(Geo)Ethics. Step 1: Preparedness.

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NATURAL HAZARDS

Complex physical phenomena that expose a natural area to risk of loss of life, environmental degradation and property damages.
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TIME LINE

- BEFORE THE EVENT (LARGE SCALE)
- DURING THE EVENT (SHORT SCALE)
- AFTER THE EVENT (MID TO LONG SCALES)
"Disaster Preparedness", is defined by the UN as involving "forecasting and taking precautionary measures prior to an imminent threat when advance warnings are possible".

What happens when warning is not possible in advance?
Risk analysis, risk characterization, risk communication, risk management, and policy relating to risk, in the context of risks at a local, regional, national, or global level

- Quantitative
- Qualitative
- Probabilistic
**COMPLEX SYSTEMS**

On the risk analysis, we use to be too Cartesians, taking too much time in arriving to conclusions when a non clear cause-effect chain can be identified.
COMPLEX SYSTEMS

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THE ETHICAL PROBLEM OF DELAYING CONCLUSIONS: THE VICE OF BEING TOO DETERMINISTICS

The search for a specific cause for a given extreme natural event may be futile when dealing with a nonlinear system, with complex and unknown feedback mechanisms, because every link in the feedback loop is both cause and effect.
THE PROBABILISTIC APPROACH

IN MOST OF THE CASES, RISK ANALYSIS CAN BE, AT BEST, BASED ON THE ESTIMATION OF ERROR FORECASTS, OFFERING TO SOCIETY OUR BEST ESTIMATES IN PROBABILISTIC TERMS, EVEN WHEN OUR ANALYSIS WAS, IN SOME WAY, ESTOCASTIC (deterministic + probabilistic)
THE PROBABILISTIC FEAR & OUR ETHICAL CHALLENGE

- A TOO DETERMINISTIC MIND LIMITS OUR BEST CONTRIBUTION TO PREPAREDNESS AGAINST NATURAL HAZARDS.
- HOWEVER, OUR FEARS ARE NOT FUTILE, BECAUSE WE DID NOT EDUCATE SOCIETY, PROPERLY, TO DEAL WITH SUCH PROBABILISTIC APPROACHES.
BACK TO SCALES

A Voyage Through Scales

Time and Space Scales are Dimensions

HUMAN DIMENSION IS ANOTHER SCALE
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