

Effect of Inequality on Cooperation:
Heterogeneity and Hegemony in Public Goods Dilemma

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Abstract

Inconsistent findings on the effect of resource inequality from previous studies are explained by two properties of heterogeneity: (1) level of inequality and (2) asymmetry of resource distribution. In two studies, we have confirmed that symmetric heterogeneous groups cooperate less than homogeneous groups. Moreover, the larger the inequality, the less the groups cooperate. Interestingly, the cooperation of hegemonic distribution groups remains unchanged across inequality levels. We have also found that the contribution to the provision of public goods can reduce the inequalities in symmetric heterogeneous groups but not in hegemonic distribution groups. The causes and the consequences of the phenomenon are discussed. Our study sheds light on the investigation of different types of resource inequality in public goods dilemma.

Keywords: public good, heterogeneity, hegemony, inequality, resource redistribution

摘要

我們以異質小組（heterogeneous）的兩個屬性：（1）不平等程度和（2）不對稱的資源分配解釋了以前一些於資源不平等研究上找到的不一致結果。在兩項研究中，我們證實對稱異質小組的合作行為少於同質小組（homogeneous），此外，小組資源越不平等，合作行為越少。有趣的是，霸權形式（hegemonic）的資源分配小組的合作行為在不同的不平等程度上會維持不變。我們還發現，人們對公共物品（public goods）的貢獻可以縮窄對稱異質小組的資源不平等，但不會對霸權形式的資源分配小組造成影響。我們會討論此現象的原因和後果。我們此項研究的結果可對日後不同類型的資源不平等在公共物品困境的影響上的研究提供參考作用。

Scales for Manipulation Check (English and Chinese version)

1. In this investment, how much is your endowment different from others in your group?

(1 – much less than others; 7 – much more than others)

你覺得你手上有的金額跟你的組員比較有多大分別 (1 = 比其他組員少很多; 7 = 比其他組員多很多)

2. In this investment, there is one person in my group, including myself, possessing an extremely large amount of endowment relative to others. (1 – strongly disagree; 7 – strongly agree)

我組內有一位組員 (包括我自己) 手上有特別多的金額 (1 = 完全不同意; 7 = 完全同意)

Scales for Measuring Psychological Factors (English and Chinese version)

Measure of the Desire to Free-ride

1. In this contribution, I want to contribute as little as I could. (1 – strongly disagree; 7 – strongly agree)

我想夾最少的錢受到最多的食物 (1 = 完全不同意; 7 = 完全同意)

Measure of Sucker Effect

2. In this contribution, I am worried that other people would contribute very little. (1 – strongly disagree; 7 – strongly agree)

我擔心其他組員會夾得少(1 = 完全不同意; 7 = 完全同意)

Measure of Self-efficacy

3. In this contribution, I think my contribution will be sufficient to make the group bonus satisfactory. (1 – strongly disagree; 7 – strongly agree)

我相信我夾的錢對我組所能享受到的食物之質量有頗大影響 (1 = 完全不同意; 7 = 完全同意)

Measure of Responsibility

4. In this contribution, I think I have the responsibility to contribute for the welfare of the group. (1 – strongly disagree; 7 – strongly agree)

我想我有責任為了我組的福利去夾錢 (1 = 完全不同意; 7 = 完全同意)