

不平等的災難： 921 地震下的受災風險與社會階層化*

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本文以 1999 年臺灣 921 地震為例，討論社會不平等如何導致受災風險的差異，以及災後重建對社會不平等的影響。從社會脆弱性的觀點出發，我們認為階級、族群與城鄉差距是造成民眾受災風險差異的主要因素，並且造成了災後的社會不平等。本研究採用「臺灣教育長期追蹤資料庫」(Taiwan Education Panel Survey) 2001 年調查之第一波國中學生及家長問卷，該調查標示了部分受災戶。我們發現地震災害的風險確實不是中立的，首先，臺灣的低技術工人與自營作業者（包括部分農民）特別容易受災、資本家與經理人則較少受災；原住民與客家族群在地震中傷亡比率也偏高；此外，城市居民的受災風險遠低於鄉村居民。其次，為了同時控制風險分布並估計災後重建的影響，我們引進了處方迴歸模型來估計在地震發生兩年之後，受災戶與非受災戶兒童的幸福感以及心理憂鬱程度、家戶所得、家庭遭受經濟危機的機率的差異。結果發現，雖然受災戶家庭及學童在上述四個方面都比非受災戶更糟，但是將受災風險隨機化之後，災後重建的過程並沒有導致上述指標的惡化。換句話說，災區內的社會不平等不是來自災後重建過程，而是來自受災風險的不平等，易於受災使得弱勢者更弱勢。這個結論建議，災後重建不應只給予受災戶補償，而應改善災區的社會不平等。

關鍵字：社會脆弱性、災難、階級、族群、社會階層化、處方迴歸

Unequal Disaster: Hazard and Social Stratification in an Earthquake

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ABSTRACT

Taking the aftermath of Chi-chi earthquake in 1999 as an example, the article investigates the social stratification of disaster hazard and its consequences on social inequality. Following the literature on “social vulnerability,” we argue that class, ethnicity and uneven rural-urban development shaped the unequal distribution of disaster hazards, which led to social inequality in the affected area. We use the first wave of the Taiwan Education Panel Survey (TEPS), a national dataset of high school students collected in 2001, and identified the affected households in the statistics. It is found that the hazard is not neutral but is robustly associated with class, ethnicity and the rural areas. The households from the working class, peasants and self-employed origins were more likely to be affected, while those from the capitalist and manager origins suffered less from the earthquake. Minorities from aboriginal and Hakka were more likely to suffer, while urban residents were less likely to be affected the disaster.

To estimate the redistributive effects in the process of reconstruction, we introduce the treatment regression model for the control of the risk inequality. Modeling the household income, economic crisis, self-reported happiness and depression, we find that the victims were worse off two years after the earthquake. However, once the treatment model randomized the hazards, the differences between the affected families and the non-affected families disappeared. The outcomes suggest that the deterioration of social inequality mostly results

from the unequal distribution of hazard rather than the redistribution in the reconstruction. The conclusion also implies that for reducing the unequal hazard, the reconstruction strategy for the affected area should focus not only on the compensation of the victims, but also on the reforms of primarily social inequalities.

Key Words: social vulnerability, disaster, class, ethnicity, social stratification, treatment regression