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Rational Accidents

Reckoning with Catastrophic Technologies

By: John Downer

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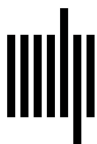
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III MASTERING ULTRAHIGH RELIABILITY

Wherein it is argued:

- That experts do not manage the reliability of jetliners via formal assessment practices, as they purport. They instead leverage service experience by interrogating failures to hone a single, stable, airframe design paradigm (**chapter 8**).
- That the idea of a stable airframe design paradigm is more credible than might be immediately apparent; and the reliability of aircraft has been dramatically lower where airframers have deviated from that paradigm (**chapter 9**).
- That airframers are able to leverage service experience in the way they do only because of their industry's unusual structural incentives. Regulation and good intentions are insufficient explanations for civil aviation's design choices (**chapter 10**).
- That the significance of structural incentives needs to be qualified in light of the 737-MAX crisis; and that this significance becomes most evident in relation to crash survivability, the incentives around which are different from those around reliability (**chapter 11**).

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