

行政院國家科學委員會專題研究計畫成果報告

生命事件 (Vital Events) 的季節性變化之探討

Seasonality of the Vital Events in Taiwan

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一、中文摘要

Durkheim 主張，社會學的研究題材就是社會事實，所以，排除其他『非社會事實』的事物作為社會學研究對象。其中，氣候與季節因素就是 Durkheim 所反對者。然而，眾多的人類之社會行為展現季節變化模式，而且，自然季節變化往往也被賦予文化意義和社會價值。職是之故，人類的社會行為之季節性模式，可以也應該被納入成為重要的社會學研究題材。

本研究的主旨，就是探討生命事件的季節性變化 (seasonality)。「生命事件」(vital events)，主要包括出生、死亡、結婚及離婚，乃是最為根本、重要的人口動力成份。在幾乎所有的社會裡，不論古代或是當代，或多或少都發現生命事件呈現季節性變化模式。自然的季節韻律，之所以影響生命事件發生頻率，乃是因為自然的季節韻律透過對於人類生理機能、文化、宗教、經濟生產活動等中介機制，轉而左右生命事件發生的時間選擇。

本研究以臺灣地區整體作為對象，長期地以本世紀之人口動態統計資料作為基礎，探討其季節性變化模式。具體而言，本研究的目的乃是檢視和分解生命事件之發生時間分佈的季節性 (seasonal) 效應，探討影響生命事件發生時間展現季節性模式的原因。

關鍵詞： 生命事件、季節性模式、氣候、人口轉型、出生、死亡、結婚、離婚

Abstract

The evidence for seasonality in human behavior is scattered throughout the scientific traditions and has been observed in virtually all human populations, both contemporary and historical. These seasonal variations have attracted considerable attention from demographers, and a variety of behavioral, biological, and demographic mechanisms have been proposed to explain them.

In this study we examine the seasonality of vital events in Taiwan. Vital events, including birth, death, marriage, and divorce, are the fundamental components of demographic dynamics. Existing literature provides estimates of seasonality of vital events for many countries and time periods, but differing methodologies and the frequent use of small sample periods makes comparisons across populations difficult. Moreover, seasonal variation in vital events

must be connected with the specific cultural and social life of a given population. Therefore, it necessitates to widely examine patterns of seasonality in diverse populations. Taiwan provides an ideal case to study the seasonal regularity of vital events, for it has compiled a long-term period of vital registration. Based on the preliminary analyses, we believe that it demonstrates a clear and non-negligible seasonal fluctuation of births, deaths, marriages, and divorces in Taiwan. However, the seasonal patterning of vital events in Taiwan should be examined in depth. The specific objectives of this study are: (1) to construct a seasonal patterning for various vital events based on solar and lunar calendar respectively; (2) to decompose the component of seasonality, the component of trend, and the nonseasonal, nontrend component of temporal regularity of vital events; (3) to explore the plausible explanations of seasonality of vital events in Taiwan.

Keywords: Vital event; seasonality; vital statistics; birth; death; marriage; divorce

二、緣由與目的

十九世紀末，法國社會學大師 Emile Durkheim 為了建立社會學成為一門獨立的科學，創作《社會學方法論》(*The Rules of Sociological Method*) 一書，強烈聲稱社會學的研究題材應該就是「社會事實」(social facts)，而且，Durkheim 堅信，解釋社會事實的原因惟有訴諸社會事實。嗣後，Durkheim 更是出版《自殺論》(*Suicide*) 一書，藉以應用實證研究而展示其所主張社會事實的方法論。在《自殺論》一書當中，Durkheim 廣泛匯整實證資料，然後駁斥所有解釋自殺率差異的原因，包括精神病態、酗酒、種族、遺傳、或是氣候等 (Skog, 1991)。畢竟，這些因素並非、或是至少不是相干的社會事實。

誠然，由於 Durkheim 的堅持，對於創建社會學成為一門獨立的實證科學而言，的確厥功至偉。然而，同時也對於社會學的傷害頗深。就如 Lemert (1994) 所指出，「由於 Durkheim 將社會學界定得如此排外，幾乎只與其自身的事實相關，等於將社會學與其他人的科學切斷」。舉例言之，自殺論的分析裡，Durkheim 觀察發現，在夏季裡的暴力犯罪事件增加，他卻否認這是氣候因素本身所造成，反之，乃是因為夏天的氣候致使人們增加在戶外的

機會，因而增加人際之間互動的頻率。當然，也是增加犯罪者與受害者互動的頻率，於是增加犯罪率。準此而言，Durkheim 主張，互動頻率才是造成犯罪率差異的原因。

總之，Durkheim 的方法論，的確有助於社會學的實證研究發展，可是，卻也造成社會學研究的排外性格。至少刻意排除許多表面上似乎『不是』社會事實的因素。本研究的重心，在於探討季節變化對於人類社會行為的影響。「季節變化」（seasonality）這件事，從典型的 Durkheim 立場來看，可以說絕對不是社會事實，因而必須排除在社會學研究領域之外。然而，事實不然。至少，一方面我們看到，人類社會的許多行為、甚至社會制度，的確與自然季節變化密切相關；另一方面，純粹之自然的季節變化韻律，已經或多或少被賦予文化意義和社會價值，所以，具有濃厚的社會事實色彩。

析言之，首先，我們看到，許多的人類行為與社會制度，強烈受到季節變而影響。舉例言之，農業生產活動必須配合自然的節奏（Babu, Thirumaran, and Mohanam, 1993; Kaiser and Dewey, 1991; Pfeffer, 1980; Scott, 1981），因而，農業社會生活作息與社會組織制度，實與自然生息相關。近代工業社會裡，商業的景氣循環，往往也是展現季節性周期變化（Beaulieu and Miron, 1992; Miron, 1996）。此外，季節性遷移（Dunlevy, 1980; Hogan and Steinnes, 1993, 1994; Longino and Marshall, 1990; Longino, Marshall, Mullins, and Tucker, 1991; Martin and Taylor, 1990; McIlough and Mings, 1994; Rose and Kingma, 1989）、季節性勞動參與（Halperin, 1980; Hurtado and Hill, 1990; Smith and Vanski, 1979）、或是季節性旅遊（Brown and Connelly, 1986; Gu and Martin, 1992; Hartman, 1986; Witt, 1994）等現象，也是不勝枚舉。最後，即使是犯罪現象，也是和季節變化有關。例如，在義大利的 Milan，人們發現，旅遊旺季的八月裡，似乎罪犯總是歇業停工（Zimring, Ceretti, and Broli, 1996）；在英格蘭地區，氣溫則是影響犯罪頻率（Farrell and Pease, 1994; Field, 1992）。

當然，許多人類行為不但和自然季節變化息息相關，更重要者，許多的文化和社會裡，自然的季節已經被賦予文化意義和社會價值，所以，已經成為「涂爾幹式的社會事實」（Durkheimian social fact）。例如，傳統的中國農業社會裡，一切的社會生活乃是依循以「中氣」和「節氣」為基礎的「農曆」（李甲孚，民 60 年；張忠，民 64 年；鄭遵哲，民 64 年），臺灣的歲時節俗中，也是盛行「上元賞花燈，二月百花生，三月瘋媽祖，四月迎王爺，五月神暗訪，六月慶半年，七月開鬼門，八月邀月賞，九月重陽日，十月祭水官，十一月青山王，十二月吃尾牙」（劉還月，民 80 年）。由此可見，在中國社會裡，自然的季節變化韻律，已經被賦予文化與社會意義，成為規律社會生活的「文化時刻表」（cultural time-table）。

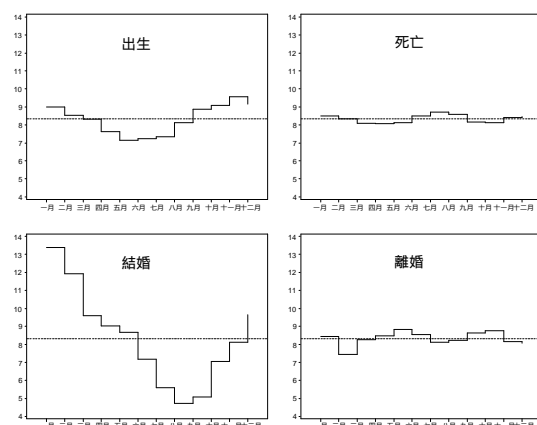
總之，自然的季節，不再是純粹的自然現象，相反地，已經變成 Durkheim 所謂的社會事實，影響社會生活與制度。本研究的主旨，正是探討生命事件（vital events）的季節性變化。「生命事件」，主要包括出生、死亡、結婚、與離婚；這些事件，不僅是最基本的人口動力（demographic dynamic），左右人口的成長與組成，更甚者，在個人生命歷程當中的所有社會事件裡，也是以這些事件最為根本和重要，甚至，生命歷程的變化（不論是個人或是家庭）總是圍繞在這些事件而變遷。

三、結果與討論

圖 1 資料，平均歷年（1906 至 1996 年）各月生命事件數所佔全年百分比，因此，可以代表本世紀臺灣地區各種事件的典型季節性模式。在各種生命事件當中，結婚事件的季節性模式最為明顯。旺季係反映「王老五現象」，集中於農曆春節之前，淡季則是出現在農曆七月的鬼月，而且，高低峰之間的結婚對數差異高達三倍。

出生方面，明顯呈現 U 型狀態，其中的出生淡季係在四至八月。在此，如果以 280 天受孕期前推，重新呈現受孕數的月份分佈模式，我們應該發現，受孕的月份分佈模式事實上極為契合結婚的季節性模式。死亡數方面，七八月份是高峰期，另一高峰期則為十二月與一月；整體來說，月份差異存在，但是，並不極度顯著。最後，離婚方面，農曆正月似乎是離婚禁忌，五月與十月則是旺季。

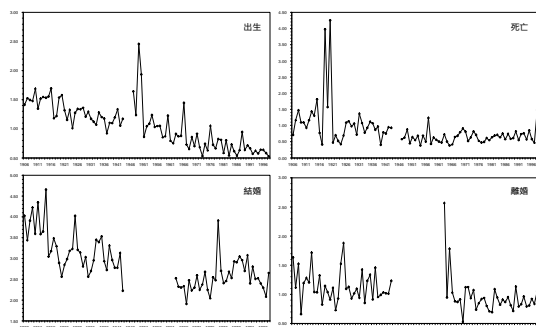
圖 1：歷年「各月生命事件數佔全年比例」之平均數



事實上，生命事件的季節性變化模式，明顯存在於臺灣地區，圖 2 就是以年為單位，計算十二個月之「生命事件數佔該年百分比」的標準差——如果月份之間的差異不存在，則標準差為 0，所以，數值愈是偏離 0，則表一年之內各月的變異顯著。顯然地，各種生命事件的月份差異現象，在圖 2 的資料中，尤其明顯呈現。其中，結婚事件最為凸顯月份差異的季節模式，出生事件其次，死亡事件的季節變化則相對而言不甚明顯。不過，這些季節模

式，隨著年代時間變遷，也有所變化，值得深入比較。

圖 2：歷年「每月生命事件佔該年百分比」之「年標準差」



有關這些生命事件的季節模式，相關深入分析，請參閱研究報告本文。

四、計畫成果自評

整體上，研究成果內容與原計畫相符，各項主要預期研究目標接能順利達成。不過，由於本研究屬於探索性，以描述討論的研究方式為主，希望在後續下一階段研究中，更深入以模型建構為目標，並將臺灣地區的相關現象與其他國家進行國際比較。

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