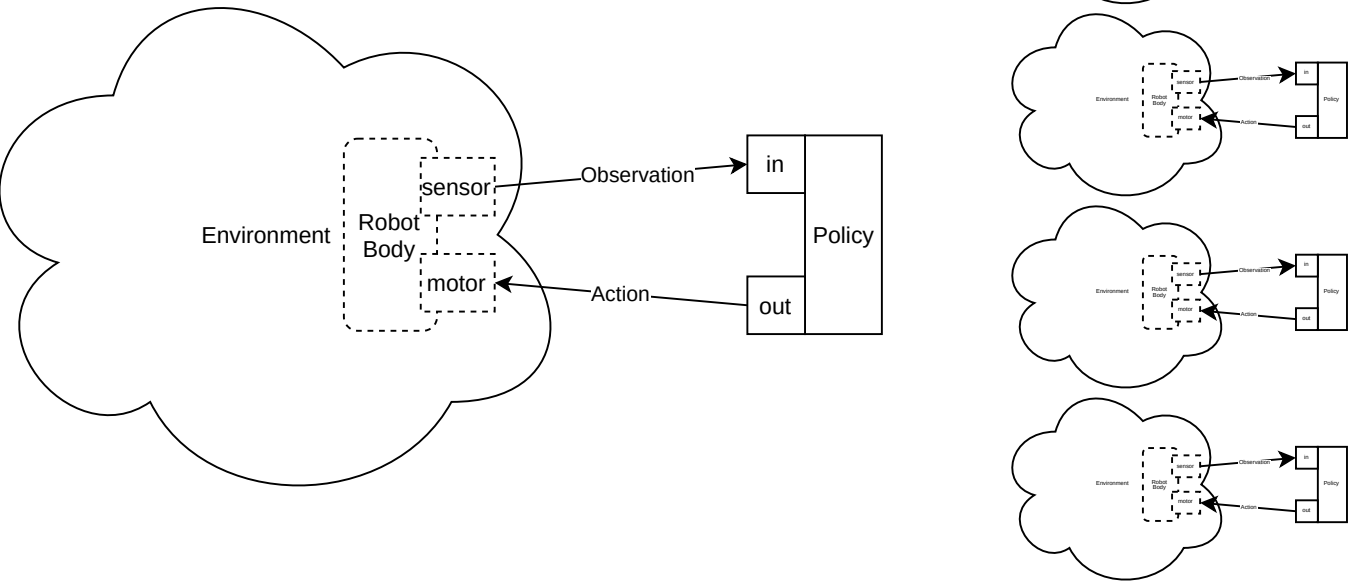
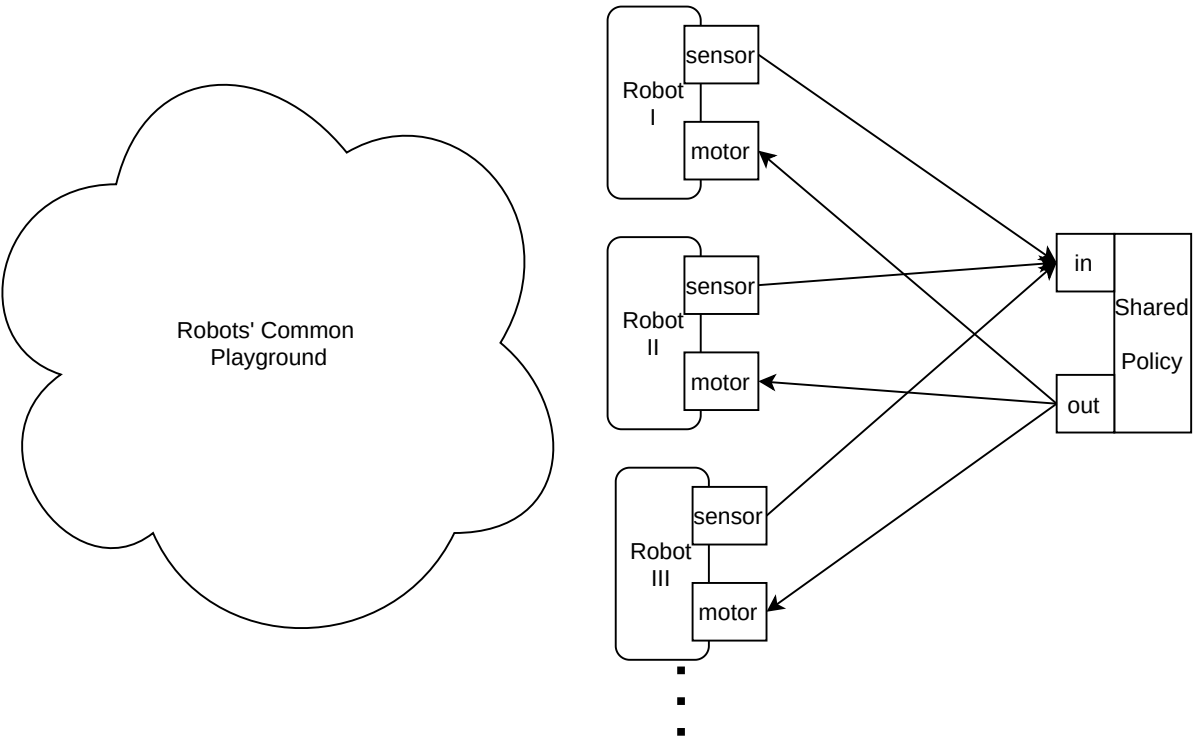


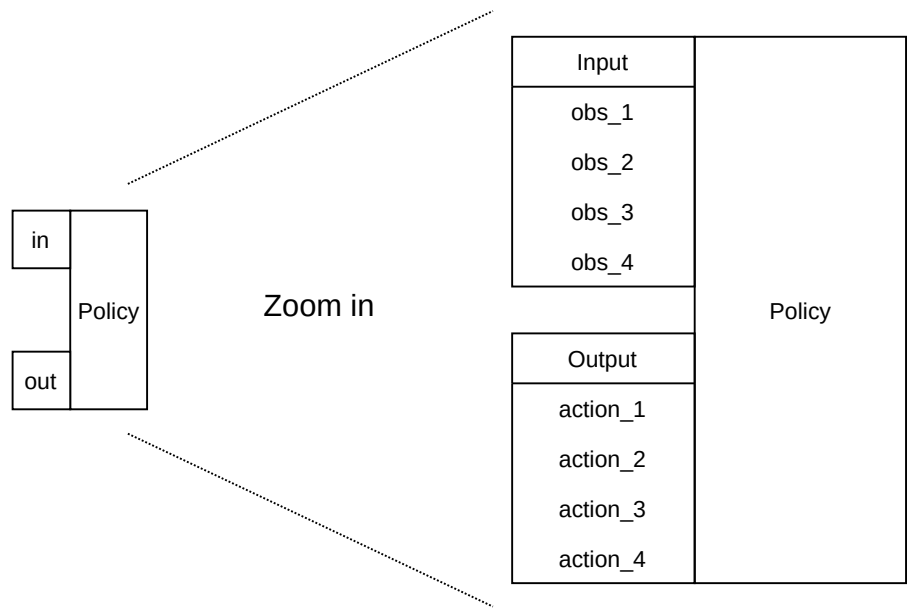
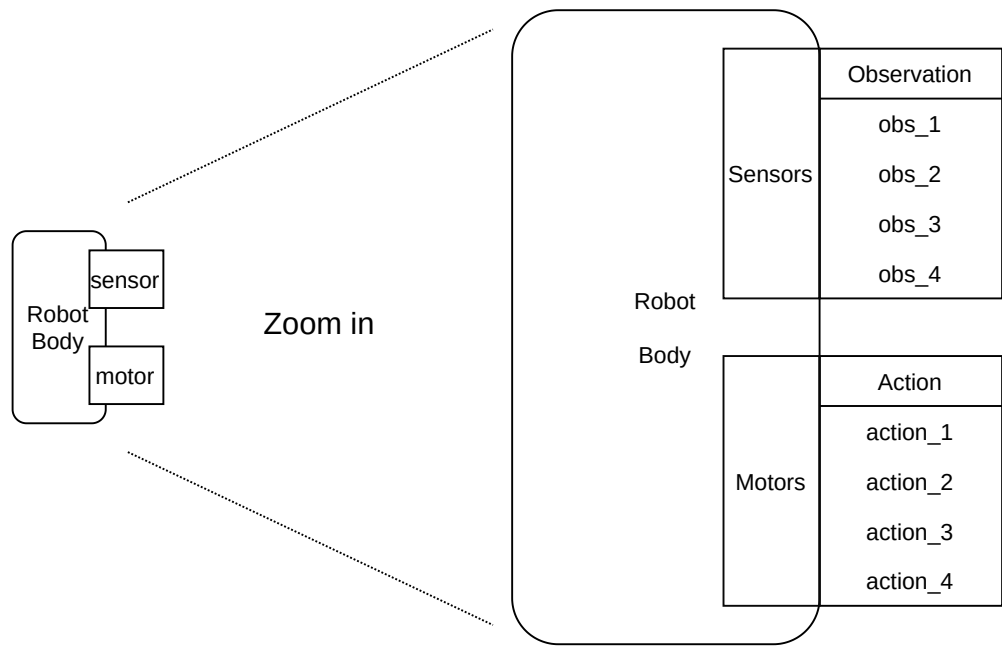
Conventional RL



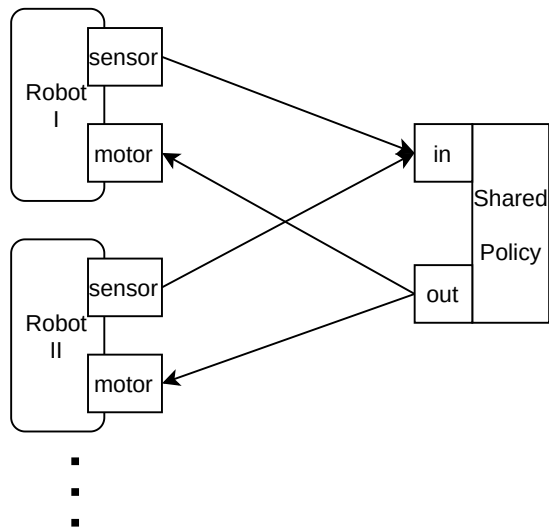
Multiple Bodies share one policy



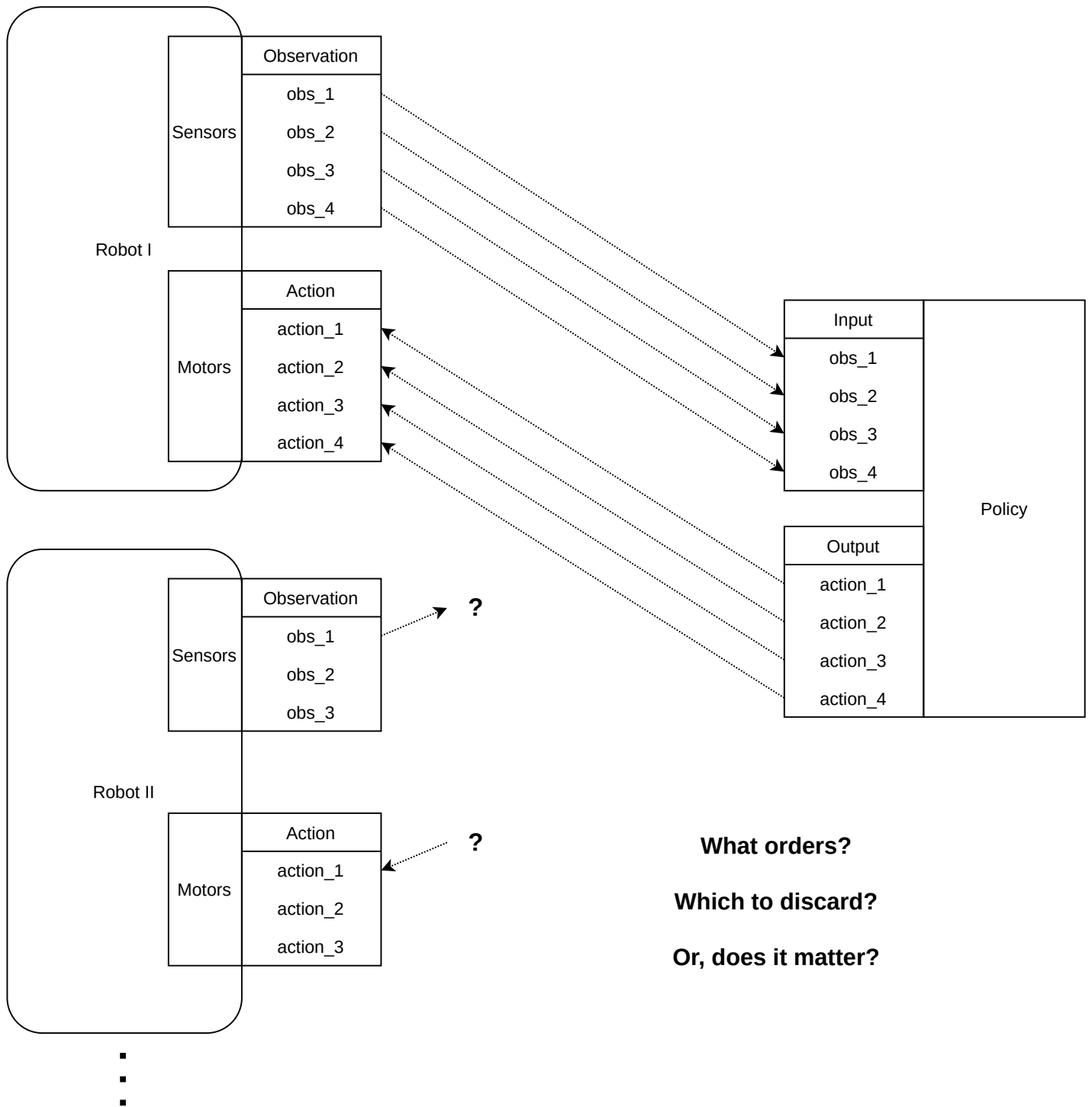
Zoom in



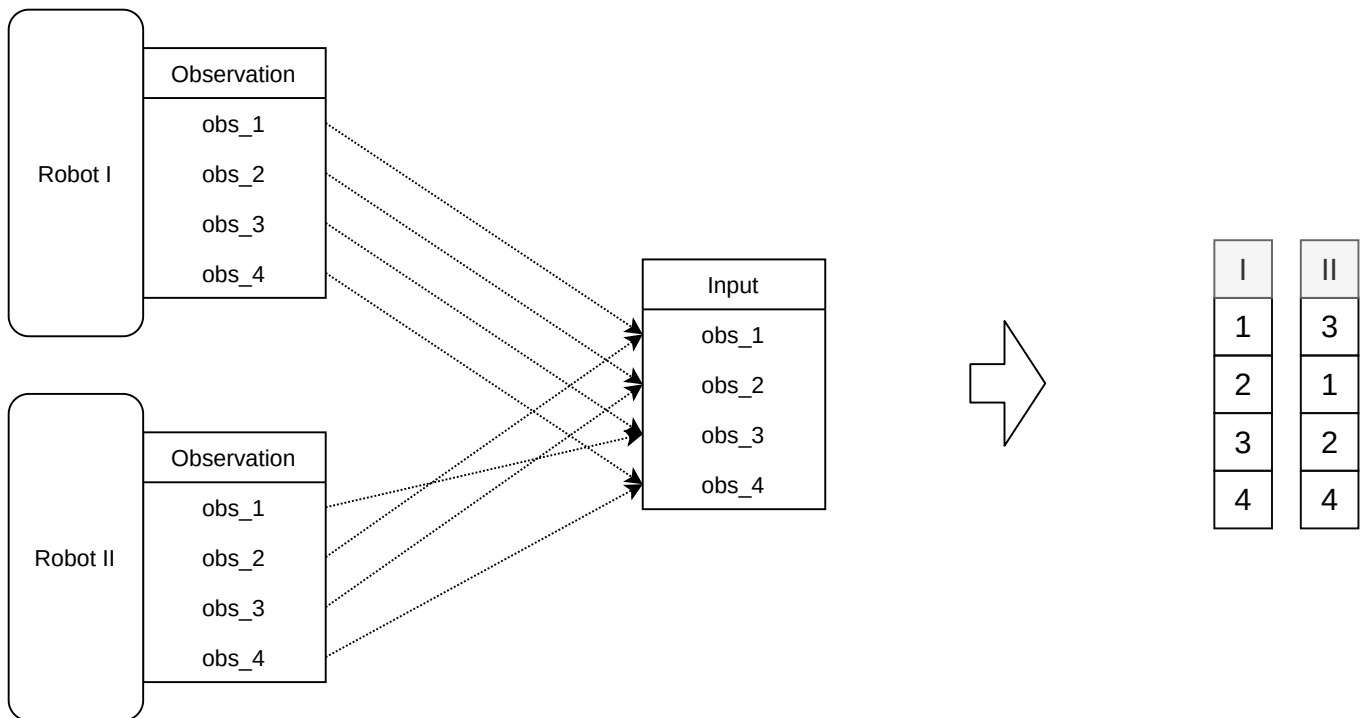
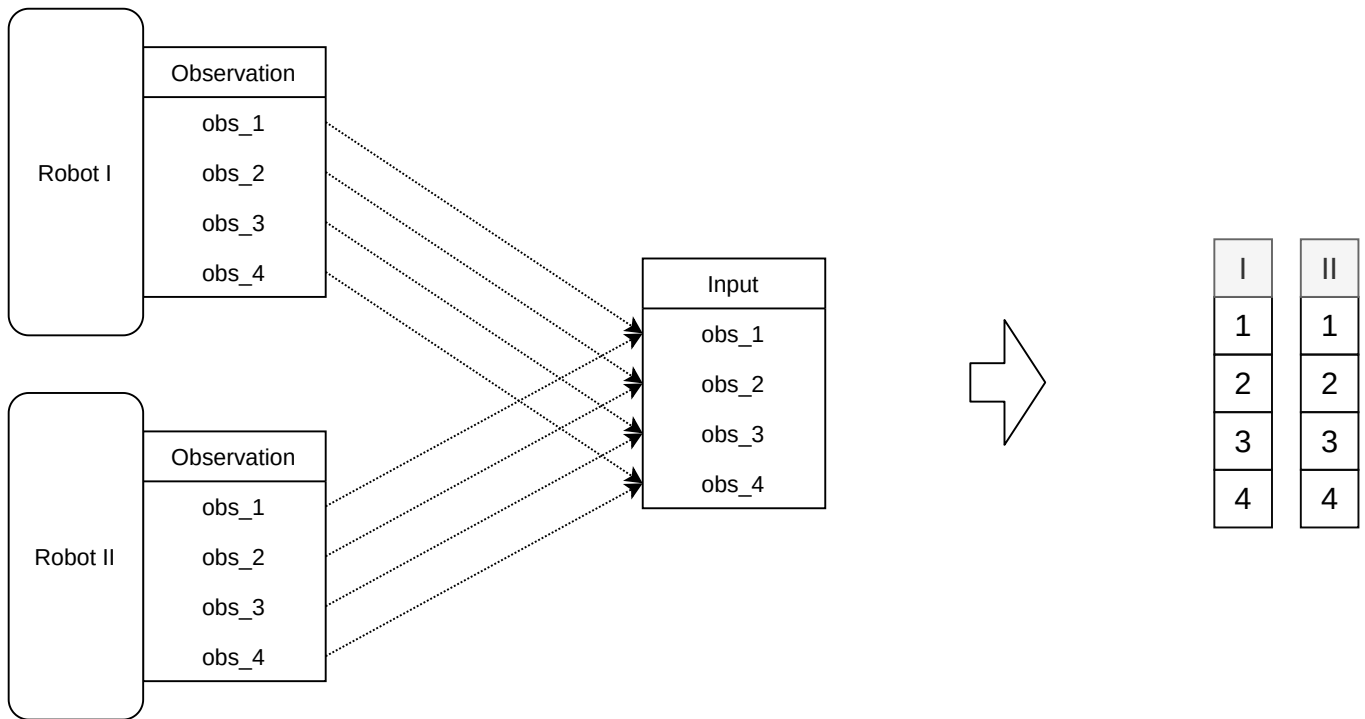
Problem



Zoom in



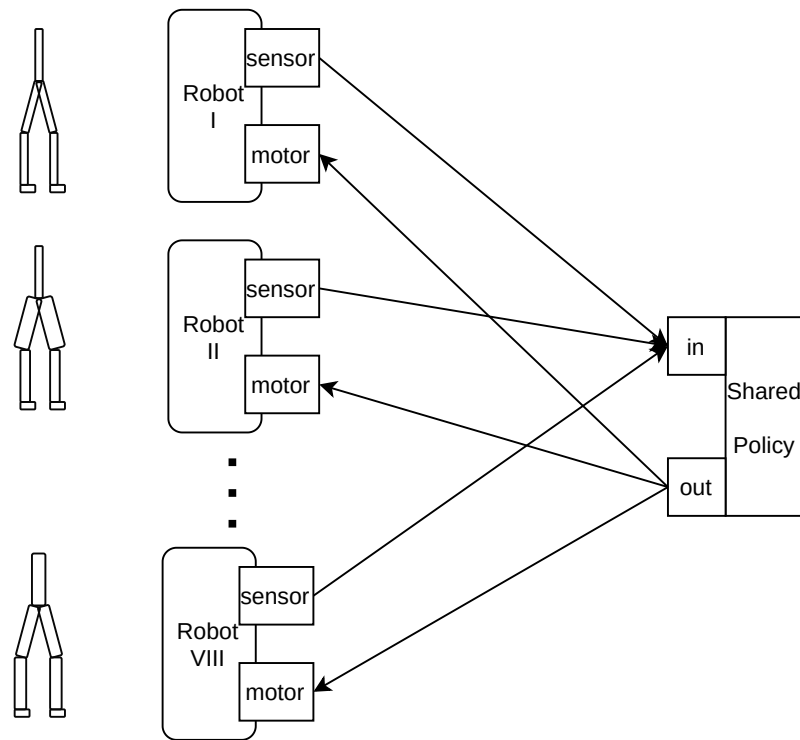
Simplified notations



Assuming observations and actions are paired, so specifying the order of observations determines the order of actions.

Research questions: do different alignments result in different learnabilities?

(1) Experiment with Parametrically Different Bodies



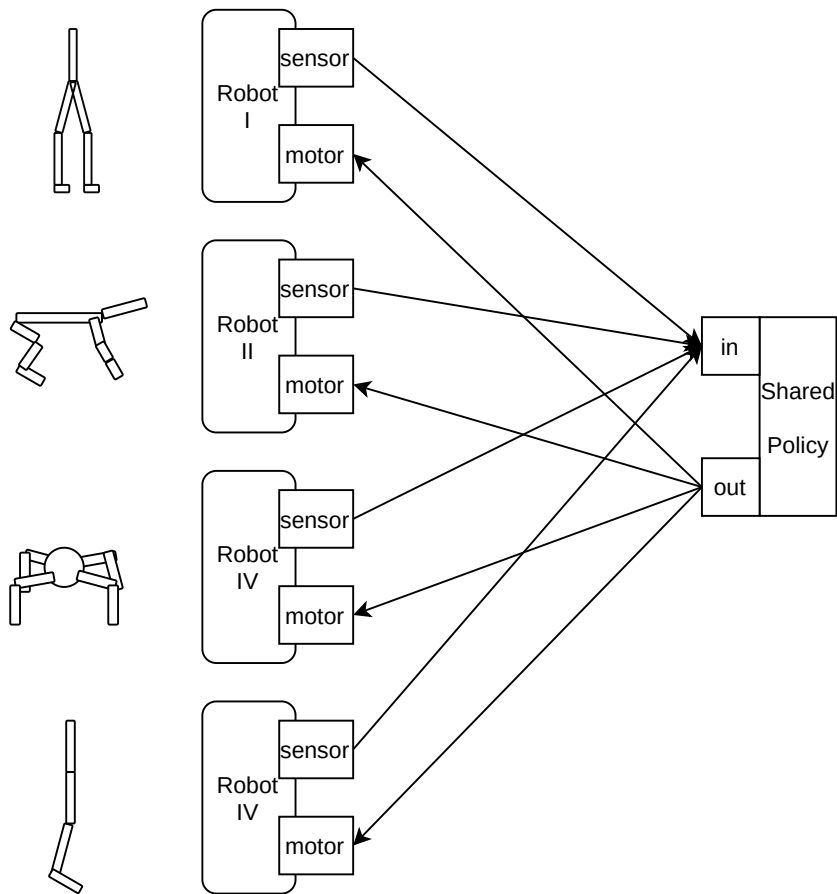
	I	II	III	IV	V	VI	VII	VIII
Aligned	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3
	4	4	4	4	4	4	4	4
	5	5	5	5	5	5	5	5
	6	6	6	6	6	6	6	6

V.S.

[illegible]

Research questions: do different alignments result in different learnabilities?

(2) Experiment with Topologically Different Bodies without obvious correspondence



Arbitrary # 1

I	II	III	IV
5	5	1	5
4	6	6	1
3	7	2	3
6	3	4	-
1	4	3	-
7	2	8	-
-	-	7	-
-	-	5	-

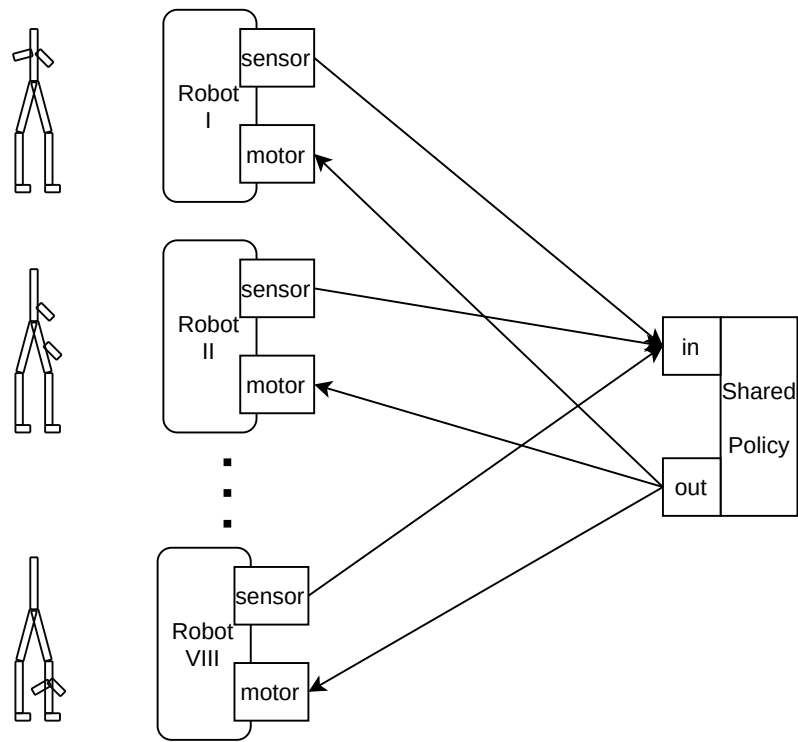
v.s.

Arbitrary # 2

I	II	III	IV
7	3	8	7
3	2	5	5
4	4	1	3
1	6	4	-
5	7	2	-
6	8	3	-
-	-	7	-
-	-	6	-

Research questions: do different alignments result in different learnabilities?

(3) Experiment with Topologically Different Bodies with obvious correspondence



M0

I	II	III	IV	V	VI	VII	VIII
1	2	2	2	2	2	3	3
2	3	3	3	3	1	1	4
3	1	4	4	4	3	2	1
4	4	1	5	5	4	4	2
5	5	5	6	6	5	5	5
6	6	6	1	7	6	6	6
7	7	7	7	1	7	7	7
8	8	8	8	8	8	8	8

v.s.

M2

I	II	III	IV	V	VI	VII	VIII
1	2	2	2	2	5	3	3
2	3	3	8	3	1	1	4
3	1	4	4	4	3	2	1
4	4	1	5	5	4	4	2
5	5	5	6	6	2	5	5
6	6	6	1	7	6	6	6
7	7	7	7	1	7	7	7
8	8	8	3	8	8	8	8

END of file

TMP saving

I	II	III	IV	V	VI	VII	VIII
1	4	4	2	2	1	2	3
2	3	2	3	4	2	3	2
3	2	1	1	1	4	4	4
4	1	3	4	3	3	1	1

I	II	III	IV	V	VI	VII	VIII
1	2	3	3	3	2	4	1
2	4	2	1	1	1	2	2
3	3	4	2	4	3	3	4
4	1	1	4	2	4	1	3