**The Social and Environmental Harms of Earthquakes**

**NON-BLIND ABSTRACT**

**Name:** Gah-Kai Leung

**Affiliation:** University of Warwick

**Email:** Gah-Kai.Leung@warwick.ac.uk

**Abstract:**

Moral and political philosophy is only just beginning to tackle the normative issues that arise in earthquake policy. This enterprise is what I call *seismic justice*. But in order to have a successful account of seismic justice, we need an account of what is morally injurious about earthquakes in the first place. Consequently, this paper lays some of the foundational work critical to any account of seismic justice, by canvassing some of the harms that occur when earthquakes impact the human and non-human world. Here, I argue that earthquakes give rise to a category of harm which I call *social harms*. Social harms are those which damage social cohesion and undermine citizens' ability to relate to each other on fair and equal terms. Such social harms include (but are not necessarily limited to) those that arise from temporary isolation from the rest of the country, intra-community breakdown and the uncertainty of recovery from the catastrophe.

The paper unfolds as follows. In Section 1, I discuss what I mean by ‘harm’. Since most existing accounts of harm appear unable to account for social damage, I propose a definition of harm that captures a range of morally important values, in order to account for the social effects of earthquakes. Section 2 then outlines the kinds of social harms that arise in the case of earthquakes: specifically, I discuss isolation from the rest of the country, intra-community breakdown and the uncertainty of recovery from the disaster. These are not meant to be exhaustive, but they illustrate well the types of harms I have in mind when I talk of 'social' harms. I show how morally weighty values are set back when social harms occur, to highlight the normative significance of this category of harm. Section 3 responds to two significant objections: (i) the objection that social harms should be correctly described as those that emanate purely from the social order, rather than the earthquake itself; (ii) the objection that social harms reduce to aggregates of individual harms. Section 4 then considers environmental harms. Here I discuss the kinds of non-human entities that may be subject to harm and the ways in which they are harmed. Section 5 concludes.

The major upshot of this paper is that we need a broader definition of harm that is able to capture the social and environmental effects of earthquakes. Most existing definitions of harm will rule out societal and environmental damage as harms. Thus, my argument will suggest that we need to expand the definition of harm in order to account for this problem.

This paper contributes to the literature in contemporary political theory by considering a new applied problem: the case of earthquake policy. At the same time, it engages with relevant empirical insights from public policy studies as well as geology and the earth sciences, in order to offer a fuller account of the morally serious costs of earthquakes on society and the environment.

**Keywords:** harm, environment, natural hazards, earthquakes, risk, vulnerability, resilience, disasters