

Transcript of The Naked Scientists, BBC radio, 30th July 2006

DON'T PANIC! - THE SCIENCE OF MASS EVACUATION - Dr John Drury, University of Sussex

Kat - Anyone who was in London about this time last year was shocked to the core by the London bombings. How do you start evacuating people from a situation like that?

John - I think we want to step back for a moment there and consider the concept of crowd control. There's a kind of hidden assumption there that the crowd is the problem and it's down to the authorities to deal with the problem of the crowd. The problems of the crowd are defined as its reduced intelligence, its irrationality, its over-emotional behaviour, and its inability to control itself. This goes back over 100 years to when crowd science first emerged and you see them in the ideas of the police and also in many procedures for evacuating crowds.

Kat - So how instead should we look at crowds?

John - The first thing to point out is that it's in common sense discourse that when there's an emergency, people will panic. When we say panic, what we mean is that people will over-react, they will become selfish, individualised and ultimately ineffective in their attempts to escape because they keep getting in each other's way.

Kat - And how should we get people out of those situations in the most calm way possible? Is there any way to stop people panicking?

John - Well the point I'm trying to make is that panic is a myth. 50 years of research into disasters and emergencies have shown no evidence at all of panic behaviour. What is more common is people obviously feeling fear but evacuating in a relatively orderly way. Helping is very common and deaths are due not so much to people panicking but people often trying to stay behind to help people to get out. They are often in small groups of people and they're trying to help people less able than themselves.

Kat - So people don't run around like headless chickens like you might imagine.

John - Yes, it's a myth. Everyone commented that after the bombings last year, all the accounts mention how calm everybody was and how much helping there was. It was characterised by something about London, or British identity or London identity. But in fact it's a universal phenomenon. Help and co-ordination and co-operation is a universal phenomenon in emergencies.

Chris - It's interesting John because we've had a call in from John in Colchester who's asked whether pheromones or chemicals be used to control riots and crowds? And I know that in the United States, a lot of research has been sunk into microwave guns that can blast plasma at people and give them a little bit of pain if they step into the beam of it. This is a good way of pushing people into submission. Also, there was a group in Washington who was working on the world's worst smell, so that you would release this smell on people and it reduces them to a quivering heap on the ground as you try and hold down the contents of your stomach because it's so unpleasant.

John - Yes and this goes back to my earlier point: where crowd science arose from was the perception by those in power that the crowd was the problem, and so how do we deal with the crowd. Turn it round, and the crowd is actually the solution. Social change comes about through crowds. Progressive social change comes about through crowds. The most uplifting, most constructive and most

empowering events in terms of emergencies are due to processes within the crowd itself. The concept called resilience used by the government and used by sociologists looking at disasters refers to a natural quality of people to respond in a constructive and humane way and to co-ordinate through their own natural resources.

Kat - I was reading the paper this morning and one of the classic problems with large groups of people trying to do stuff is getting on an aeroplane. There are various models people are trying to look at to see which is the best way to get people onto a plane. They were saying that people do tend to get in each other's way in that situation. You should put people into the window seats first. Where you have a lot of people trying to go to the same place at once, is there a best way for doing this?

John - I haven't really got a solution for that question but I have a comparison which sheds some light on the issue. Think of a crowd of commuters on the central line and the way they behave and how they feel. They're packed close together, they're uncomfortable, they don't meet each other's eyes and they find physical proximity unpleasant. They are a physical crowd crowded together where they don't see themselves as a crowd or as part of a whole. Take the same situation, yet this crowd is a crowd of football supporters that's just seen their team have a victory. They are singing together and the physical proximity there is an enjoyable thing. So there's something about being a psychological crowd or seeing yourself as a crowd that makes people put other people first, be self-sacrificial, co-ordinate and communicate. Whereas in a physical crowd, the crowd of individuals or consumers competing for space, have a lack of unity. The lack of unity stems from the lack of shared identity, so those people have no shared interest.