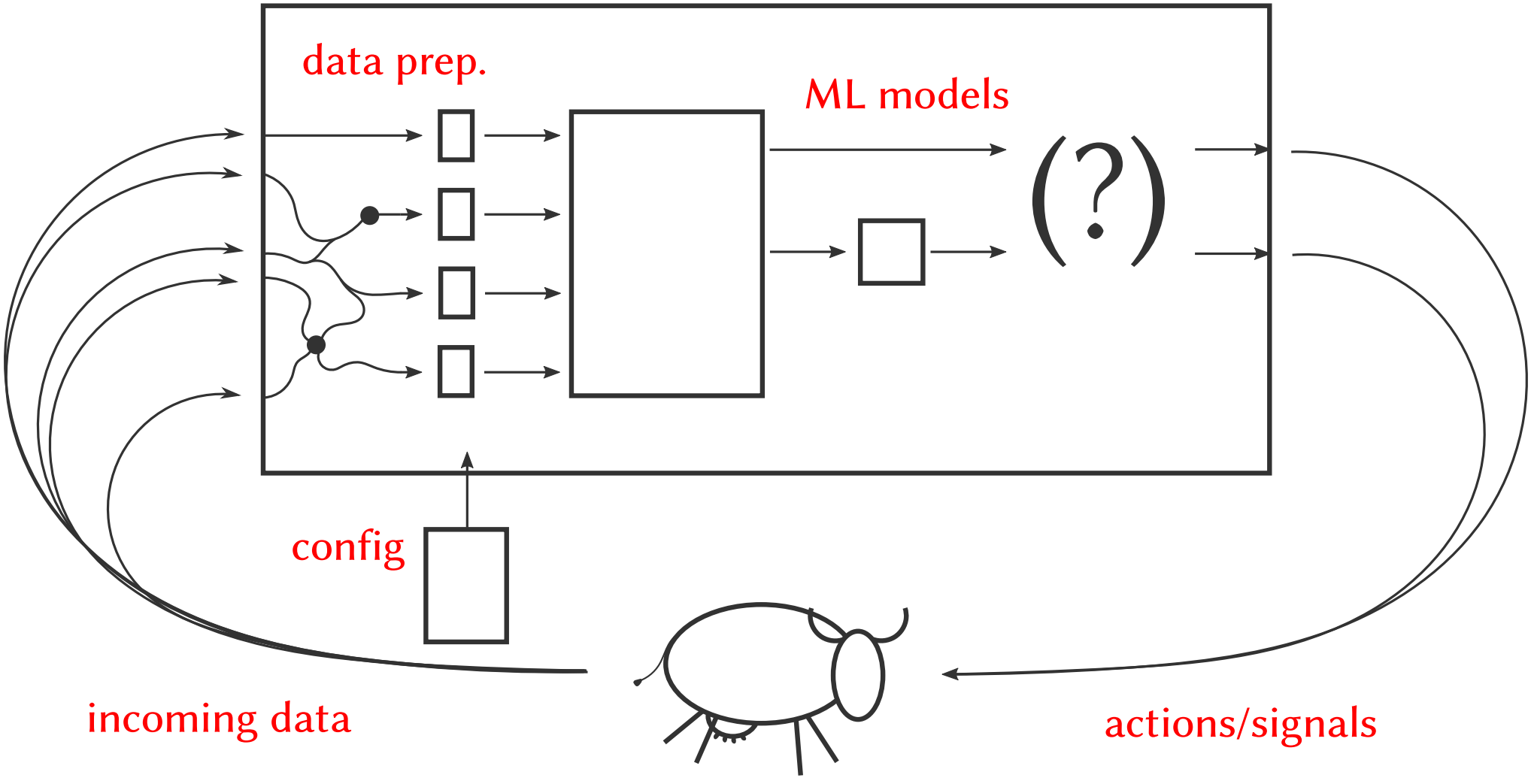
Machine Learning: The High-Interest Credit Card or Technical Debt

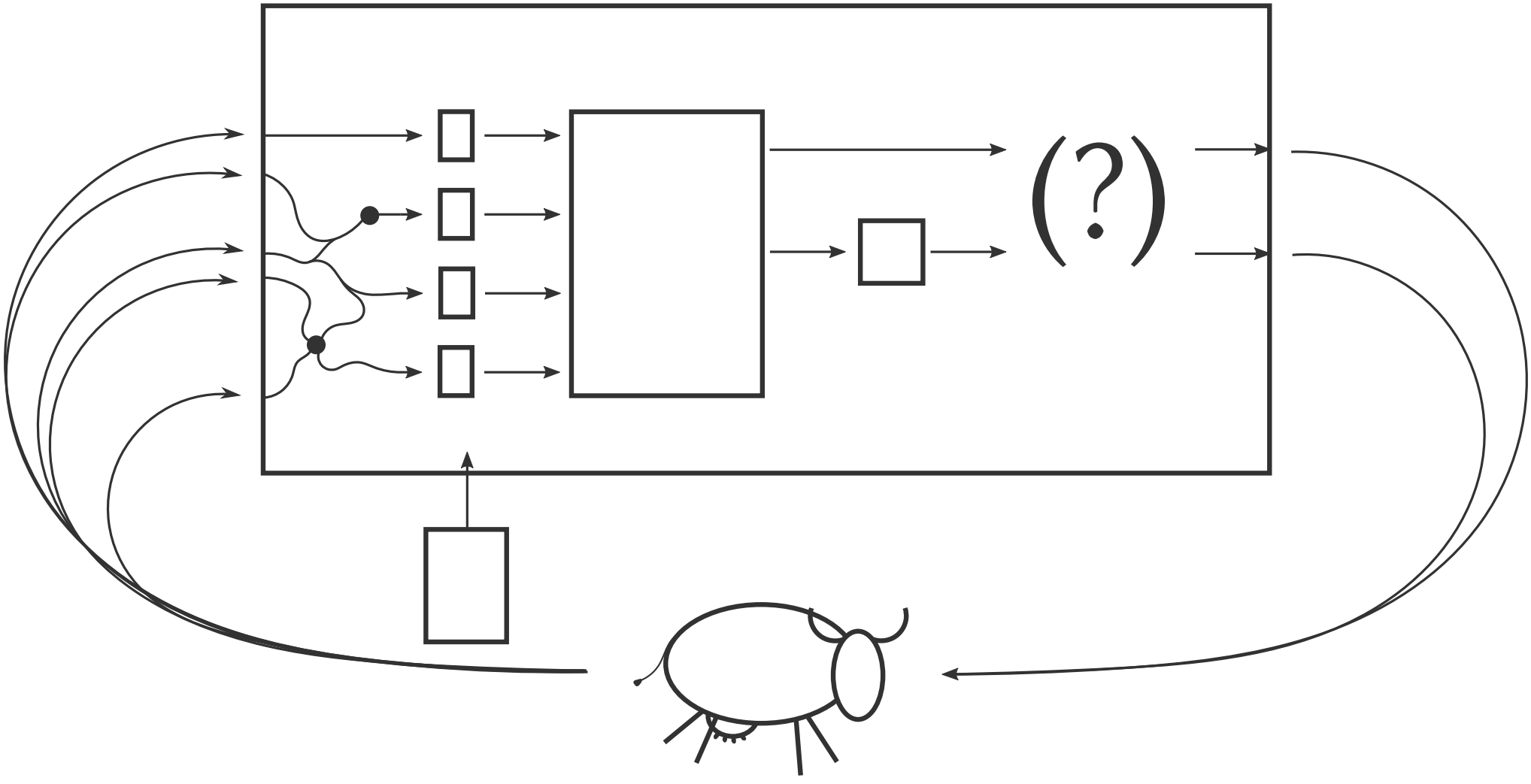
Sculley et al. 2014

Robert Różański, MLGdańsk 29.01.2018

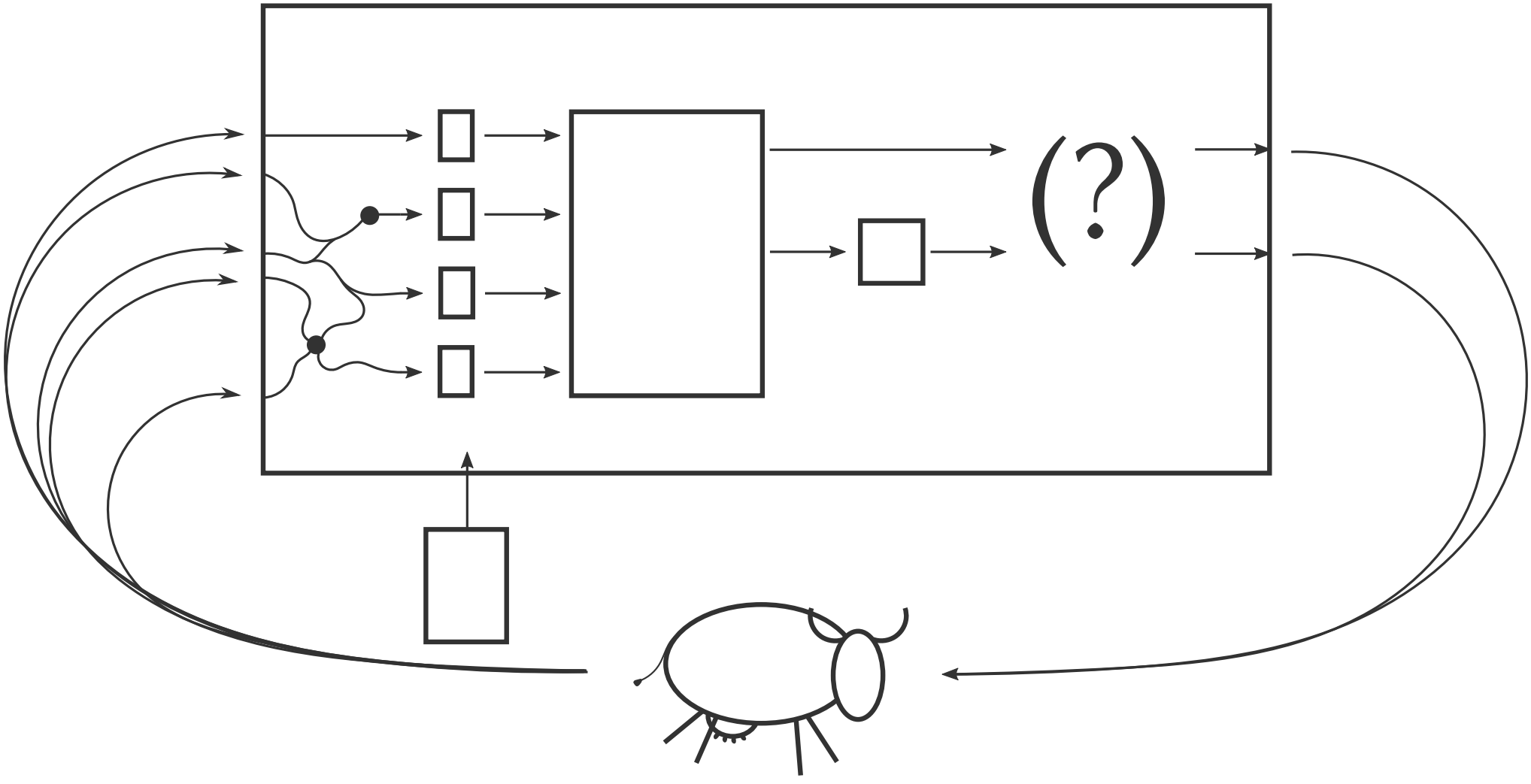
ML system



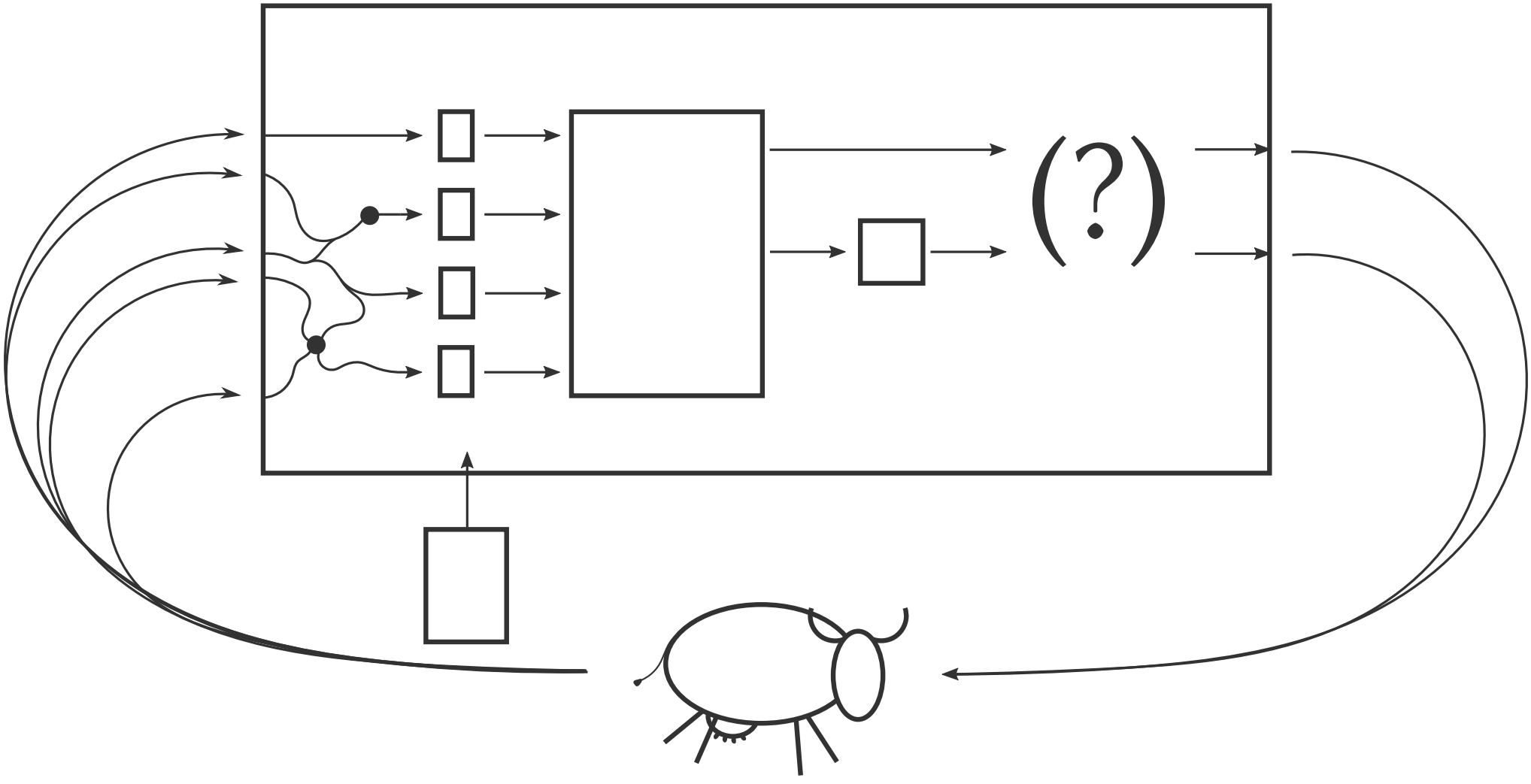
1. ML erodes boundaries:



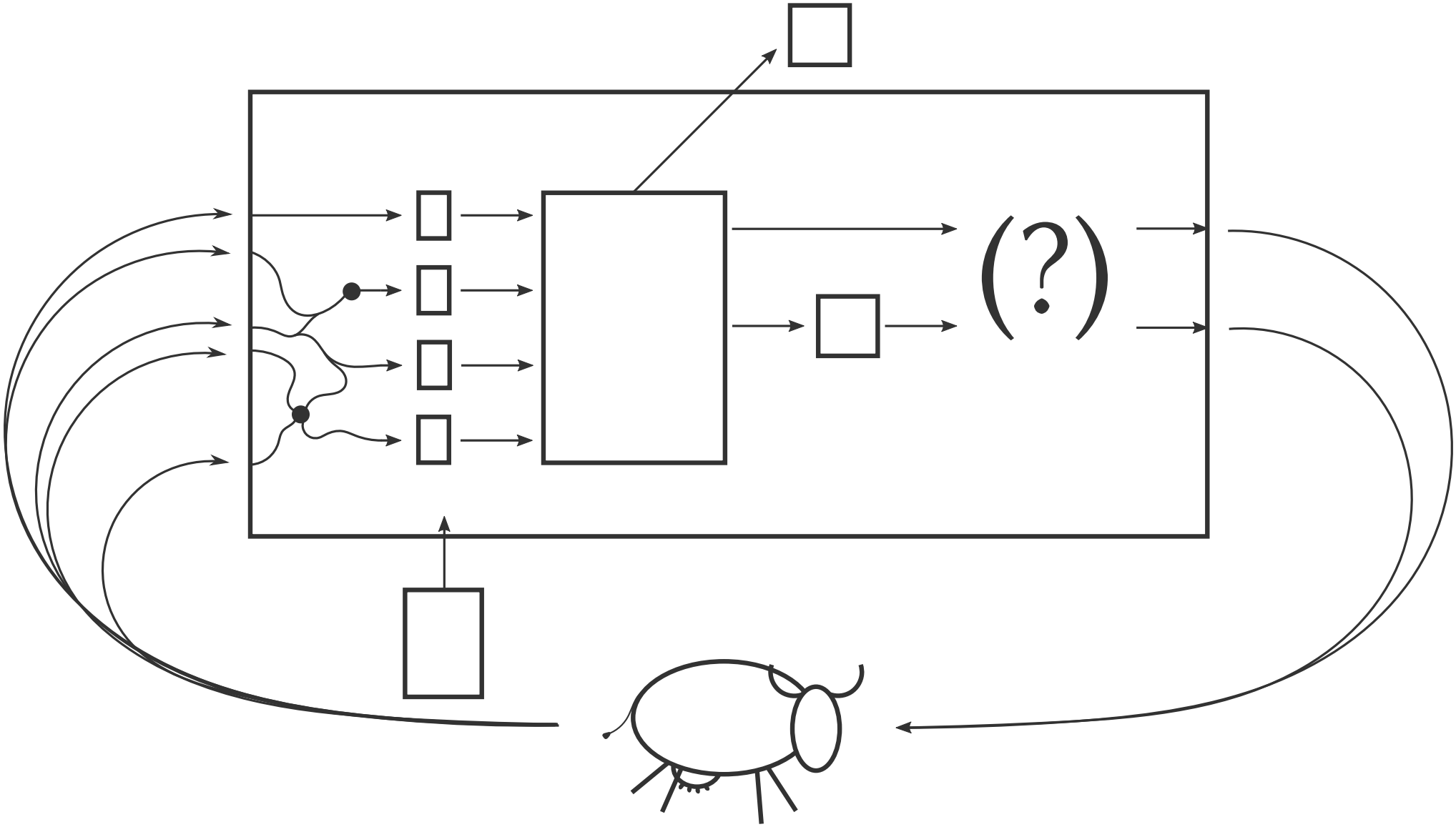
1. ML erodes boundaries:
1.1 Entanglement (CACE)



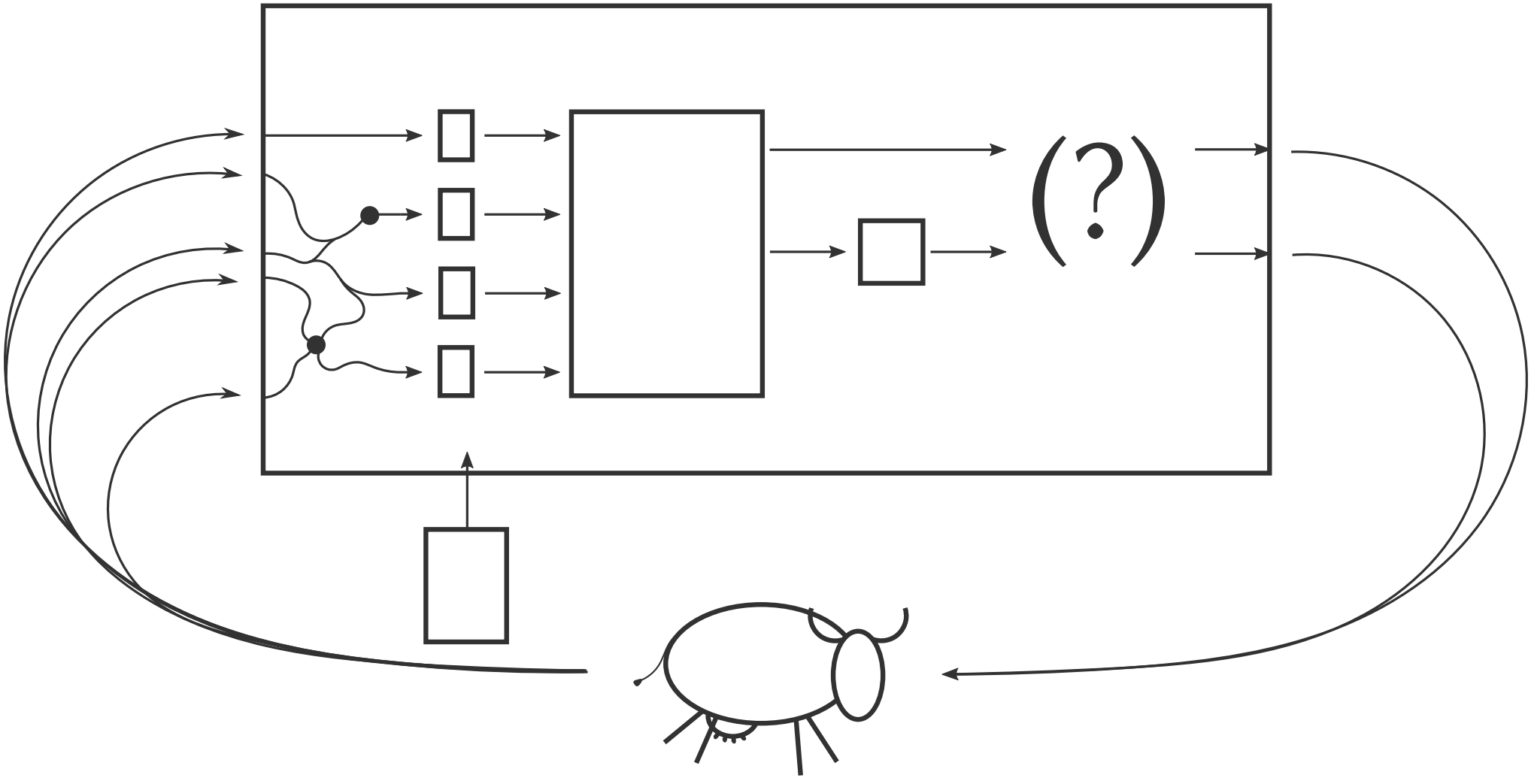
1. ML erodes boundaries:
1.2 Hidden feedback loops



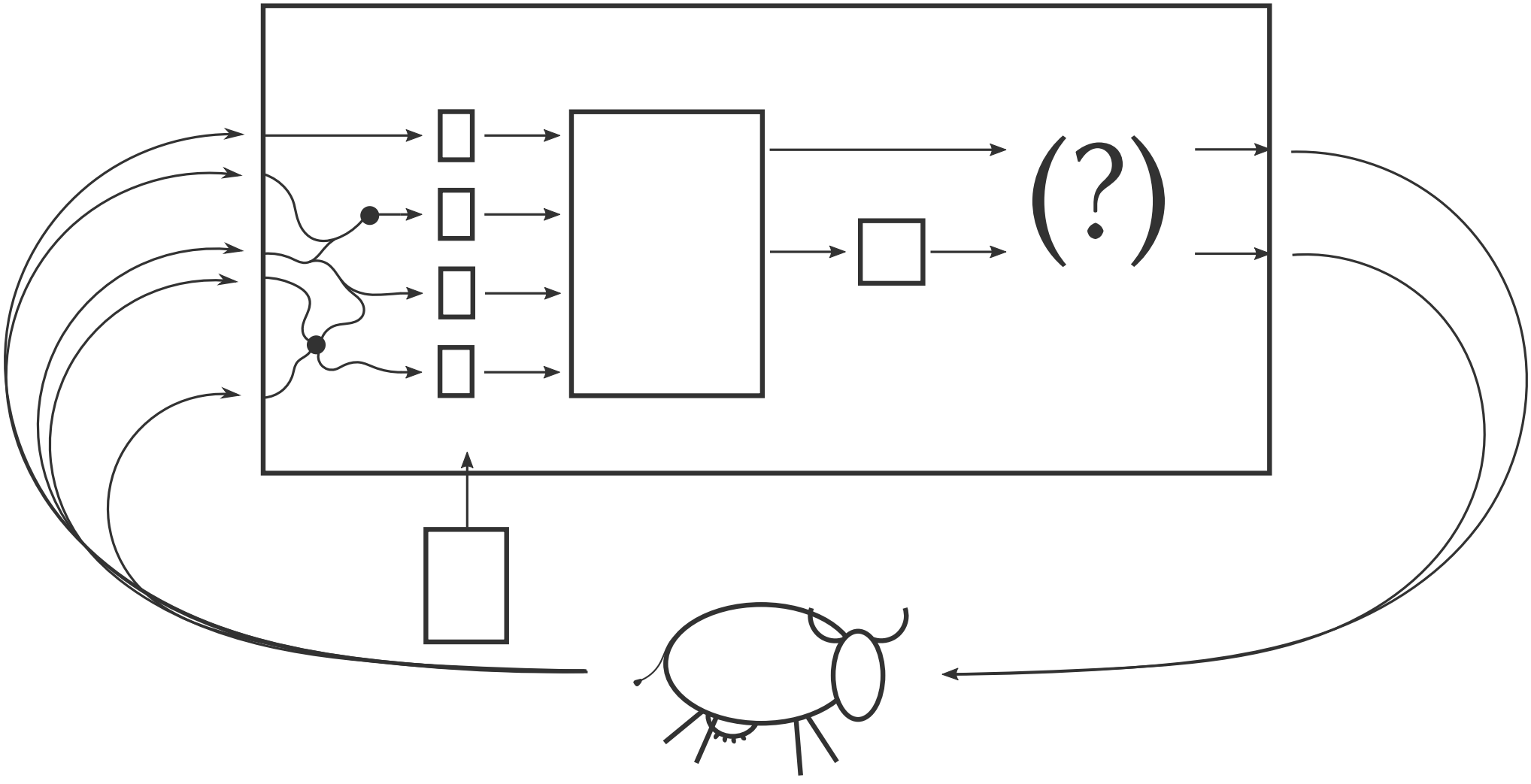
1. ML erodes boundaries:
1.3 Undeclared consumers



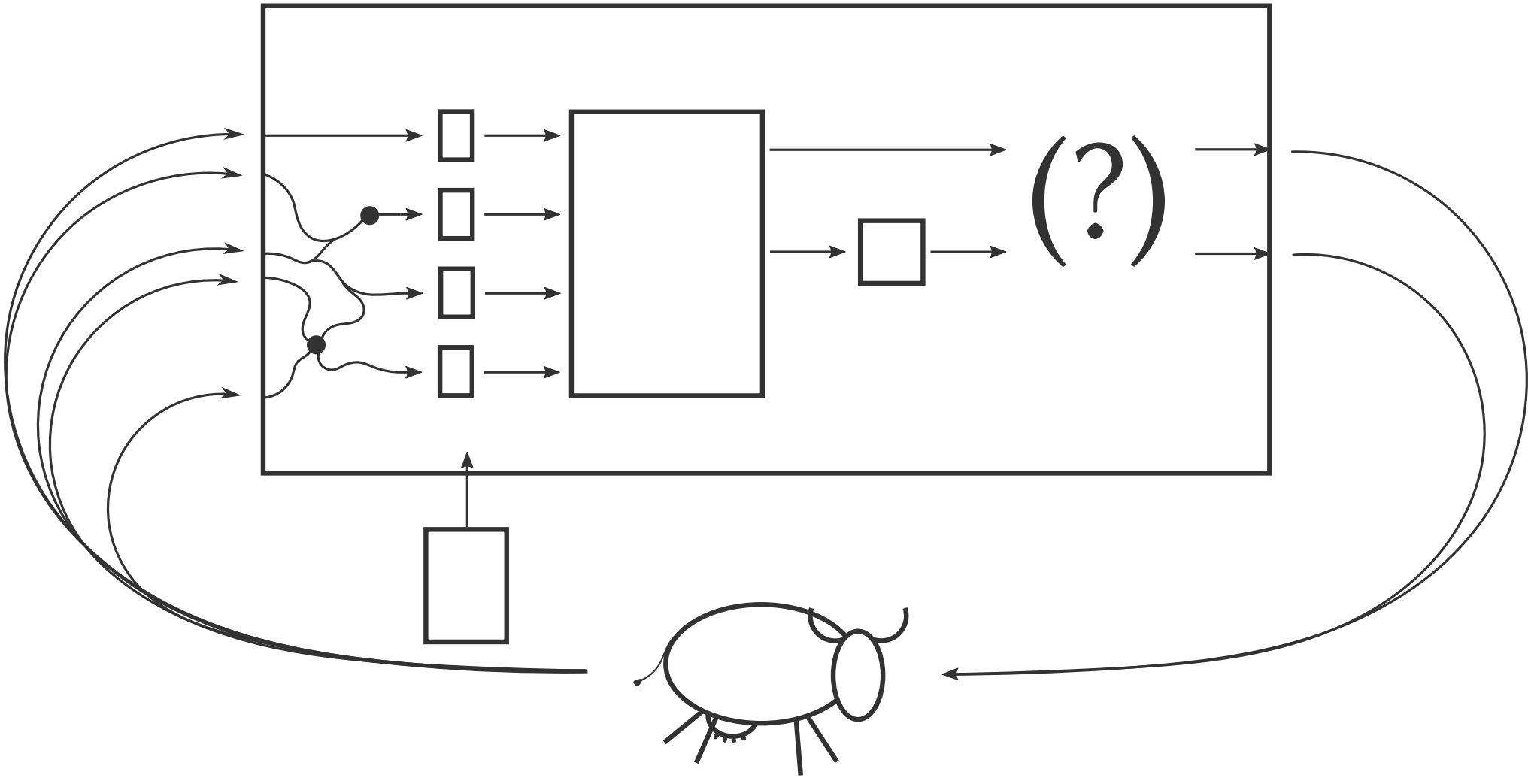
2. Data dependencies:



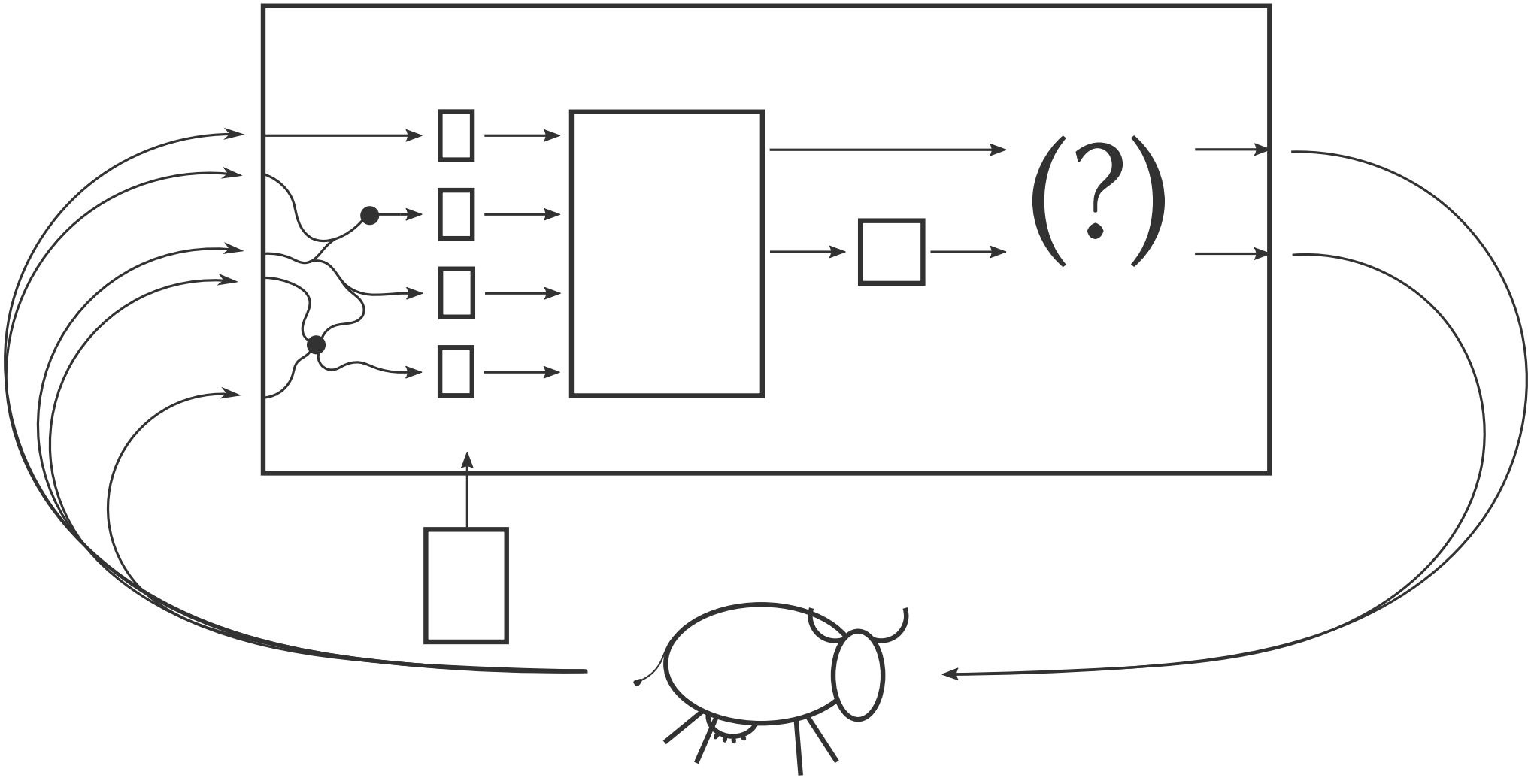
2. Data dependencies:
2.1 Unstable data dependencies



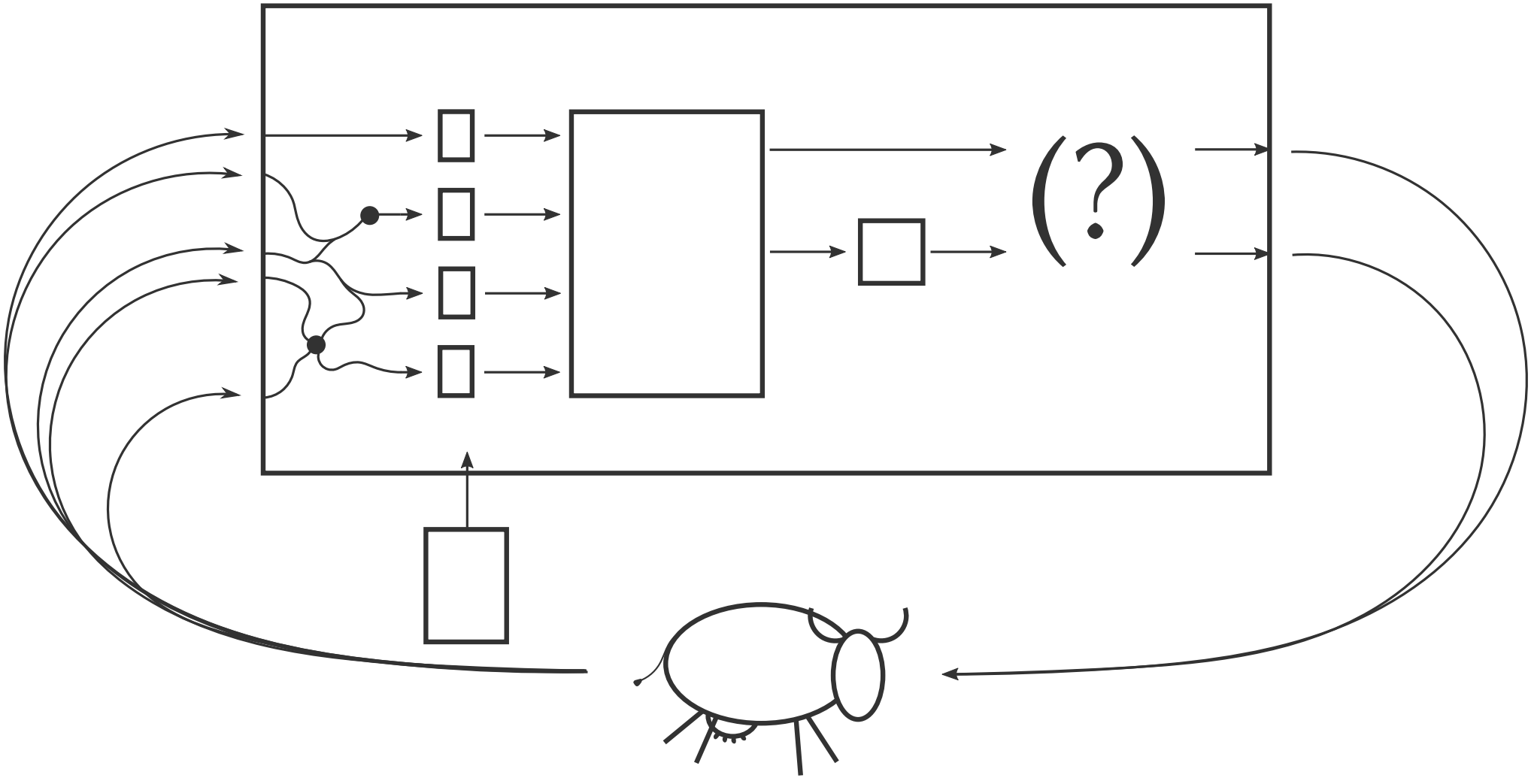
2. Data dependencies:
2.2 Underutilised data dependencies



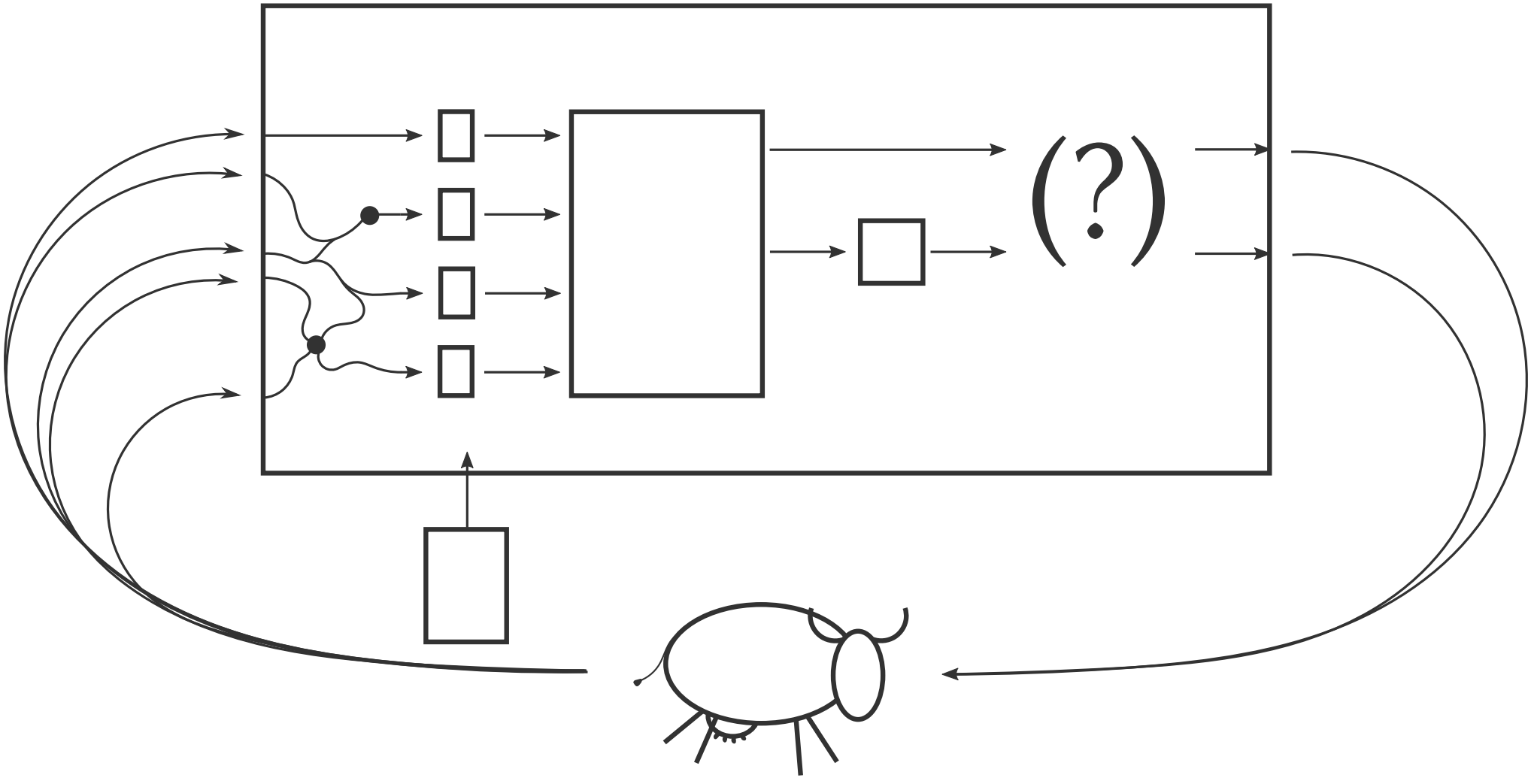
3 System-lvl spaghetti:



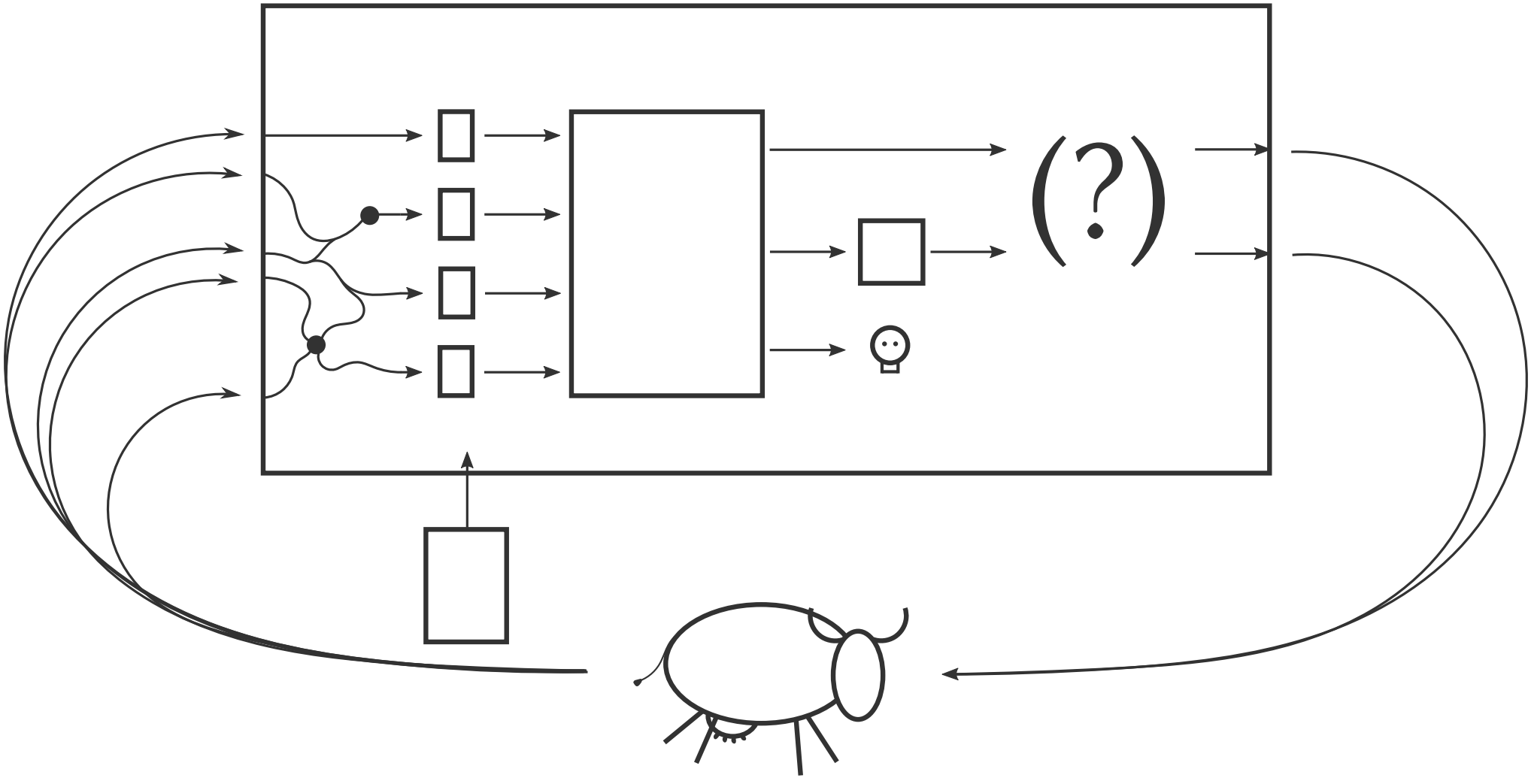
3 System-lvl spaghetti:
3.1 glue code



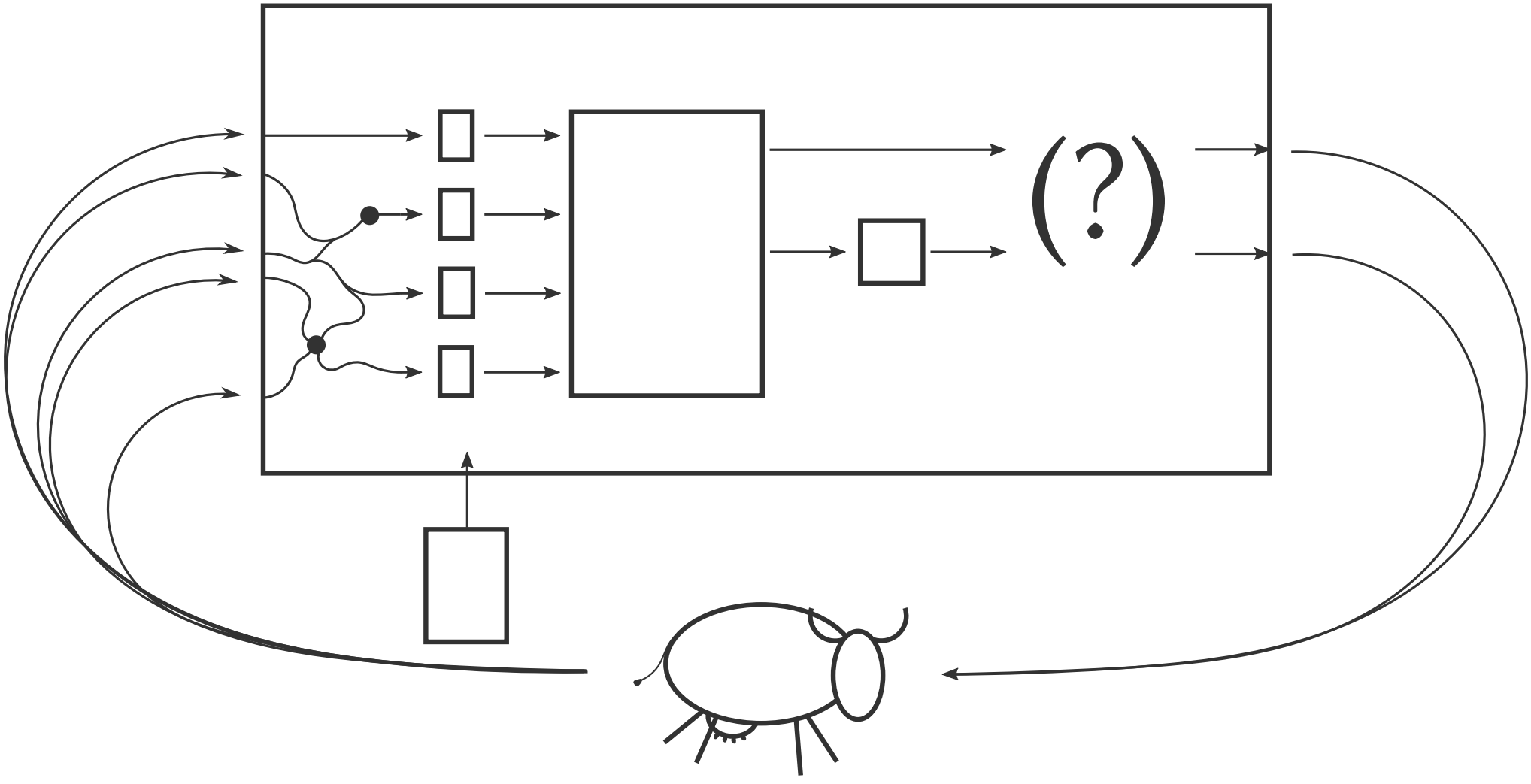
3 System-lvl spaghetti:
3.2 pipeline jungles



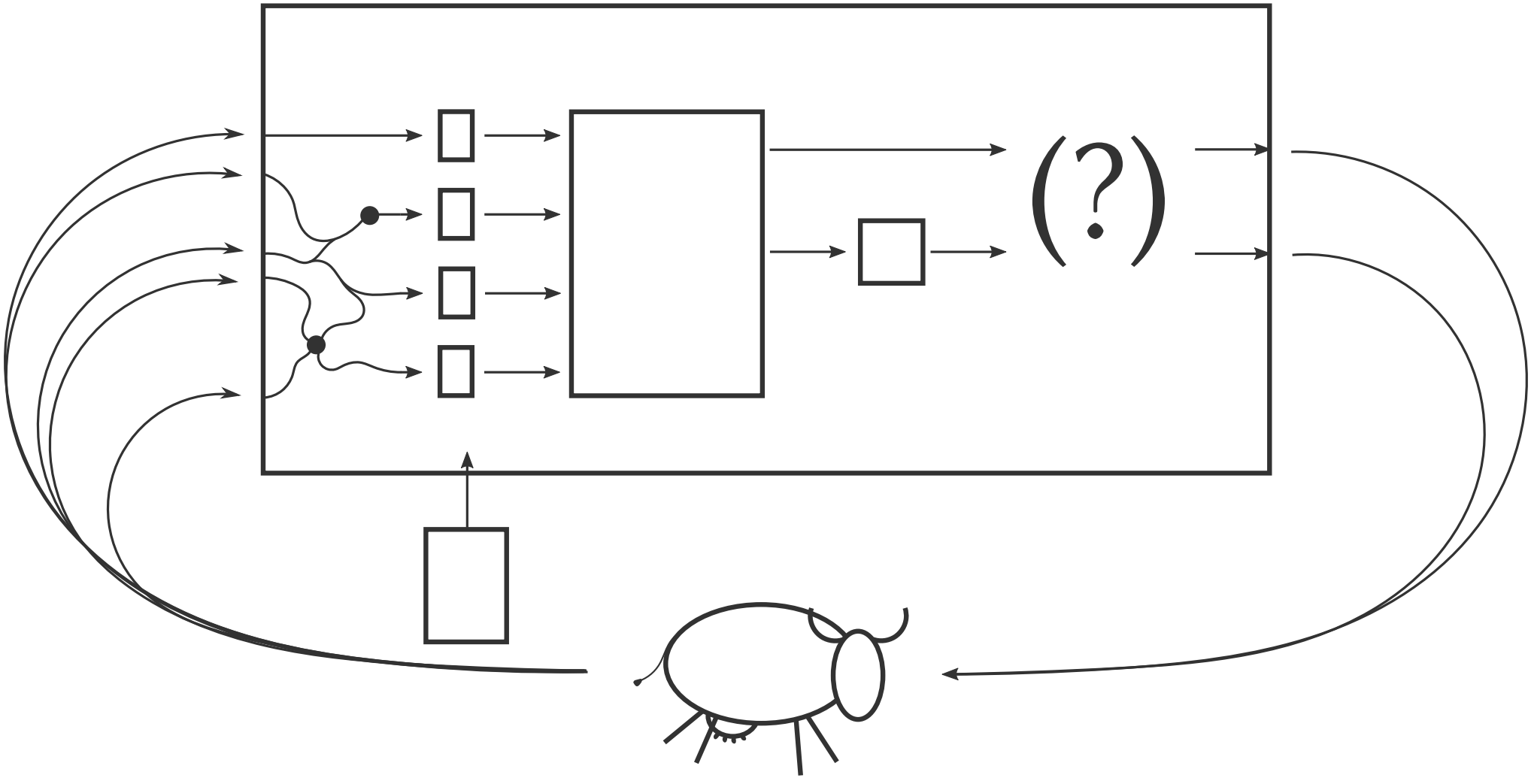
3 System-lvl spaghetti
3.3 dead experimental codepaths



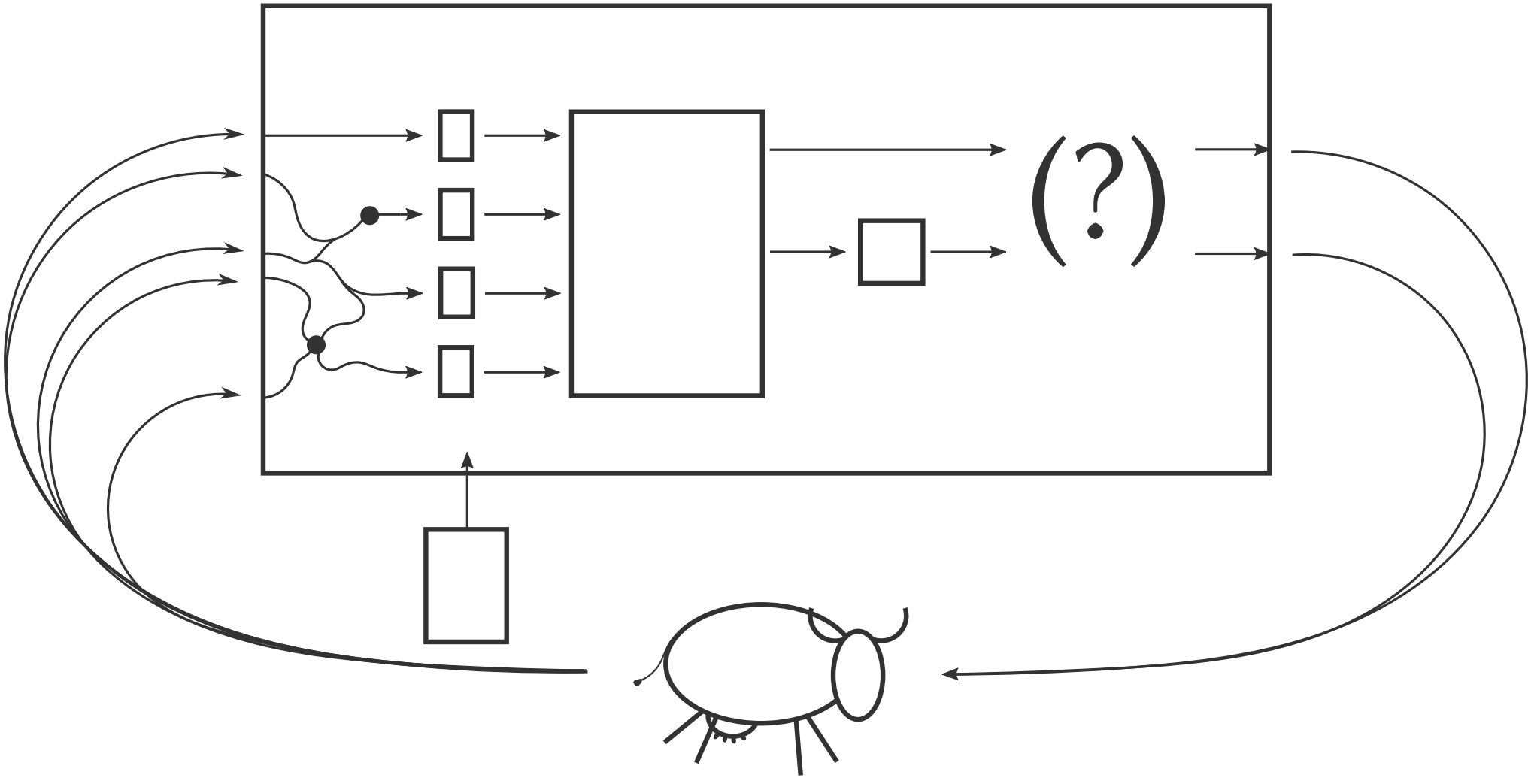
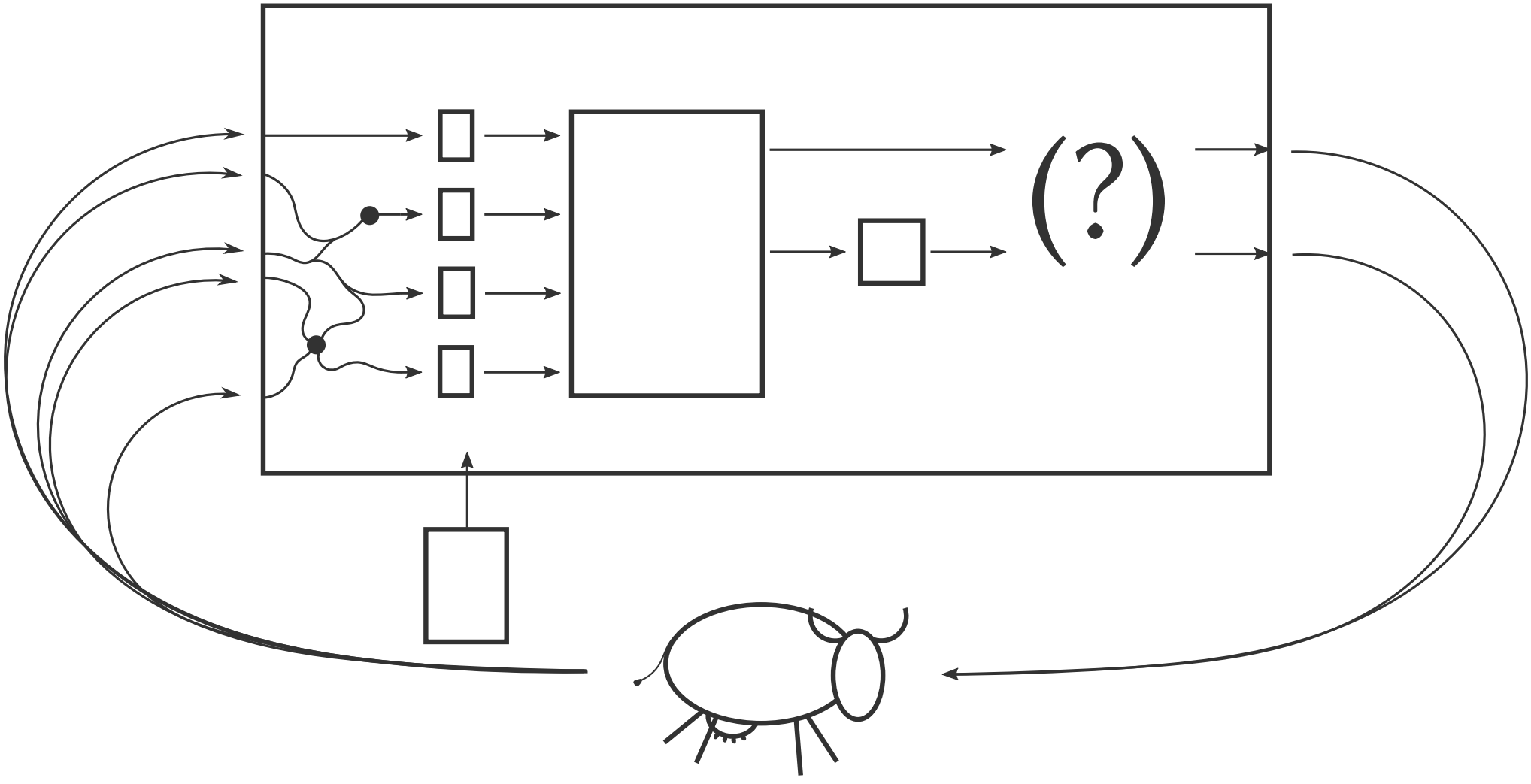
3 System-lvl spaghetti:
3.4 configuration debt



4 Changes in the external world:



4 Changes in the external world:
4.1 fixed thresholds



4 Changes in the external world:
4.2 Outdated correlations