Poverty Measurement

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Outline

Lessons learned

- Income is not reliable as a poverty measure.
- People may feel poor and not be identified as such.
- People may be identified as poor and not feel as such.
- We are more or less poor and in many different ways.

Why do we measure poverty?

Poverty is a problem

For whom is it a problem? Why is it a problem? What does it mean fighting poverty?

Poverty reduction policies

Who is expected to benefit from such policies? How they should benefit? Is that specific policy efficient?

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Endowments and Commodities

Each household is endowed by a set of resources. Endowments allow to produce commodities which can be exchanged within the society.

	Commodities				
Households	m_1	m_2	m_3	$\cdots$	m_m
x_1	0	1	500	$\cdots$	0
x_2	1	0	1000	$\cdots$	0
x_3	0	2	900	$\cdots$	1
$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$	$\vdots$
x_n	0	1	400	$\cdots$	1

Clustering

Households can thus be clustered according to “similar” distribution of commodities. Considering the population X we obtain clusters L_h described by a vector of commodities:

$$L_h = \langle M_{1j}^h, \cdots M_{mj}^h \rangle$$

where:

$$M_{ij} = \frac{|\{x \in L_h : m_i(x) = j\}|}{|\{L_h\}|}$$

Such clusters only identify segments of the population being "similarly poor"

From Commodities to Functionings

We establish a set of potential dimensions of welfare:

- Housing
- Education/Culture
- Nutrition
- Health Care
- Mobility

We then associate subsets of commodities to dimensions of welfare. For instance “house”, “sanitation” and “water” to “Housing”. Some commodities (such as salary) are instead associated to the whole set of welfare dimensions. We call the later “generic commodities”.

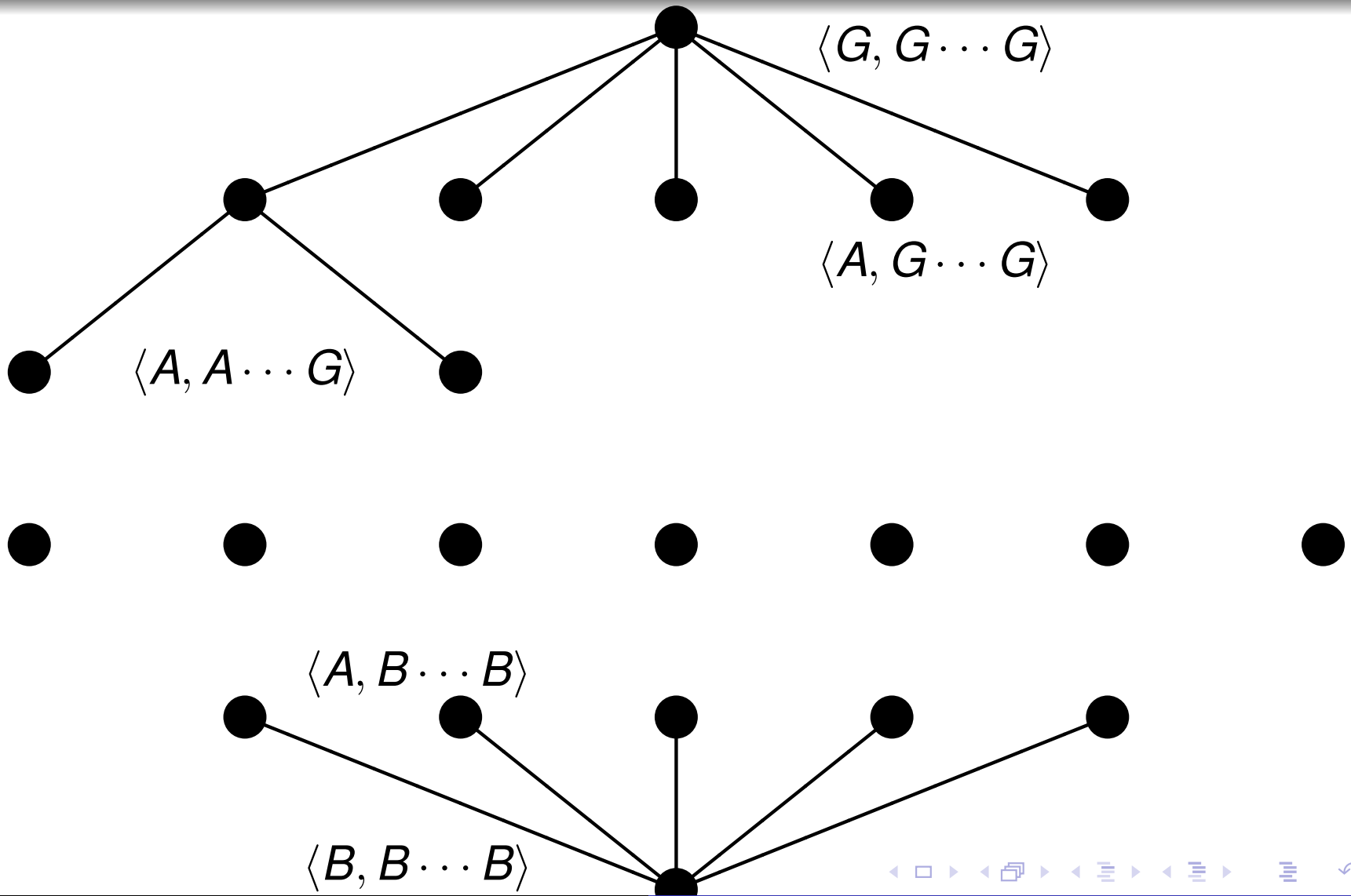
Functionings

	Functionings								
House		0			1			2	
Water			0			1			
Sanitation	0			1			2		3
Housing		B			A			G	

Bad, **A**verage and **G**ood being the three possible functionings of the Housing welfare dimension. We end getting the functionings vector of cluster L_h:

$$F(L_h) = \langle f_1(L_h), \cdots f_t(L_h) \rangle$$

The Functionings Lattice



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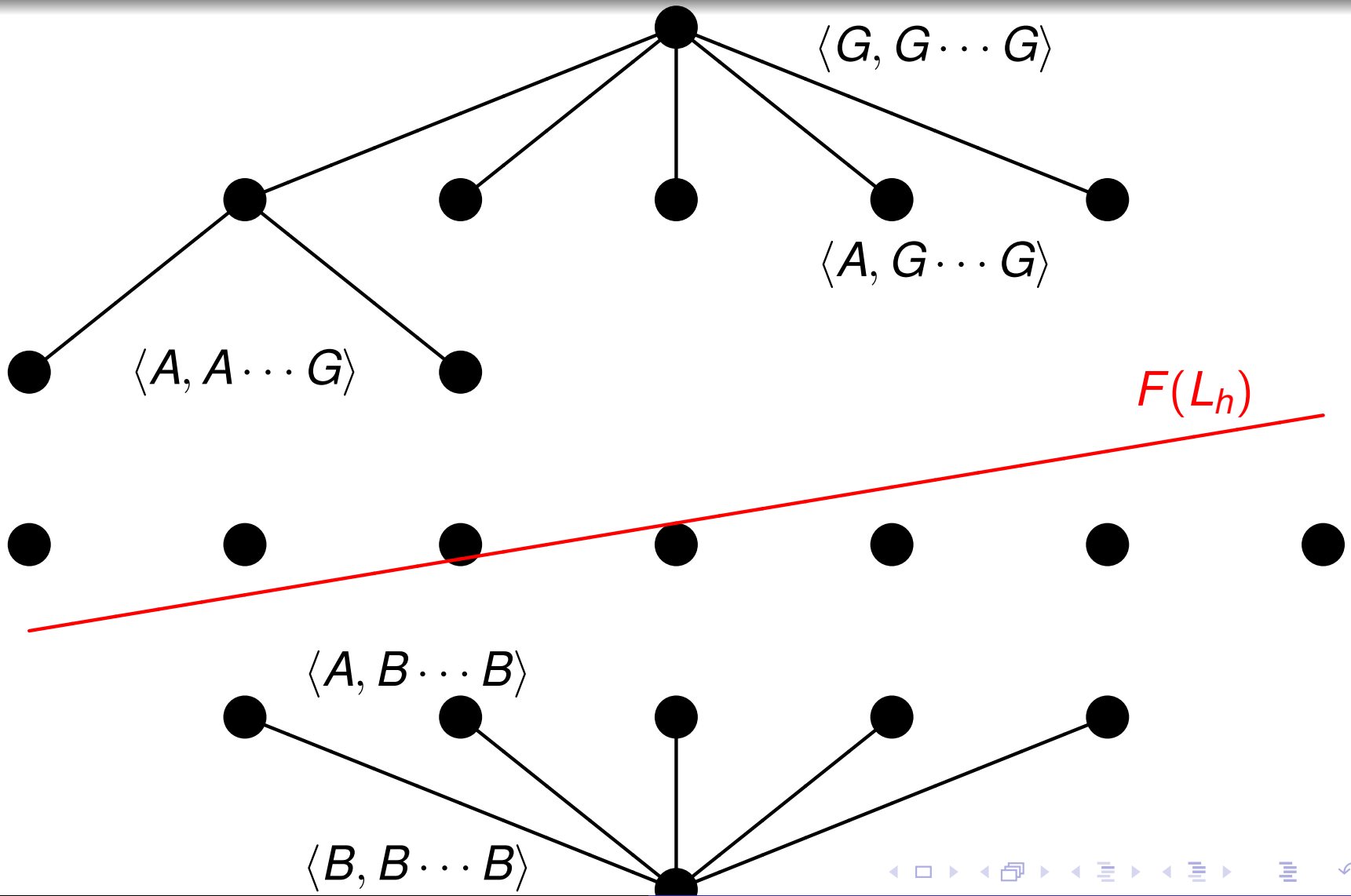

Capabilities

Feasible Capabilities

The subset of functionings compatible with a given set of commodities (resulting from the functionings lattice) establishes the feasible capabilities.

Extended Capabilities

Feasible capabilities can be extended using the generic commodities which allow to increase some of the attainable functionings.

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Policies

A poverty reduction policy should imply:

- Establish the clusters of households.
- Construct a capabilities ordering of the households' clusters.
- Allocate resources to each cluster.
- Monitor the evolution of each cluster position in subsequent orderings constructer at regular time intervals.