

# The Deduction of Valid Ethics Using Praxeology

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[Note: This is an early draft, lacks explication, notation can change etc.]

**Definition 1.** Action  $a \in \mathbb{A}$ .

**Definition 2.** Future sequence of events  $s \in \mathbb{S}$ .

**Definition 3.** Presupposition of an action  $P(a) \subseteq \mathbb{S}$ .

**Definition 4.** Actions on a sequence of events  $A(s) \subseteq \mathbb{A}$ .

**Definition 5.** Sequences where action  $a$  is chosen:  $S(a) = \{s \in \mathbb{S} \mid a \in A(s)\}$ .

**Definition 6.** Action is conscious;  $P(a) \subseteq S(a)$ .

**Definition 7.** All action presupposes some empirical (uncertain) means of action;  $P(a) \neq S(a)$ .

**Definition 8.** Action is impossible if the presupposition of it is in contradiction with reality. Formally, action  $a$  on  $s \in S(a)$  is impossible iff  $s \notin P(a)$ .

**Example 1.** A sequence of events  $s$  where someone acts ( $a$ ) with the presupposition of having the ability to fly by only flapping his arms, and then fails at flying, contains an impossible action;  $s \notin P(a)$ .

**Definition 9.** Action is impossible in principle iff  $P(a) = \emptyset$ .

**Definition 10.** Action is continuous. It is valid to treat any two actions as one. Composition of presuppositions:  $P(aa') = P(a) \cap P(a')$ .

**Definition 11.** Mutually impossible action (conflict between actors) is action  $\prod_k a_k$  such that  $\bigcap_k P(a_k) = \emptyset$ .

**Proposition 1.** *The composite action of conflicting actions is impossible in principle. In simpler terms: some party of a conflict will in all outcomes have had an incorrect presupposition for their action. Proof is trivial.*

Any ethical claim can be presented in the form of "Such-and-such actors should choose to act in such-and-such way."

The action of making a claim presupposes the possibility of its propositional content. The proposal of any ethical claim therefore presupposes that 1) all of the actors considered have the possibility to understand the prescription meant for them, and that 2) all of the actors considered have the possibility to act according to the prescribed action. Let us call these the two praxeological a-priori axioms of ethics. Attempting to propose an ethical claim contrary to these axioms would result in a performative contradiction. Such a proposition would be absurd and to be discarded by all rational thinkers.

**Definition 12.** The set of action that fulfills the first axiom (actor-prescribable action) is denoted by  $\mathbb{A}_H \subseteq \mathbb{A}$ ,  $A_H(s) = A(s) \cap \mathbb{A}_H$ . Later such action is simply called human action.

The second axiom prevents any ethical claim allowing impossible action. Universal ethical theories must forbid that which they can not allow, because leaving the status of some ethical claims undefined would contradict universality.

**Definition 13.** Any universal ethical theory forbids any sequence  $s$  of impossible human action. Sequence  $s$  is forbidden iff  $\mu(s) \iff \exists a \in A_H(s) : s \notin P(a)$ .

We continue with the assumption that no further restrictions are axiomatically possible. Therefore the only justifiable ethical theory is fully defined by the forbidding condition  $\mu$ .

With ethics solved in the abstract, let us now focus on practicalities. One cannot gain certainty on what the actions of other people will be and thus one cannot gain certainty on whether their actions will be impossible or not. One can only estimate the likelihoods of different kinds of futures. The best one can do to conform to the only justifiable ethical theory "*All impossible human action is forbidden*" is in every moment to choose that action which has the perceived smallest likelihood for impossible human action occurring. The practical application therefore is "*Minimize the likelihood of any impossible human action*".

**Definition 14.** Perceived likelihood (probabilities) of outcome  $\mathcal{S} \subseteq \mathbb{S}$  for individual action  $a$ :  $L(a, \mathcal{S}) \in [0, 1]$ ,  $\sum_{s \in \mathbb{S}} L(a, \{s\}) = 1$ ,  $\forall \mathcal{S} \subseteq \mathbb{S} : L(a, \mathcal{S}) = \sum_{s \in \mathcal{S}} L(a, \{s\})$ .<sup>1</sup>

**Definition 15.** Individual action is subjectively certain;  $L(a, S(a)) = 1$ .

**Definition 16.** Any instance of a presupposition is perceived as possible;  $\forall s \in P(a) : L(a, \{s\}) > 0$ .

**Definition 17.** Perceived likelihood of ethically forbidden result of action  $a$ :  $\mu_L(a) = \sum_{s \in \mathbb{S}} [\mu(s)] L(a, \{s\})$ .<sup>2</sup>

**Definition 18.** The practical governing rule of the only justifiable ethical theory. Choosing  $a$  over  $a'$  is ethically correct iff  $\mu_L(a) \leq \mu_L(a')$ .

The rest is explication of the found governing rule.

**Definition 19.** Impossible action  $a$  takes place on sequences  $I(a) = \{s \in \mathbb{S} \mid a \in A(s) \wedge s \notin P(a)\}$ .

**Definition 20.** The three main categories of action  $a$  - impossible action  $a'$  (A-IA) relations: Impossible action is certain in presupposition:  $P(a) \subseteq I(a')$ . Impossible action is impossible in presupposition:  $P(a) \cap I(a') = \emptyset$ . Impossible action is uncertain in presupposition: *otherwise*.

**Definition 21.** The two categories of choice-proposition relations: Choice  $a$  over  $a'$  contributes to proposition  $\mathcal{S}$  iff  $L(a, \mathcal{S}) > L(a', \mathcal{S})$ . Otherwise it doesn't contribute.

**Proposition 2.** *The governing rule can be restated as "Choose action that does not contribute to impossible action". TODO: Proof*

**Definition 22.** Each three main categories of action-impossible action (A-IA) relations divide to two subcategories of contributing and non-contributing action when choice is introduced. The categories of choice-impossible action relations (C-IA) are:

	Contributing to IA	Non-contributing to IA
IA is certain in presupposition	Intentional	Inevitable
IA is uncertain in presupposition	Reckless	Un-influenceable
IA is impossible in presupposition	Negligent	Accidental

**Definition 23.** All action is driven by the experience of uneasiness and the perceived possibility of reducing it. All action has a goal  $G(a) \subseteq \mathbb{S}$ . In the presupposition of an action chosen by an individual, the goal is always possible,  $G(a) \cap P(a) \neq \emptyset$ , but the goal is never certain,  $P(a) \not\subseteq G(a)$ .

**Definition 24.** The goal of action composes as  $G(\prod_k a_k) = \bigcap_k G(a_k)$ .

**Definition 25.** The goal of an action is impossible in principle iff  $G(a) = \emptyset$ .

**Proposition 3.** *Impossible in principle goal does not imply impossible in principle action. For example, it is possible for different actors to pursue taking exclusive control of the same resource, but still have their composite action to be possible. Such action is competition. TODO: Proof*

<sup>1</sup>Note that this is not defined for inter-actor composite action.

<sup>2</sup>Square brackets are Iverson brackets.

**Proposition 4.** *Possible in principle goal does not imply possible in principle action. It is possible for different actors to pursue the same goal, but have the means to preclude each other, resulting in a conflict. TODO: Proof*

We can express the governing principle in terms of what must be done instead of what mustn't.

**Definition 26.** The lack of human conflict (mutually impossible human action) is peace. The lack of impossible human action is harmony. A sequence  $s$  is harmonious iff  $\neg\mu(s)$ . The proposition of harmony is  $\{s \in \mathbb{S} \mid \neg\mu(s)\}$ .

**Proposition 5.** *Peace is a necessary but not sufficient condition for harmony.*

**Definition 27.** Among any set of potential choices  $\{a_k\}$  a maximally contributing action  $a$  to proposition  $\mathcal{S}$  is such that  $\forall k : L(a, \mathcal{S}) \geq L(a_k, \mathcal{S})$ .

**Proposition 6.** *The governing rule can be restated as "Choose action which maximally contributes to harmony."*

At the limit of infinite sequences (long timespans) we can recover certainty in practical rules.

An infinite series of probabilities of independent sequential events of impossible action  $p_n$  can be used to represent the probability of ethically correct future (no impossible action):  $\prod_{n=1}^{\infty} (1 - p_n)$ . This is non-zero iff  $\sum_{n=1}^{\infty} p_n$  converges. A necessary condition for the sum to converge is that  $p_n$  approaches zero at the limit of infinity. That is, a necessary condition for a long-term ethically correct action is that recurring non-negligible contributions to impossible action are forbidden. Otherwise impossible action is inevitable, or equivalently, harmony is impossible.

**Example 2.** Given that resources are scarce and that humans will have conflicting preferences for the use of those resources in recurrence, interacting people who conform to the above must proclaim observable borders for their use of scarce resources. Even if no one ever intentionally pursues conflict, the lack of such borders would lead to recurrent non-negligible contributions to impossible actions of accidentally conflicting with someone's use of scarce resources, which over a long enough period of time would result in inevitable impossible action. Self-establishing observable borders around one's usage of scarce resources is therefore necessary for lasting ethical action. This is one example on how a propertarian order naturally emerges from the interaction of people who follow the practical governing rule by refraining from contributing to impossible action, or to put it simply, who are peaceful.