

# EFR summary

Philosophy, FEB11020X

2024-2025



Lectures 1 to 5

Weeks 1 to 3

**Deloitte.**



## **Details**

**Subject:** Philosophy

**Teacher:** Frederik Van De Putte & Stefan Wintein

**Date of publication:** 21.03.2025

© This summary is intellectual property of the Economic Faculty association Rotterdam (EFR). All rights reserved. The content of this summary is not in any way a substitute for the lectures or any other study material. We cannot be held liable for any missing or wrong information. Erasmus School of Economics is not involved nor affiliated with the publication of this summary. For questions or comments contact [summaries@efr.nl](mailto:summaries@efr.nl)

---

# Philosophy – IBEB – Lecture 1, week 1

## What is Philosophy?

Philosophy is the systematic investigation into the foundational concepts and principles of any subject matter.

Philosophical methodology consists of structured methods of analysis::

- Conceptual Analysis
- Logic & Arguments

To illustrate these methods, we examine the **Utilitarian Principle (UP)**:

*“You should perform an action which, of all available actions, results in the greatest total sum of individual well-being.”*

## Why Study Philosophy?

### 1. Relevance to Business

- Philosophy helps in:
  - o Persuasive argumentation
  - o Writing clearly and systematically
  - o Analyzing and structuring complex problems. Notably, entrepreneurs and professionals (e.g., Damon Horowitz) emphasize philosophy as a valuable discipline.

### 2. Relevance to Economics

Economics is deeply intertwined with philosophical concepts. Utilitarianism, which underpins much of welfare economics, continues to shape economic policy decisions. Examples:

- COVID-19 Policies: Utilitarianism informed difficult policy choices (e.g., prioritizing ventilators, balancing lockdown measures).
- Climate Change: Utilitarian approaches propose fair emissions reductions based on well-being maximization.

### 3. Relevance to ESE Students

Philosophy is foundational for later courses like:

- Applied Microeconomics (Year 2)
- Collective Decisions & Voting Methods (Year 3)
- Political Economy (Year 3)

### 4. Philosophy is Fun

Besides academic and career relevance, engaging in philosophy is intellectually stimulating and enriching.

## Conceptual Analysis

Conceptual analysis seeks to clarify concepts by defining them through **Individually Necessary and Jointly Sufficient (INJS) conditions**. Examples of Conceptual Analysis:

- What is knowledge?
- What is fairness?
- What is freedom?

Philosophers ask "**What is X?**" to clarify concepts. To understand a concept, we:

1. Define it clearly
2. Establish how it relates to other concepts
3. Identify INJS conditions for its application

## INJS Conditions (Individually Necessary & Jointly Sufficient)

- **Individually Necessary:** Each condition must be present for X to exist.
- **Jointly Sufficient:** If all conditions are present, X must exist.

Example 1: "**What is a vixen?**"

**Definition:** *"x is a vixen if and only if x is female and x is a fox."* Being female & a fox is necessary and sufficient for being a vixen

Example 2: "**What is man?**"

Plato famously attempted to define a man as a "featherless biped", two

characteristics that distinguished humanity from other animals.

**Definition:** "x is a man if and only if x is biped and x is featherless."

## Epistemology

Epistemology is the branch of philosophy that systematically investigates the foundational concepts and principles that are at stake when we discuss the questions:

1. What is knowledge?
2. What can we know?
3. What are the best means to acquire knowledge?

### What is knowledge?

Three types of knowledge:

1. **Propositional Knowledge** ("John knows that Rotterdam is in the Netherlands.")
2. **Knowledge-How** ("John knows how to fix a tire.")
3. **Knowledge by Acquaintance** ("John knows Ann.")

### The JTB (Justified True Belief) Theory

A person (A) knows something (p) if and only if:

- p is true (**Truth condition**)
- A believes p (**Belief condition**)
- A is justified in believing p (**Justification condition**)

They are the INJS conditions for knowledge

### Testing JTB with Thought Experiments

A thought experiment (TE) typically presents an imagined scenario with the intention of eliciting an intuitive judgement about the (way things are in the) TE. The scenario will typically be designed to target a particular philosophical concept, such as morality, knowledge or the nature of the mind.

The response to the imagined scenario is supposed to tell us about the nature

of that concept in any scenario, real or imagined. Philosophers test a principle by comparing, for a TE:

1. What the principle says about the TE, with
2. What our intuitive judgement says about the TE.

When (1) = (2): the TE provides **evidence** for the principle.

When (1) not= (2): the TE is a **counterexample** to the principle.

Example: Broken Watch Thought Experiment

- Ann's watch stopped at 11:03 PM.
- At 11:03 AM, she looks at it and correctly believes it's 11:03.
- But she was just lucky!
- Intuition suggests Ann does not have knowledge, contradicting JTB.

This is a **counterexample** to JTB, showing it may need revision.

(Gettier (1963) argued JTB is incomplete and needs a fourth condition.)

### **Responses to Counterexamples:**

1. Revise (or reject) the principle.
2. Dispute the counterexample.
3. Bite the bullet (accept the principle despite intuition).

## Conceptual Analysis & the Aim of Philosophy

Philosophy aims for a systematic and unified view of the world by resolving inconsistencies in our thinking.

### Inconsistency

Your thinking about a subject matter S is inconsistent when the propositions that you believe about S are jointly inconsistent, i.e. when it is impossible that all these propositions are jointly true. *Example of Inconsistency:*

- Ann does not know it's 11:03 (intuition).
- Ann has a Justified True Belief that it's 11:03.
- If someone has a JTB, they should have knowledge.

→ **Inconsistency! One of these beliefs must be rejected or modified.**

## Reflective equilibrium

- Philosophy uses reflective equilibrium to refine our principles, seeking a balanced view between intuition and theoretical consistency.
- To avoid inconsistency, we need to realize which of our beliefs are inconsistent with each other, and decide which of our beliefs to reject.
- We use Conceptual Analysis to reach a reflective equilibrium

## The Utilitarian Principle & Conceptual Analysis

The Utilitarian Principle (UP) states:

*"The morally right action is the one that results in the greatest sum-total of well-being."*

UP: It is morally right for A to do h if and only if

1. h is an available action for A, and
2. h results in the greatest sum-total of well-being of all available actions.

Thus the UP formulates **INJS conditions** for a morally right action.

## UP is tested using thought experiments:

- **Lifeboat Scenario**

One person on Island A, five people on Island B.

Only one trip is possible.

UP says: Rescue the five!

Agrees with intuition.

- **Organ Harvesting Scenario**

Five people need organ transplants.

A healthy person (David) could be killed to save them.

UP says: Kill David!

Intuition says: That's wrong!

UP contradicts moral intuitions.

- **World Cup Scenario**

Bob is trapped but in no immediate danger.

Rescuing him interrupts the World Cup broadcast for millions.

UP says: Wait until the match ends.

Intuition says: Rescue Bob immediately!  
Another counterexample to UP.

## Breaking Down the Utilitarian Principle

To understand UP better, it is split into five fundamental principles:

- **Consequentialism** – Choose the action that results in the best outcome.
- **Welfarism** – Only well-being determines an outcome's value:
- **Weak Pareto Principle** – If everyone prefers outcome X to Y, then X is better.
- **Cardinal Comparability** – Well-being levels can be measured and compared.
- **Transitional Equity** – A trade-off in well-being is acceptable if equal.

## More Philosophy

Four major branches of philosophy:

1. **Metaphysics** – What is reality?
2. **Epistemology** – What can we know?
3. **Ethics** – How should we act?
4. **Logic** – How should we reason?

# Philosophy- IBEB - Lecture 2, week 1

## Conceptual Analysis & Arguments

### What is an argument?

- An ensemble of propositions. (“things that can be true or false”)
- One of the propositions is called the conclusion, the other propositions are called the premises.
- The premises are interpreted as offering reasons to believe or accept the conclusion. Example of an argument:



- John is a musician.
- Thus, John can read music.
- After all, all musicians can read music.
- Argument in standard form: First list the premises, then state the conclusion + indicate what is what. Example:
- All musicians can read music. John is a musician. Therefore, John can read music.

## What is a good argument?

Arguments in which the premises provide a good reason to believe or accept the conclusion.

- **An inductive argument:** the conclusion “follows from” the premises on the basis of frequencies / statistics / generalization. Example: Louise interviewed a large sample of Flemish college students and found out they speak both Dutch and French. Thus, all Flemish college students speak both Dutch and French.
- **An abductive argument:** The conclusion “follows from” the premises because it is a plausible explanation of those premises. Example: If there is a high demand for a certain good, then this good is expensive. Rental houses are very expensive in Rotterdam. So, there must be a high demand for houses in Rotterdam.
- **A deductive argument:** If the premises are true, then the conclusion must be true as well. Example: If the world is deterministic, then humans have no free will. The world is deterministic. Therefore, humans have no free will.

## What is a valid argument?

A deductive argument is called a valid argument:

1. The conclusion necessarily follows from the premises.
2. It's impossible that all premises are true while the conclusion is false.

**Logic** is the study of the (in-) validity of arguments.

### **Sound argument:**

- An argument is sound if the argument is valid and all its premises are true.
- Example:
- All musicians can read music.

- John is a musician.
- Therefore, John can read music.
- This Musician example is valid but not sound since Stevie Wonder cannot read music so premise 1 is false!
- **Enthymeme**: an invalid argument with suppressed premises that, when added, render the argument valid. Suppressed premises are implicitly accepted by a proponent of the argument. E.g Abortion
- Logic is concerned with validity, not with soundness. (Theology would try to see whether it is sound)

## Two ways to show validity:

1. Argue that if  $A_1, \dots, A_n$  are true, then B must be true as well (aka "**Semantics**")
2. Show that this argument is an instance of a valid argument form by applying a series of logically valid inference to  $A_1, \dots, A_n$  (aka "**Proof Theory**")

A semantic argument may proceed i.a. by means of a so-called **reductio (ad absurdum)**

**Reductio ad Absurdum**: proof / argument / form of reasoning whereby one shows that a certain assumption leads to a contradiction, and thus this assumption cannot be true.

## How to show invalidity?

**Counterexample** to an argument's validity: a situation in which the argument's premises are true and its conclusion false.

How to find counterexamples?

In the case of conceptual analysis: by referring to

1. real cases (empirical work)
2. potential situations (=thought experiments)

# When is an argument valid on formal grounds?

## Argument Forms

Modus Tollens

P1 If p, then q.

P2 Not q.

C Not p.

**Modus Tollens** is the (propositional) argument form of arguments such as Payoffs, Bankruptcy, and infinitely many others.

Those arguments are all valid in virtue of their form.

## Logical form

The logical form of an argument = what you get by abstracting from specific propositions, objects, properties, and relations in the argument, leaving only the logical terms in place: words such as "all", "some", "and", "not", "or", "if... then...", etc. Thus, you obtain the logical form by replacing all non-logical (denoting) terms (those terms that refer to events and objects in some external reality) with letters that function as variables. Types:

- **Propositional logic**
- **Predicate logic**

## Formal Validity and Logic

(Formal) Logic deals with arguments that are valid solely in virtue of their logical form, i.e. of the logical terms that occur in them.

But what are logical terms? Here's a (by far not exhaustive) list:

- **Propositional connectives:** and, or, if... then..., ... if and only if..., not
- **Quantifiers:** some, all, no
- **Modalities:** necessarily, possibly, sometimes, always, it is forbidden that, it is permitted that, ...

## The atomic propositional form

One obtains the atomic propositional form of an argument by replacing atomic propositions that occur in the argument with letters, using the same letter for atomic propositions that occur more than once.

## Validity of form

Atomic propositional form of Payoffs, Bankruptcy, and Hilary:

P1 If p, then q

P2 Not-q

C So, not-p

This form explains why these arguments are all **valid**.

More precisely, they are valid in virtue of their form and the standard (most common, classical, typical, ...) meaning of "not" and "if..., then...".

Some such forms: **Disjunctive Syllogism, Modus Ponens, Modus Tollens**

## Disjunctive Syllogism

Socrates and its valid atomic propositional form

P1 Socrates died of poison or was killed in an accident.  $\rightarrow p \text{ or } k$

P2 Socrates did not die of poison.  $\rightarrow \text{not-}p$

C So, Socrates was killed in an accident.  $\rightarrow k$

- Socrates is valid because it instantiates a valid form:  
For any propositions p and k that we substitute in this form, the resulting argument is valid.
- The (propositional) form of Socrates is called Disjunctive Syllogism:
  - $\alpha \text{ or } \beta. \text{ Not-}\alpha. \text{ So, } \beta.$
  - where  $\alpha$  and  $\beta$  are arbitrary (not necessarily atomic) propositions.

Disjunctive Syllogism is the name for a valid (propositional) argument form.

## Modus Ponens

Another well-known valid (propositional) argument form is **Modus Ponens**.

Modus Ponens:

P1 If  $\alpha$  then  $\beta$ .

P2 Moreover,  $\alpha$ .  
C So,  $\beta$ .

### Budget Cuts

P1 If the budget cuts are approved, then there will be a strike.  
P2 The budget cuts are approved.  
C There will be a strike.

Budget Cuts has Modus Ponens form:

$\alpha$ : The budget cuts are approved.

$\beta$ : There will be a strike.

This argument is valid in virtue of its Modus Ponens form.

To explain the validity of an instance of Modus Ponens, we do not need to resort to the meaning or internal structure of  $\alpha$  and  $\beta$ .

## Denying the Antecedent

### ≠ Modus Ponens

#### Division of Labour

P1 If we divide labour, then our efficiency goes up.  
P2 We do not divide labour.  
C Our efficiency does not go up.

#### Buying Goods

P1 If I buy new shoes, then my budget is fully spent.  
P2 I do not buy new shoes.  
C My budget is not fully spent.

From if  $p$ , then  $q$  and not- $p$ , it does not follow that not- $q$ !

#### Division of Labour

P1 Only if we divide labour, our efficiency will go up.  
P2 We are not dividing labour.  
C Our efficiency will not go up.

“Only if  $p$ , then  $q$ ” actually means: “if  $q$ , then  $p$ ”!  
(i.e.  $q$  cannot be true without  $p$  also being true.)

# Philosophy- IBEB -Lecture 3, week 2

## Introduction

### Utility Principle (UP) = Sum-ranking Welfarism + Consequentialism

- Consequentialism: An action should be performed if its outcome is better than any alternative action.
- Sum-ranking Welfarism: One outcome is better than another if the total individual well-being in the former is greater than in the latter.

## What is Well-being?

- **Optimism about Welfare:**

Welfare has increased since the 1960s (e.g., household purchasing power increased by 65%).

- **Questions:**

What are the hidden premises to make this a valid argument?

Do you agree/disagree with those premises? Why?

- **Well-being is Debatable:**

Statements about welfare are often imprecise and need rigorous argumentation.

- **Roger Crisp (Stanford Encyclopedia of Philosophy):**

Well-being is what is non-instrumentally good for a person.

In utilitarianism, well-being is the only moral requirement.

## Terminology & Distinctions

### 1. Content:

What is well-being, ultimately?

How do we compare well-being in different outcomes?

### 2. Structure:

Can well-being be represented in degrees, rankings, or numbers?

### 3. Subject:

Whose well-being matters? All living beings? All future beings?

## Well-Being: Terminology

- **Intra-personal Comparison:** A person's well-being in one outcome vs. another.
- **Inter-personal Comparison:** One person's well-being vs. another's.
- **Absolute Claims:** Statements about a person's well-being having a degree/level.
- **Instrumental vs. Intrinsic Goodness:**
  - Instrumental Good: Valuable as a means (e.g., money).
  - Intrinsic Good: Valuable in itself (e.g., dignity).

Theories of well-being are theories of what is **intrinsically good** for an individual, of what it is that makes something good.

## Theories of Well-being

### Preference Satisfaction (PS) Theory

A's well-being is greater in x than y if A prefers x over y.

### Hedonist Theory

A's well-being is greater in x than y if x provides more pleasure than y.

**Example:** The Calvinist (Hedonism vs. PS Theory)

A saves money instead of enjoying life.

Hedonism: Spending on enjoyment is better.

PS Theory: Saving is better if A prefers it.

### Capability Approach (Nussbaum & Sen):

Functionings (what people do) and Capabilities (what they can do)

### Nussbaum's List of Well-being Factors:

Bodily health, integrity, imagination, emotions, pleasure, practical reason, respect, play, etc.

## Subjective vs. Objective Theories:

Subjective: Well-being depends on preferences and pleasure.

Objective: Well-being depends on external factors beyond preferences.

## Objective Theories & Paternalism

**PS Theory:** Banning smoking reduces well-being if people prefer smoking.

**Objective Theory:** Banning smoking increases well-being based on health.

**Paternalism Debate:** The ultimate "judge" of what is good for someone is not the person themselves but rather someone.

*To refute objective theories, one should argue that only one's own preferences/pleasure/judgment should matter for one's well-being!*

**Mill's View:** The state should not force well-being upon people.

**Nussbaum's View:** Some external guidance is necessary.

## Problems with Subjective Theories

- **Mental Adaptation (Sen's Argument):**

Nelson Mandela was imprisoned but found pleasure in small things.

**Counterargument:**

Pleasure alone does not define well-being.

- **Experience Machine (Nozick's Argument):**

If pleasure is the only well-being measure, we should plug into a machine simulating pleasure.

**Counterargument:** Most people reject this, showing pleasure alone is insufficient.

- **Adapted Preferences:**

A prisoner may prefer staying in prison due to adaptation, but does this mean prison is better for them?

- **False Beliefs:**



If Alma prefers living in one city due to false beliefs, is that preference valid?

- **The Revised PS Theory of Well-being**

Outcome x is better for Alma than outcome y if and only if Alma would prefer x to y, if she were informed of all the empirical facts.

- **Compulsions**

Alma has two options:

(x) Meet her friends, but then she can't count the blades of grass.

(y) Stay in the park and count the blades of grass.

Because of her **compulsion**, Alma prefers y to x. Her preferences are fully informed.

- **Time-Sensitivity of Preferences**

Preferences change over time and the (Revised) PS theory is ambiguous as to which preferences it should be applied to.e.g. Angry preferences and Calm preferences

## Laundered preferences

### Preference laundering

Preference laundering is restricting, modifying, or affecting the preferences to be used as basis for judgements about well-being. Examples:

- **Angry Teenager:** to Alma's preferences that are "stable over time".
- **Self-Sacrifice:** to Alma's preferences that can be (dis-)satisfied during her life.
- **Grass Counting:** to Alma's preferences after she has received treatment, i.e. to the (counterfactual) preferences of a "mentally healthy version" of Alma

### Arguing about Welfare

Optimism about Welfare: Our welfare has increased significantly since the '60. That is, we notice that the purchasing power of a household has increased 65% on average.

This argument is...

- not valid as such, starting from any of the standard accounts of well-being
- valid on the hedonistic account if a rise in purchasing power means a rise in pleasure (regardless of other relevant factors)

- valid on a PS theory if everyone prefers to have more purchasing power (and this is all they prefer)
- valid on an objective theory if a rise in purchasing power instrumentally or intrinsically contributes to the well-being of individuals

# Philosophy- IBEB -Lecture 4, week 2

## Representing Well-Being

### 1. Ordinal Representations and Statements

- **Example: Representing Temperature**
  - Different valid scales (Celsius vs. Fahrenheit).
  - Similarly, well-being can have multiple correct representations.
- **Utility Functions Represent Well-Being**
  - A utility function assigns numerical values to alternatives to indicate well-being levels.
  - **Ordinal Representation:**
    - A utility function **correctly** represents an individual's well-being ordering if it **preserves rank order** (higher values mean better well-being).
    - **Multiple ordinal representations exist** (e.g.,  $u(x)$  and its strictly increasing transformations).
- **Strictly Increasing Transformations**
  - If  $v(x) = f(u(x))$  with a strictly increasing function  $f$ ,  $v$  is also an ordinal representation.
- **Ordinal Well-Being Statements**
  - Statements about an individual's well-being are **ordinal** if they remain true for any strictly increasing transformation of a utility function.
  - **Example:** "Ann's well-being in option A is greater than in B" is ordinal.
- **Key Takeaways:**
  - **Ordinal representations** capture only **ranking information**.
  - They do **not** capture differences in well-being levels.

## 2. Cardinal Representations and Statements

- **A Non-Ordinal Statement: Diminishing Marginal Well-Being (DMW)**
  - If well-being increases at a decreasing rate with income, this is **not** ordinal since it does not hold under all strictly increasing transformations.
- **Positive Linear Transformations**
  - A function  $v(x) = \alpha u(x) + \beta$  is a **positive linear transformation** and **preserves cardinal information**.
- **Cardinal Well-Being Statements**
  - A statement is **cardinal** if it remains true for all **positive linear transformations** of a utility function.
  - **Example:** "The difference in well-being between options A and B is greater than between C and D."
- **Key Takeaways:**
  - **Ordinal statements are always cardinal, but not vice versa.**
  - Cardinal representations **preserve differences and ratios** between well-being levels.

## Measuring Well-Being

### The VNM Utility Function

Von Neumann & Morgenstern (VNM) proposed a method for measuring well-being.

- **Analogy: Measuring Temperature**
  - Fixed points are used in defining a scale (e.g., Celsius scale uses freezing/boiling points of water).
- **VNM Utility: Defined using Lotteries**
  - Individuals rank lotteries with different probabilities of obtaining **best (c)** or **worst (m)** outcomes.
  - The *utility value of an option (u)\** is the probability at which a person is indifferent between that option and a lottery.
- **Key Takeaways:**
  - The **VNM utility function** assigns cardinal values to alternatives.
  - It assumes a **steady expansion** of probability from worst to best outcomes.

## Does VNM's Utility Yield a Cardinal Representation?

- **Axioms for Well-Being Orderings**
  - Completeness: All alternatives can be compared.
  - Transitivity: If A is preferred to B and B to C, then A is preferred to C.
  - **VNM Axioms:**
    - **Monotonicity:** A lottery with a higher probability of the best outcome is preferred.
    - **Continuity:** Every outcome is comparable to a lottery.
    - **Independence:** Replacing an outcome in a lottery with an equivalent lottery **does not change** preferences.
- **The Expected Utility Representation (EUR) Theorem**
  - If preferences satisfy VNM axioms, then a utility function **unique up to a positive linear transformation** can represent them.
  - **Controversy:** Some economists argue that **not all preferences conform to expected utility theory**.
- **Key Takeaways:**
  - VNM utilities **do not guarantee a perfect measure of well-being**.
  - They are **useful for decision-making under uncertainty**, but their status as cardinal well-being measures is debated.

## Well-Being vs Rational Choice Under Uncertainty

- **Rational Choice & Expected Utility**
  - According to VNM, a rational person **maximizes expected utility**.
  - **But is this the same as well-being?** Some argue it only measures decision-making behavior, not true well-being.
- **Utilitarianism & Well-Being Comparability**
  - Utilitarianism **requires well-being to be cardinal and comparable** across individuals.
  - Some argue VNM utilities **support this**, while critics (e.g., Weymark 2005) claim they only capture choices under uncertainty.
- **Key Takeaways:**
  - VNM utilities are **helpful for rational choice theory**.
  - Their use in measuring **actual well-being** remains controversial.

# Philosophy- IBEB -Lecture 5, week 3

## Aggregating Well-Being I - Comparable Well-Being

### Introduction

- Previous lectures covered individual well-being (content and structure).
- Well-being is represented in utility functions to determine social welfare by summing up individual utilities.
- Key question: Under what conditions is this sum a valid measure of overall well-being?

### Well-Being Information Types

Well-being statements can be:

1. **Ordinal**: Only ranking matters (e.g., x is better than y).
  2. **Cardinal**: Differences matter (e.g., x is twice as good as y).
  3. **Ratio Scale**: Proportions matter (e.g., x is five times better than y).
- **Transformations**:
    - **Ordinal**: Strict positive transformations.
    - **Cardinal**: Positive linear transformations.
    - **Ratio Scale**: Scalar transformations.

Different welfare functions require different well-being information.

### Social Welfare Functions (SWFs) & Informational Assumptions

- **SWF Definition**: A function ranking outcomes based on well-being distributions.
- **Assumption in this lecture**: Well-being gains/losses **are comparable across individuals**.
- Different SWFs depend on the **type of comparability assumed**.

# 1. Utilitarianism & Unit Cardinal Comparability

## The Utilitarian SWF

- **Utilitarianism ranks outcomes** based on total well-being:
  - $x \succ y \iff \sum u_i(x) > \sum u_i(y)$
- Utilitarianism relies on:
  - **P1:** Consequentialism
  - **P2:** Welfarism
  - **P3:** Weak Pareto
  - **P4: Unit Cardinal Comparability**
  - **P5:** Transitional Equity

## Comparability and Equity

- **P4: Unit Cardinal Comparability**
  - Well-being changes **within and between individuals** can be compared.
- **P5: Transitional Equity**
  - If one person's gain equals another's loss, outcomes are **equally good**.
  - **Utilitarianism does not account for equality**—only total well-being matters.

## Cardinality Alone Is Not Enough

- Example: Ann & Bob's holiday (Canada vs. Thailand).
- Different **cardinal representations** can lead to **contradictory rankings** under utilitarianism.
- **Conclusion:** Cardinality alone is insufficient; **well-being must be on a common scale**.

## Unit Cardinal Comparability

- Statements about well-being must **hold under identical positive linear transformations** across individuals.
- **Key Property:** Comparisons of **total well-being** are unit cardinal comparable.

## Full Cardinal Comparability

- **Stronger assumption:** Requires **one common** transformation for all individuals.
- **Key Question:** Is full cardinal comparability necessary for utilitarianism?

## P4 Revisited

- **Utilitarianism assumes** unit cardinal comparable representations.
- **Debate:** Can **VNM utility functions** provide a "same scale measurement" of well-being?

## Utilitarianism & Equality

- **Utilitarianism does not care about equality**—only **total well-being** matters.
- **Criticism:** A society where **everyone is moderately well-off** may be better than an elite thriving while others suffer.

## 2. Egalitarianism & Full Cardinal Comparability

### Egalitarianism Definition

- Advocates **equality of well-being** rather than just maximizing total well-being.
- **SWFs should account for inequality** in addition to sum totals.

### Simple Egalitarianism

- Defines **inequality (I)** as the difference between individuals' well-being.
- **Egalitarian Welfare Level:**  $E(x) = \sum u_i(x) - 2 \cdot I(x)$
- **Conclusion:** Prefers **more equal distributions** of well-being.

### Egalitarianism & Levelling Down

- **Levelling Down Definition:** A policy is better if it reduces inequality, **even if no one benefits**.
- **Criticism:** Levelling down can **harm everyone without benefiting anyone**, which **many philosophers reject**.

## Equality-Respecting SWFs

- **Egalitarian SWFs** prioritize equality.
- **Challenge:** Avoiding the **levelling down problem** while maintaining fairness.

## 3. Prioritarianism & Full Ratio Scale Comparability

### Prioritarianism Definition

- **Gives priority** to increasing well-being for those who are worse off.
- **Core principle:** A unit of well-being **matters more** for the worse-off than for the better-off.

### Simple Prioritarianism SWF

- Uses a **concave function** (e.g., square root of well-being).
- **Effect:** Benefits to the worse-off **contribute more** to overall welfare.

### Concavity & Priority

- **Concave functions** reflect diminishing marginal well-being.
- **Prioritarian SWFs** are:
  - **Equality-respecting** (favoring the worse-off).
  - **Not subject to levelling down.**
- **Requires full ratio scale comparability—stronger assumptions than utilitarianism.**

## 4. Rawlsian SWFs & Ordinal Comparability

### Rawls' Difference Principle

- **Social inequalities should benefit the least advantaged.**
- **Applied to well-being:** Maximize the **worst-off person's** well-being.

### Basic Rawlsian SWF (BR)

- **Ranks outcomes based on the minimum well-being level:**  $x > y$  iff  $\min(u_A, u_B)_x > \min(u_A, u_B)_y$  \text{ iff } \min(u\_A, u\_B)\_x > \min(u\_A, u\_B)\_y



- **Violates Strong Pareto** (can treat unequal outcomes as equal).

## Comparison to Other SWFs

- **Does not allow levelling down.**
- **Equality-respecting.**
- **Requires only ordinal comparability** (less information than Prioritarianism).

## References

Napolitano, G (2025), Philosophy\_Lecture 1.pdf. Retrieved from:  
<https://canvas.eur.nl/courses/47675/files/100418799?wrap=1>

Napolitano, G (2025), Philosophy\_Lecture 2.pdf. Retrieved from:  
<https://canvas.eur.nl/courses/47675/pages/lecture-2-logic-and-arguments-wed-05-03-11-00-12-45-m2-03-sorbonne>

Napolitano, G (2025), Philosophy\_Lecture 3.pdf. Retrieved from:  
<https://canvas.eur.nl/courses/47675/pages/lecture-3-the-content-of-well-being-mon-10-03-13-00-14-45-erasmus-aula>

Napolitano, G (2025), Philosophy\_Lecture 4.pdf. Retrieved from:  
<https://canvas.eur.nl/courses/47675/pages/lecture-4-the-structure-of-well-being-wed-12-03-11-00-12-45-m2-03-sorbonne>

Napolitano, G (2025), Philosophy\_Lecture 5.pdf. Retrieved from:  
<https://canvas.eur.nl/courses/47675/files/100547840?wrap=1>

