material conditions and standards of good practice, such as machine guarding and limiting occupational exposure to harmful materials, has been one of its strengths and typical modus operandi. This is classified as “occupational Health” (OSHA) in other countries. Specification of “Safety” (in terms of “acceptable risk”) is much more challenging and has largely been avoided in this country. (In contrast to say The Netherlands and Norway). The exception being the nuclear industry where the “Tolerability of Risk” report, was more of an attempt at justification rather than control.

Thus “safety” has become seen to be achievable as a result of filling in paperwork, rather than the much more difficult (and potentially self incriminating) confronting quantitatively, the implications and consequences of planned and unplanned actions.

In fairness, it is very difficult to set out quantitatively convincing (and acceptable?) requirements for people’s health, or their safety. In any community there will be a wide range (a “normal” distribution) of behaviours and exposures. Should we regulate (control) on the mean, median, lower 10 percentile, etc? Setting maximum and minimum criteria is also difficult as health responses vary widely depending on age, sex, genetic factors, etc.

But with the demands for quotable “standards”, increasing, it is important that criteria set out in one context are not senselessly appropriated for uses for which they were not intended. We need a common understanding of the essential contexts for these numbers.

3. The Role of the Regulator

The Robens report clearly set out the need for the HSE regulator to enforce good practice to keep risks low (As Low as Reasonably Practicable). If the HSE regulator is now being asked to dictate safety standards in everyday activities such as school trips, then some thought must be given as to what standards should apply? By default we have one size fits all – do a risk assessment. OK, I’ve ticked the boxes, what’s the risk now?

If Parliament wishes to ensure a responsible overview of the health and safety of the general population, we need to rethink the roles (Where does the NHS fit in?).

4. Roles and Responsibilities

Recent rioting has highlighted a problem with a tendency of some people to assume that it is the state’s responsibility to look after everything connected with health and safety, as included in the welfare/ benefits entitlements, that are their current unquestioning expectation (by right?). The state support is a laudable manifestation of the social responsibility of government, but many people feel that the pendulum has swung too far and that the necessary balancing with personal responsibility has atrophied. When a regulated community feels that the regulator is taking responsibility and laying down behavioural criteria, they inevitably stop trying to improve their performance and tend to think less for themselves and only perform as well as absolutely necessary. Safety criteria are then taken as market “norms” against which they are allowed to work as closely to the upper limits as possible!

Was this micromanaging role really intended for an occupational, mutually negotiated standards enforcer? A very different stance is taken for regulating the use of tobacco (a risky exercise). Here the risks are required to be spelt out and if a smoker still persists, he is allowed to continue provided he is aware of the risk involved. This then is a necessary question to ask first, as to what we really want the role to be – in loco parentis or informed consent?

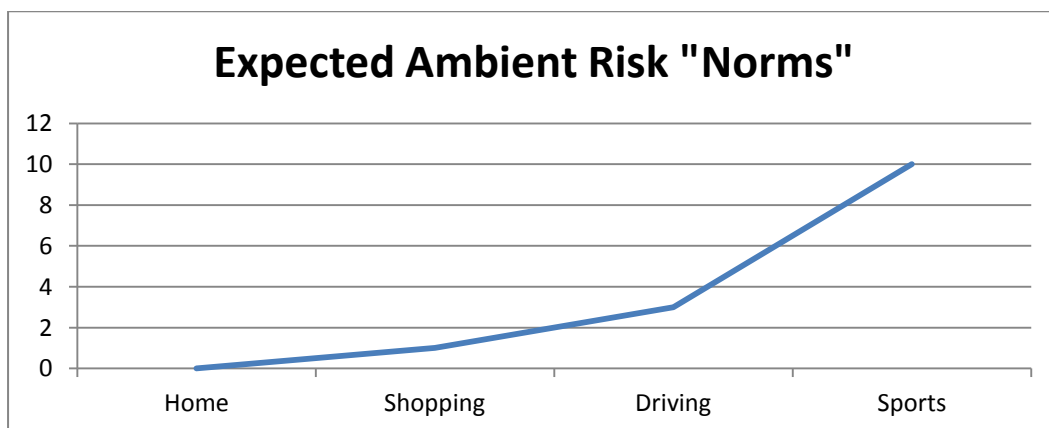
5. Legitimacy of Mandate

A recent example of where emergency rescue personnel allowed a man to drown in 3 inches of water and quote “Heath and Safety” as the reason they were not allowed to intervene, may be exaggerated, or even apocryphal; but it is now part of folk lore and typifies the low esteem in which this necessary and important activity is currently held. I am quite sure that Lord Robens would have been as disturbed as anybody else at the flagrant misuse of the parliamentary intent. A pressing need therefore is to spell out more clearly the scope and legitimate use of HSE legislation.

One of the clear reasons that we need to bring this in line with today’s society’s needs, is that most of the time businesses and professionals (rescue and Armed Services), want to know what risks they are able, or can be expected to take, not which particular red tape (legal trap, jobsworth, or mercenary ambush), they’re likely to trip up over.

6. Applicable and Different Dimensions to Risk

Much work has been done to distinguish and differentiate the areas where risk perception and tolerance/ aversion distorts our appreciation of what is at stake in different occupational and social; environments. Individual risk is treated differently to risk imposed on a large population. The number of fatalities in an accident, their identity/ origin and nature of the hazard determine whether the media report it as screaming headlines, or on the bottom of page 32. From this barometer of public concern, we can appreciate that there are a variety of situations that we need to specify, before we can start assigning expected “norms” or acceptable maxima, to “Risk”.



Risk levels to the Public

- In their own home
- Routine day to day – say shopping
- More risky routine – travelling – public transport
- Travelling by car/ driving
- Sports activities – which can run the gamut from dominoes to rock climbing

Similarly we can expect a range of typical or “Acceptable” Risk levels for other classes of exposures. These can be categorised in increasing severity, from “zero tolerance” to “whatever it takes” as in:-

Occupational Exposures

- Say Librarians
- Teachers
- Shop assistants
- Normal manufacturing/Factory
- Hi-Hazard such as Nuclear, chemical, offshore
- Emergency/ NHS/ Rescue services
- Police
- Armed Services
- SAS, Intelligence

Environmental Exposures

Again “context” matters as in where you are, at the time, as in:-

- Domestic
- Food Related
- Neighbourhood
- Event (Football Match)
- Fairgrounds, Fun Parks
- Vacations, seaside ,Safari
- Offshore, Extremes
- Mountain climbing/walking

“Scale”

- Individual
- Group
- Crowd
- Community
- Society/nation
- Global

And, lastly we must include the most studied and documented (e.g. Slovic) dimension of

“Nature” (Nuclear dread?)

- “domestic”
- Infection
- Poison
- Fire
- Genetic
- “Natural” (Earthquakes, etc.)
- Chemical
- Cancer

This just underlines how people feel about risk exposures and how difficult (nonsensical?) it is in practice to impose a single mandatory, qualitative process (Risk Assessment?) to justify actions: and if you can’t tick all the right boxes, you are a criminal?

No wonder the fettered decision maker can't distinguish between getting one's feet wet and the life of a loved one! (to exaggerate to make a point). We need to step back and focus on what we need the outcome to be. Again we could do worse than revert to the old HASWA principle that risks should be as low as reasonably practicable (ALARP). Who decides what is reasonable? The classic Wednesbury judgement specified the test as - what the "man on the Clapham omnibus would do!" Perhaps this is preferable to the unreality of the typical Brussels legal bureaucrat?

To help develop a useful approach, we can start with the Wednesbury judgement which required a two-handed "balance" between risks and benefits. (On the one hand-----!)

In responding to an emergency, the balance is between the benefits to the incipient "Victim" of potentially being saved/protected weighed against its cost (i.e. the expected impact on the intervening "Agents"). This works well for the drowning man in 3 inches of water, but can it be generalised? At least it could provide the backbone of guidance, or training materials (not forms or checklists!)

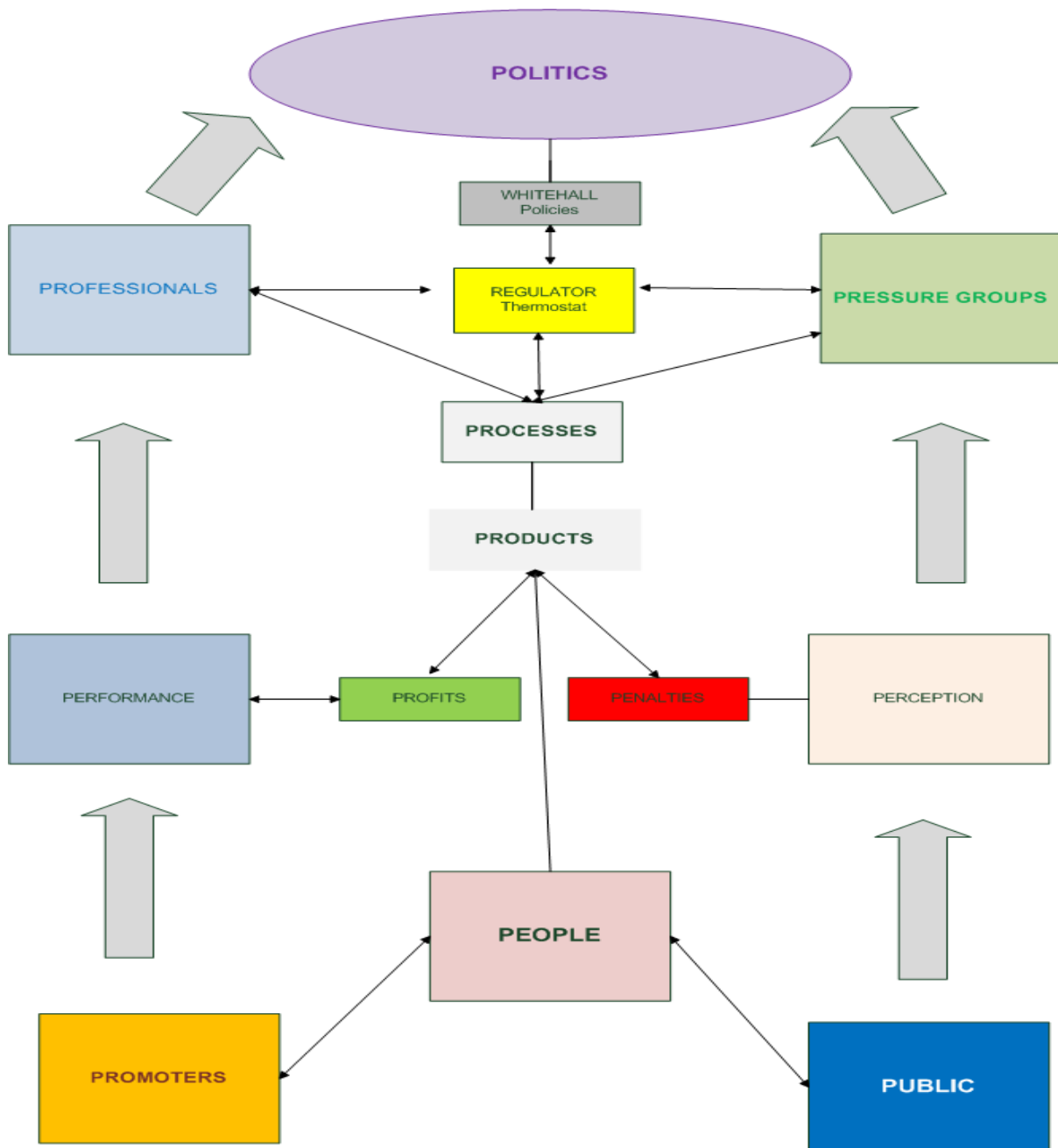
But to do it properly it would have to include the other "scoping" factors previously outlined – Public/Occupational; Environment, Scale and Nature. This note argues for including these other dimensions. Considerations such as "common sense" should be reintroduced. But above all we must give the decision maker the freedom to use it. Train them, trust them and give them the option to assess consequences realistically, make responsible judgements and yes, even make mistakes. In emergencies as the medics will tell you almost any action is more defensible than doing nothing because the paperwork comes out wrong!

7. The Decision Framework

The legislator/ regulator of course is not an isolated, all knowing/ all seeing oracle. But in a democracy, the political system allows the bringing together of a wide variety of interests and viewpoints for consultation/negotiation. The Health and Safety Commission was established to achieve just that. Sometimes these constituencies have been grouped in different effectively isolated, watertight compartments in their thinking and approach. These "Boxes", each emerge continually with their own theories, rationalisations and proposals as to what needs to be done.

For example, Adams in his influential book on "Risk" identifies some of these boxes and chides, for instance, scientists and engineers and their naive belief that it can all be quantified satisfactorily given sufficient data and models. (As in the Royal Society's Reports). Another "box" identified, is that of government civil servants setting up self funding agencies (Booker), with entrepreneurial encouragement in the belief that these "taxes" will inhibit hazardous activity. He himself, however, confesses to being in the "Cultural Theory" box which, (after Wildawsky) identifies different personality and behavioural characteristics, which shape an individual's perception of risk and their degree of comfort with rules.

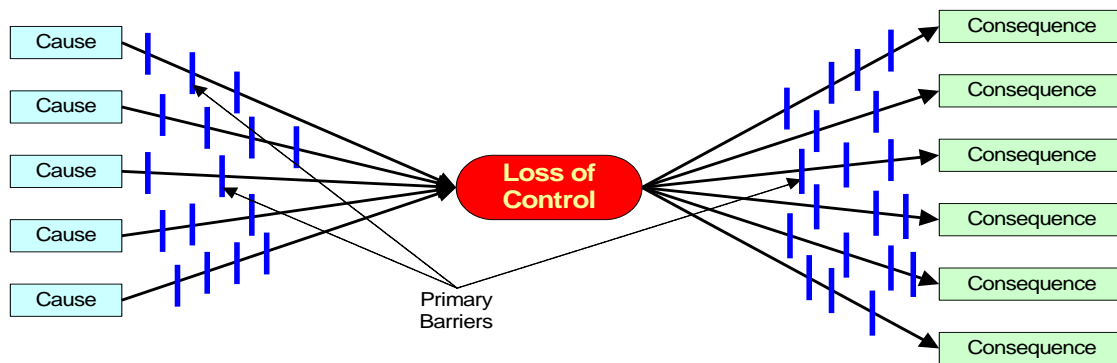
This in turn helps us to understand how there are diverging views of the same behaviours (c.f. Risky, vs. Enterprising?), depending on personal, psychological "type" and the direct cost/ benefit or individual risk reward implications of activities. These are often expressed /amplified (The Social Amplification of Risk) by pressure groups in the hope that it will encourage government to develop policies to reset the risk temperatures to reflect their particular appetites or aversions. This is shown diagrammatically below and helps to place the regulator in the decision framework as society's "Thermostat" to use Adams' helpful metaphor.



In each of the boxes, there are approaches, methodologies and standards that are helpful and need to be taken into account. These include for example, Utility Theory developed by the market (economists) to analyse and predict risk taking in investments and consumer preferences. But the lesson of this structural analysis is that the inherent conflicts of vested (legitimately) interests, social and political agendas as well as potential exploitation agents, make the idea of a single “Accepted” risk benchmark, highly unlikely to say the least.

8. Real Risks in Real Life

Most people think of risk as something that can “go wrong!” Anybody knows that we can slip on icy pavements. This can have a wide range of consequences, from inconvenience to fatality, depending on individuals, environments, preparedness, but above all on chance. The first lesson we learn is to avoid, if at all possible, the slip (loss of control). Where this is not possible, we should ensure we have sufficient layers of protection (Adequate Resilience). So this “risk” becomes “acceptable”, not because we guess it is unlikely to happen, we know it can; but even if it does, we can survive! The “Bow Tie” representation of accidents (below) where the “knot” represents the point at which loss of control occurs is very helpful to visualise this and identify which measures are aimed at trying to reduce “Vulnerability” (the left hand side) and those that are there to provide “Resilience”. (the right hand side)



Current legislation on automotive “risk” indicates the lack of such a clear paradigm in rationalising our regulatory approach to personal transport. Car accidents happen every day! They are an acceptable risk? The transport authorities even prioritise infrastructure investment against their internally sanctioned “value of a human life”. The regulatory response aimed at reducing the frequency of fatalities is to impose vehicle speed restrictions and to require competence and reliability through testing.

We know that this is not acceptable, however, as there is a raft of rules and regulations enacted, which assume the accident will happen (Probability of 1!) This includes safety belts, crash helmets, toddler seats, insurance, etc. and they are all about our survival (Resilience!), (or at least a sporting chance?). Which is more effective - speed cops or safety belts? Are there some cases where their combination actually decreases overall safety? Sometimes we can become overconfident if we believe that we have multiple barriers between us and disaster (Deepwater Horizon - hazards of relying on dumb resilience!) Public pressures for freedom of movement and personal safety means that all these initiatives make some contribution, but still allow an appalling (in comparison to almost any other risk!) unconscious, almost hypocritical inconsistency in our perception of road risk.

9. The Enforcement Approach (Speed Cops vs. Safety belts)

So how do we assess what levels of risk to people’s Health and Safety (Occupational or otherwise) are appropriate, should be publicised, recommended, enforced? This discussion suggests that the popular emphasis and understanding that there should be levels of “risk” exposure that can be legislated and enforced in the manner of speed limits on motorways is at best naive and at worst undoable and unhelpful. Part of the reason for this is that it cannot take into account the wide range of social, occupational and emergency situations involved, but partly, and very important practically,

because of the sheer impossibility of deriving and politically justifying such numbers, where human lives are involved.

The alternative and more practical approach forced on the automotive domain, is to ensure that the level of protection afforded is sufficient. (at least in the eyes of the man on the Clapham omnibus!). In a way, this also reflects smoking risk pragmatism, if one accepts a written warning as effective! The vehicular approach would also help in treating battle tanks and family saloons as quite different propositions.

These are useful precedents for the process of arriving at a consensual solution to exposures, which must include and reflect the interests and diversification of psychologies involved. This should generate the norms or workable “risk temperatures” to set the regulator, or thermostat; hence making it (enforcement) acceptable and effective.

10. Conclusions

It must be timely to re-evaluate how we need to regulate risk in the twenty-first century. Society and the nature of the threats we have to deal with, has evolved from, but still includes, the natural environmental and industrial risks (Fukushima): but it now needs to be “stretched” to include some new and challenging ones (Cyber, 9/11 and Tottenham!). In trying to extend the legislative ideas developed in the 1970’s to deal with the impact of Industry on society, to include most social contexts these days; we have inevitably had to over simplify the processes to a common denominator.

This again has almost inevitably, encouraged our current tick box mentality; which is now proving such a barrier to the effective operation of industries and services; while probably not doing much to reduce its risk. It paradoxically, seems significantly to increase blame and discourages effective and timely response (culture)? As well as this “fear of blame” attitude inhibiting safety initiatives, such as no blame reporting systems, it must also be discouraging to the dedicated professionals charged with its enforcement. Encouraging the consideration of the resilience, rather than only the risks of some activity/system, in a logical and practical way, would also offer the crucial insights needed for the effective management of those risks.

This note argues that it might now be appropriate to go back to basics and train decision makers and risk managers, (it’s now a profession?) in the crucially different dimensions of risk. Further, to empower them to take responsibility for making informed (and occasionally flawed) judgements; and to achieve the kind of common sense balance of costs and benefits implied by Wednesbury. Far from arguing that we should dumb down the process any more, it argues for more and better decision support tools, information and management aids, to help assess the consequences of decisions and provide a better understanding of the nature and impacts of alternatives. Going back to proven tactics, it is pertinent to remember the traditional Factory Inspector’s focus on machine guarding (on the right hand side of the knot!) also recognised its simple and effective logic. It also means live, informed, flexible, responsible ownership of the risk and consequences of our actions, not paper checklists.

The ideas of “Acceptable Risk” promulgated in the 1980’s are patently no longer valid or practicable. (if they ever were, with hindsight!). When the consequences themselves are unacceptable and no guarantee can be given to gainsay inevitability of occurrence, then “Adequate Resilience” must be preferable to Russian roulette. Belt and braces is the only sensible response if the activity is important or even, indispensable.