Observations to concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Is it predicted?</th>
<th>Is it expected?</th>
</tr>
</thead>
</table>

Observations to concepts

Concept

Is it predicted? \{t\}

Is it expected?

Prediction 1

Prediction 2

Observation space
Observations to concepts

Experimentation 1

Concept

{t}

Is it predicted?

{f}

Is it expected?

Prediction 1

Prediction 2
Observations to concepts

- Concept
- Is it predicted? \{t,f\}
- Is it expected? \{∅\}
4 rules: to propagate predictions or expectations following relation types (composition or generalization/specialisation)
Propagation rules

4 rules: to propagate **predictions** or **expectations** following relation types (**composition** or **generalization/specialisation**)

Propagation rule for predictions with composition relations
Propagation rules

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Propagation rule for predictions with composition relations
Propagation rules

4 rules: to propagate predictions or expectations following relation types (composition or generalization/specialisation)

Propagation rule for predictions with generalization/specialisation relations
Propagation rules

4 rules: to propagate predictions or expectations following relation types (composition or generalization/specialisation)

Propagation rule for predictions with generalization/specialisation relations
Reasoning: specific mode

Pathway

Variant 1
  Reaction Set 1
    Reaction 1
      {{∅}}

Variant 2
  Reaction Set 2
    Reaction 2
      {{t}}

    Reaction 3
      {{∅}}

Reaction Set 3
  Reaction 4
    {{t}}

Prediction 1

Prediction 2

V1 → R1 → R2 → R3
V2 → R4 → R2 → R3
Reasoning: specific mode

Pathway

Variant 1
- Reaction 1
  - Reaction Set 1: $\{\emptyset\}$

Variant 2
- Reaction 2
  - Reaction Set 2: $\{\{t\}\}$
- Reaction 3
  - Reaction Set 3: $\{\{\emptyset\}\}$

V1
- RS1
- RS2

V2
- RS3
- RS2

Reaction 4
- $\{\{t\}\}$
Reasoning: specific mode

Pathway

Variant 1
- Reaction Set 1
  - Reaction 1

Variant 2
- Reaction Set 2
  - Reaction 2

Reaction Set 3
- Reaction 3

V1
- RS1 → RS2

V2
- RS3 → RS2

{-φ}, {t}

{}
Reasoning: specific mode

Pathway

Variant 1

Variant 2

Reaction Set 1

Reaction Set 2

Reaction Set 3

Reaction 1

Reaction 2

Reaction 3

Reaction 4

V1

V2
Reasoning: specific mode

Experimentation 1

Pathway

Variant 1

{∅} {t}

Reaction Set 1

{∅}

Reaction 1

Variant 2

{t}

Reaction Set 2

{t}

Reaction 2

Reaction Set 3

{∅}

Reaction 3

{t}

Reaction 4
Reasoning: specific mode

Propagation of expectation on child concept with the greatest degree of belief for prediction
Reasoning: specific mode

Pathway

Variant 1

Variant 2

Reaction Set 1

Reaction 1

Reaction Set 2

Reaction 2

Reaction Set 3

Reaction 3

Reaction 4
Reasoning: specific mode

Pathway

Variant 1

Reaction Set 1

Reaction 1

Variant 2

Reaction Set 2

Reaction 2

Reaction 3

Reaction Set 3

Reaction 4