About Resilience

— From Dependability to Resilience —

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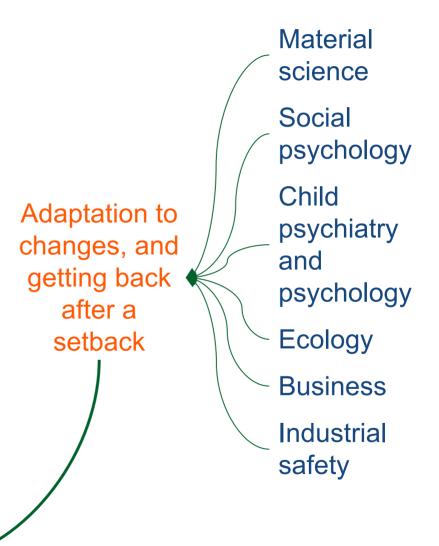
Resilience

in dependability and security of computing systems

Adjective Resilient

- In use for 30+ years
- Recently, escalating use
 - → buzzword
- Used essentially as synonym to fault tolerant
- Noteworthy exception: preface of Resilient Computing Systems, T. Anderson (Ed.), Collins, 1985 «The two key attributes here are dependability and robustness. [...] A computing system can be said to be robust if it retains its ability to deliver service in conditions which are beyond its normal domain of operation»

in other domains



Fault and change tolerance

At stake: Maintain dependability in spite of changes

Dependability: Ability to deliver service that can justifiably be trusted

Resilience: persistence of service delivery that can justifiably be trusted, when facing changes



The definition does not exclude the possibility of failure

Alternate definition of dependability:

Ability to avoid unacceptably frequent or severe service failures

Resilience: persistence of avoidance of unacceptably frequent or severe service failures, when facing changes

Resilience: persistence of dependability when facing changes

Technologies for resilience

