

**PH458**

# **The Precautionary Principle**

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# Introduction

## Doing and allowing

- *Inter alia*, moral philosophers are concerned about the differences, if any, between 'doing harm' and 'allowing it'.

### **Example:**

Drowning someone **vs.** allowing someone to drown.

- *Consequentialists* are likely to say that such pairs are not different. *Deontologists* are likely to disagree.
- The former emphasise that both doing and allowing lead to the same consequence and hence are equally good or bad.
- The latter weighs doing much more heavily than allowing.

## Action and inaction

- Sometimes harm occurs because of an action. But harm can also occur because of inaction.

### **Compare:**

The death of people by: (1) 'flipping a switch' (Germanwings pilot) or (2) 'not flipping a switch' (Helios Airways engineer).

- Arguably, the doing vs. allowing and action vs. inaction distinctions sometimes cut across each other.

**Example:** spoiling a play by not turning up (doing by inaction) vs. cancelling charitable donation (allowing by action).

## Uncertainty and harm

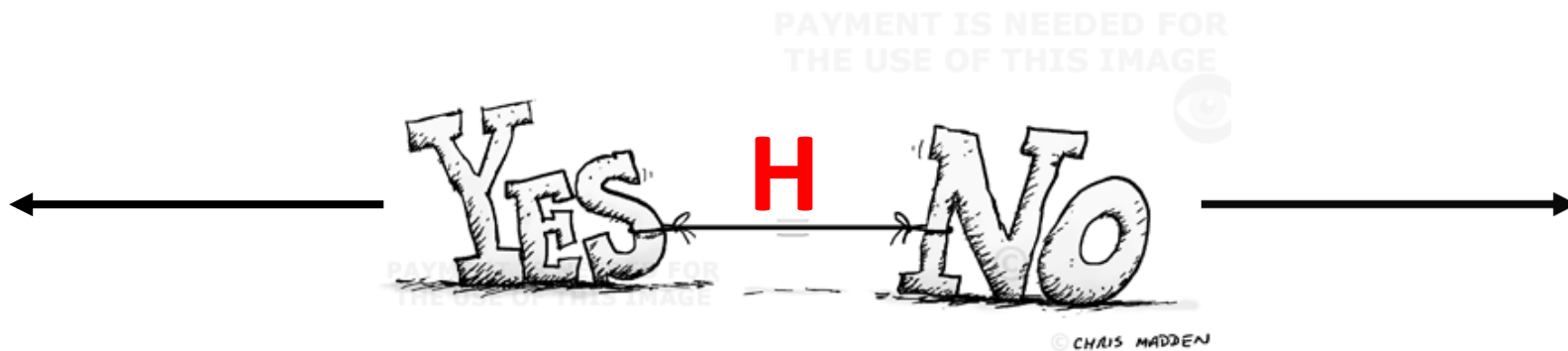
- Arguably then, when inaction or a specific action leads to harm, it is morally right to act so as to impede the harm.
- Up to now, we have assumed that (via action or inaction) harm is guaranteed to ensue unless something is done.
- But what happens in cases where there is uncertainty?
- Under what conditions should we act when there is some (perhaps unquantifiable) risk of harmful effects?
- The *precautionary principle* is designed to deal with precisely such cases.

# The Precautionary Principle

# Evidence and uncertainty

- A strict increase in evidence generally (but not always) reduces uncertainty.

*Example:* Gravity wave experiments from 60s until today.



## Uncertainty: Range

- Another important aspect of uncertainty in this context is what it ranges over.
- Uncertainty in relation to:

(a) whether effects are harmful?

**Example:** The claim 'vaccinations compromise the immune system'.

(b) if harmful, how likely are they to occur?

**Example:** A 2°C increase in global temperatures by 2080.



## A generic version

- Let us start with a generic version:

*Where there is uncertainty regarding potentially dangerous outcomes, precautions can (or must) be taken.*

- Intuitively captured by the proverb: ‘Better safe than sorry’.
- The principle enjoys wide appeal. For example, it is included in the Society for Conservation Biology Code of Ethics:

“3. Recognize that uncertainty is inherent in managing ecosystems and species and encourage application of the precautionary principle in management and policy decisions affecting biodiversity”. [from <https://conbio.org/> ].

# Uncertainty should not mean inaction

- **Key idea:** Uncertainty must not always lead to inaction.

Certainty

Uncertainty



# Applicability

- There are various cases where the principle may apply:
  - \* Climate change
  - \* Driverless cars
  - \* Fracking
  - \* Medical procedures and drugs
  - \* Social experiments

## The weak version

- On this reading, PP seems to leave it open whether to act:  
*In the face of uncertainty regarding potentially dangerous outcomes, precautions **can** be taken.*

Alternatively:

*Where there is such uncertainty, it should not be used to justify against the taking of precautions.*

### **1992 Rio Declaration on Environment and Development**

“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall be not used as a reason for postponing cost-effective measures to prevent environmental degradation” (Article 15).

## The weak version in action

- The weak PP is meant to **block** inferences of the form:

There is insufficient evidence.

∴ There is no reason to do something (e.g. regulate).

∴ There is reason to do nothing.



Concrete example:

There is insufficient evidence whether there will be a 2°C increase in average global temperatures.

∴ There is no reason to take any measures.



*NB:* The inference is inductive. The conclusion's truth is thus not guaranteed, i.e. there may be reason to do something.

## The strong version

- On this reading, *PP* demands that action be taken:

*Where there is uncertainty regarding potentially dangerous outcomes, precautions **must** be taken.*

### UN World Charter for Nature

“Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed”

<http://www.un.org/documents/ga/res/37/a37r007.htm>

## The strong version in action

- The strong PP is meant to prescribe inferences of the form:

Insufficient evidence whether  $X$  is harmful and/or likely.



∴ There is reason to take precautions against  $X$ .

**NB:** Reasons are here taken to motivate obligations.

- Note that the inference is once again inductive! The conclusion's truth is thus not guaranteed.
- If there is no guarantee whether to take precautions, what can we do to get as close to it as possible?

## More and less demanding versions

- “(1) If there is **some scientific evidence** that an activity **leads to an irreversible environmental harm**, then an alternative should be **substituted for that activity if feasible**.

(2) If a **scientifically plausible mechanism** exists whereby an activity **can lead to a catastrophe**, then that activity should be **phased out or significantly restricted**.

(3) If it is **possible** that an activity **will lead to a catastrophe**, then that activity should be **prohibited**.” (Steel 2013: 327).

knowledge condition: **red**

harm condition: **green**

precaution: **blue**



# The (Triviality or Incoherence) Dilemma

# The dilemma

- Sunstein (2001; 2005) puts forth the **dilemma objection**:

*EITHER*

*PP* is given a weak formulation in which case it says something *trivial*

*OR ELSE*

it is given a strong formulation in which case it says something *incoherent*.

- Similar critiques appear in Goklany (2001), Graham (2001) and Manson (2002).

## Horn 1: Triviality

- To be accused of triviality usually means to be accused of being *trivially true*.
- The weak *PP* is **trivial** if it *merely asserts* that we *might* take precautions in cases where we lack full certainty.
- After all, what it says seems tantamount to a tautology:

### Compare:

(1) In cases of uncertainty, either take precautions or don't.

(2) In most cases, either P or not-P.

## Horn 2: Incoherence

- To be accused of incoherence usually means to be accused of issuing *some contradictory judgments*.
- The strong *PP* is **incoherent** if it asserts that we should take precautions in cases that may lead to significant harm.
- Why? Precautions sometimes involve actions that may lead to significant harm. What do we do then?
- In such cases, the strong *PP* seems to turn against itself. Its application forbids its own application. As Sunstein notes:  
  
“The real problem is that the principle... forbids all courses of action... It bans the very steps that it requires. (2005, p. 26).

## A rival account

- **Cost-benefit analysis:** Construed as a decision procedure, it makes recommendations on the basis of costs and benefits.
- Such an approach puts an emphasis on estimating the costs and benefits of alternatives.

*Example:* Such analyses may counsel against a hefty GHG emission reduction if it leads to a greater overall cost.

# Steel's Defense of the Principle

## Redrawing the distinction

- Steel (2013) defends *PP* against the dilemma. The first step in *PP*'s rehabilitation is a redrawing of the distinction.
- Instead of weak and strong versions, Steel urges us to endorse meta and object-level versions of *PP*.
- To be precise:

**weak version**      **—————>**      **meta-level PP**

**strong version**      **—————>**      **object-level PP**

- He then goes on to defend both of these levels.

## The *PP* as a meta-rule

- To defend the *PP* meta-rule (*MPP*) against triviality, Steel first points out that it is not a fully-fledged decision procedure.
- Rather, what it does is constrain the range of permissible decision procedures.

*Any decision procedure must be such that it does not require scientific certainty before action can be taken.*



## The substantive-ness of the meta-rule

- We can still ask: Is the *MPP* empty?
- Steel argues ‘NO’ on the basis of cases where *MPP* contradicts specific decision-making rules.

“... MPP conflicts with any decision procedure that makes premises about probabilities of outcomes a prerequisite for justifying action... when used as a method for deciding whether a proposed action is justifiable, cost–benefit analysis often has precisely this feature” (324).

**NB:** Steel stresses that the conflicting decision-making rules at issue are ‘actually advocated or used’.

## The *PP* as an object-rule

- To defend the *PP* object-rule (*OPP*) against incoherence, Steel first points out that there are various versions of it.

**NB:** Recall, the earlier list with varying levels of knowledge, harm and precaution demanded.

- Incoherence goes away, he argues, if we take into account proportionality. This breaks down into two principles:

**Consistency:** Precautions should not be excluded by the *same* version of *PP*.

**Efficiency:** Precautions should aim to minimize a danger while keeping negative side effects to a minimum.

## Example: Carbon tax scheme

- Steel demonstrates this approach with some examples.

“In the case of a carbon tax, for example, consistency would demand that the tax not be so high or introduced so abruptly as to create an economic catastrophe, and efficiency would demand that restrictions be designed to achieve as much reduction as possible at the least cost. Harmful economic effects of a carbon tax could be minimized by using the proceeds of the tax to lower other taxes and to provide economic assistance to low income individuals who would be most adversely impacted by rising energy costs” (330).

- How does the recent introduction of T-charge in London fare in relation to this kind of evaluation?

# Further Critiques

## The flexibility of the principle

- If left sufficiently open-ended, *OPP* will issue judgments that are open to interpretation.
- Alternatively, if there are different versions of *OPP*, it may not be clear which version to use on each occasion.

# The status quo weapon of choice

- The precautionary principle can also be employed to preserve the status quo.

## **Example:**

In light of uncertainty about child welfare, it may be argued that children should not be brought up by same-sex couples.

*NB:* On the supposition that such uncertainty exists.

- Again, unless PP is pinned down, it is always liable for manipulation (in this case to preserve the status quo).

The End