

# On the Human Dimension of Disasters

*David Alexander*

Disasters open an extraordinarily revealing window on the workings of society. Through the disruption and the exigencies that they create, they expose, as it were, the "soft underbelly" of the social organism. With this in mind, I will now offer some reflections on the 'human condition' as seen through the lens of a student of disasters, crises and major incidents.

Each of us has a special skill to bring to disaster risk reduction, but experience of crises and emergencies suggests--proclaims, even--that our interventions should be made with careful attention to the context of our work, as well as that of the events themselves (Hewitt 2013). Disasters are multi-faceted phenomena and the threats and impacts that they create require multi-disciplinary responses (Kruchten et al. 2008). Such is the growing complexity of society that before long virtually all disasters and major incidents of a certain size will be cascading events, which cannot be understood in monodisciplinary terms (Pescaroli and Alexander 2015).

One effect of disciplinary specialisation has been a tendency to shy away from the bigger picture, which includes underlying risk drivers that represent the fundamental causes of disaster. These lie in the domains of poverty, marginalisation, the incidence and prevalence of disease (and in some countries malnutrition), conflict, displacement, and, increasingly, climate change adaptation. So powerful are the forces that create vulnerability, and so persistent is the problem of disasters, that some analysts have begun to urge us to study disaster risk *creation*, not disaster risk *reduction* (Oliver-Smith et al. 2016). And so begins the search for reality in its stripped-down form.

As an initial question, to what extent should policies and decisions be based on evidence? The current fashion for "evidence-based practice" began in medicine (Sackett et al. 2000). If a particular surgical operation was accomplished with a consistently low level of success, there would presumably be evidence in the operating theatre of what was going wrong, which would explain why practices should be changed. Ostensibly, it is a good idea to base decisions on the evidence of what actually happens when implementation takes place. Evidence can be precise and decisive, and thus able to support good decision making. However, it can also be equivocal, ambiguous, puzzling or uninterpretable--evidence of what? Moreover, it can be ignored, distorted or used selectively so that the picture of what is going on produces radically different interpretations depending on which evidence is selected (Lau et al. 2006).

For some key issues, we have very little evidence. For example, the role of perception and self-protective behaviour in saving people's lives when buildings collapsed in earthquake disasters is very poorly understood (Goltz and Bourque 2017). Although in earthquake injury epidemiology we have more than 40 years of concerted studies, the evidence is fragmentary and does not add up to useful empirical generalisations on which with confidence and security we can base policy. In migration studies, evidence

is used in a highly selective manner. For example, in the Western world migration policy tends to assume that immigrants are a drain on the health and welfare services and national economies, and that they take jobs from indigenous workers. The evidence tends to support the opposite conclusion (Dustmann and Frattini 2014), but this does not affect policy when it is based on political considerations rather than cold socio-economic logic. This consideration is important to disaster specialists, as there is a substantial risk that a human mobility crisis will overlay with another form of disaster and create a compound event of extraordinary reach and intensity (Pigeon 2017).

In recent years there has been an increasing divergence between policy and reality, if the latter can be represented by something in the moral, ethical and legal domain. We live in the age of mass cognitive dissonance (Metzger et al. 2016). On the one hand there are *xenophobia*, the distrust of unfamiliar people, *rejectionism*, the sense that it is not our problem, and *distancing*, or "not in my back yard". On the other hand there is *compassion*, the desire to help the needy, and *charity*, a willingness to donate. Seldom has the human race been at such a crossroads!

This points to a major lesson to be learned. None of us will be able fully to understand the problem of disasters, let alone solve it, until we start to be realistic about the world in which we live. As the work of Naomi Klein and Anthony Loewenstein has shown us, in the field of 'disaster capitalism', disasters consolidate power structures, augment profits, redistribute wealth from the poor to the rich, allow the introduction of conveniently repressive measures and permit gratuitous social engineering, including that which is achieved by forced migration (Klein 2008, Loewenstein 2015). Put simply, disasters are a vehicle for economic, social and political opportunism. Klein and Loewenstein argue that this is because the dominant forces treat the economic and physiological enfeeblement that disasters cause to affected populations as an opportunity for exploitation. In a world in which half of all trade (and US\$7.6 trillion), is funnelled through 87 tax havens and eight men control as much wealth as 3.6 billion other citizens, inequality and resource hoarding are a major influence on disaster potential in all countries without exception (Oxam 2017).

Despite the imperatives, sadly policy makers at all levels of government, commerce and industry are generally uninterested in disaster risk reduction. Politically, it has the 'negative kudos' of the "no votes in sewage" syndrome, i.e. that a politician will not be elected for promising to build a new waste-water treatment plant. As a consequence of this, and the predominance of other political considerations, decisions are seldom made on the basis of evidence and research.

One by-product is that throughout the world corruption is one of the principal causes of disaster. This can be seen in the erosion of planning laws (and the lack of adherence to them) in floodable parts of London, England. It can be seen in the nuclear release at Fukushima Dai'ichi, Japan, and it can be seen in the mass collapse of relatively new buildings during earthquakes in countries such as Turkey and Pakistan. Indeed, studies have shown that, at the national level in seismically active countries, the gravity of earthquake disasters correlates most strongly with weak governance and corruption in planning, construction and building code enforcement (Escaleras et al. 2007,

Ambraseys and Bilham 2011). The greatest difficulty with this thesis is how to measure corruption, which is often dangerous to study, is often pervasive, is always occult and does not necessarily involve the transgression of laws. However, as vulnerability is the root of disaster, corruption adds to it--immeasurably, in both senses of the word.

Much of world policy on disaster risk reduction is national and international in genesis and is therefore "top down". Field studies suggest that it does not easily reach the local level. The United Nations International Strategy for Disaster Reduction has endeavoured to counteract this by organising the 'Safe Cities' initiative, with principles and guidelines for reducing disaster risk at the local level (UNISDR 2013). A thousand towns and cities have joined the initiative, but as there are more than a million urban settlements above the village level, only about 0.1% of the world's cities are involved.

Despite this, theorists, and many practitioners, believe that local-level activism is possible and the community is the best vehicle for measures to reduce disaster risk and impact (Berkes and Ross 2013). That is fine, but it ushers in some thorny problems. One is that there is no innate geographical scale at which to define the concept of 'community'. Is a community a street, a neighbourhood, a city, a world-wide group of like-minded individuals, or what? Secondly, communities are often neither homogeneous nor harmonious. Rivalry and rancour abound in them. Thirdly, identification with the community is a highly variable phenomenon. As sociologists discovered nearly 40 years ago, disasters can produce subcultures, represented by very heterogeneous groups of people who have a common agenda, and subcultures can produce emergent groups, such as survivors' networks and pressure groups (Wenger and Weller 1973). However, these are not always therapeutic phenomena and not always graced with longevity.

Fourthly, power structures are evident in the make-up of communities, which tend to be dominated by the interests of their most powerful members or overlords. One consequence of this is 'elite capture', in which the popular agenda is captured by the dominant interests (Kundu 2011). It is as likely to be encountered in the Thames basin of outer London as it is in the villages of Bangladesh. Another consequence is marginalisation, in which groups of people are deprived of the economic, political and social power needed to achieve self-determination. Marginalisation has been found to be strongly correlated with vulnerability to disaster, as has the poverty that accompanies it (Wisner and Luce 1993). Again, these are features of all societies, rich and poor.

In a just society, imbalances of opportunity would be counteracted by welfare, a term that, curiously, all and sundry seem to shy away from defining. It is clearly too much of a political hot potato, but here is my own definition: "The provision of care to a minimum acceptable standard to people who are unable adequately to look after themselves." In disaster, welfare assumes paramount importance, but it is easily subverted by politics and opportunism. We therefore need to look carefully at what welfare is not, as much as at what it is. What is legitimate care and support, and what is a debilitating source of aid-dependency or a political sweetener in exchange for votes?

The dismal picture of dark forces and negative changes that I have drawn is the result of a pervasive tendency not to tackle the root causes of disaster. Perhaps we lack the means, but there is also a reluctance to look reality in the face, and that leads to a further tendency to underestimate the power of disaster and to misinterpret its causes. In 1983 a book entitled *Interpretations of Calamity* appeared, edited by the Canadian-British geographer Kenneth Hewitt (Hewitt 1983). The authors of this volume promoted what has come to be known as the 'radical critique', which argues that vulnerability is the key to disaster, while hazard, or threat, is merely the trigger of events. Paradoxically, since the mid-1980s, we have seen the massive growth of hazard studies and only a modest increase in vulnerability studies. The money is in seismology, volcanology, and the 'technofix' solution to everything from storms to terrorism. In the meantime, vulnerability continues to grow, proliferate and send its insidious feelers into many aspects of life.

Does the explanation for such paradoxes lie in culture, perhaps? As scientists we are taught that there is only one reality and science can somehow "nail it down". Other interpretations are fallacious and to be despised. However, 37 years spent studying disasters have convinced me that there are many realities, and they stem from remarkably different interpretations of what constitutes rationality. If, as happened in June 2015, a Malaysian cabinet minister states publicly that an earthquake occurred because tourists took their clothes off on a sacred mountain, we may chortle and dismiss the assertion, but it nevertheless influences people's perceptions and thus has a concrete effect.

We have long known that the enigma of people's attitudes to disaster, and actions in the face of disaster risk, are a function of human cultures. Anthropologists have been quick to claim the high ground here, and they have conducted some notable field studies of disaster culture (Oliver-Smith 2004). However, in recent years there has been a renewed interest in trying to understand how culture influences other aspects of disaster and other fields by which disaster is interpreted.

Culture is remarkably hard to measure. It is something we are born with and develop as we mature. Many of the aspects of culture that are thus created are, to use the terminology of the linguist Kenneth Pike, 'emic', or culturally specific (i.e., not common to all cultures, or to many of them--Franklin 1996). In the modern age, cultural metamorphosis is driven largely by technological developments, which are decidedly 'etic', or culturally universal. This promotes fusion and the constant reinterpretation of cultural norms. By and large, emic elements of culture mutate less rapidly than etic ones do (Alexander 2000). They are the 'ballast' of culture. Cultural change can be achieved, but only by persistent application of effort and recognition that change will be slow and continuous, for cultures do not change overnight. In the meantime, projects that are culturally compatible are likely to succeed, while those that are not will fail, no matter how rational and laudable they are. A more unstable factor is represented by risk perception. Forces are constantly at work that both create risk and abate it. Which of these wins, and how the balance is tipped, depends on the 'wild card' of risk perception. Note, however, that the 'wild card' is constrained by the cultural filter (or lens) by which we interpret the world at all levels from the individual to the international.

It is vital that the social sciences embrace cultural analysis. Cultural differences may explain, for example, why the sociological definition of panic is so different from that entertained by psychologists (Alexander 1995). In this sense, it is a matter of both how these constituencies interpret the meaning of culture, and how the cultures of sociology and psychology operate to constrain the interpretations. The picture is complicated by the fact that at the individual level, culture is like Chinese boxes or Russian dolls: it is a multiple phenomenon. No wonder it is hard to pin down in any scientific manner.

In conclusion, we live in a world of changing realities. Identity and sovereignty have remained relatively immutable for four hundred years, but they are now entering a period of radical change. Welfare, entitlement and human rights are essential elements of disaster risk reduction, but they are under extreme duress in a world in which equality is a receding goal.

Many of these ruminations have no apparent practical outcome, but the reader will ask what we can do as individuals and groups. The first thing is to search for the underpinnings of reality, read between the lines, strive to interpret events in more fundamental ways. Awareness is the lynch-pin of action. We must all advocate and strive for policies, practices and procedures that take account of the world as it really is. If we understand the fundamental drivers of disaster we can concentrate on reducing them, rather than merely prodding away at the symptoms.

## References

- Alexander, D.E. 1995. Panic during earthquakes and its urban and cultural contexts. *Built Environment* 21(2/3): 171-182.
- Alexander, D.E. 2000. *Confronting Catastrophe: New Perspectives on Natural Disasters*. Terra Publishing, Harpenden, U.K., and Oxford University Press, New York, 282 pp.
- Ambraseys, N. and R. Bilham 2011. Corruption kills. *Nature* 469: 153-155.
- Berkes, F. and H. Ross 2013. Community resilience: toward an integrated approach. *Society and Natural Resources* 26(1): 5-20.
- Dustmann, C. and T. Frattini 2014. The fiscal effects of immigration to the UK. *The Economic Journal* 124(580): F593-F643.
- Escaleras, M., N. Anbarci and C.A. Register 2007. Public sector corruption and major earthquakes: a potentially deadly interaction. *Public Choice* 132: 209-230.
- Franklin, K.L. 1996. K.L. Pike on etic vs. emic: a review and interview. Summer Institute of Linguistics. SIL International, Dallas, Texas, 9 pp.
- Goltz, J.D. and L.B. Bourque 2017. Earthquakes and human behavior: a sociological perspective. *International Journal of Disaster Risk Reduction* 21: 251-265.

Hewitt, K. (ed.) 1983. *Interpretations of Calamity from the Viewpoint of Human Ecology*. Unwin-Hyman, London: 304 pp.

Hewitt, K. 2013. Environmental disasters in social context: toward a preventive and precautionary approach. *Natural Hazards* 66(1): 3-14.

Klein, N. 2008. *The Shock Doctrine: The Rise of Disaster Capitalism*. Penguin, Harmondsworth, 576 pp.

Kruchten, P., C. Woo, K. Monu and M. Sotoodeh 2008. A conceptual model of disasters encompassing multiple stakeholder domains. *International Journal of Emergency Management* 5(1-2): 25-56.

Kundu, D. 2011. Elite capture in participatory urban governance. *Economic and Political Weekly* 46(10): 23-25.

Lau, J., J.P.A. Ioannidis, N. Terrin, C.H. Schmid and I. Olkin 2006. Evidence based medicine: the case of the misleading funnel plot. *British Medical Journal* 333: 597-600.

Loewenstein, A. 2015. *Disaster Capitalism: Making a Killing Out of Catastrophe*. Verso Books, London, 376 pp.

Metzger, M.J., E.H. Hartsell and A.J. Flanagin 2016. Cognitive dissonance or credibility? A comparison of two theoretical explanations for selective exposure to partisan news. *Communication Research* 1-26.

Oliver-Smith, A. 2004. Theorizing disasters: nature, power and culture. In S.M. Hoffman and A. Oliver-Smith (eds) *Catastrophe and Culture The Anthropology of Disaster*. School of American Research Press, Santa Fe, New Mexico: 23-47.

Oliver-Smith, A., I. Alcántara-Ayala, I. Burton and A. Lavell 2016. *Forensic Investigations of Disasters (FORIN): A Conceptual Framework and Guide to Research*. FORIN Publication no. 2. Integrated Research on Disaster Risk, Beijing, 36 pp.

Oxfam 2017. *An Economy for the 99%*. Oxfam Briefing Paper. Oxfam, Oxford, 48 pp.

Pescaroli, G. and D. Alexander 2015. A definition of cascading disasters and cascading effects: going beyond the “toppling dominos” metaphor. *Planet@Risk* 3(1): 58-67.

Pigeon, P. 2017. Dike risk: revealing the academic links between disaster risk reduction, sustainable development, climate change, and migration. In K. Sudmeier-Rieux, M. Fernández, I.M. Penna, M. Jaboyedoff and J.C. Gaillard (eds) *Identifying Emerging Issues in Disaster Risk Reduction, Migration, Climate Change and Sustainable Development*. Springer, Berlin: 67-80.

Sackett, D.L., S.E. Straus, W.S. Richardson, W. Rosenberg and R.B. Haynes 2000. *Evidence-Based Medicine: How to Practice and Teach EBM* (2nd edn). Churchill Livingstone, Edinburgh, 280 pp (and subsequent editions).

UNISDR 2013. *Making Cities Resilient: Summary for Policymakers*. United Nations International Strategy for Disaster Reduction, Geneva, 20 pp.

Wenger, D.E. and J. Weller 1973. Disaster subcultures: the cultural residues of community disasters. Preliminary Paper no. 9, Disaster Research Center, University of Delaware, Newark, Delaware, 18 pp.

Wisner, B. and H.R. Luce 1993. Disaster vulnerability: scale, power and daily life. *GeoJournal* 30(2): 127-140.