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Challenges to V&V Intelligence

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Are INTELLIGENT systems

a **new** class of systems?

...for which traditional/existing SE does not work

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Learning to perform a function better

Learning to handle a larger set of input trajectories for an existing function

Learning a **new function**

Learning to achieve an existing outcome in a new context

Learning to achieve an outcome better

Learning to achieve a **new outcome**

Deciding to pursue a different outcome



Is **INTELLIGENCE**

inherent to the system OR Characterize intelligence a function of context? Learning is a Direct engineering consequence Define intelligence Property of the system Current engineering practices Learning is a representation Learning is a Indirect engineering property of a system Intelligence Independent of context Property of the Learning is either a Learning and system's relation to consequence or a Intelligence are embodied in context Intelligence is a context representation Global phenomena

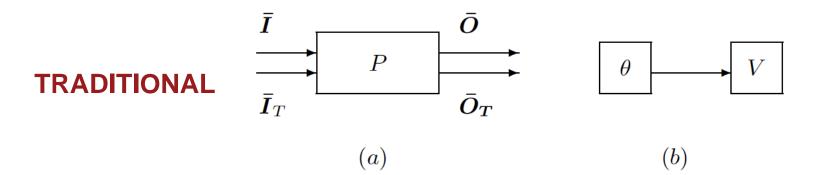


INTELLIGENT systems

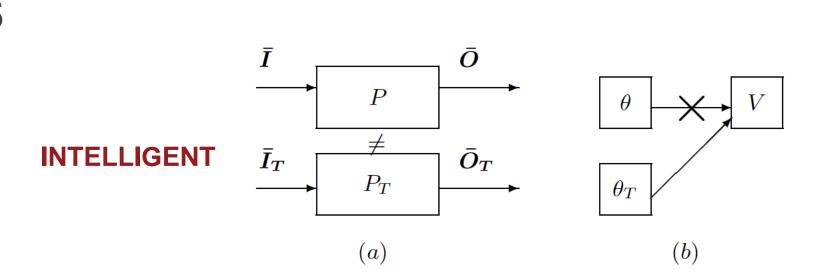
are not behavioral-preserving entities

are highly sensitive to inputs



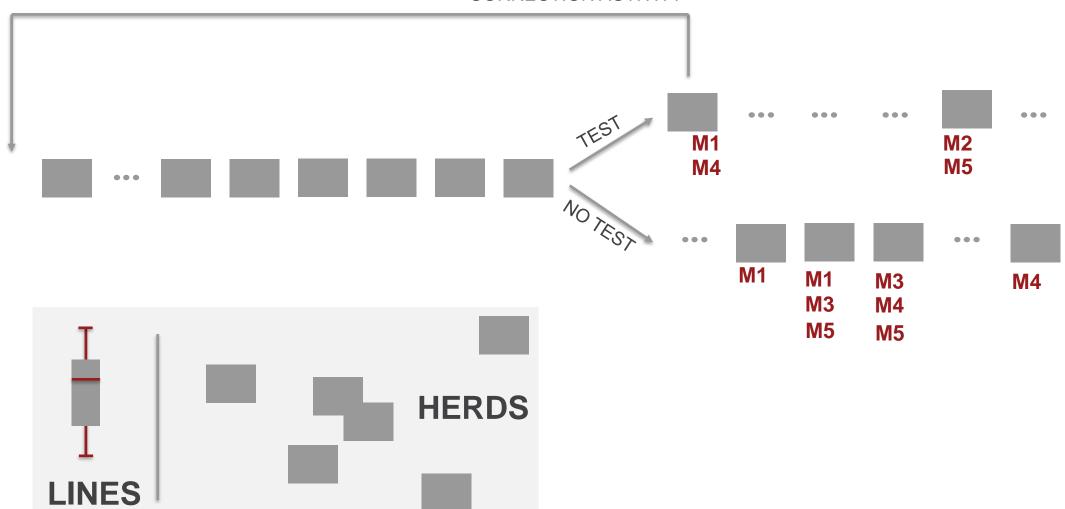


TEST VECTORS

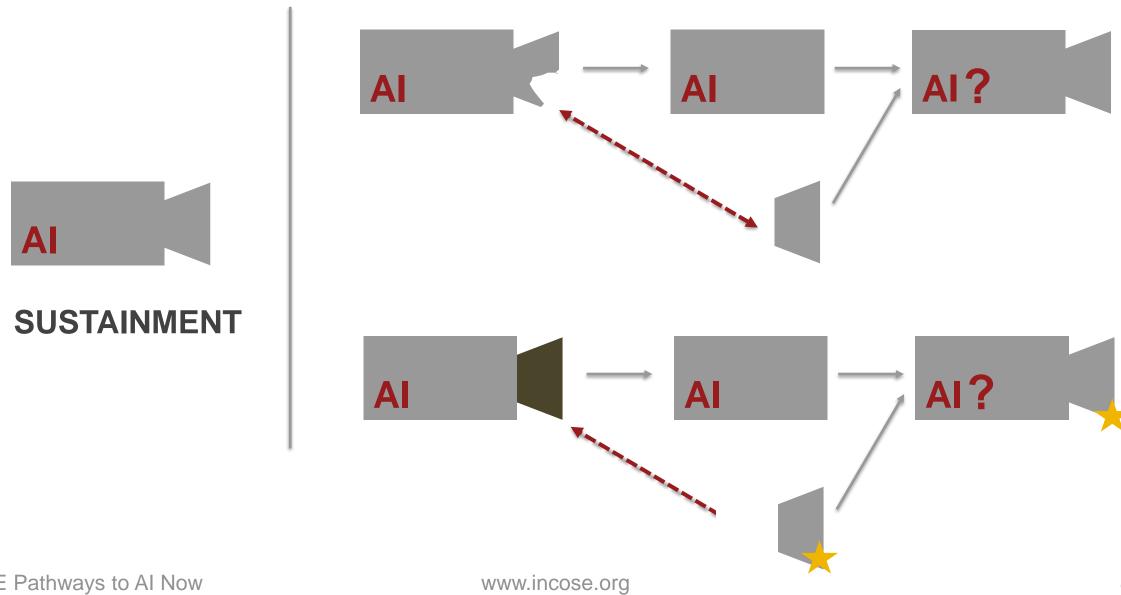




CORRECTION ACTIVITY







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ADAPTIVE V&V

V&V RULES of learning Talk to Tom McDermott!

Characterize learning *TOLERANCE*

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