

Inequality and Poverty: Analysis and Policy

Fourth lecture: Defining and measurement of poverty

12 March 2024

Dr hab. Ryszard Szarfenberg, prof. UW
Faculty of Political Sciences and International Studies
Warsaw University

Course web page: <http://rszarf.ips.uw.edu.pl/inequality/>

Lecture contents

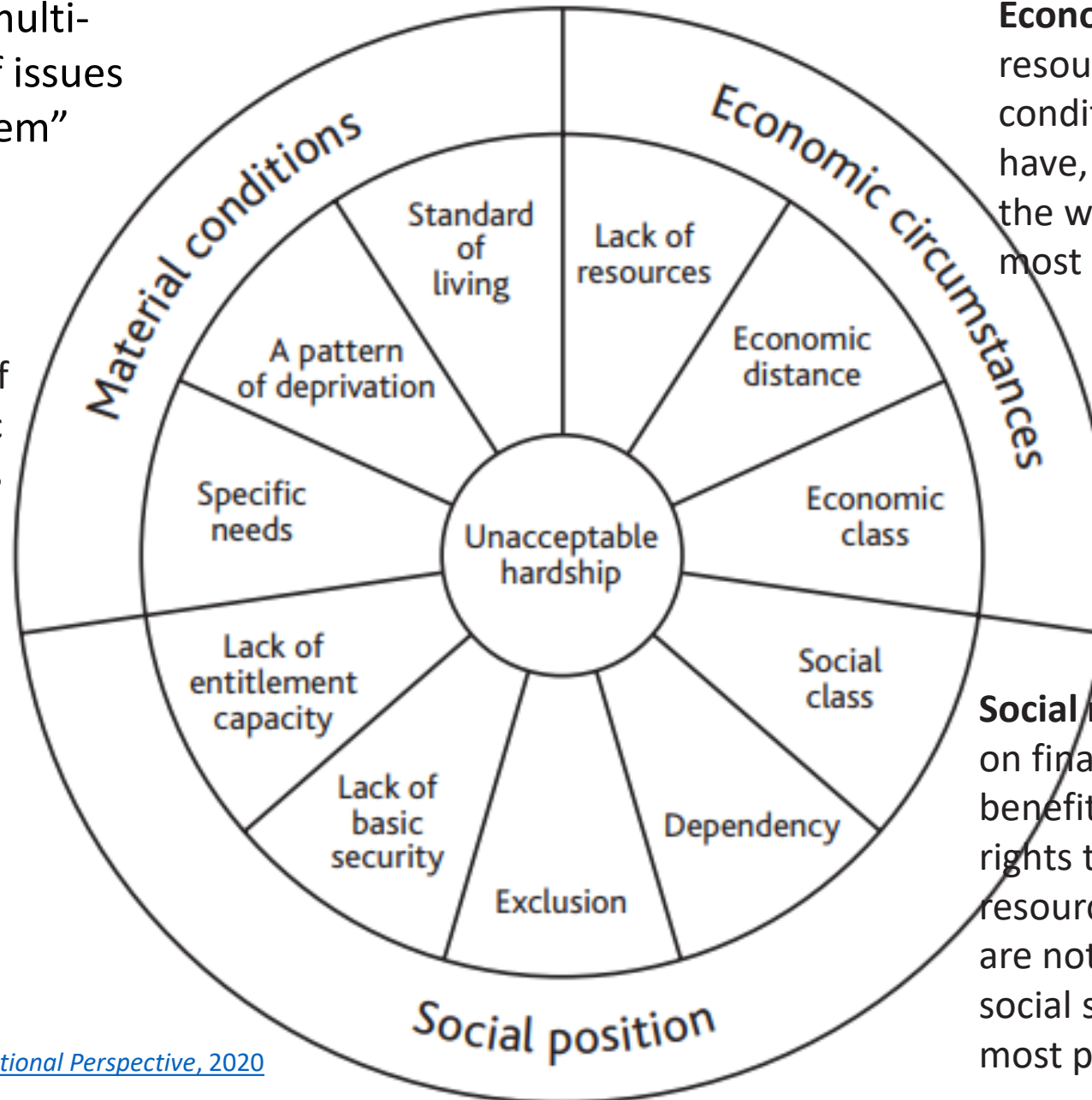
1. Understanding poverty as a general concept with many dimensions
 1. 12 meanings of poverty in three clusters
 2. 3 sets of dimensions with 5 intervening factors
2. Measurement of poverty
 1. Relative and absolute poverty line
 2. Inclusion and exclusion errors
 3. Measuring poverty in two dimensions
 4. Poverty in time
 5. Poverty measurement procedure with several problems
3. Summary

The concept of poverty

„Poverty is complex and multi-faceted, a constellation of issues rather than a single problem”

Paul Spicker

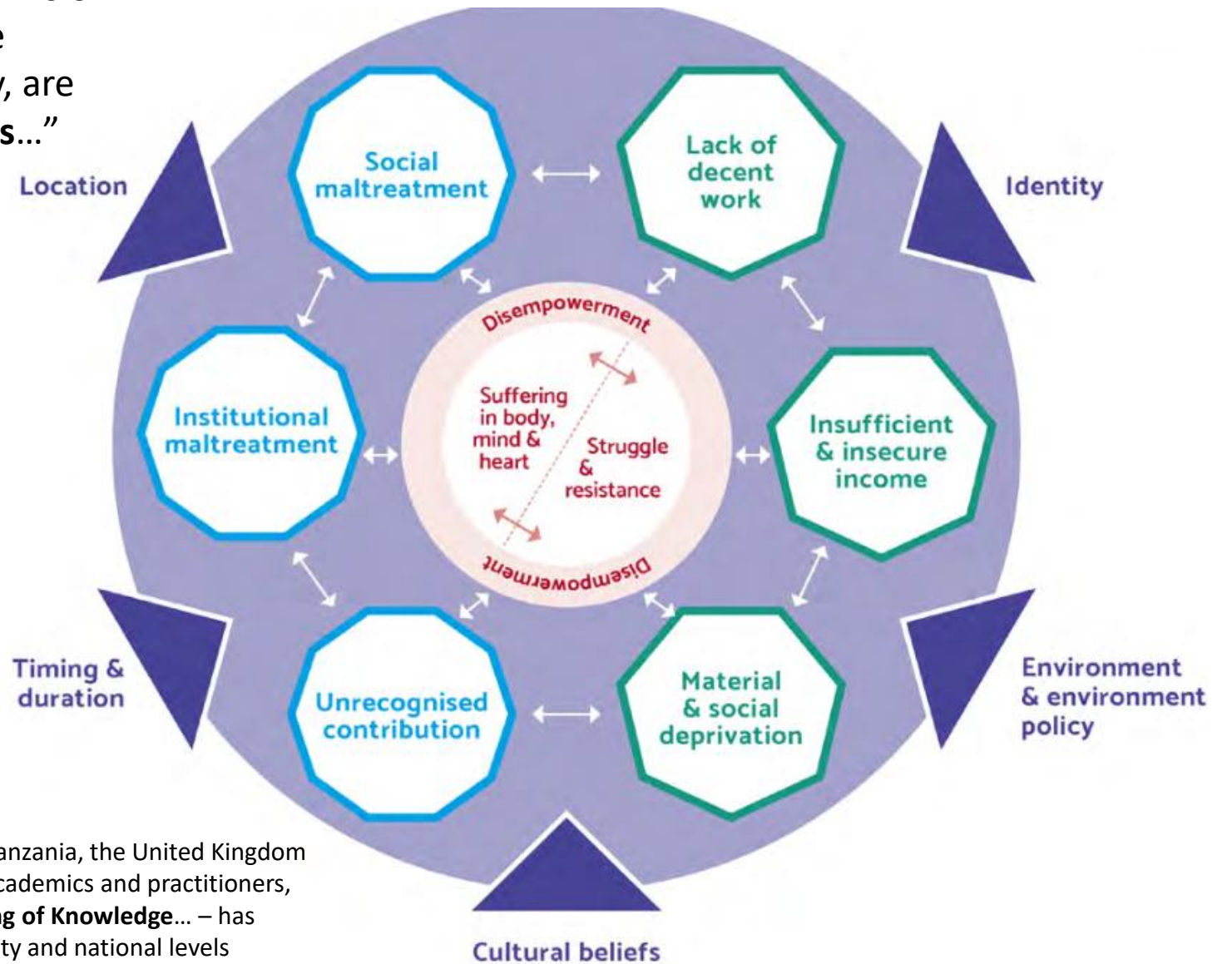
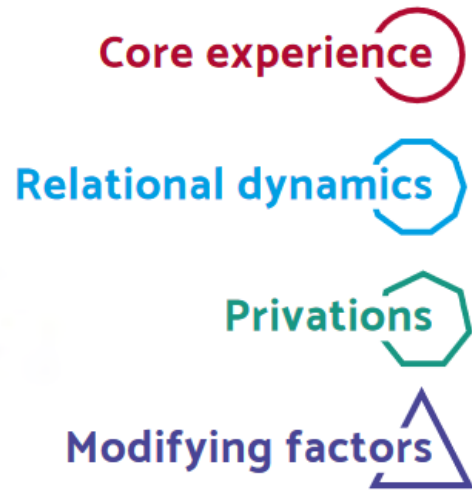
Material conditions: a generally low standard of living, the lack of specific goods and items, such as housing, fuel, or food...



Economic circumstances: Lack of the resources to have access to the conditions of life that other people have, the poor are an integral part of the working class – its poorest and most disadvantaged stratum....

Social relationships: dependency on financial support and state benefits, they do not have the rights to access and use resources that others can, they are not part of the networks of social solidarity and support than most people in a society rely on...

„the complexity of poverty is best described in terms of **three inter-related sets of dimensions...** The nine dimensions, and hence the experience of poverty, are **further understood to be modified by five factors...**”



„The research has involved teams in Bangladesh, Bolivia, France, Tanzania, the United Kingdom and the United States. People with direct experience of poverty, academics and practitioners, worked together as equals. The research process – termed **Merging of Knowledge...** – has made possible a transformation in thinking at individual, community and national levels through the generation and sharing of knowledge”

[The hidden dimensions of poverty. International participatory research led by ATD Fourth World and the University of Oxford, 2019](#)

Poverty of what and poverty of whom

Poverty of what?

Sphere and dimensions of poverty

- LIFE OUTCOMES: absolutely or relatively **insufficient outcome or result in some necessary and valuable space** e.g. economic, political, social, psychological
- LIFE CHANCES: absolutely or relatively **insufficient opportunity or chance to achieve valuable outcome or result** in something important in life

Poverty of whom?

Categories of people

- Individuals
- Groups e.g. families, ethnic groups
- Collectivities of people e.g. sex and age groups, geographical groups (inhabitants of regions, cities, villages)

Specific poverty: intersection of dimensions of what and whom

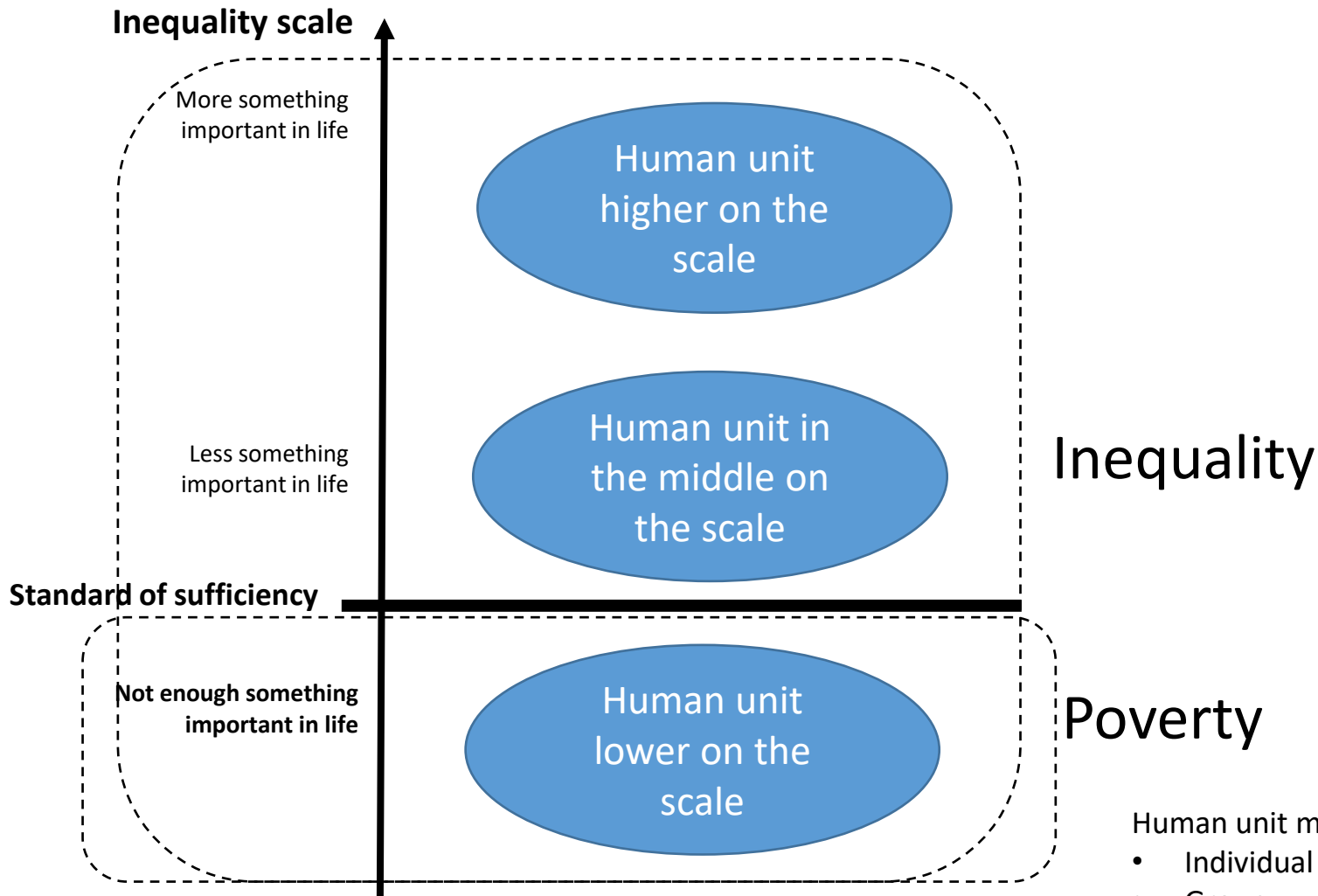
WHAT: Sphere and dimension for consideration of sufficiency (outcome or opportunity)	WHO: category of people (examples)			
	Women	Poles	Inhabitants of Warsaw	Richard (individual)
Economic: Income	Women in income poverty (with insufficient income)	Poles in income poverty		Richard is in income poverty
Economic: wealth	Women in wealth poverty (with insufficient wealth)		Inhabitants of Warsaw in wealth poverty	
Social: health	Women in health poverty		Inhabitants of Warsaw in health poverty	
Social: education	Women in education poverty	Poles in education poverty		Richard is in education poverty
Political: power	Women in power poverty		Inhabitants of Warsaw in power poverty	

Women's multidimensional poverty

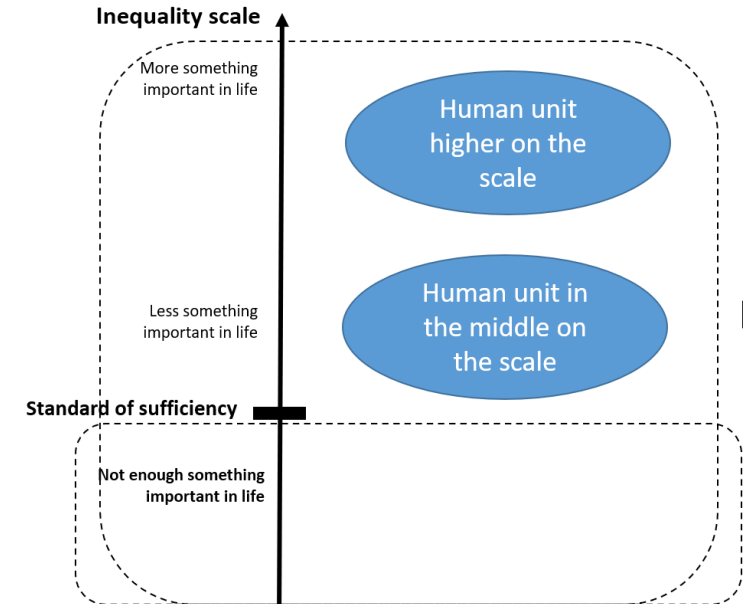
Comment: most discussions about poverty is related to poverty in economic dimension (insufficient income or consumption)

Measuring poverty

Poverty as a lower part of inequality



Specific case: inequality without poverty?



Comment: It is more difficult to eliminate relative poverty than to eliminate absolute poverty (see next slide)

Human unit means

- Individual
- Group
- Collectivity

Relative and absolute poverty

- There are two main ways of thinking about **standard of sufficiency**
 - **RELATIVE**: **The point of reference is the average for all members of the given society** – sufficient means somewhere away from the average of what is important in life e.g. sufficient is a half of the average
 - **ABSOLUTE**: **The point of reference is an objective requirement for achieving something in life** – sufficient means having what is required to fulfil some important life goal e.g. have specified amount of food, water and heat (requirements) to survive in good health (goal)
- Accordingly there are **two ways of thinking about poverty**
 - **RELATIVE POVERTY**: **Those below relative sufficiency standard** (called **relative poverty line** in the context of measurement)
 - **ABSOLUTE POVERTY**: **Those below absolute sufficiency standard** (called **absolute poverty line** in the context of measurement)

Two concepts of absolute poverty – example from Poland

	Social (overall) minimum	Subsistence minimum
<i>Survival needs</i>		
Food	✓ ✓	✓
Housing	✓ ✓	✓
Clothing and shoes	✓ ✓	✓
Health protection (medicines)	✓ ✓	✓
Personal hygiene	✓ ✓	✓
Education	✓ ✓	✓
<i>Participation needs</i>		
Transport and communication	✓	-
Culture	✓	-
Sport and holidays	✓	-

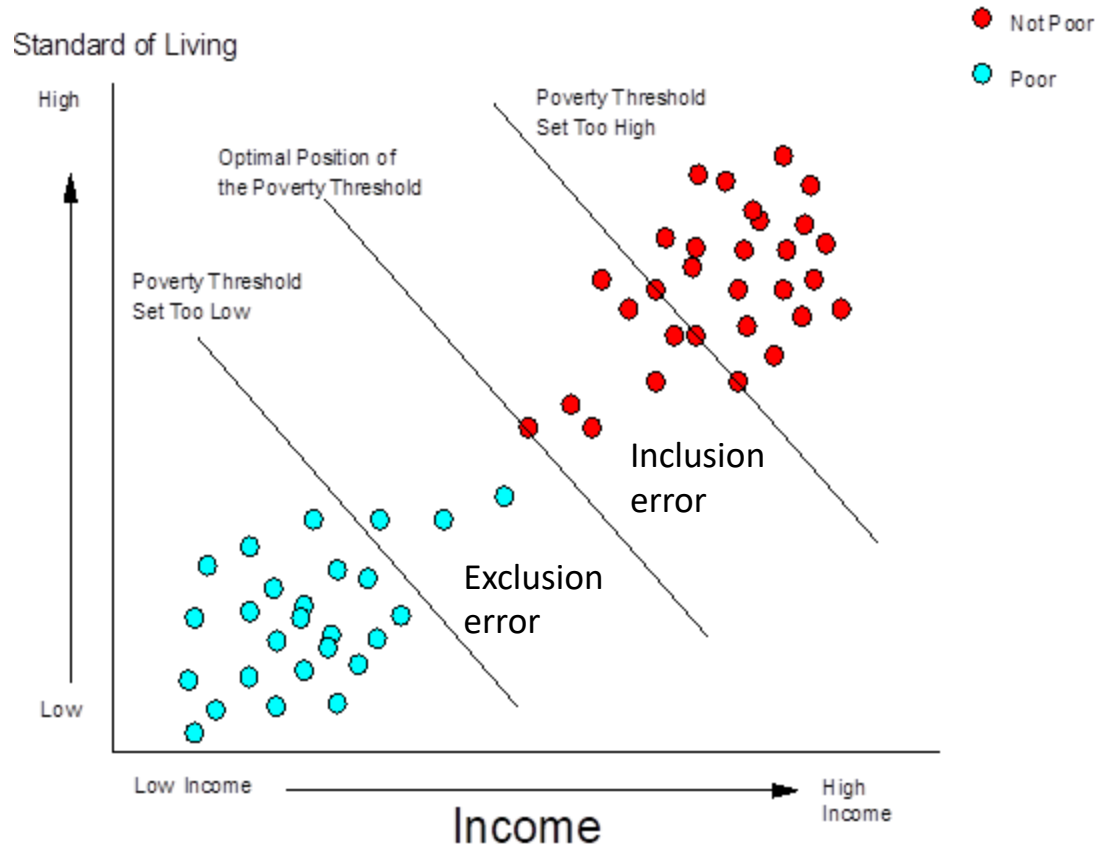
The differences are in

- **Content of the standard:** social minimum covers more needs
- **Generosity of the standard for the same needs:** social minimum is more generous for satisfaction of survival needs

From idea how to calculate the amounts of money for whole baskets in a nutshell:

1. list of needs,
2. for each need list of satisfiers (satisfying items),
3. for each satisfier estimation of its quality and quantity for household and time unit,
4. searching for the lowest prices of satisfiers,
5. total cost for each satisfier at the lowest prices for household and time unit,
6. adding all costs for specified type of minimum (for several types of households)

Some problems with poverty measurement: poverty threshold set too low or too high in two dimensions



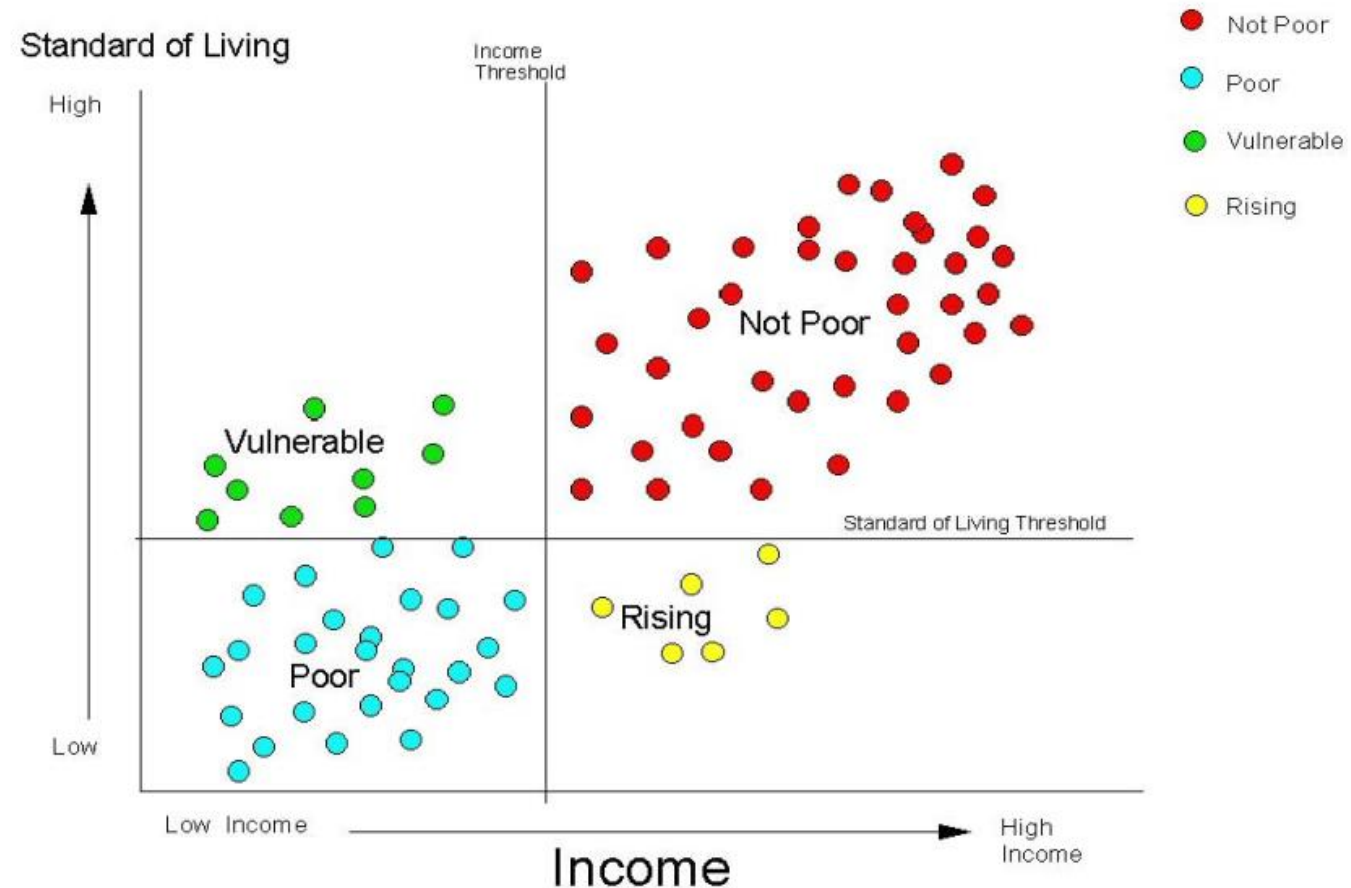
- **Poverty threshold is set too low:** the resulting problem is **exclusion error** – some living in poverty not considered as poor
- **Poverty threshold is set too high:** the resulting problem is **inclusion error** – some not living in poverty considered as poor

[David Gordon Definitions of Concepts for the Perceptions of Poverty and Social Exclusion, in J. Bradshaw et al. *Perceptions of Poverty and Social Exclusion, Report on Preparatory Research, 1998*](#)

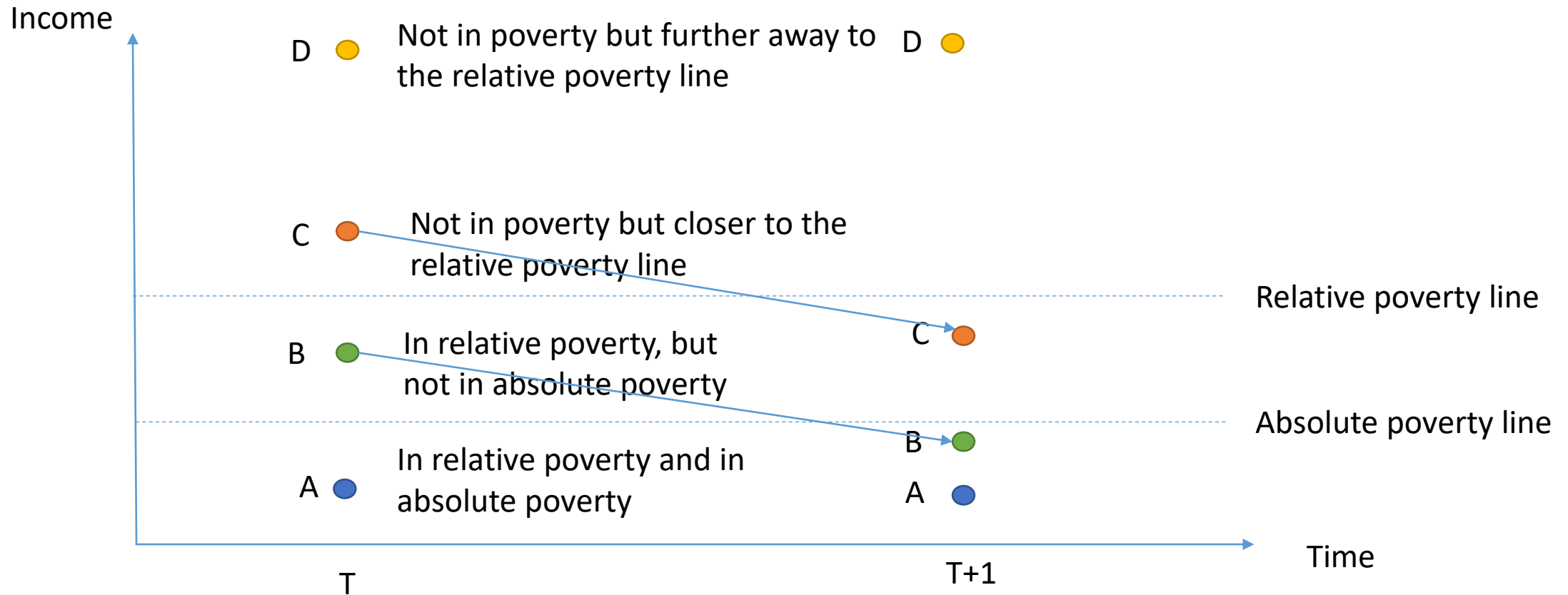
Who is poor, vulnerable, rising and not poor in two dimensions: standard of living and income

Figure 9.1: Gordon matrix of income and deprivation

Standard of living means the level of satisfaction of human needs. The threshold means the number of satisfied needs e.g. at least 4 from the list of 9



Poverty in dynamic perspective with two poverty lines and two moments in time



In this example in time T+1

- **Change for C:** from not-in-poverty to relative poverty (rise in number of people in poverty)
- **Change for B:** from only relative poverty to relative and absolute poverty (rise in a depth of poverty for some people who were poor in time T)
- **For C and B it is a clear deterioration**
- For A and D there is no change in poverty position, **but A is still in very deep poverty**

Headcount poverty ratio and poverty gap measures

- **Headcount ratio (HC)**

- Idea: **share of those below poverty line in a population**
- Number of poor units divided by all units in a specified population (times 100% which gives per cent of the poor in a population)

- **Poverty gap (PG)**

- Idea: **distance between poverty line and actual score for each measured unit below poverty line**
 - For each poor unit calculate the difference between the poverty line and unit score e.g. poverty line is 100\$, unit score is 40\$, **individual poverty gap** is 60\$
 - Averaging individual poverty gaps: calculate the average for all individual poverty gaps
- HC and PG are the simplest measures of poverty and there are a lot more

Measuring poverty: general procedure

1. WHAT

1. Choose **sphere of life** e.g. economic
2. Choose **dimension in selected sphere of life** e.g. income
3. Define dimension e.g. income in monetary units

2. WHO

1. Choose population e.g. Polish population
2. Choose human unit (individuals, groups etc.), e.g. households (attention for the problem of equivalence scales)

3. Measure dimension in selected human unit in selected population e.g. measurement of income in Polish population

4. Choose **poverty line** (standard of sufficiency in chosen dimension) e.g. 50% of the average income (relative), subsistence minimum or overall minimum (absolute)

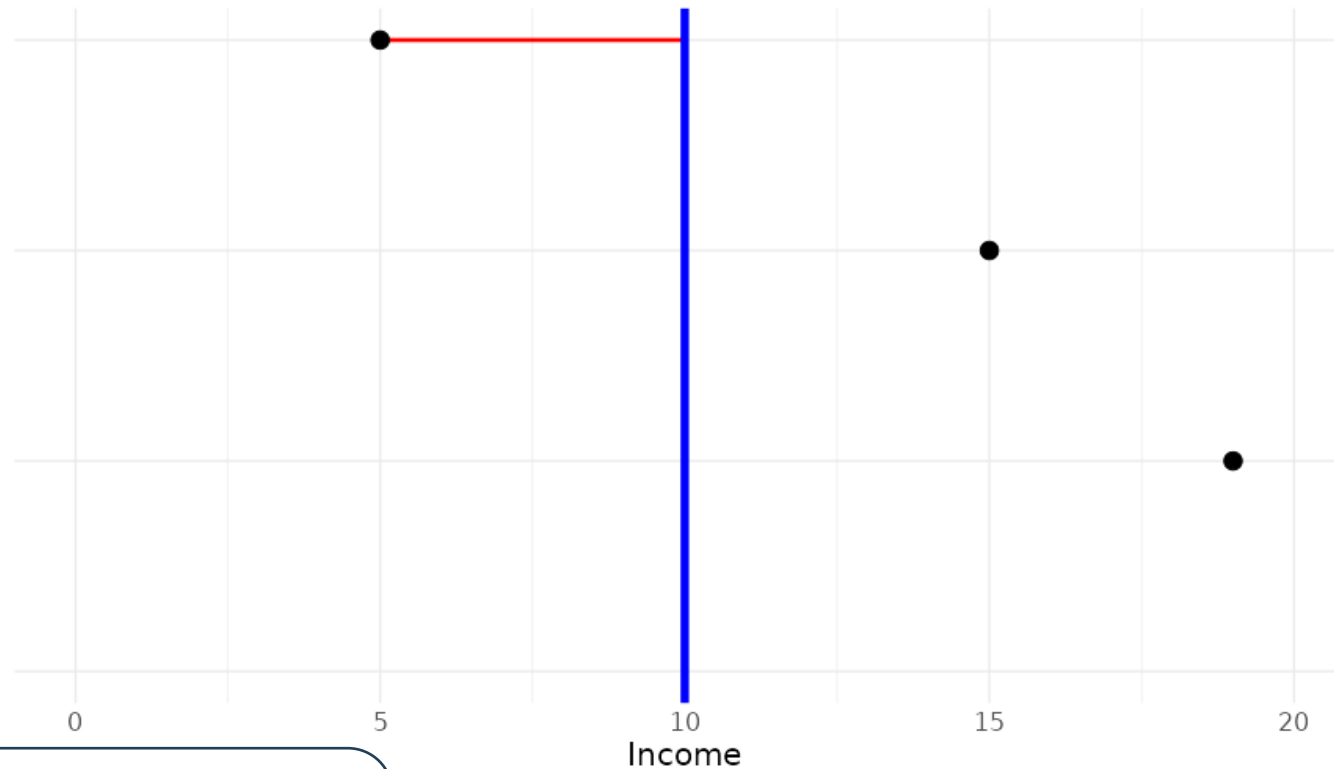
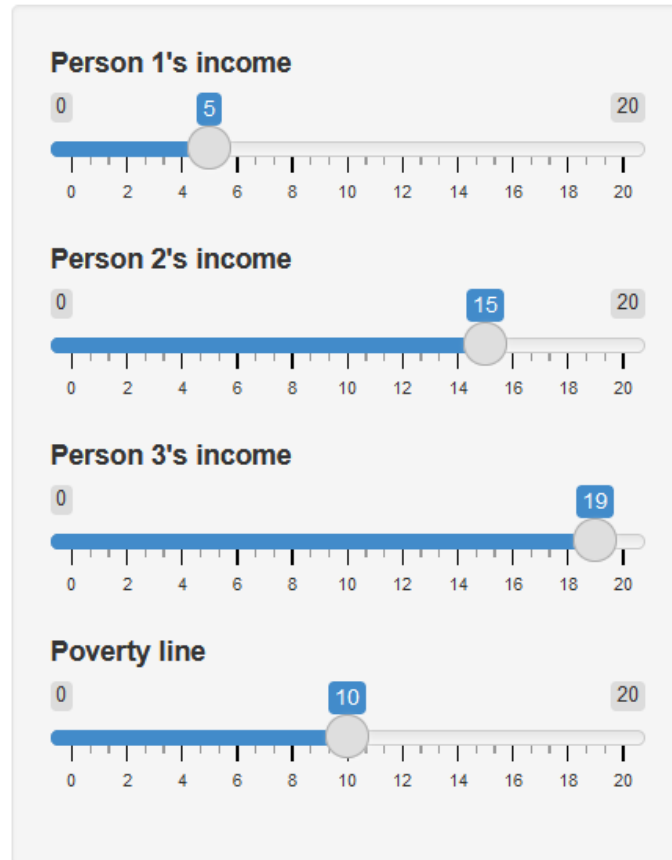
5. Choose **poverty measure** e.g. number of the poor divided by all measured units (headcount ratio)

6. Calculate chosen poverty measure, e.g. poverty headcount ratio is 10%

7. **Evaluate results** e.g. low poverty, high poverty or moderate poverty?

Practice measurement of poverty in [simple app](#)

Poverty Measurement



Headcount index: 0.333
Poverty gap: 5
Poverty gap index: 0.167
Squared poverty gap index: 0.083
Gini coefficient: 0.205

Four measures of poverty depending on the setting of data points for incomes and poverty line in the application.

Several problems with measurement of poverty

- **Hard to reach individuals and families** e.g. homeless people, families, children and people living in institutions
- **Problems with the blurred borders of household**
 - Adult children living independently but still supported by their parents (different households but sharing income)
 - Adults renting together the same flat, but not sharing income and consumption (the same address but not sharing resources)
- **Problems with intra-family distribution of resources:** every household below poverty line is considered to live in poverty, but
 - Parents can sacrifice their own needs for those of their children
 - Adult children living with older parents can prioritise their own needs over the needs of their parents
 - Grandparents can sacrifice their own needs for those of their grandchildren

What we have learnt? Summary

1. Poverty as a concept has many different definitions which recognise its multidimensional character
2. Paul Spicker's concept of poverty is based on 12 different meanings of poverty in three areas: material conditions, economic conditions and social relationship
3. ATD concept of poverty is based on three inter-related sets of dimensions: core experience, relational dynamics, privations, modified by five factors e.g. location, identity, timing and duration
4. There are many dimensions of life and many different units to measure deprivations e.g. economic poverty of men and women
5. To measure poverty in income or consumption there is a need of poverty line, and it may be obtained by absolute or relative approach
6. Poverty line set too high means that many non-poor households is counted as poor, and poverty line set too low means that many poor households is not counted living in poverty
7. Two or more poverty lines and two or more points in time create complex picture of more or less households in and out of poverty and more or less in poverty in shorter or longer periods
8. Procedure to measure poverty involves many steps with difficult choices to made
9. There are several problems with measurement of economic poverty, e.g. the borders of the households, intra-family distribution of resources, hard-to-reach populations, equivalence scales and more