equally span across this entire product cycle. However, an analysis of the past and present laws and policies on agricultural biotechnology demonstrates that the EU regime has, throughout the past two decades, not succeeded in meeting this objective.
It is therefore evident that a regulatory gap has been left in this rather crucial intermediate stage, involving the thorny issue of coexistence of GMO and non-GMO farming. The anomaly created by this regulatory gap is that a regime which allows for the authorization of GMOs for cultivation, and which sets qualitative end-of-cycle targets and requirements for the final cultivated products, but which fails to provide any substantive prescriptions for how the cultivation itself should be operationalized in practice.
This paper will analyze the Commission's strategy to fill this regulatory lacuna, with specific reference to the implications thereof for the environment and health, consumer choice, the EU internal market objectives, as well as the for the viability of the current regulatory regime. Finally, it will make recommendations for an alternative, more consistent and integral, approach to the regulation of coexistence of GM and non-GM agriculture in Europe.

TU-V-5

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Familiarity with food products and the perception of risk and benefit.

Perceptions of risk and benefit have been reported to be negatively correlated, which may imply common cognitive causality. There is some evidence to support the hypothesis that this causality is triggered by an affect toward an event or object (the "affect heuristic"), where positive affect acts to reduce risk, and increase benefit perception, associated with a specific hazard. Prior experience of a potentially risky event or object may activate the affect heuristic. Against this, the "primacy heuristic", the information that is considered by an individual first, may also form the basis of the affective response experienced by an individual. The primacy heuristic is predicted to dominate affect if the object of deliberation is unfamiliar (for example, in the case of consumer products), such that deliberation regarding risk (or benefit) estimates imputes an affective response. This affective response should act as an ad-hoc heuristic for the estimation of subsequent perceptions of benefit (or risk). In a 2 (within: familiar (apple or salmon) – unfamiliar product (starfruit or fugu)) x2 (between: asked for risk judgement first – benefit judgement first) experiment, 105 participants showed a larger negative correlation between risk and benefit judgements for unfamiliar products compared to familiar products. Prior attitude about the products was most influential regarding risk and benefit judgements for familiar products, but not for unfamiliar products. The order of asking for judgements of risk and benefit influenced the complementary judgement for the unfamiliar products but not for the familiar products. The results indicate that both the proposed mechanisms lead to a negative correlation between perceptions of risk and benefit perception. Experience with a specific product determines which mechanism is prominent. Furthermore, the negative correlation between risk and benefit perception can be attributed to prior experience for familiar products, while the order of answering causes a similar effect for unfamiliar products. These results may be of consequence for the interpretation of causal models of risk and benefit perception.

MO-IV-6

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Unstable risk management systems: The evolution of an intelligent building in Singapore.

The research presented in this paper demonstrates that in the management of risks arising from the development of complex socio-technical systems there are four contingent organisational states correlating with four distinct strategies for managing risk: Type 1 - High Reliability, Type 2 - Normal Accidents, Type 3 - Low Reliability, Type 4 - Murphy's Law.
The research shows that negentropy and redundancy are the forces that seek to achieve effective organisational behaviour and lead to a more steady predictable Type 1 state of algorithmic organisational stability and high reliability operations. Negative feedback is important in order to detect incipient errors, threats, vulnerabilities and hazards. Reducing uncertainty is important.
If there is sufficient payoff then some redundancy and reliability will be sacrificed resulting in the acceptance of normal accidents or errors. In Type 2 risk management, exploiting an opportunity is more important than high reliability operations. Reducing complexity and improving efficiency is necessary to optimise payoffs.
Resilience may be more important when decision-making is non-rational, lead times are less than lag times and where economy and positive feedback loops provide a more appropriate fit with the environment. In Type 3 Risk Management, low reliability becomes acceptable and decisions are focused on reducing conflict amongst stakeholders. Strategies are political and risk is managed by manipulating budgets.
Crisis Management is the fourth type of risk management where Murphy's Law reigns. Risk is shared equitably and charismatic leadership is needed to move towards more reliable operations.
This research shows from a case study - an Intelligent Building project in Singapore - that likelihood and consequence of surprises in a complex socio-technical system are contingent upon the causal texture of the environment, the dominant risk culture of the key stakeholders, and the dynamic reliability of the system determined by the ratio of lead to lag times and gain to load. Redundancy and negative feedback are important particularly in rational decision systems. Resilience and positive feedback are important in non-rational decision systems. Instability and surprise can occur in transition from one decision state to another, especially during overload conditions. A decision-paths' schema is developed to show that the Intelligent Building, described in the case study, as originally intended did not eventuate. This paper thus demonstrates the analytic value of contingency theory.

MO-IV-5

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Natural hazard risk – variability of damage potential and implications for risk management.

The assessment of natural hazards in mountain regions of Europe is based on the methodology of risk analysis. In natural hazards research, risk is defined as a mathematical function of (a) the probability of occurrence of a hazardous process, and (2) the assessment of the related extent of damage. The methodology is comparatively reliable in determining the hazard potential and the related probability of occurrence of defined design events, e.g. an