

# Are all plausible versions of the precautionary principle trivial?

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## Abstract

The precautionary principle advocates a “better safe than sorry” approach when confronted with serious yet scientifically uncertain threats to the environment or public health. In the wake of COVID-19, use of the principle will inevitably gain policymaking prominence out of a desire to prevent future pandemics, as seen with Swine Flu (H1N1). Yet, critics such as Clarke (2005) have criticised the principle, arguing that all plausible versions are trivial. This paper defends the precautionary principle against Clarke’s objection, insofar as it can be understood as a non-rigid principle. I propose strong versions are best understood under non-rigidity, which presupposes a normatively pluralist framework for policymaking. This avoids Sunstein’s (2005) “precautionary paradox”. I reconstruct Clarke’s (2005) “dilemma objection”, then argue a non-rigid strong version is both plausible and non-trivial, finally considering policy implications. I adopt normative pluralism and assume no single moral principle subsumes all others.

## 1 Introduction

This essay defends the precautionary principle against Clarke's (2005) claim all plausible versions are trivial, insofar as it can be understood as a *non-rigid* principle. I propose strong versions are best understood under non-rigidity, which presupposes a normatively pluralist framework for policymaking. This avoids any "precautionary paradox" (Sunstein 2005a: 26). The precautionary principle advocates a "better safe than sorry" policy approach when confronted with "serious yet scientifically uncertain threats to the environment or public health" (Steel 2013: 322). A moral principle  $p$  is rigid iff  $p$  applies to all moral choice situations, and for every other moral principle  $q$ ,  $p$  overrides  $q$  or vice versa or  $p$  and  $q$  yield identical verdicts;  $p$  is non-rigid iff it is not rigid (Sandin & Peterson 2019: 37). After outlining the methodological framework (§1), I reconstruct Clarke's (2005) "dilemma objection" (§2), then argue a *non-rigid* strong version is plausible (§3) and non-trivial (§4), finally considering policy implications (§5). I adopt normative pluralism and assume no single moral principle subsumes all others.

## 2 Methodological Preliminaries

Interpretations of the precautionary principle (PP henceforth) can broadly be categorised as follows (Ahteensuu & Sandin, 2012):

- (i) *action-guiding*: determining a course of action (Sunstein 2005a, Clarke 2005);
- (ii) *epistemic*: specifying an evidence threshold validating actions (Randall 2011);
- (iii) *procedural*: concerning the best way to reach decisions (Steel 2013);
- (iv) *integrated*: elements of (i)-(iii) (Hartzell-Nichols, 2013).

Termed the "dilemma objection" (Steel 2013: 322), the charge "all plausible versions are trivial" derives from an action-guiding distinction between "strong" and "weak" PPs. "Strong" versions emphasise the need for *action*, namely the Wingspread Principle (SEHN 1998), whereas weak versions contend uncertainty is no reason for *inaction* (alternatively, action is permissible), notably the 1992 UN Rio Declaration. I appeal to the soundness of the dilemma objection from within this "strong" (precaution "should" occur) and "weak" (precaution "could" permissibly occur) framework.

### 3 The Dilemma Objection

Clarke’s (2005: 121) “dilemma objection” makes two claims. He initially criticises weak PPs as trivial, his implicit premises (W1, W2) and weak conclusion (WC) reconstructed below:

*W1. Potential harm:* It is permissible to take precautionary action to avoid potential harm.

*W2. Unquantifiability:* There is decision-theoretic uncertainty or ignorance of whether an action will cause harm.

*WC. Trivial:* Weak PP offers no positive policy guidance.

Clarke then condemns strong PPs as implausible (reconstructed as S1.1, S1.2, S.2 yielding strong conclusion SC):

*S1.1 Potential harm:* Policy *should* take precautionary action to avoid potential harm.

*S1.2 Potential harm:* Policy *should not* take precautionary action if doing so entails potential harm.

*S2. Unquantifiability:* There is decision-theoretic uncertainty or ignorance of whether taking precaution or not taking precaution will cause harm.

*SC. Paradox:* Strong PP implies taking precautions and not taking precautions is required.

“All plausible versions are trivial” can therefore be dissected into whether a conception is plausible or implausible, trivial or non-trivial (Figure 1).

	<u>Plausible</u>	<u>Implausible</u>
<u>Trivial</u>	Clarke’s Weak PP (WC)	-
<u>Non-Trivial</u>	<b>Non-rigid Strong PP (proposed)</b>	Clarke’s Strong PP (SC)

*Figure 1. Action-guiding PP matrix*

Refuting the soundness of Clarke’s position on strong PP only, I argue strong PP is best understood as non-rigid. Consequently, strong PP becomes plausible and non-trivial.

Previously, Sandin and Peterson (2019: 36) argued PP might be understood as non-rigid. However, their procedural “general guideline from which specific rules...can be derived” offers limited insight into action-guiding objections (*Ibid.* 38). Divergently, I apply non-rigidity to the action-guiding “strong-weak” distinction inextricable from the dilemma objection, constituting:

Rigid strong PP: precaution *should always occur* given unquantifiable risk, unless precaution also has unquantifiable risk of harm.

Rigid weak PP: precaution is *always* permissible given unquantifiable risk.

Non-rigid strong PP: precaution is *advocated* given unquantifiable risk, yet does not override all other moral principles in such policy scenarios.

Non-rigid weak PP: precaution is *sometimes* permissible given unquantifiable risk, yet can be overridden by other moral principles.

Under non-rigidity, note a distinction between “advocated (hence permissible), but sometimes subservient” and “sometimes impermissible”. We might reframe non-rigid strong PP as offering *pro tanto* justification, which “needs to be balanced against other principles before a moral conclusion can be reached” (*Ibid.* 36). Non-rigidity hence presupposes normative pluralism, insofar as PP may be subservient to other moral judgements if they make a stronger case.

I first turn to the left column of the matrix: plausibility.

#### 4 The Precautionary Principle is plausible

For Clarke and Sunstein, strong PP appears implausible because its premises produce a logical contradiction: there is unquantifiable risk from acting and not acting, thus we must do *x* and we must not do *x*. Sunstein points to genetically modified (GM) foods, nuclear power and arsenic in water. Each has “threats of harm (not fully proven)” yet regulation “might well deprive society of significant benefits, and hence produce serious harms” (Sunstein 2005b:3). PP accordingly “bans the very steps that it requires”, appearing “paralysing” not protective (Sunstein 2005a: 26, 34).

However, this “ $x$  and not  $x$ ” paradox is only derived if strong PP is interpreted as “rigid”. If so, PP *always* acts instrumentally, which seems conducive to constructing examples where PP “renders counterintuitive implications *because there are other considerations*” indubitably relevant (Sandin & Peterson 2019: 39, emphasis added). Perhaps GM crops expose consumers to a rare health risk yet could feasibly eradicate widespread malnutrition in a region of food scarcity. Appeals to alternative “non-rigid” moral principles—equity or beneficence (Beauchamp & Childress, 2001)—might speak against precaution.

Viewed in this light, Sunstein’s examples actually speak in favour of understanding strong PP as non-rigid. By definition, a non-rigid moral principle is not decisive in all moral choice situations, therefore consideration of other moral principles—normative pluralism—may be required to determine action. The point here is not which alternative principle is salient, or the ideal balancing process, but once considered alongside alternative principles a non-rigid strong PP no longer offers *ultimate* justification of outcomes. The strong conclusion might now suggest “we must sometimes do  $x$  and we must sometimes not do  $x$ ”. There ceases to be any logical contradiction, thus non-rigid strong PP is plausible.

A foreseeable objection contends strong PP understood non-rigidly collapses into weak PP. To “*balance* [PP] against other non-rigid principles” arguably indicates precaution is permissible, not directly instrumental (Sandin & Peterson 2019: 37). Meanwhile, strong PP remains implausible given its bolder claim precaution and not taking precaution are “not merely permitted” but “required” (Steel 2013: 322).

In practice, this objection loses its force. Consider potential non-rigid S1 and W1 formations:

*NS1. Potential harm:* Policy should take **reasonable** precautionary action to avoid potential harm, **on balance with other relevant principles**.

*NW1. Potential harm:* It is sometimes permissible to take **reasonable** precautionary action to avoid potential harm **on balance with other relevant principles**.

Certainly, there is scope to criticise the illusive process of balancing competing claims and what constitutes “reasonable”. Nonetheless, the “strong-weak” distinction remains meaningful. NS1 might suggest we “should” ban GM foods, consistently allowing favouring beneficence

concerns if they are perceived to outweigh precautionary arguments. NW1 only suggests we “could” allow precaution amongst other principles. Non-rigid strong PP is distinct from weak, and avoids any precautionary paradox.

Further objections brand the “strong-weak” spectrum misleading, falsely presenting “principles operating at the same level and along a single dimension, from permissive to strict” (Steel 2013: 326). Steel, akin to Sandin and Peterson, explicitly frames his objection in procedural terms: his “meta” PP “does not constitute a rule in its own right for selecting among alternative[s]” (*Ibid.* 324). However, this risks making a category mistake (Magidor, 2019), effectively talking past action-guiding PPs by articulating a procedural PP. An imperfect analogy might be criticising a foul in rugby by applying football’s rules: it may be worthy of criticism, but to be valid must be judged against the rules of its own game. The proposed distinction between non-rigid strong and non-rigid weak PPs avoids obfuscating action-guiding methodology.

## 5 The Precautionary Principle is non-trivial

I now argue *non-rigid* strong PP is (i) substantive and (ii) distinct, hence non-trivial. This charge is less contentious, given “dilemma” objectors generally understand “stronger” PPs as versions not vacuous or devoid of normative content (Sunstein 2005a: 18).

Nonetheless, concerning (i) Peterson (2007) presumes only strict “if this, then that” rules can have normative force, and consequently be action-guiding (Peterson 2007: 306). Presumably, the strictness of non-rigid PP is compromised by appealing to other ethical judgements, insofar as it does not offer universal judgement when confronted with unquantifiable risk.

A non-rigid strong PP can have substantive normative force nevertheless. Accepting “sometimes there are other considerations... more relevant to the case at hand” (Sandin & Peterson 2019: 39) essentially concedes non-rigid PP is one of many reasons we might consider a policy appropriate. A proposal to ban “wet markets” might be supported by strong PP, given unquantifiable risk of a global pandemic otherwise. Simultaneously, arguments citing animal cruelty and the threat to endangered species might contribute to an overlapping consensus endorsing a ban. Consequently, it is not by virtue of the pandemic alone (a non-rigid

precautionary approach) that wet markets are necessarily banned. Yet, irrespective of that fact, each argument seems to have substantive, meaningful force contributing *pro tanto* to the decision. Despite not offering a universal judgement, non-rigid PP can make a substantive non-trivial claim.

Conversely, objectors may surface cases where non-rigid PP seems to make no (ii) distinct claim, hence is trivial. Consider Sunstein's (2005b: 4) pharmaceutical example. Strong PP might sometimes advocate extensive precaution in pharmaceutical trials with unquantifiable risk to humans, but sometimes prohibit this given potential harm from rescinding the drug's benefits. Once non-rigid, PP permits simultaneous appeal to non-rigid principles non-maleficence (avoid possible harm), and beneficence (an obligation to help others) (Beauchamp & Childress, 2001). Pro-regulatory non-maleficence could be deemed to outweigh the pro-regulatory argument from PP. Equivalently, beneficence might outweigh strong PP against such extensive regulation. Non-rigid PP seemingly offers no distinct claim.

In response, a "precautionary" outcome established without explicit appeal to PP does not render PP indistinct, but perhaps *redundant*. Non-rigid strong PP may offer limited impetus to "tip the balance" between alternative non-rigid principles. However, to imply this equates to triviality obfuscates PP's overall distinctness, extensively established in the literature. Validly, John (2007: 221) elucidates PP's emphasis on "serious or irreversible damage" concerning "special bad outcomes", contrary to "any damage" (which might come under non-maleficence). On a practical level, "precautionary approaches emphasise longer time horizons...and more uncertain effects" than other assessments (Hourdequin 2007: 346), characterising "how many ripples in the pool [analysts] should ...investigate" (Graham & Wiener 1995). Non-rigid strong PP retains the distinct claim of PP in expanding the range of policy outcomes considered, therefore is non-trivial.

## 6 Policy Implications

Clearly, a PP which presupposes normative pluralism requires a balancing method to be agreed upon in practice. Uncertainties need communicating concretely where possible (such as predictions of sea level rise). Yet, this may be a challenge for science rather than philosophy:

to better define plausible possibilities, rather than altering the formulation or justification of PP. Currently, the *de minimis* principle offers partial guidance, yet is imperfect (see Peterson 2002). One particular benefit of non-rigidity contends PP “need not be fixed across the different domains of applied ethics” (Sandin & Peterson 2019: 37). Non-rigid interpretations might offer different guidance to moral quandaries faced by biomedical researchers than to engineers, enabling wide applicability.

## 6 Conclusion

Ultimately, this essay has articulated how strong versions of the precautionary principle understood under non-rigidity can refute Clarke’s (2005) dilemma objection. Because non-rigidity presupposes normative pluralism, strong PP shifts from being non-trivial yet implausible under his rigid interpretation, to becoming non-trivial and plausible. There remain questions concerning practical policy guidance, however this challenge invites input from policymaking and science, to complement philosophy.



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