Algorithmic Game Theory

All information in the **course webpage**:

https://ml2.inf.ethz.ch/courses/agt/

...including these slides

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Questions/discussion/help...:

Moodle

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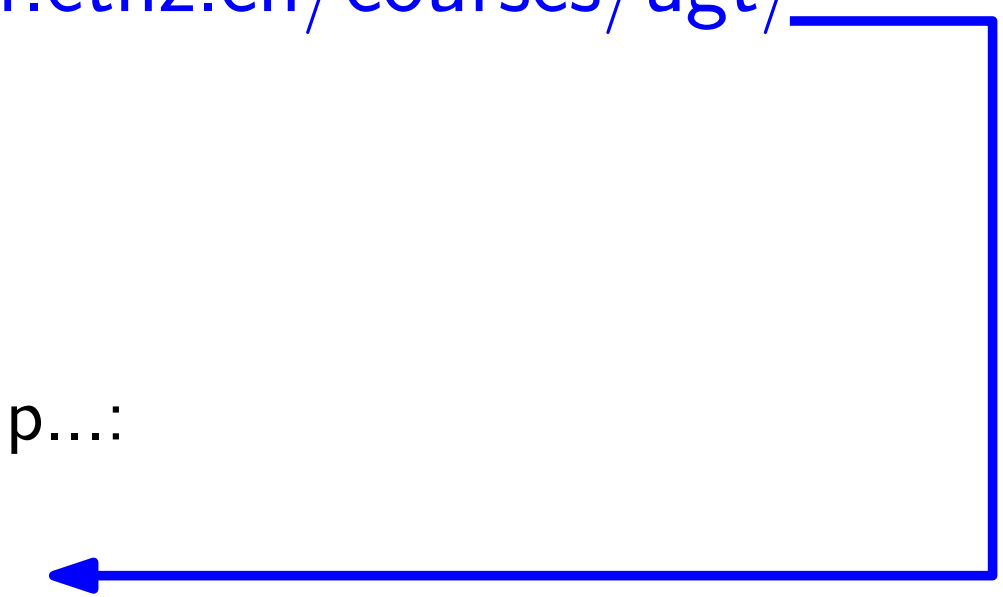

course cataloguge or myStudies

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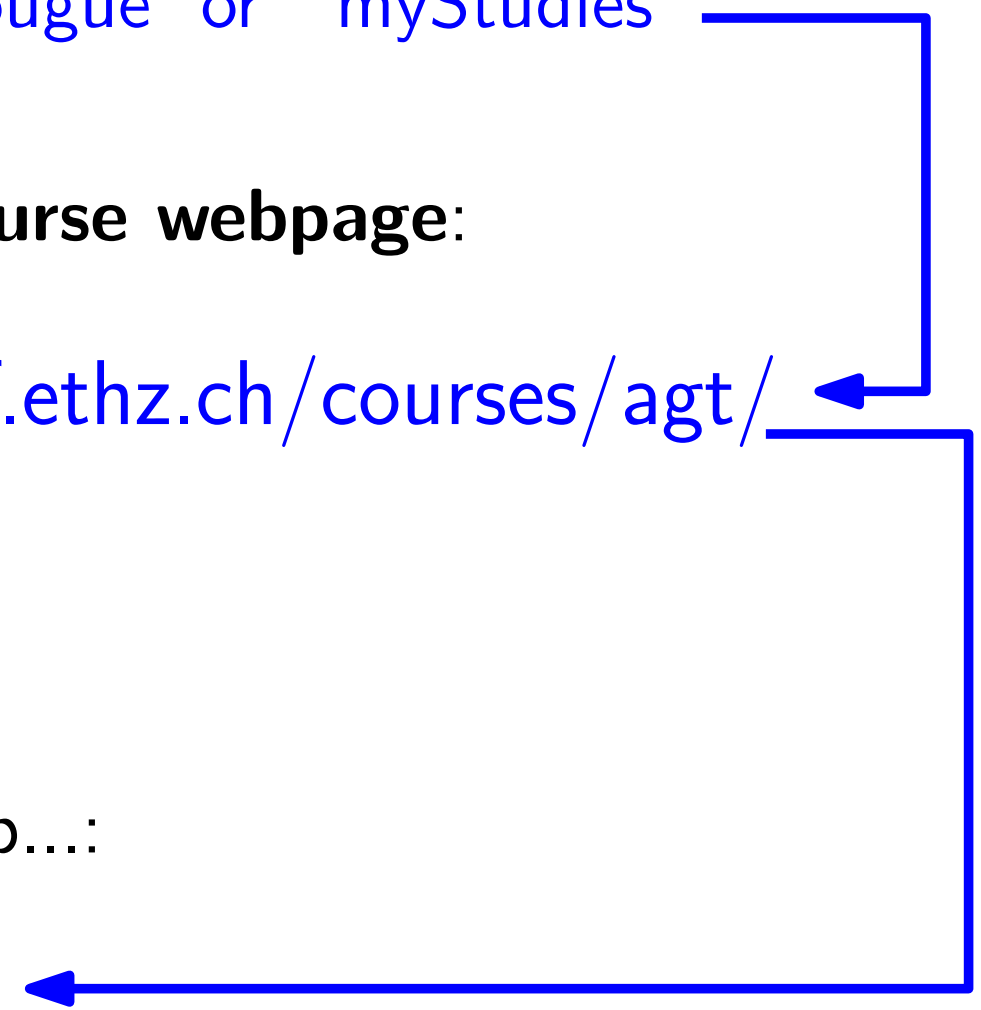

Organization

- Lectures

  CHN C14 + Streaming + Video recording

- Exercise Class

Group 1	Group 2	Group 3
Tu 10–12	Tu 10–12	Tu 16–18

Organization

Teaching Assistants:

Andrei Ivanov **Lorenzo Laneve**

Varun Maram **Paolo Penna**

- Exercise Class

Group 1	Group 2	Group 3
Tu 10–12	Tu 10–12	Tu 16–18

same content

Organization

Teaching Assistants:

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- Exercise Class

Group 1	Group 2	Group 3
Tu 10–12	Tu 10–12	Tu 16–18

different time

Organization

Teaching Assistants:

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- Exercise Class

Group 1	Group 2	Group 3
Tu 10–12	Tu 10–12	Tu 16–18
In Class	Online	In Class

Organization

You can choose any group

TAs partially alternate

...we'll do adjustments if necessary

- Exercise Class

Group 1	Group 2	Group 3
Tu 10–12	Tu 10–12	Tu 16–18
In Class	Online	In Class

Grading

Your **grade**:

- Final written exam (**70%**)
- Exercises Grade (**30%**)

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week 3 week 6 week 9 week 12

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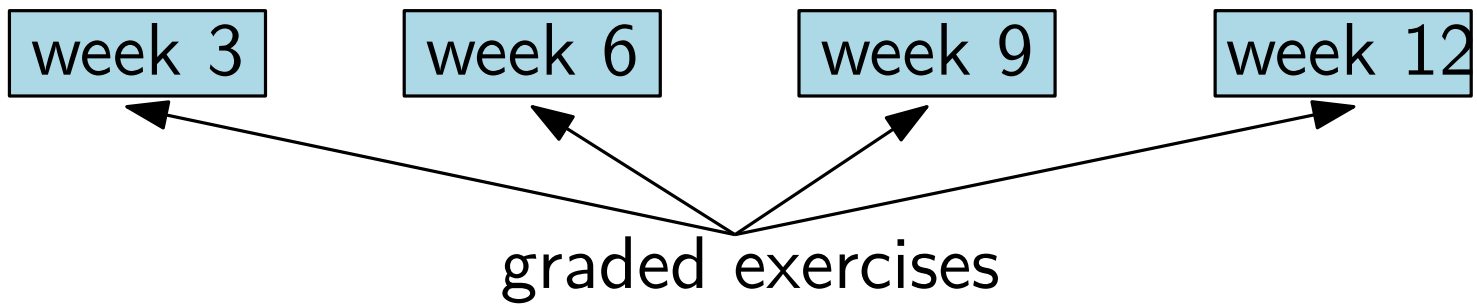
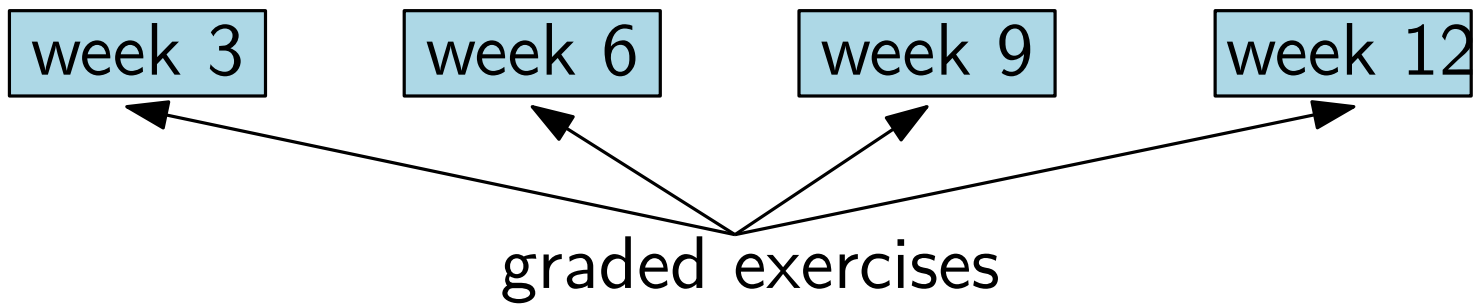


Grading

Your **grade**:

- Final written exam (**70%**)
- Exercises Grade (**30%**)

best 3 out of 4

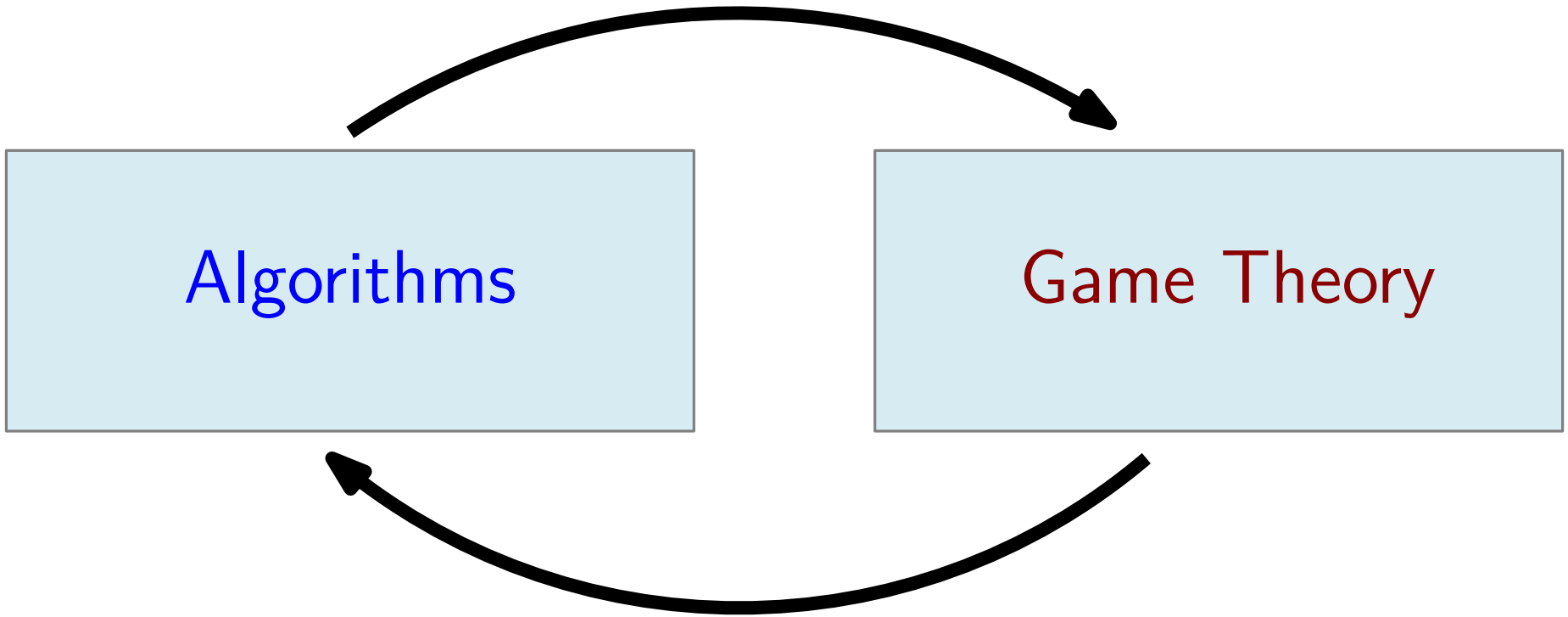


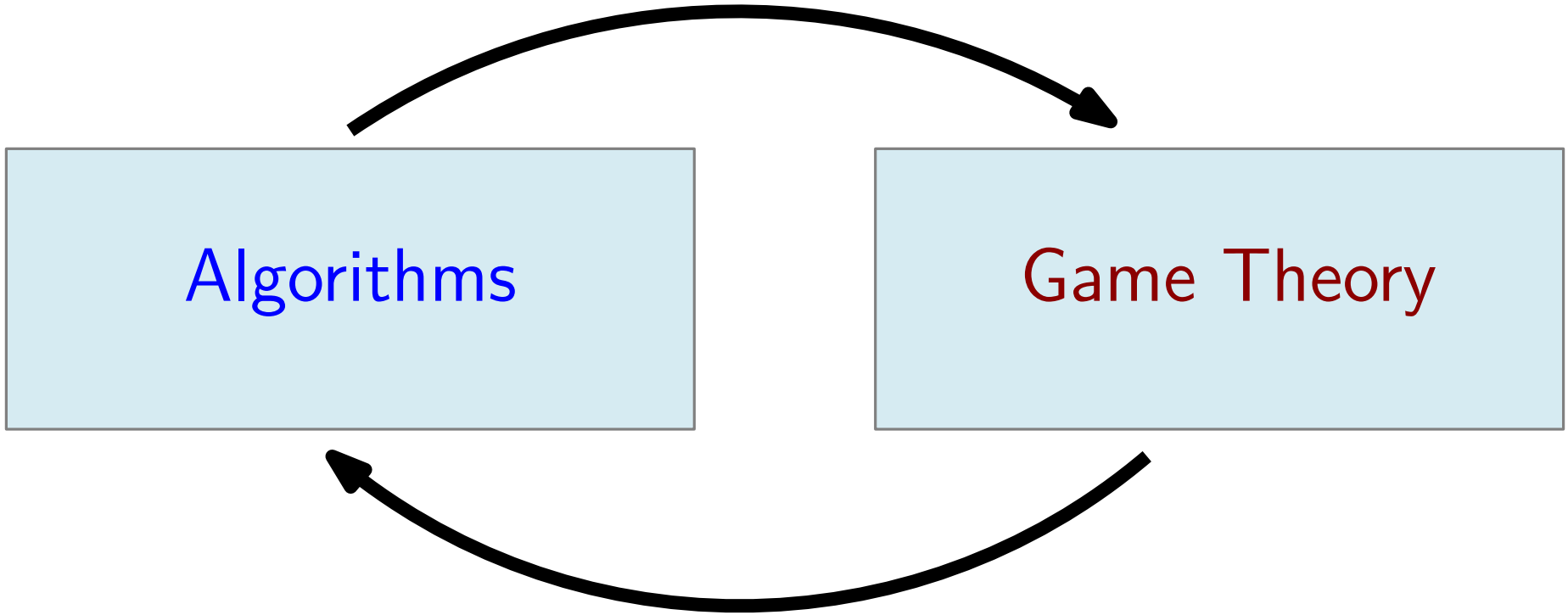
Conflicts with other lectures?

Never heard things like running time of **algorithm**, asymptotic analysis,...?

Please talk to me during the break

What is this course?


Algorithms
Game Theory



...more at the end
today

Ready to play?

You have two options A or B

You will be paired with another person in the room

You will get the following grade:

You	Other	Your Grade	Other's Grade
A	A	5.5	5.5
B	A	6	4
A	B	4	6
B	B	5	5

your choice: A ☐ B ☐

Course Topics Overview...

Part 1: Equilibria

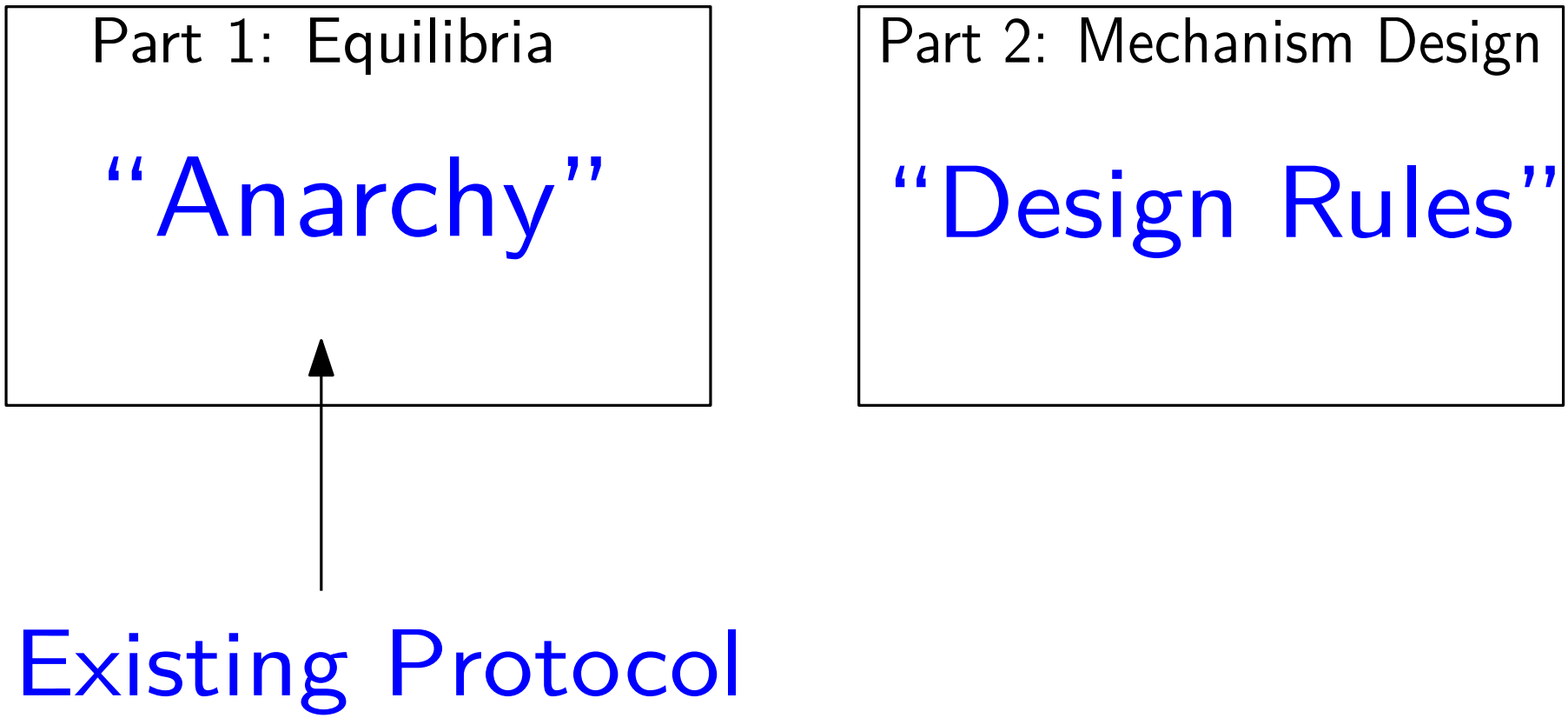
"Anarchy"

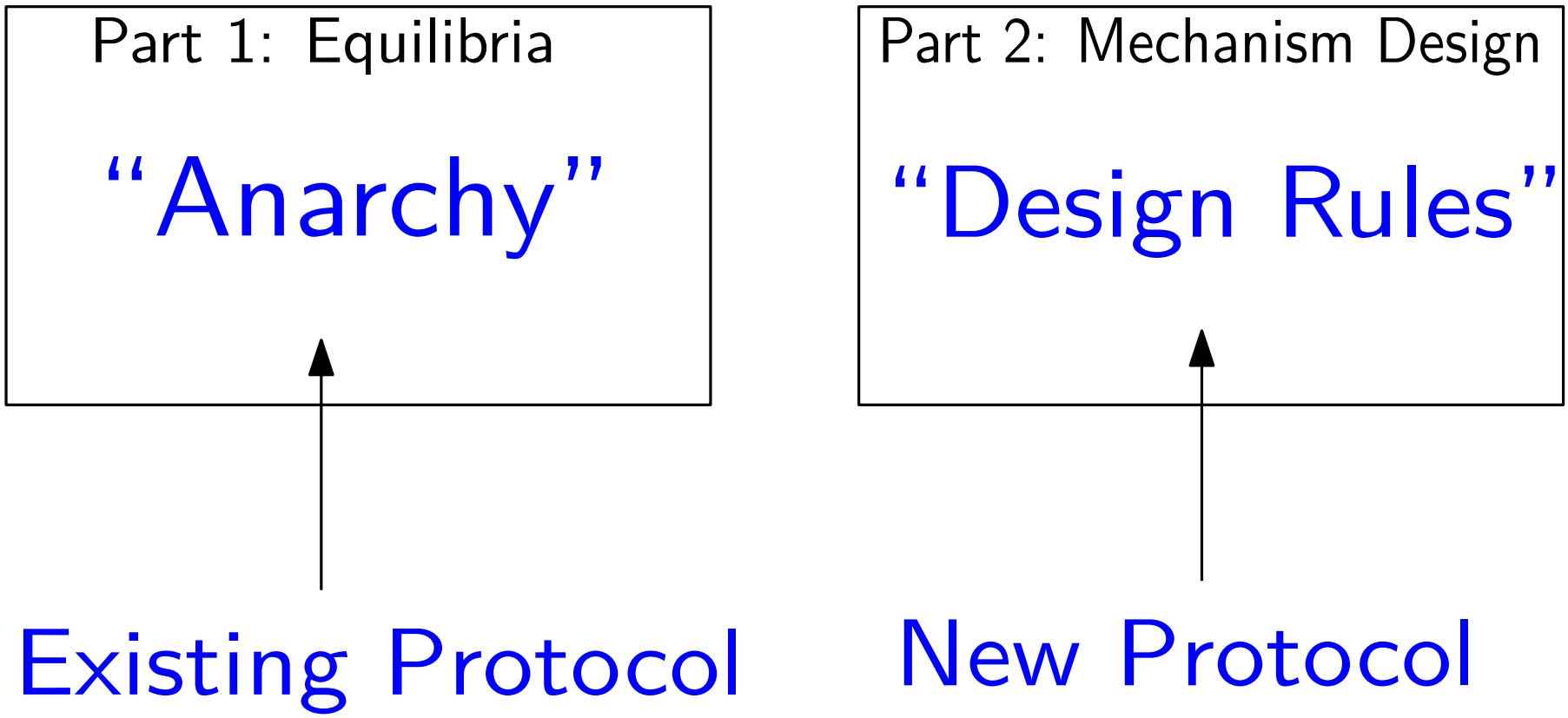
Part 1: Equilibria

"Anarchy"

Part 2: Mechanism Design

"Design Rules"


Part 1: Equilibria
"Anarchy"
Part 2: Mechanism Design
"Design Rules"
Existing Protocol

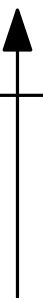

Part 1: Equilibria
"Anarchy"
Part 2: Mechanism Design
"Design Rules"
Existing Protocol
New Protocol

Part 1: Equilibria

"Anarchy"

Part 2: Mechanism Design

"Design Rules"



Voting

Part 1: Equilibria

"Anarchy"

Part 2: Mechanism Design

"Design Rules"

... TCP, BGP,...

... Google Sponsored Search,...

Part 1: Equilibria

"Anarchy"

Part 2: Mechanism Design

"Design Rules"

... TCP, BGP,...

... Google Sponsored Search,...

...Blockchain,...

...ML (GANs, RL)...