Disaster preparedness and the aftermath
Risk Management as a component of conservation theories for Historic Urban Environments/Landscapes[1]

Professor Michael Turner
UNESCO Chair in Urban Design and Conservation Studies,
Department of Architecture, Bezalel Academy for Arts and Design, Jerusalem

> "Remember how often you have postponed minding your interest, and let slip those opportunities the gods have given you. It is now high time to consider what sort of world you are part of, and from what kind of governor of it you are descended; that you have a set period assigned you to act in, and unless you improve it to brighten and compose your thoughts, it will quickly run off with you, and be lost beyond recovery."
> *Marcus Aurelius AD 121-180, Meditations on Stoic philosophy,*

> Post-disaster reconstruction projects provide ideal opportunities for affected communities to gain sustainable improvements and thereby generate benefits for stakeholders on a global scale. To achieve this, current reconstruction practices need to be questioned and rethought to ensure that future works conform to long term needs and the priorities of all affected communities. The new approach must demonstrate a shift in conventional policies if the future security of global populations and their environment are to be guaranteed.[2]

In considering the aftermath, we should start at the end and work back, so in the spirit of hindsight, the intervention might be better termed as the 'aftermath and disaster preparedness'. This approach is well described by Sigfried Giedion [3] in terms of constancy and change. In Panayotis Tournikiotis' comparison between the approaches of Nikolaus Pevsner and Emil Kaufman and that of Giedion[4] he attributes that although the past can reassure the present, it is the future that is important. In that sense we ought to look at the past from the viewpoint of the present – a present located in a wider dimension of time, so that it can be enriched by those aspects of the past that are still vital.

GENERAL SHERMAN AT POMPEII.

Aftermath

> For nearly eleven hours the volcano thrust a column of pumice twelve miles into the stratosphere. Around midnight the column collapsed, sending the first surge of four avalanches of superheated gases, pumice, and rocks blasting through Herculaneum. Not until the fourth avalanche the next morning did the suffocating surge reach Pompeii. The Latin poet Statius (45–96 A.D.) summarized the horror and grief, *"Will future centuries, when new seed will have covered over the waste, believe that entire cities and their inhabitants lie under their feet, and that the fields of their ancestors were drowned in a sea of flames?"*

While the aftermath is yet another *phase* in the history of the site and should represent the continuation of its associated values, the *point* of history of the disaster is to be understood through an attitude to (i) the disaster itself and (ii) its interpretation and meaning. The community and its culture that gave the values for the significance of the site will have to continue its re-evaluation in the light of the events and its implication on the heritage.

Attitudes towards preparedness

What are the attitudes and values associated with disasters?

The ancients in explaining the disasters developed narratives of which the elements of fire and water were evoked. The floods of Gilgamesh[5] and Noah[6] and the fire and brimstone of Lot were just the tip of the iceberg. Aristotle in ancient Greece categorizes disasters as the result of natural phenomena and not supernatural interventions.

Historically, it was God in the form of the Supernatural. It essentially attributed to negative societal happenings about punishment of the sinners or tests to the righteous; but religion and passivity are not necessarily identical. Prayers, offerings and rituals were widely seen to influence the supernatural. The story of the prophet Jonah is evidence of this dilemma demonstrating the ability to repent and be forgiven by God, and the positive interpretation of the wisdom that 'God helps them that helps themselves'. This was a time that the dichotomy between the proponents of determinism and predestination on one side and of free-will on the other was marked by the burning at the stake or the defenestration of the opposing sides.

And here, the Oni, the demons in Japanese lore wander between the living and the dead. Sometimes doing good deeds in the world, and sometimes wrecking havoc. Demons having supernatural powers also have the magical ability to affect natural phenomena. Ceremonies to drive away the evil spirits were a regular annual feature in village life, while the later transformation of the Oni to a more protective function reflects the changes in the evolving society in the Orient.

In the Occident, the Supernatural took another turn at the end of the seventeenth century in Europe with the Age of Enlightenment, when the philosophers rebuilt the heavenly order on earth developing the concepts of pantheism and monist thought, thus collapsing the Supernatural of God and the Universe into a single entity.

But all this is nothing for the insurance companies who still continue to indemnify us against *acts of God* albeit substituted by the secular French with the *force majeure*, the superior force, from the Latin roots of *casus fortuitus*.

Although the documentation of a disaster by the many researchers and professionals brings together the same facts and the same values, the aftermaths inspire diverse outcomes. This is the component that relates to *interpretation* and *meaning*. An existential or historical interpretation will affect the policies and impending results. The interpretations are not mutually exclusive and hybrid situations can occur that, for example, highlight the differences between place/city and shelter/building. Here we will focus on the historic examples of the city and its urban characteristics, where the personal commitment is great and the collective memory strong.

In the loving book of Dame Rose Macaulay the Pleasure of Ruins, and later accompanied by the brilliant photography of Roloff Beny, she quotes that the Archbishop Hildebert in 1116 urged that ancient Rome's remains be left unrestored as a witness of heavenly chastisement; the decay being an exemplary warning against sin and depravity. She continues in remarking that the ruins attested to human retribution with the havoc wreaked against enemies found emotional joy in the contemplation of ruinous results.[7] 'Never again' was no empty slogan.

This has been challenged by Christine Boyer [8] in that the issue is the problem of time – of permeance and discontinuity of generations and rupture. She contends that the naïve enlightenment cannot deduce moral norms from architectural expressions or remains. Two liminally conjoined spaces are encountered: that of history or memory and that of objective thought or subjective testimony. The acceptance of the ancient narratives was through the 'great lessons and exemplary accounts' with people's actions tied to the terrestrial influences of the stars and interventions of God's will. The modern age wanted the cold facts.

A heuristic approach

Continuing the spirit of hindsight and observation, a heuristic approach is needed that evaluates examples but focused nevertheless within a single geo-cultural context. It is safe to say that further comparative studies will be needed to reach any global conclusions.

Water was the source of life, a necessity that created the love-hate relationship to site and place. As urbanism grew, there were the great rivers, nurturing the great civilizations, the Nile, Tigris and Euphrates and the Huang He/Yellow River that all developed river control as mitigating efforts for a long term natural risk as well as coping by physically altering structural dimensions. The physical necessity of remaining at the same place and attached to the sources transcended other considerations bringing about the formation of the tel. But considerations were more complex especially when compounded with the socio-economic situation of the government at large and the city structure in particular.

In choosing some examples we shall look at sites in the Mediterranean, on the River Jordan section of the Great Rift Valley, the Italian experiences at Rome and Pompeii and highlighting the Sicilian disasters of the seventeenth century; the Great Fire of London in the wake of the Plague in itself an event of Outstanding Universal Value documented by the diarist Samuel Pepys and finally the perspectives of the destruction of human mind and physical fabric of the twentieth century wars and conflicts.

What were the options?

Lawrence Vale and Thomas Campanella outline in the introduction to their book, *The Resilient City: how modern cities recover from disaster* that, like the phoenix, cities are resilient and all the more so in the modern era. It is the exception that a major city is truly and permanently lost. One must add that there are many other meanings to the word 'lost', including declining, abandoned or destroyed. Shrinking cities of Eastern Europe or ghost mining cities in the Americas are yet another syndrome of the socio-economic effect of abandonment.

The urban planning decisions differ from the decisions on construction, style and materials. Often, *building above* or *building instead* was substituted after a disaster by *building by* and or *not building at all*. Cities with long habitation histories have later quarters built on top of

the old ones, in an archeological 'tell'-like structure, well known in the Eastern Mediterranean along the Great Rift Valley and include historic cities as Jerusalem, Tiberias, Safed, Bet Shean/Scythopolis, Nablus and Amman.

In short, they determine that cities are among humankind's most durable artefacts in reality, in mind and soul.

The historic examples

Let me start by sharing with you some thoughts from my home town, Jerusalem. A city in the words of Ashbee[9] that it is "unique, and before all things a city of idealists, a city moreover in which the idealists through succeeding generations have torn each other and their city to pieces. Over forty times has it changed hands in history. And perhaps partly because of all this and partly because of the grandeur of its site and surrounding landscape it is a city of singular romance and beauty." Each time, it was rebuilt and re-invented, but throughout the earthquakes and the changing hands of history and until the middle of the nineteenth century it remained centred on the water source of the Gihon or the Virgin's Well and the current Ottoman footprint on a tel of less than one square kilometre.

But it is the idealism of the resurrection of the three religions on the Axis Mundi that represents the forces of rebuilding at each event.

Whether the Great Fire at Rome was or was not to be attributed to Nero, insisting on the execution of a megalomaniacal urban upgrade, William Ramroth [10] gives three important principles that can be learnt from the lessons of the disaster in 64 AD; that (i) serious action is only taken after a disaster, (ii) improvements can transcend the disaster component and (iii) disasters play a significant role in shaping history. In the case of Rome it brought on political change moving an aristocracy to a republic and was a golden opportunity to create change on a grand scale – which it did!

The tsunami that washed away Alexandria in 365 AD was not forgotten when on the morning of the 18 January 749 AD an earthquake rocked the Jordan Rift Valley. The area, anyway, was in administrative decline after the defeat of the Byzantine Empire by the Umayyad caliphates. The devastation was so great and the economic capacity for renewal so small that the recovery of these towns was minimal, resulting in the establishment of little townships some distance from the ruins. The remnants of the archaeological debris are scientific evidence of the disaster and sheds important light on the geological movement in the region.

The Great Fire of London of 1666 was seen as a blessing in disguise cleansing the streets of London from the plague. This came in the wake of the Royalist restoration of 1660 recovering the monarchy from the commonwealth of England. Distinguished members of the newly established Royal Society came up with revolutionary plans that would have delighted Nero at Rome, but although the damage was total, and changes in architecture where adopted, the existing socio-urban fabric was too strong to allow any real transformation of the city form. Ramroth summarizes that in the case of London they were not prepared; (i) you have to learn by yourself – the hard way (ii) problematic situations built up incrementally (iii) Cities are organic (but so are democratic governments) and (iv) evolution teaches that organisms that change or mutate drastically have difficulty in surviving.

The famous 1693 earthquake of Sicily presents us with a new paradigm as over forty towns were destroyed in an area of some 5,500 square kilometers. Spanish sources concerning the aftermath gave detailed accounts of the arguments between the local communities and the Spanish Authorities[11] as to the recovery plans. This was a period of wealth, economic growth and vision.

The rebuilding of the old town of Avola (Avola Vecchia) in its present location close to the sea was contended due to the necessity of the prevention of attacks by pirates and smuggling. But, because of its level position, and in common with Grammichele, Noto and Pachino, it was a preferred site with a regularly patterned layout on a geometric ground plan. A hexagonal shape was chosen and a quadrate-shaped main square in the middle of the town, from which lead the right-angled street system. The ground plan was carried out during the course of the 18th century and the rather rustic Baroque features of this period give the town its characteristic appearance, most particularly in the centre. The original mediaeval site of Occhiolà remains an archaeological site some distance from the new Grammichele. The most notable town is Noto itself, with its fine Sicilian Baroque architecture. Extensive public debate resulted in a new town being built some ten kilometres away where it would be laid out on new principles of city planning[12]. Caltagirone benefited from a thriving ceramics industry which gave a big boost to the reconstruction programme within the same city perimeter.

It was at Ragusa that public opinion on where to rebuild the town was divided, and so a compromise was made. Whereas in Noto the poorer citizens finally had to move to the new site, in Ragusa the wealthier, more aristocratic citizens built their new town, now Ragusa "Superiore", while the other half of the population decided to rebuild on the original site, on a ridge at the bottom of a gorge, now Ragusa Ibla. The two towns remained separated until 1926 when they were merged to become the chief town of the province.

But these were rebuilding programmes for an age of excess and Baroque extravangence using the opportunities for new city – a theatrical performance as part of the Italian gene. Together they are deemed as a poignant reminder of the resilience of the communities in the wake of a disaster. And it was for these values it was inscribed on the World Heritage List.

Remaining on the island allow me to divert to a modern alternative folly with Ghibellina destroyed in the 1968 earthquake the original site has been fossilized by Alberto Burri in a denial of renewal, I Rruderi di Ghibellina versus Ghibellina Nuova.[13] The authentic ruin is not to be understood as some ontological essence of ruins but as a significant conceptual and architectural constellation that points to moments of decay, falling apart, and ruination already present in the beginnings of modernity in the eighteenth century. [14]

In short, we can say that the ancients were not equipped physically for the natural disasters, but were mentally very well prepared through faith and belief and were not afraid of renewal as opportunity arose. At this point, we have enough examples to take time out, a hiatus, and evaluate the first group of paradigms and measure them against criteria for Outstanding Universal Value.

Outstanding Universal Value

These varied examples in the Mediterranean, of one geo-cultural region, give a diverse picture of the responses to disasters. What is to be the new evaluation of the values of the site in light of the 'disaster'? How does the disaster event change the original status of the city and how is the perception of the city transformed in the eyes of the stakeholders. Adopting the relevant World Heritage criteria for Outstanding Universal Value, we can possibly evaluate these changes. Six criteria are considered:

> (ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
> (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
> (iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
> (v) be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
> (vi) be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
> (vii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

Is the disaster in itself a '*superlative natural phenomena*'(vii), does the site become an 'exceptional testimony to a cultural tradition or to a civilization which … *has disappeared*' (iii) or even 'an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become *vulnerable under the impact of irreversible change*' (v). It could also be 'directly or tangibly *associated with events .....of outstanding universal significance*.(vi). We will need to reconsider the values, but also recall the World Heritage definitions on *authenticity and integrity*[15], and where better to do this than in Historic Japan?

The twentieth century

The next group of examples focus on the twentieth century, when disasters of war reached mammoth dimensions. This is not to diminish the natural catastrophes of San Francisco, Skopje, Mississippi, Bam or Kobe. The post war syndrome or catharsis were personified in the European Recovery Program, commonly known as the 1947 Marshall Plan. Would reconstruction affect the authenticity of the site? The debate on the nominations of Warsaw[16], Dresden and LeHavre to the World Heritage List leaves much to be desired.

San Francisco, 1906 Earthquake   San Francisco, 1981 (author)

The urge for restoration embodied in criterion (vi) was a new phenomenon; where were the 'brave new worlds' and vision for a new and better life?

A look at the Warsaw reconstruction programme through the eyes of Jasper Goldman[17] within the context of the communist regime will be enlightening. The rebuilding of the Old Town could be seen as part of the propaganda from the Office for Aesthetic Supervision of Production and the Art at the Institute of the Polish Academy of Science. They approved, on behalf of the government, architectural styles and details according to socialist realist rules. Creative reconstruction "to serve the needs of the present" meant altering the interiors – modernization thereby obscuring the ideological intent. Old Town as a socialist housing district interiors as 6sq m per person was probably gentrification in reverse. Was this the authentic cultural continuity and the resilience of the city or an authentic ersatz as a film set? The new stadbilt was to "creatively refer to its historic form, but also be a creative contribution from the architects of the contemporary Polish People's Republic; to harmonise in character with the Old Town, with the existing elements of the city panorama, from the Vistula and most importantly with the Palace of Culture". The site was finally inscribed on the following criteria.

> Criterion (ii): The initiation of comprehensive conservation activities on the scale of the entire historic city was a unique European experience and contributed to the verification of conservation doctrines and practices;

> Criterion (vi): The historic centre of Warsaw is an exceptional example of the comprehensive reconstruction of a city that had been deliberately and totally destroyed. The foundation of the material reconstruction was the inner strength and determination of the nation, which brought about the reconstruction of the heritage on a unique scale in the history of the world.

Marek Tuszyński's collection of WWII prints

The text for criterion (ii) could also have been used for the architectural restorations at Ankor Wat and the multitude of doctrines and practices. Yet, in spite of the ICOMOS caveat, and with the longer perspective from the disaster event itself, the inscription of Le Havre as the City Rebuilt by Auguste Perret has opened the door to new interpretations of the meaning of authenticity, while the differences in the two texts speak for themselves. Criterion (vi) twenty-five years later was discarded.

> Criterion (ii): The post-war reconstruction plan of Le Havre is an outstanding example and a landmark of the integration of urban planning traditions and a pioneer implementation of modern developments in architecture, technology, and town planning.
>
> Criterion (iv): Le Havre is an outstanding post-war example of urban planning and architecture based on the unity of methodology and system of prefabrication, the systematic use of a modular grid and the innovative exploitation of the potential of concrete.

On the other side of the coin, and less innocently, building and rebuilding have often been tied to attempts to control and manipulate meaning. Mussolini excavated the ancient monuments of Rome, Hitler and Speer to replace Berlin and even Saddam Hussein recreated Babylon.

A possible option is to accept the stability of the values of the city as a continuum and part of a cultural tradition, calling to mind the principles of Nara as embodied in the cycles of rebuilding at the shrine of Ise. The alternative is the authentic ruin. In the transposed words of Ruskin it would be growing old respectfully and affectionately. But even the ruin cannot survive without interference.[18] We find ourselves between the large-scale restoration project or complete renewal.

Our mutual commitment as host and guest must surely bring together the last two examples from the Second World War, the inscriptions in 1979 of the Auschwitz Concentration Camp and in 1996 of the Hiroshima Peace Memorial (Genbaku Dome).

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Hiroshima Peace        775   Japan
Memorial (Genbaku Dome)

The Delegation of China expressed
reservations on the approval of this
nomination in a statement prior to
the Committee taking its decision.
The text of China's statement is
reproduced in Annex V.

The Committee decided to inscribe the
Hiroshima Peace Memorial (Genbaku
Dome) on the World Heritage List,
exceptionally on the basis of
cultural criterion (vi).

The Delegate of the United States of
America made a statement dissociating
his Delegation from the Committee's
decision.  This text is reproduced in
Annex V.
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No.   Name of property
      State Party
_____

31    Auschwitz concentration camp
-     Poland

   The Committee decided to enter
Auschwitz concentration camp on the
List as a unique site and to
restrict the inscription of other
sites of a similar nature.
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Nothing is more poignant than the interpretation and meaning of these events and the implication on the aftermath and its meaning. But we are now at the critical point in time between the transposition of personal and collective memories and the decisions that will

affect the representation of history as a new chapter is written should be evaluated carefully. We need time and perspective before we consider this change. The discussion concerning the implication of the universality of the site is currently under question.

Hiroshima(G Boccardi, UNESCO)   Auschwitz (author)

How do changing values affect the site? We accept the definitions that
- Beliefs (standards), which have significance for a cultural group or an individual, often including, but not being limited to spiritual, political, religious and moral beliefs.
- Places may have a range of values for different individuals or groups and values are continually renegotiated.

The debate is on-going; in Judaism there is the wisdom of 'each generation and their exponents'.[19] What is the relevant meaning? Does this relevance have meaning only for the original time encapsulated in space and time or of the values as reinterpreted? On one hand, it remains a continuing evidence as a memorial or cenotaph. On the other hand if we are to reinterpret the values and the lessons learned who will agree to the new meanings? For Auschwitz, a range of ideas come to mind and might include holocaust, anti-semitism, Jewish studies, the recognition of minorities, or more generically genocide. And, is a College for Tolerance one of the accepted uses in the site? [20]

What about the possible meticulous reconstruction of Hiroshima and the application of the criteria used for Warsaw, or perhaps a rebuilding scheme that would be based on a grand scale with renewed ideas as Val de Nota? Could they be as poignant a memorial as the Dome?

And so, this brings us to disaster preparedness.

Disaster preparedness

Working backwards, we now need to ask ourselves for what alternative are we preparing by applying the heuristic approach to managing future disasters and crises. [21] We have seen that disasters have had differing effects on the continuing existence of cities. For the majority, they have been re-established, phoenix-like - from all "sacked, shaken, burned, bombed, flooded, starved, irradiated, poisoned, famined…locusts (Vale and Campanella, 2004). Nevertheless some forty cities throughout the world were permanently abandoned following destruction.

The examples should provide the hindsight allowing us to refine the headings of information that is needed during the 'calm before the storm'.

Who defines the disaster? Again, we have seen that human societies differ in terms of their cultural frameworks. Anthropologists have said that there are different patterns of beliefs norms and values, different conceptions of crises and disaster. They can be attributed to the supernatural, natural or human factors and in turn this will affect the mitigation recovery and reconstruction programme. The political, social and economic conditions of the society and situation are the governing factor through the will of the public at large and the citizens as individuals. The 'public' being composed of individual citizens and the groups of which they are members (Blumer 1948) demand a two pronged dialogue with government.

The USA Ready, Willing and Able Act[22] was proposed but not as yet approved. It allowed for a greater involvement of the public in developing and modifying community disaster preparedness. Not only the integration of traditional local communities in geographic space and chronological time, but also in cyberspace – social space and social time. These are virtual reality communities embracing social reality through collective behaviour. Traditional wisdoms of the Andaman Islands survived the tsunami - social setting within, geophysical, climatological and physical occurrences

There is a larger social settings in which a disaster or crises occurs, therefore recognising cross-societal and cross cultural differences; is there a universal principle of crises and disaster behaviour? There is an importance to debate built-in contingencies within the scripts and narratives of current issues and problems including social disasters as overcrowding and congestion.

Social assessment and planning efforts are of great importance for communities attempting to reconstruct livelihoods and quality of life in the aftermath of disaster. Personal and collective memories intertwine. What is needed to help this evaluation?
> Documentation, whether for details of restoration or as a record of the past;
> A dynamic understanding of changes to significance and justification of criteria;
> Acceptance of authenticity and integrity
> Continuing management and sustainability
> Monitoring

It is the integration of disaster preparedness in the everyday activities of planning that is necessary. It sees disasters as challenges and recovery as an opportunity for change and as part of normal processes and not just assessment for the sake of assessment. The documentation can take place for the restoration or for the historic records. The process that is proposed is:
> Identify the non-changeable parts
> Define problem areas and planning mistakes
> Opportunities based on the potential for change

On this basis possible scenarios could be prepared and evaluated against the different and changing criteria. Perhaps the old adage 'maximum possible – minimum necessary' should be reversed. The community could be involved in 'what if?' scenarios and the debate on the vision of the city at all levels. Existing UNESCO programmes could be harnessed in an integrative way as:
> DREAM Centres[23]
> Scenes and Sounds of my City[24]
> Growing up in Cities[25]
> World Heritage Education KIT [26]

These programmes could be utilized as part of everyday activities to evaluate the spirit of the local community. Rather than seeing them as individual tools, they could be monitored to provide much needed information for preparedness and increase the awareness of understanding and images of the city.

Schools of Architecture, Urban Design, Conservation, Environment and Planning are key players in generating ideas and scenarios, while Departments of Geography, Social Sciences and Public Administration could research and comprehend the reactions of the community to current urban affairs.

The encouragement of volunteering as part of community service at times of quiet is an essential part of preparedness especially for the hybrid disaster.

The advanced format would include studies on urban disaster and urban resilience. Destructive acts conceptualised according to presumed causes (uncontrolled nature/ combination of natural forces and human action/ deliberate human will. Sometimes social and political disasters are self-afflicted. Different scales of destruction, from a small precinct to an entire city, with different solutions based on the opportunities, potential for change and community scenarios would be evaluated.

Post-disaster action and reaction and the symbolic dimensions of trauma and recovery are not covered in this paper, while the environmental aspects of human intervention that increases vulnerability, as the denuding of forests would be integrated in the preparedness through the adaptive use of environmental impact assessments.

Learning from the past

The Greeks identified four natural elements - fire earth (quake), air (wind) and water[27] that form the basis of our preparedness. But local wisdoms, memory and knowledge need to be brought to the discussion table.

For instance, Amman was severely damaged in the 1927, M=6.5 Dead Sea earthquake, though it is located more than 50 km from the epicentre whereas sites within closer range of the epicentre suffered less damage. It is suggested here that the anthropogenic strata in Amman might have played a significant role in the enhanced damage reported. Comparable cities with long habitation history are expected to have similar geotechnical problems in their old sections and are advised to take appropriate engineering measures to reduce damage and loss of life in future earthquakes. Similarly on the mirror-side of the Rift the Holy City of Safed suffered disproportionate damage in the earlier 1837 earthquake.

Let me recall the research from my alma mater, University College London, where three key principles are recommended to remain at the forefront of all post-disaster practice, not just in theory:

1. Development during and following recovery should be driven by the wishes and needs of local communities affected by the disaster, including the right to return.

2. The development process should be transparent and ensure financial accountability, with funds distributed to the lowest practical level.

3. Development should be comprehensive and long-term and rebuild lives, not just houses and infrastructure. This should be phased by priority.

One attitude is common, and that is seizing the opportunity to build better lives[28]. The question will remain who will determine what is a better life and how this can be achieved?

Integrating the living dimension - criterion (vi)

A part of the strategy for bringing out cultural continuity and compatibility will be dictated by following the integrated approach of hybrid heritage in understanding the cultural resource itself which is the carrier of local knowledge and capacity. This clearly implies, three important elements of the cultural heritage, which are worthy of consideration, namely
- local communities (the bearers),
- environment/ecology (human-environment relationships),
- built heritage including museum object and collections (the physical interventions).

So 'cultural heritage at risk' implies putting one or all of these elements at risk. Interestingly, this holds true for all the typologies of cultural heritage, even monuments / museum building, as they also exist in a definite context, which defines specific relationships to these three key elements.

Specific understanding of the impact on the cultural heritage of the place, which needs to be understood in the extended scope and definition, includes not only monuments or historic buildings but also cultural landscapes, vernacular and other living traditions. The living dimension is one of the most important aspects of cultural heritage especially relevant to the rich civilizations in South Asia. The living heritage approach takes into consideration risks to the continuation and evolution of cultural heritage in terms of usage patterns and crafts/skills to meet changing needs and socio-economic context. Such an approach will also provide an important interface for bringing together cultural resource management, disaster management and development challenges.

The effect of the perception of aid needs greater research. The top-down and bottom-up issues are nowhere more in conflict that the two narratives of the post-disaster reconstruction of Maharashtra. The report of the World Bank with lessons learned and its evaluation makes for convincing reading. The comparison of the reporting of the 'Reconstruction Programme' by the World Bank in 1999 and that of Teddy Boen and Rohit Jigyasu, presented in 2005 at a UNDP Conference is illuminating. It was the same disaster – different people.

William Becker wrote in the Washington Post[29] that

> as the waters recede from the Great Flood of 1993, the river dwellers of the Midwest will feel compelled to return to the flood plain, cleaning away the muck and rebuilding their homes and businesses. They will be drawn back by tradition, by the magnetism of the rivers and by the conviction that they have no choice.

> The nation will empathize with their losses and admire their grit. But is rebuilding the flood plain an act of endurance, or folly? In most cases, it would be folly. The Great Flood leaves no doubt about the dangers of living in one of nature's highways. It was the same disaster – different cultures.

Conclusions

Learning from history is problematic as 'history never repeats itself'. But some pragmatic conclusions are necessary.

Let me first dismiss the disaster preparedness for the man (and rarely woman) -made disasters of war. In one word - 'peace'; it is the encouragement of dialogue in the spirit of the UNESCO constitution. It highlights our responsibility as architects and designers towards cultural diversity and its recognition in the design of cities and their role in the acknowledgment of the 'other'. As to the accidents of life, we need to design in a more pro-active way to ensure that we consider defensive space encompassing all its facets. [30]

This brings us back to the need for a comprehensive understanding of preparedness and to ensure its integration into our daily lives as opposed to a separate component dealt with esoterically by experts. This obviously reminds us of the debate on design for handicapped, integrating the design for all or the site-specific solution. The way forward is to work in an integrative way whereby language should transcend professions and disciplines; for example 'ruptures' refer equally to the language of geology and social history.

The Environmental Impact Statements are already an integral part of the design process, and the sub-heading of disaster preparedness needs to be accepted sine qua non. Awareness has to be raised at all levels and the developments of 'what-if?' scenarios are critical. Here the involvement of schools of architecture and design in developing proposals and alternatives for different parts of the city after disaster, and their subsequent discussion at public fora.

The application of UNESCO programme could generate a more integrated awareness not only by the public as a whole, but the understanding of the spirit of the populace. This is in itself an important exercise in as much that it encourages people to have a dream and vision for life; and what about exhibitions of children's' works on 'drawing their neighbourhood or city'? All this can be facilitated by the use of historic examples which in themselves are not threatening.

The use of criterion (vi) should be encouraged. This is the understanding of the place of living cultural heritage in the lives of the individual and the community. There is a need to develop and strengthen local knowledge and history in the educational programmes to make it noticeable and give it a high profile for its recognition in our daily life. In short, it should be nothing out of the ordinary.

Disaster preparedness is not just a necessity. It comes together with the understanding of the processes of changes in cities and in the age of urgency there is room for the making the most of opportunities and seeing that every cloud has a silver lining. This recalls the old Chinese adage; when you have only two pennies left in the world, buy a loaf of bread with one, and a lily with the other.

[1] Presentation at the workshop on sustainable protection of cultural heritage in earthquake zones, 30 August 2009, Kyoto

[2] Broadbent¸ Susan G and Broadbent, D Michael; Rethinking Future UK Support to Post-Disaster Reconstructions : Meeting Stakeholder Interests

[3] Giedion, Sigfried; Space, Time and Architecture - the Growth of a New Tradition, Harvard University Press

[4] Tournikiotis, Panayotis, The Histiography of Modern Architecture, MIT Press

[5] According to an inscribed clay tablet discovered in Nippur, Iraq by an American expedition 1883 - 1886; a god was described as having advance knowledge of a coming torrential downpour and subsequent flooding probably before 1800 BC

[6] Dynes, Russell R. Noah and Disaster Planning: The Cultural Significance of the Flood Story Disaster Research Center, Department of Sociology and Criminal Justice, University of Delaware,

[7] Macaulay, Rose; The Pleasure of Ruins, Thames and Hudson

[8] Boyer, M. Christine; The City of Collective Memory – Its Historical Imagery and Architectural Entertainments; MIT Press

[9] Ashbee, C.R. Proceedings of the Pro-Jerusalem Society 1920-1922 p.4

[10] Ramroth, William; Planning for disaster: how natural and man-made disasters shape the built environment, Kaplan Publishing

[11] Fernando Roderiguez de la Torre, Spanish sources concerning the 1693 earthquake in Sicily, Annali di Geofiscia Vol XXXVIII, N.5-6, 1995

[12] Coburn, Andrew and Spence, Robin; Earthquake Protection, Wiley

[13] Woodward, C. In Ruins, Vintage

[14] Andreas Huyssen Nostalgia for Ruins; Grey Room 23, Spring 2006, pp. 6–21.

[15] UNESCO World Heritage Centre, Operational Guidelines for the implementation of the World Heritage Convention, Edition 2008

[16] From the ICOMOS recommendation to the 4th session of the World Heritage Committee

Canada	* L'Anse aux Meadows National Historic Park (4)
Ecuador	* City of Quito (2)
Ethiopia	* Rock Hewn Churches of Lalibela (18)
	Fasil Ghebbi, Gandar region (19)
Poland	* Historic Urban and Architectural Center of Cracow (29)
	Historic Center of Warsaw (30)
	* Auschwitz, concentration camp (31)
	* Wieliczka, saltmine (33)
United States	* Mesa Verde

Of the nominations listed above, those marked (*) have been found (in the opinion of ICOMOS) to satisfy the criteria for cultural properties. It is believed that Fasil Ghevvi, Gondar region, Ethiopia, while plainly of national significance, needs further expert opinion, regarding its world importance. **There is a question as to whether the Historic Center of Warsaw meets the general rule of authenticity, and it is accordingly believed that further expert opinion is required on this nomination.** (my bold)

[17] Goldman, Jasper; Warsaw – reconstruction as propaganda; pp 135-158; The Resilient City: how modern cities recover from disaster, Oxford University Press

[18] Lowenthal, David, The Past is a Foreign Country, Cambridge University Press

[19] Babylonian Talmud

[20] Turner, Michael, intervention on the name change of the World Heritage Site, 2007

[21] Havidán Rodríguez, Enrico L. Quarantelli, Russell Dynes, Handbook of Disaster Research

[22] From the GovTrack web site:

To promote the development of disaster plans that will protect the maximum number of citizens; to foster public trust, confidence, and cooperation with these plans; and to encourage greater public participation in homeland security by allowing the American people to have a direct and influential role in developing and modifying community disaster preparedness, response, recovery, and mitigation

plans in collaboration with government officials, emergency managers, health authorities, and professional responders, and for other purposes.

[23] The UNESCO/Tribute 21 DREAM Centres is an arts education programme for children – DREAM stands for Dance, Read, Express, Art, Music. The project was inaugurated in 2003 with the goal of providing underprivileged children, especially in post-conflict regions, the opportunities and tools to express themselves creatively. This is based on the belief that creative expression is a powerful source of self-confidence and essential to child development.

[24] The Scenes and Sounds of my City programme is part of the Young Digital Creators project. Despite living in an increasingly globalised society, with news and pictures from the television and the internet linking us to the rest of the world, many of us still have very little idea about the everyday lives of people in our own and other countries. This programme provides an opportunity to discover what it would be like to live in another city. It is your chance to tell us. First we want you to think about your life in your city. Young persons are asked to think about what their favourite places and sounds are and then make art to share their city experiences with others.

[25] Growing Up in Cities is a collaborative undertaking of the MOST Programme of UNESCO and interdisciplinary teams of municipal officials, urban professionals, and child advocates around the world, working with young people themselves to create communities that are better places in which to grow up-and therefore, better places for us all. We live in an urbanizing world, in which more and more children and young people live in cities. In industrialized countries, a half to three-quarters of all children live in urban areas; in the developing world, the majority of children and youth will be urban in the next few decades. Growing Up in Cities is a global effort to understand and respond to these and other questions, and to help address the issues affecting urban children and youth. The programme enlists the energy, ideas, and hope of young people to evaluate their own circumstances, define priorities, and create change. It also enables municipal governments and child advocates to implement the participation principles of the Habitat Agenda, Agenda 21, and the Convention on the Rights of the Child. It provides models of interdisciplinary, inter-sectorial collaboration for listening to the voices of young people and creating more responsive urban policies and practices.

[26] The World Heritage in Young Hands KIT is sharing knowledge about heritage conservation with young people in the form of a journey through the world's magnificent cultural and natural heritage. The introduction of the World Heritage Education KIT has resulted in experimentation in many schools, adapting and building on the concept of World Heritage Education. Used at the grassroots level in Associated Schools in all five continents, the KIT is:

> based on an interdisciplinary approach seeking to involve teachers across curricula in raising awareness of young people of the importance of World Heritage;
> strives to incorporate World Heritage into the curriculum as a way of delivering core subjects and transverse themes in the classroom as well as through extra-curricular activities;
> focuses on creative and participatory methods of teaching, involving students in research, in collecting and analyzing data, in role-playing and simulation exercises, in information and communication technology, in taking part in well-planned field trips, and in conducting preservation campaigns.

Most importantly, the KIT promotes discussion and listening to others, resulting in re-affirmation of identity, whilst promoting mutual respect and respect for diversity. It serves as a valuable bridge for bringing together young people, teachers, heritage specialists and other stakeholders in a situation in which they learn together and from each other and which results in knowledge and appreciation for their local and world heritage.

[27] Ramroth, William; Planning for disaster: how natural and man-made disasters shape the built environment, Kaplan Publishing

[28] Developing from Disasters Network, University College London

[29] Becker, William; Noah's Architecture: Let's Not Rebuild on the Flood Plain, The Washington Post, 12 September, 1993

[30] For further reading see Newman, Oscar; Defensible Space