

## Peer Review

# Review of: "Multiscale Entropic Ethics: A Non-Scalar, Auditable Grammar for Decision-Making Under Irreversibility"

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This paper rejects traditional ethical frameworks – “deontological, utilitarian, or consequentialist” – underlying social decision-making, and proposes instead something called “Multiscale Entropic Ethics” (MEE) as an alternative. Roughly the first half of the paper is devoted to describing MEE, while the second half is an example of its application to a case study of the Dakota Access Pipeline. I will not attempt to make a judgment as to the merits of the pipeline; that issue is complicated and has been the subject of considerable controversy and litigation for a decade or more. Instead, I will concentrate on the theoretical argument.

The basic problem is that the paper assumes that it is possible to set out decision-making criteria that painlessly overcome conflicts of interests and values. In some cases, scientific uncertainties make sharp dichotomies problematic (i.e., specifying “tipping points,” establishing “guardrails,” etc.); in other cases, the disagreements are rooted in value differences (i.e., how to account for effects of decisions on non-human entities). In yet other cases, there are pure conflicts of interest between people disadvantaged by a particular decision and those benefiting from it. No amount of verbiage or artificial classification structures can obviate these difficulties.

Additionally, it smacks of intellectual hubris blithely to assert that “[h]uman ethical reasoning has continually evolved alongside transformations in the scale and complexity of civilization,” dismissing as inapplicable or obsolete such powerful moral systems as the Decalogue or the thought of Aristotle, Augustine, or Aquinas, while giving precedence to science-fiction constructs like the Gaia hypothesis or a “‘land ethic’ [with] moral obligations extending to soils, waters, plants, and nonhuman animals as part of a broader community [footnotes omitted].” An upward trajectory in the “evolution” of human moral

thinking certainly is not reflected by the tens of millions of innocents slaughtered over the past century in the Holocaust, the depredations of communism, and the ongoing scourge of abortions.

The decisions of modern states are sometimes grounded in cost/benefit analyses, with an implicit incorporation of the Pareto-improvement standard: A policy is justified if the gainers could, at least in principle, compensate the losers and have something left over. Of course, this compensation is rarely carried out, and as a result, actual politics often takes on a zero-sum appearance. Other criteria, such as minimax regret, in which the choice is made that minimizes the maximum regret that would be experienced if a policy *not* chosen turned out to be best, have been proposed. These economics-based rules fall on the consequentialist side of the “traditional ethical frameworks.”

The main alternative is a deontological approach, and MEE comes closer to this than the paper would seem to suggest. Absolute regard for treaty rights, rejection of any action that exceeds environmental thresholds, and taking no action unless certain procedural tests are passed, are all requirements that have a deontological flavor. But of course, the problem with deontology is that there is no agreement on just what the inviolable boundaries should be. It does not matter if an issue is analyzed by multiple “cells” as proposed in the paper, because left unspecified is who chooses the membership in the cells, and how any differences in the judgments within and between cells are to be reconciled. Clothing MEE with jargon about how “artificial intelligence, biosphere stress, and quantum information interact nonlinearly” cannot dispel irreconcilable conflicts. While the MEE framework may serve advocacy purposes, it cannot claim to be the basis of a new universal moral standard. The attempt to do so in the paper ultimately is not persuasive.

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.