

# Mechanism design for public goods, exclusive private goods and subcontracting

Citation for published version (APA):

Csapó, G. (2015). *Mechanism design for public goods, exclusive private goods and subcontracting*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20150605gc>

## Document status and date:

Published: 01/01/2015

## DOI:

[10.26481/dis.20150605gc](https://doi.org/10.26481/dis.20150605gc)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

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BEHORENDE BIJ HET PROEFSCHRIFT

## MECHANISM DESIGN FOR PUBLIC GOODS, EXCLUSIVE PRIVATE GOODS AND SUBCONTRACTING

DOOR

GERGELY CSAPÓ

1. The mathematical connection between maximising the revenue of a monopolist public good provider and the optimal way of extracting precious materials from the ground is both an illuminating and ironical insight. (Chapter 2)
2. In order to tackle a hard problem sometimes you just have to relax. (Chapter 3)
3. By decomposing two-dimensional agents into single-parameter representatives and turning allocational externalities into interdependent valuations we can achieve a tighter upper bound on the original, multi-dimensional problem. (Chapter 3)
4. When it comes to solving optimization problems, being greedy can lead you to surprisingly good or bad solutions: the trick is to find the right form of greed. (Chapter 4)
5. The information that the solution exists is itself a big piece of the solution [Nassim Nicholas Taleb].
6. Failing to take incentives into account in the design of institutions can lead to waste of resources, lower revenue, significant project delays or even to system meltdowns such as the recent financial crisis.
7. An algorithmic mechanism designer takes an optimisation problem from operations research, adds extra behavioural constraints borrowed from game theory and attacks the resulting problem with tools of computer science. Finally, he/she uses an auction example to illustrate what is going on.
8. Inventions occur only when the accumulated knowledge reaches a sufficient level to make it happen. This heap of knowledge is built up granularly, having the pieces standing on each other, therefore society should not underestimate any straw that a PhD thesis can add.
9. PhD life is like a second childhood with more consciousness and financial independence.