



# THE EVOLUTION OF RISK

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The concept of risk has evolved a long way since its origin at the end of the Middle Ages, up to the way risk is understood today. **Four main stages of evolutionary development** can be identified:

1. Risk as **objective danger** that resides in the natural world. Originating at the end of the Middle Ages, this notion of risk is similar to that of *hazard*, involving natural disasters, famine, earthquakes, hurricanes, plague and so on.
2. Risk as **accident**, which is inevitable in the quest for economic progress. Gaining momentum in the 19<sup>th</sup> Century, this idea of risk included dangers and hazards arising from industrial processes, and viewed *human fault* as the cause of potential losses and damages.
3. Risk as **social phenomenon** arising from relations between human beings. By the end of the 19<sup>th</sup> Century, risk was seen as neither an external phenomenon nor the result of misconduct. Instead, risk was perceived as socially constructed and politically loaded, coming from the decisions made by people, either deliberately or unconsciously. Such risk is hard to rationalise and accurately define in terms of probability, consequences, compensation and accountability. Risk was viewed as an integral part of *human life*: the multiplicity of uncertainties that surround us as individuals, organisations, or societies shape the risk landscape of threats and opportunities.
4. Risk as a global **'grand challenge'**. Today, the concept of risk includes mega risks that could affect the whole of humanity, jeopardise sustainable development, and even endanger our existence. Mega risks include climate change, critical infrastructure disruption, etc. One of their key characteristics is that mega risks disrupt cause-effect relationships in our globalised and highly-interdependent society. This disruption can occur in various dimensions across generations, geographic areas, sectors, institutions. This can create a 'butterfly effect' that often escapes our attention. A prominent recent example is the global financial crisis that triggered a wave of cascading risks across geographic regions, sectors, and industries. Understanding the 'butterfly effect' could help us see how risk is propagated, and identify early signals of potential mega risks.

**This evolution in our understanding of risk affected the way risks were managed in practice.**

It is important to note that each new evolutionary stage did not cancel out the previous one. Instead, it opened new horizons in understanding risk and guided practitioners to manage risks accordingly. The challenge for us now is to be able to define which notion of risk is applicable for each practical case. For example, the way we manage risks in non-complex situations (whether simple or complicated) is based on simple concepts of risk, but complex situations need a different approach.

- In *simple or complicated situations* such as technical systems, reliable risk-based decision-making can be based on a more linear understanding of risk. This includes the ideas of risk as danger or accident.
- In *complex systems* such as projects, organisations, society, a nation or international relations, it is critical to understand the political dimensions of risk that result from complex and evolving cause-effect relationships. Here we need to address risk as a social phenomenon or at global level, where the ripple effect often extends further than merely local impacts. This requires adopting a more flexible approach to identifying and managing risk by accounting for a wide variability of those contributing and those affected by a risk.

Understanding these different concepts of risk will help us to match the risk approach to the situation we face, allowing us to manage risk more effectively.