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SECOND EDITION

第二版

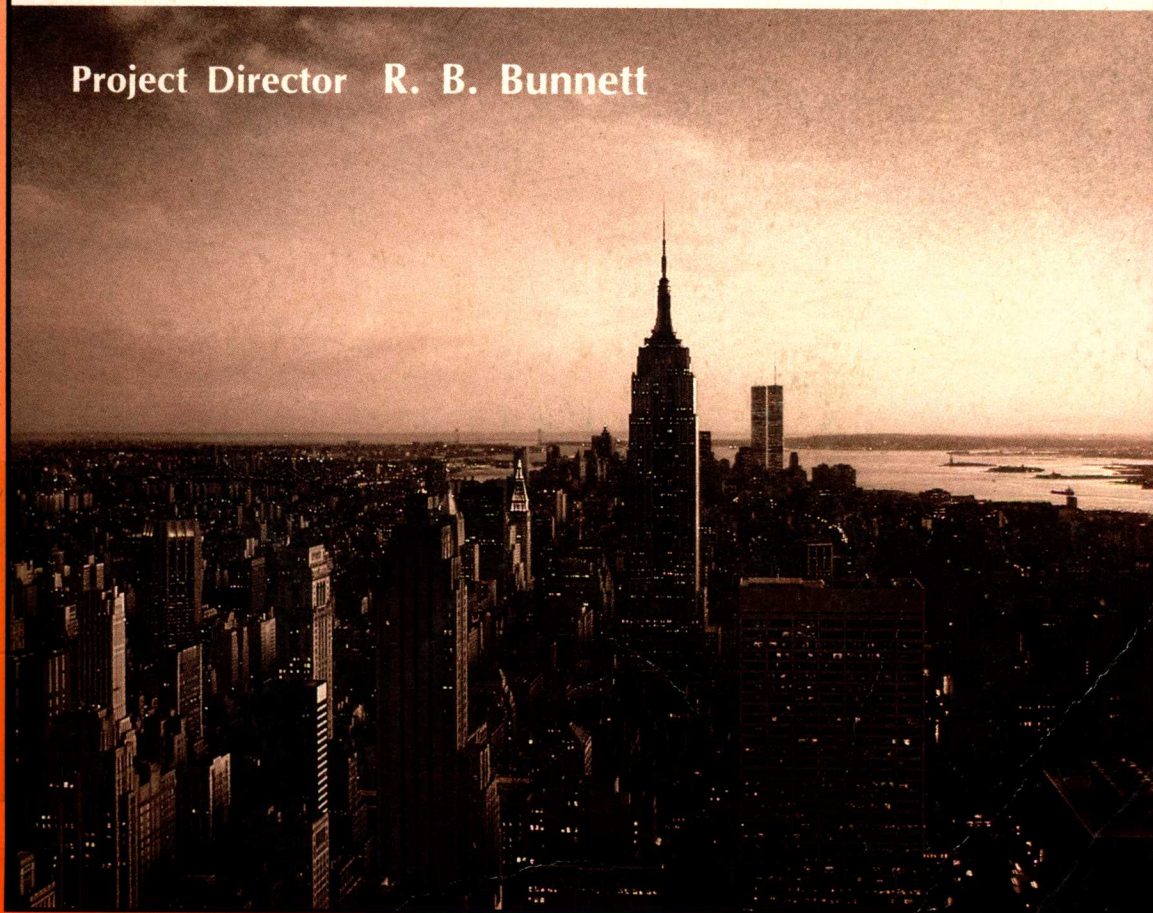
NEW GEOGRAPHY

新地理

TEACHER'S GUIDE

教師手冊

Project Director R. B. Bunnett



Linda Lau • Bryan Massingham • Edward Woo

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Introduction

序 言

Geography Today

Geography is the study of the environment and man's relationship with it. By definition, geography must embrace a wide range of subjects. It is common to find aspects of biology, botany, economics, geology, history, physics and sociology in different parts of the subject. Today's geographer will also be expected to use mathematical and statistical skills. One will also enter the realms of political science and psychology.

The geographers need the use of these subjects and skills because of the great methodological and philosophical changes that have taken place. Almost gone are the days when geography was a subject which identified and described man's activities and set them against the physical environment. Today, geographers want to understand and explain the forces which determine the patterns of human behaviour. They also want to see if there is any underlying rationale behind the way the complexities of the natural world and the human world interact to produce explainable patterns. No longer is geography a purely descriptive qualitative subject. Geography today has moved to being an explanatory and quantitative subject.

This change in philosophy has led to the development of a new methodology. A whole new range of concepts have become everyday parts of geographical study in order to allow explanation to take place. Spatial analysis, the system's approach, perception, behaviourism, association, interaction and linkages, to name a few, have become normal parts of geographical language.

The change has also led to the development of particular techniques to assist in the use of the new concepts. Statistical and graphical analysis, mathematical formulae, correlation techniques, etc. have been borrowed from other subjects or developed within geography, to help in the search for a greater understanding of the environment and man's relationship with it.

However, it must be understood that these concepts and techniques have been introduced to provide an alternative approach to the subject. Individual and regional study still has its place, although not in the isolated way regions used to be

今日地理

地理學研究環境與人類之間的關係。就定義來說，地理學課題廣闊，涉及生物學、植物學、經濟學、地質學、歷史、物理和社會學。今日的地理學家，還須應用數學及統計技術，並且要進入政治科學及心理學的領域。

近代地理學在方法及思想上，起了巨大的變化。故此地理學者需要用到上述的學科及技術。往日地理學純粹是認識和敘述人類活動，並且將它們與自然環境對立起來。今日的地理學者則着重於瞭解和解釋決定人類行為形態的種種力量。他們亦想知道：自然環境與人類世界之間錯綜複雜的相互作用背後，是否蘊藏着某種基本的原理，可供解釋種種形態。地理學不再是純粹敘述性的學科。今日的地理學，已邁向解釋性的、定量的方面發展。

這種原理上的改變，導致一種新的研究方法的發展。一系列新的概念，如今已成為地理學中常見的部份，用來提供解說。例如，空間分析、系統分析、感觀、行為主義、聯繫性、相互作用和連繫作用等等，已成為地理學中常見到的詞彙。

這種變化亦帶來特殊的技術，以便運用新穎的概念。統計及圖解分析、數學公式、相關技術等等，有者取自其他學科，有者是在地理學中發展而成。它們都有助於進行研究，以便更深入地瞭解環境與人類的關係。

然而，必須理解的是，引進這些概念及技術，目的是要給地理學提供一種變通的研究方法。個別及地區研究仍然有其一席之地，過去它們是分

studied, but as evidence to support or reject ideas, or to act as simple and straightforward case studies. Learning a statistical or graphical technique is not an end in itself. There must be a purpose behind it, otherwise the subject becomes a mechanical study with no heart or soul. Statistical techniques, mathematical formulae, system's analysis and all the other new methods are there to help the geographers to understand and explain the real world, not to act as a substitute for reality.

The trend towards giving geography a more thorough and scientific basis is useful at a time when the subject is being threatened in various parts of the world (notably the U.S.A. and Western Europe). Geography has a great deal to offer, particularly when it is applied in the fields of location analysis and planning. The new geography is more rigorous with its revised conceptual basis and quantitative approach. This movement was necessary if geography is not to go the way of the dinosaurs!

Geographical Concepts

Man-Land Relationships

Geographers examine the interaction between man and his environment or the land, in terms of man-land relationships (or man-environment relationships). This interaction can be viewed in two main ways — how the nature of the land influences man's activities, and how man through his various activities modifies the nature of the land. The world is thus seen as being a product of the balance between the outcome of human activities and the processes inherent within the natural (or physical) environment.

The man-land approach to geographical study requires an understanding of three major areas — the physical earth that forms man's natural environment, human activities and the interface between them. These are studied in terms of spatial patterns, spatial association and processes. Hence the formerly separated studies of physical geography and human geography are now integrated using the man-land approach.

The resulting man-land relationships may be explained partly by the characteristics of the natural environment and partly by man's role as a decision-maker in his socio-cultural environment.

開來孤立研究，今日它們可用來提供佐證，以支持或反對某種觀念，或可作為簡明的、直接的個案研究來分析。學習統計或圖解技術本身，不能當作是一個目標，在其背後必須要有個目的，否則，地理學將變成沒有心思及精神的機械式分析。統計技術、數學公式、系統分析和其他種種新方法，都是用來幫助地理學者瞭解和解釋真實的世界，而不是用來取代事實。

正當地理學在世界各地（特別是美國和西歐）面臨威脅的時候，這種給地理學帶來更全面的科學基礎的趨勢，最合時宜。地理學有很多用處，特別是應用在區位分析及策劃方面，更為實用。新地理學具備了新概念基礎及定量分析法，亦即更具生命力。這種動向是必然的，不然，地理學可就要層步恐龍的後塵。

地理概念

人地關係

地理學者就人地關係（或人類與環境關係）來分析人類與其環境或土地之間的相互作用。這種相互作用可從兩個主要方面來看，即：環境因素如何影響人類的活動，以及人類通過其各種活動如何改變自然環境。因此，這個世界可謂是人類活動的成果加上自然環境的內在演變過程所達致平衡的產物。

運用人地方法研究地理學，我們首先需要瞭解三大要點——構成人類自然環境的陸地、人類活動以及兩者間的相互作用。繼而從空間形態、空間聯繫和演變過程方面來研究各點。因此，過去分開來探討的自然地理學和人文地理學，在人地方法的運用下，兩者已經合而為一。

人地關係的形成，一方面可從自然環境的特性獲得解釋，另一方面可從人類在其社會文化環境中充任決策者這角色來進行分析。

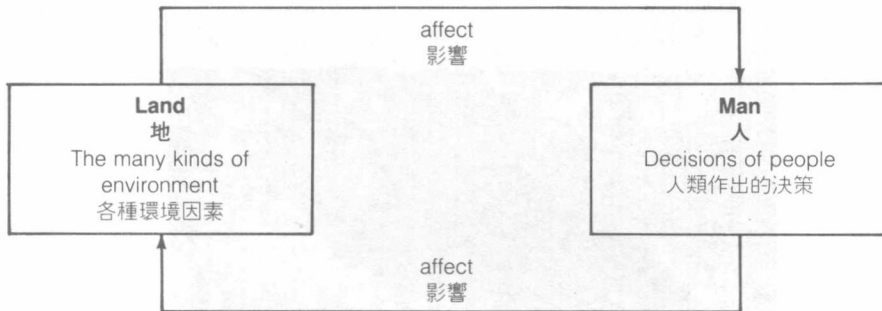


Fig. 1 A model showing the relationship between man and environment
圖 1 顯示人類與其環境之間的關係的模式

The Masai nomadic herders in East African savanna and the commercial cattle ranchers in the Australian savanna are good examples of how man in different socio-cultural environments interacts in very different ways with the same physical environment (viz the savanna), and two very different types of man-land relationships have resulted.

東非熱帶草原的馬西族牧民，以及澳洲熱帶草原上商業牲畜的牧民，正好說明人類在不同的社會文化環境，對相同的自然環境（熱帶草原）會作出不同的反應，因而產生兩種迥然不同的人地關係。

Landscapes

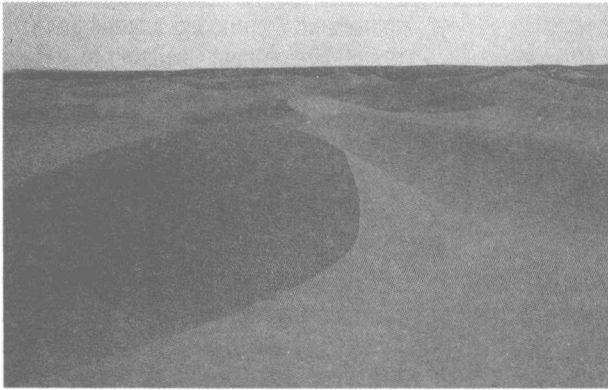
The landscape paradigm has been used by geographers for organising research into spatial problems for about a century. Landscape concepts and principles have been gradually refined and they have become a group of organising concepts which form the basis of a conceptual model and an approach in geographical enquiry.

A landscape is defined as 'the concrete expression of the visible elements of the earth's surface'. It is the result of the interaction between visible elements and invisible elements through time. Geographers have differentiated between the natural landscapes and cultural landscapes. In the natural landscapes, there are physical elements and biotic elements that are visible (e.g. landforms and vegetation) or invisible (e.g. climate and geological structure). In the cultural landscapes, there are cultural elements that are visible (e.g. buildings, roads, crops etc.) or invisible (e.g. tradition, social attitudes, value systems and government policy).

景觀

百多年來，地理學者利用景觀作為示範說明，以便從事空間問題的研究。景觀的概念及原理經過逐步改進後，成為一組有組織的概念，它們是概念模式和地理探討方法的基石。

景觀的定義，是“地球表面上可見成份的具體表現”，是可見成份及不可見成份通過時間相互作用下的產物。地理學者把自然景觀及文化景觀劃分開來，在自然景觀中有可見的物理及生物成份（例如地形和植被），也有不可見的成份（例如氣候和地質構造）。在文化景觀中，也有可見成份（例如建築物、公路、農作物等），以及不可見成份（例如傳統、社會態度、價值觀念和政府政策）。



Natural landscape e.g. a desert landscape.
自然景觀之一——沙漠景觀。



A combination of natural and cultural landscapes, e.g. a farming landscape.
自然及人文景觀的綜合，例如：農耕景觀。



Cultural landscape, e.g. an urban landscape.
人文景觀，例如：城市景觀。

Fig. 2 Increasing interaction between man and the natural environment results in increasing intensity of human impact and modification of the natural landscape

圖2 人類及自然環境之間的相互作用越來越頻繁，促使人類的衝擊和自然景觀的改變亦越來越巨大。

Some examples of landscapes showing varying degrees of human influence on the natural landscapes are shown above.

Current landscape studies emphasize not only on the concern with form and content, but also on the understanding of the processes modifying contemporary landscapes in order to organise a more harmonious interaction of elements in future landscapes.

Areal Association

The world is not uniform and can be subdivided into areas or regions which possess distinct physical, economic or cultural characteristics. These areas are not independent of all other areas, and the characteristics are also a function of the relationships and interactions with other areas. This connection between regions is known as **areal association**. We live in a highly interdependent world and it would be wrong to study areas in isolation as actions in one area can affect the activities in another.

The concept of areal association can be applied from a small local scale to a large international scale. For example, the construction of a dam for H.E.P. in one section of a river will have physical and human consequences downstream. The consequences may alter the patterns of human activity in either a beneficial or deleterious way. On a larger scale, a decision by one country to expand production of a particular raw material will have effects on another country which supplies the same raw material. The effect will be economic but with possible spatial consequences if, for example, mines are closed down, communities are disrupted and population movement takes place.

The concept of areal association provides a method of understanding the interrelationships in the world and how actions in one area can affect conditions in another.

上頁的景觀示例，不單只注重形式及內容，同時亦強調瞭解改變目前景觀的過程，使未來的景觀中，各個成份之間有更加協調的相互作用。

地區連繫

世界並不是一致的，它可以劃分成多個地區，各具不同的自然、經濟和文化特性。這些地區均受其他地區之影響，其特性反映出它們與其他地區之間的關係和相互作用。地區與地區之間的關連，稱為**地區連繫**。我們是居住在一個高度相互依賴的世界裏，一個地區的活動可影響到別個地區的活動。因此，我們不應把各地區孤立起來研究。

地區連繫這個概念，可用在大小不同規模的研究。例如，在河流中的某一段建築一個水壩，對下游的自然以及人類環境將產生某些後果。這些後果可能會改變人類活動形態，可能有利，也可能不利。從大規模方面來說，一個國家若決定增加某種原料的產量，它勢必會影響到出產同一種原料的別個國家。其影響將是經濟上的，但亦可能引致空間後果，例如：礦場倒閉，社區受到破壞，以及造成人口遷移。

地區連繫的概念，使我們明白世界裏的相互關係，以及一個地區的活動怎樣影響到別個地區的情況。

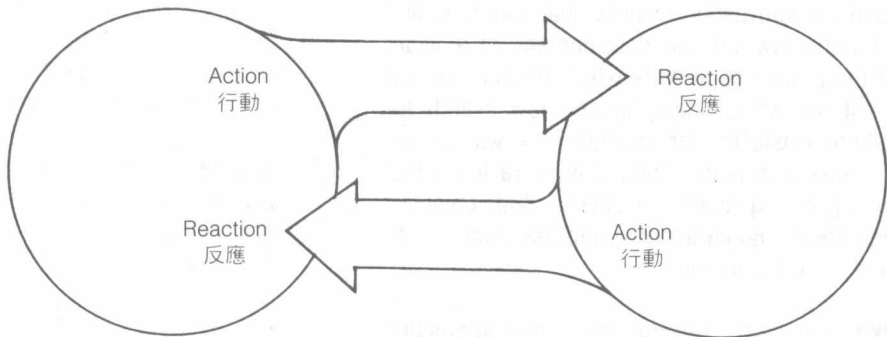


Fig. 3 Areal association
圖 3 地區連繫

Spatial Interaction

If spatial regularities occur in the various phenomena produced by man's activities, (settlements, industries, farms, etc.) the implication is that there are some reasons for this pattern. Social, economic or cultural forces must have been at work to produce the patterns. What, for example, is the reason why a limited number of settlement patterns can be distinguished, and why are villages in Western Europe, on average, 5 kilometres apart, whilst small towns are 12 kilometres apart?

Patterns are produced because of the interaction which takes place between the points of location which represent man's activities. Interaction can take the form of economic interchange such as the relationship between consumers and producers. This interaction will help to determine the type of retail activities found in different size settlements, or will influence an entrepreneur's decision as to where to locate a factory. On a social and cultural level, interaction will influence land use patterns in a town because of the tendency for social and racial groups to concentrate in specific areas.

The concept of spatial interaction is closely linked with spatial patterns. To a great extent, it is the type and degree of interaction which if it does not determine a spatial pattern, will greatly influence it. Therefore an understanding of interaction is necessary in order to help to explain the spatial manifestations of man's activities.

Patterns

One aspect of the recent trends in geographical studies is the search for patterns in man's behaviour as it affects the environment. In the past, geographers have studied phenomena in isolation. Geographers were content with describing and explaining these phenomena as if they were unique. This method was the basis for regional geography. Whilst this approach increased the knowledge of individual countries and regions, it could not allow for the development of a wider understanding of the processes at work which produce similar features throughout the world. Geographers now search for patterns. If a pattern exists in, for example, the way an industrial location decision is made, then it is more likely that the phenomenon can be explained objectively. With objective explanation comes greater understanding and assistance, with projection, prediction and planning.

Patterns imply relationships. Relationships imply interaction and interaction implies cause and effect. As geography becomes an explanatory rather than descriptive study of phenomena, the

空間相互作用

因人類活動而形成的種種形態(例如聚落、工業區、農場等),若呈現空間規律性必有某種成因。這種形態必定是在社會、經濟以及文化因素的相互作用之下而形成。例如:爲甚麼聚落形態只有幾類?又爲甚麼在西歐地區村落與村落之間平均距離是5千米,而小市鎮之間卻相距12千米?

形態的產生,是人類活動區位點之間相互作用的結果。相互作用可表現在經濟交換方面,例如消費者和生產者之間的關係。這種相互作用可決定在大小不同的聚落中將會有那種零售活動,也可影響到企業家決定在何處設立工廠。在社會和文化方面,相互作用可影響一個市鎮內的土地使用形態,因爲社會和種族羣體傾向於聚集在特定的地區。

空間相互作用的概念,以及空間形態,是息息相關的。大致上,相互作用的類別以及程度,即使不完全決定空間形態,亦會對它產生巨大的影響。因此,我們必須對相互作用有所瞭解,這樣才能解釋人類的活動在空間上的具體表現。

形態

地理學研究的最新趨勢之一,就是探討人類行爲的形態,因爲它會影響環境。往日,地理學者將種種狀態孤立來研究,他們滿足於描繪和解釋他們認爲是獨特的狀態。這種方法以前是地區地理學的基石。這種研究方法雖然能增加對個別國家和地區的認識,但卻無法進一步使人瞭解這些運作過程在世界各地產生類似的特性。現今的地理學所探討的形態。假若工業的區位決策引起一種形態的存在,在這種現象更有可能加以客觀的解說。有客觀的解說才能有更充分的理解和裨益,以及更進一步的計劃、預測和規劃。

形態意味着關係。關係意味着相互作用,而相互作用則意味着成因及結果。由於地理學已成爲解說而不是

understanding of the various concepts involved with patterns is very important. This trend has made geography much more of a discipline and adds a necessary scientific element to the subject.

描繪各種現象的一門學問，瞭解與形態有關的各種概念乃是非常重要的。這種趨勢使地理學成為更嚴謹的學科，而且也給它增添不可缺少科學成份。

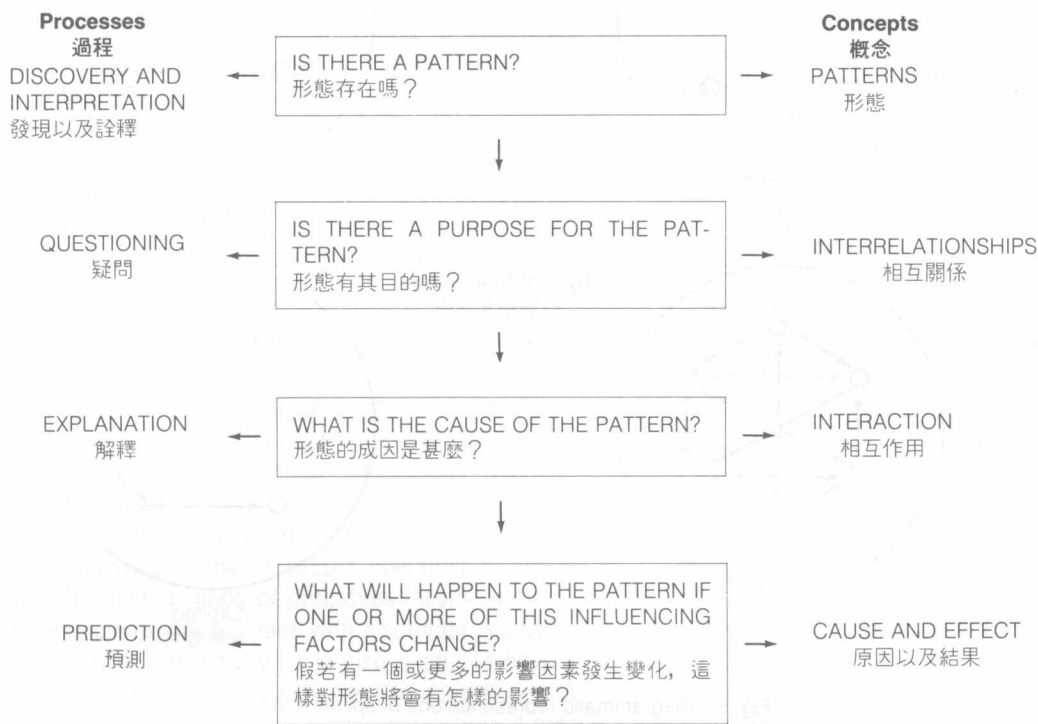


Fig. (4) The use of patterns in geography.
圖(4) 地理學上形態的應用

Spatial Patterns

空間形態

Geography is a study of man's activities in an area i.e. over space (as opposed to history which deals exclusively with time). The word 'spatial' simply refers to anything concerned with area or space.

地理學研究的是在某個領域，也即空間內的人類活動(它和純粹處理時間的歷史相反)。“空間”一詞意指任何關乎領域或空距的事物。

As geography is concerned with the spatial organization of man's activities, the main question which must be answered is

既然地理學研究關乎人類活動的空間結構，一個必須解答的重要問題

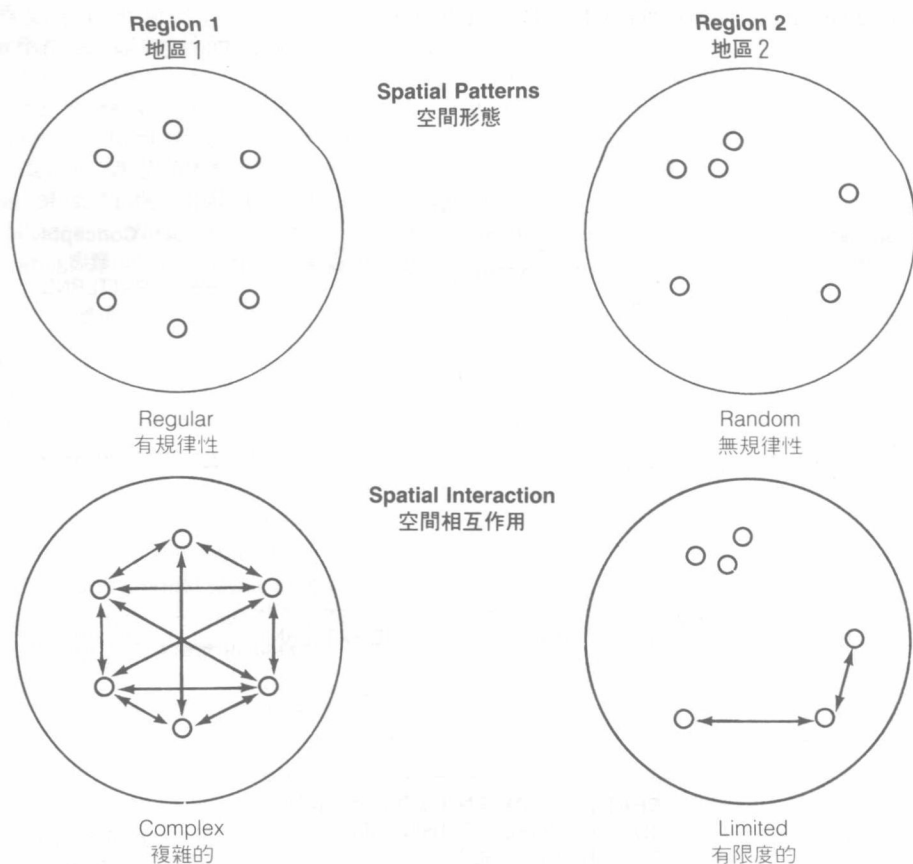


Fig. 5 Diagrammatic representations of spatial concepts
圖 5 空間概念示意圖

whether man's activities will produce a purely random structure or whether a pattern can be observed. If a regularity occurs in the distribution of man's activities, then it is correct to talk of **spatial patterns**. The discovery of a spatial pattern implies that there must be forces at work to produce the regularity observed.

Settlements are the most obvious signs of man's activities. The study of settlement patterns was one of the earliest attempts in geography to search for regularity in man's behaviour, and to suggest the processes which operate to produce the patterns. Spatial patterns have also been observed in other areas such as industrial location, agricultural landuse, population distribution and urban landuse.

To understand the location of an individual settlement or industry is important and useful. However, geographical study is further enhanced when the general distribution of all settle-

就是人類活動是否能產生一種全無規律性可言的結構，抑或是有固定的形態可遵循。假若人類活動的分佈範圍是有規律性的，討論**空間形態**是正確的。探討空間形態意味着其間的規律性，必定由某些力量作用下而形成的。

聚落是人類活動的最明顯標誌。地理學最早的嘗試之一，就是研究聚落形態，目的是探討人類活動的規律性，以及揭示產生這種形態的過程。空間形態也在其他領域受到注目，例如工業區位、農業的土地利用、人口分佈以及城市土地利用方面。

瞭解個別聚落或工業的區位是重要的，而且有其好處，然而，當所有聚落或工業的全面分佈經過分析時，

ments or all industries are analyzed. Once a spatial pattern has been discovered, the processes at work can be more easily observed and conclusions reached will have a firmer foundation.

Structural Patterns

The manner in which something is made up is referred to as its structure. In geography, the concept of structural patterns is most commonly used in population studies or economic geography. To understand the structure of anything is necessary in order to understand the processes by which the structure is produced. For example, a knowledge of population structure, i.e. the age and sex characteristics, provides a basis to study the influence of birth and death rates and migration on a population. This is because the population is broken down into its component parts and different parts can be studied in isolation.

Breaking down an economy into its component parts usually involves an analysis of the proportion of the work force employed in primary, secondary and tertiary industries. However, it is also possible to further break down the different sectors and, for example, analyze the structure of secondary industry.

Producing structures of an economy or a population allows more thorough analysis of the processes operating to create the structure. An understanding of processes means that predictions and projections can be made with a sounder academic basis and have greater objectivity. It is also useful to have a picture of the structural make-up of a phenomenon if one is comparing the phenomenon over space or through time. Comparison of the economic or population structures of countries provides, in particular, a valuable insight into the relative level of economic development. These structural patterns add another criterion for assessing the stage of development a country has reached in both economic and demographic fields.

Comparisons over time make it possible to analyze the cause and effect of any changes which are evident. A study of the structural patterns of a population over time provides information for analyzing the changing demographic trends, the effectiveness of population policies, or the influence on the structure of migration or catastrophes such as a war or epidemic. The same principles apply to economic structures when attempting to discover the economic progress of a country or evaluating the effectiveness of economic policies.

Perception

People's decision to act on the environment depends on an image of the environment they receive. All of us are constantly

地理學更見完整。只要找出某空間形態，其運作過程更易觀察，言論也更見穩固。

結構形態

我們稱一物之組成方式為結構。在地理學方面，結構形態的概念最常用於人口研究或經濟地理學。我們必須先瞭解一物之結構，才能瞭解形成這種結構的過程。例如，認識人口結構，即性別及年齡特徵，則是研究出生和死亡率以及移民對人口影響的基礎。這是因為人口為劃分成不同的組別，又可以個別加以研究。

要將經濟制度分成不同的組別，通常要分析在初級、次級以及第三級工業中受僱勞動力的比例組合。然而，要進一步分析更小的組別，例如分析次級工業的結構，也是辦得到的。

經濟制度或人口結構的用處，在於讓人們得以全面地分析造成這種結構的過程。瞭解這些過程也即意味着人們可以在更踏實的學術基礎上更客觀地進行預測以及投視，同時，假如人們需要在某個空間或一段時間內比較某種視象，瞭解其結構組成也是有幫助的。對各國的經濟或人口結構進行比較，特別有助人們更深入地瞭解各國經濟發展的相對程度。此外，這些結構形態也可用來衡量一個國家在經濟及人口方面所達到的發展階段。

時間上的比較，使人們能夠分析任何顯著變遷的原因以及結果。研究在某段時間內的人口結構形態，所取得的資料可作分析人口改變的趨勢、人口政策的有效性、遷徙結構以及災禍如戰爭或時疫的影響。當要探討一個國家的經濟進展，或是評估其經濟政策的效能時，同樣的方法也可派上用場。

感觀

人們對於環境將會作出何種反應的決策，均視乎他們對環境的看法而

receiving information from our environment. It reaches to us from our senses. We incorporate and interpret these inputs through perception.

Perception can be defined as 'the experience people have as proximate result of the sensory inputs. The process is one of selection and organization of sensations to provide the meaningful entity we experience'. It is distinct from the 'real world' or the physical reality of stimulus information. Instead, it is our interpretation of that objective reality.

The process includes perceiving and filtering inputs from the external world. (See Fig. 6.)

定。我們從環境中不斷地收取訊息。它是透過我們的感官傳達予我們。我們是透過感觀來綜合及詮釋這些投入。

感觀可解釋為“人們的體驗，它是最接近感官投入的反映。這是個選擇及各種感覺的組織，以提供有意義的實體讓我們體驗的過程”。它有別於“真實世界”或有關刺激性訊息的物理現實。其實它是我們對客觀現實所作的詮釋。

這個過程包括覺察和過濾來自外界的各種投入。（參閱圖 6）

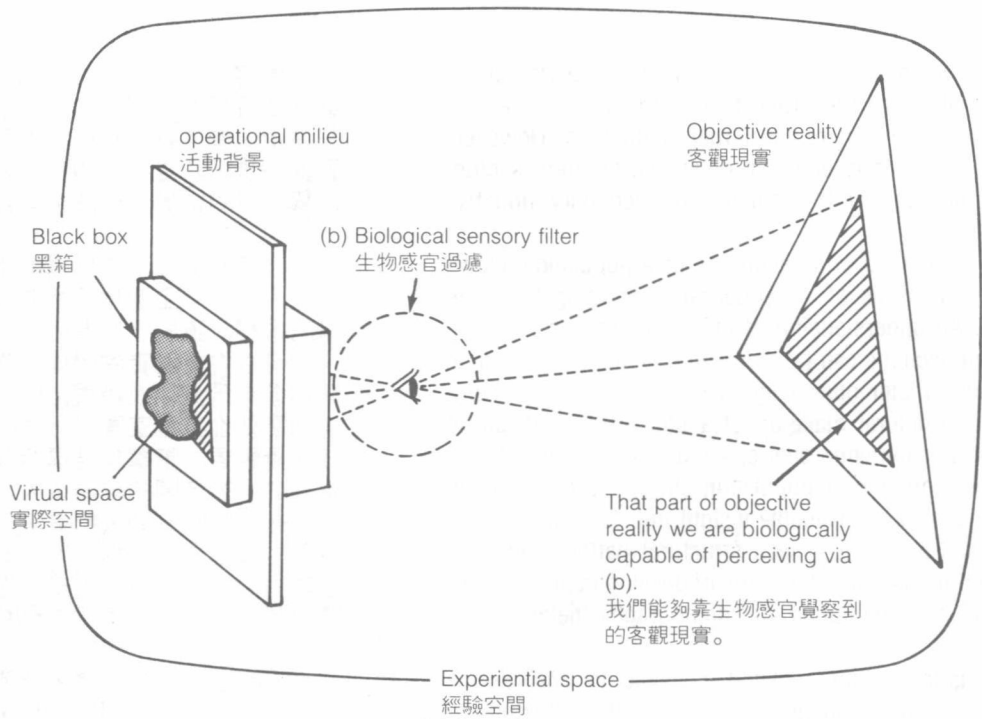


Fig. 6 Perception and reality
圖 6 感觀和現實

The process of perception and its consequent mental model are affected by:

- (a) personal view or the behavioural milieu,
- (b) cultural view or the operational milieu.

感觀的過程以及其產生的心理模式，是受到以下因素所影響：

- 1. 個人觀感或行為環境。
- 2. 文化觀感或活動環境。

‘Personal view’ refers to our own sense of space which is a result of the biological drive in us. It is also a consequence of direct experience. From here, the notions of distance, direction and space are generated.

個人觀感是指我們的空間意識，它出自我們內部的生物本能；同時也是直接經驗的結果。我們對距離、方向和空間的觀念就由此而生。

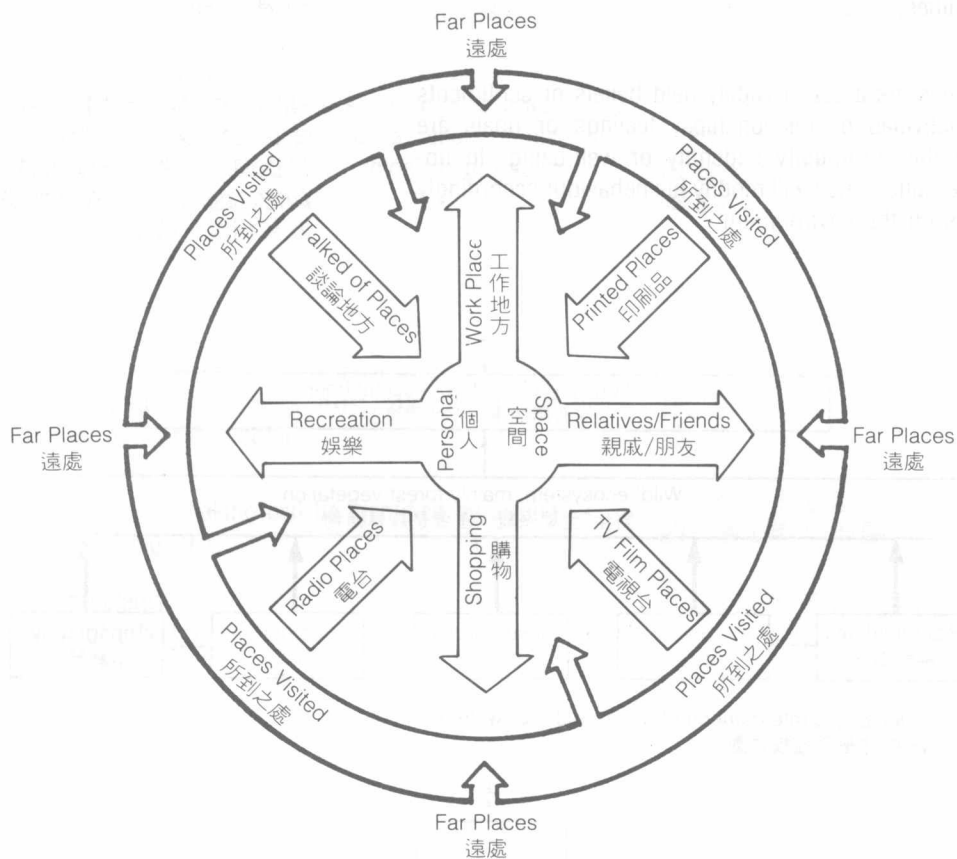


Fig. 7 A mental model of space
圖 7 空間的心理模型

‘Cultural view’ refers to the attitudes, values and cultural background of the perceiver. It is culture which enables him to choose certain stimulus and to arrange them into patterns which have meaning. From here, the notions of resources, hazards or cities and towns are generated.

“文化觀感”指感受者的態度、價值觀念以及文化背景。文化因素促使他選擇某些刺激物和把它們組織成種種有意義的形態。我們對各種資源、災禍、城市或市鎮的觀念便由此而生。

Cultural and Socio-Economic Values

文化和社會經濟價值觀念

In this study of man-environment system, one should pay special attention to the role of culture and socio-economic values. Man’s culture, to a great extent, decides the form and process of human intervention in the environment and it acts through the socio-economic aims and technical abilities that compose culture.

在研究人類——環境系統時，特別要注意文化以及社會——經濟價值的作用。人類文化大抵上決定人類支配環境的形式和過程，它通過社會——經濟目標，和構成文化的技能表現出來。

Economic values refer to man's notion of how to allocate limited resources to satisfy his wants. It is generally assumed that in the course of his actions, man tries to maximize profits or minimize costs. But more recent researches have discovered the 'satisfying' nature of human decision as he is unable to gain perfect knowledge of the environment or resources.

Technology is the science of applying knowledge to practical purpose. Man improves technology as a result of his desire for better standards of living. Technological progress imposes changes in the environment. (See Fig. 8.)

Decision-making

Decision-making often involves the choice among several possibilities. It is where alternatives exist that the act of decision-making becomes meaningful.

Three steps in decision-making can be identified by asking these questions: (See Fig. 9.)

- 1 What is the problem?
(Identification of goal(s))
- 2 What are the alternatives?
(Acquisition of information)
- 3 Which alternative is best?
(Evaluation/Choice)

經濟價值觀念關係到人如何支配有限的資源，以滿足需求的看法。一般的假定是，一個人在行動過程中，會設法追求最大利潤，或把成本降到最低。不過，最近的研究發現了人類決策上“令人滿意”的特性，這是因為人無法得到環境或資源的全部知識。

技術是將知識應用於實際用途的一門科學。人類爲了即高生活水準而改進技術。技術進展改變了環境(見圖8)。

決策

決策往往牽涉若干個可能性的選擇。有選擇存在，決策行動才具有意義。

從以下幾個問題，可以識別決策的三個步驟：(見圖9)

1. 有甚麼問題？
(鑒定目標)
2. 有那些選擇？
(取得資料)
3. 那一個選擇最佳？
(評價/抉擇)

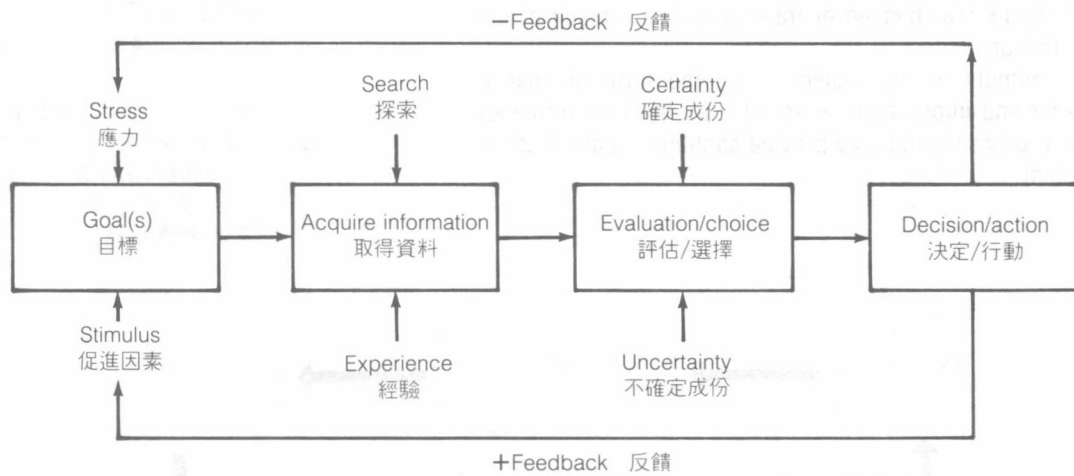


Fig. 9 A model of the decision-making process
圖9 決策過程模式

Geographical phenomena often results from human decisions. Even in thinly populated areas where the impact of man is minimal, the deliberate choice by its inhabitants to act in a certain way will bring about significant modification in the landscape. For instance, Hong Kong farmers have shifted from growing rice to vegetables which can bring them more profit. This is partly a decision to solve the problem of decreasing supply of land and labour, and competition from overseas producers.

Sometimes, it is not the individual decisions which will transform a landscape. The corporate decision-maker, for example, the government, may possess more power in modern society in such aspects of town planning or urban renewal.

地理現象往往是人類決策的結果。即使在人口稀少，受人類影響極小的地區，居民蓄意選擇某種活動，也會導致這個地區的景觀有很大變化。例如：香港的農民不再種植稻米，改種蔬菜，使利潤增加。其中的決定就是去解決土地不足與勞工短缺的問題，以及與進口米商的競爭。

有時候，不是個人的決定，而是多個決策者的共同決定能改變地理景觀，例如在現代社會的城市規劃及市區重建方面，政府可擁有更多權力。

Approaches

研究方法

Systems

系統

The use of the systems approach is a help in the study of geography. A system has the following characteristic features.

- 1 A system is made up of a number of objects, i.e. components.
- 2 These components are linked in a functional relationship, i.e. there are linkages and some purpose.
- 3 There are inputs of energy, matter and information.
- 4 The interaction of the inputs gives to the system a particular character.
- 5 The inputs are changed or transformed as a result of this interaction.
- 6 The outputs of the system — in the form of energy, matter and information — result from the transformation (or, processes) and they provide continual feedback to the system.

系統研究法有助於地理學的研究。一個系統具有下列特徵：

- 1. 一個系統是由若干物體構成，如組成份。
- 2. 這些組成份具有互相聯繫的功能，如具有聯繫性和某種目的。
- 3. 擁有能源、事物、資料的投入。
- 4. 投入的物體的相互作用，給予系統一種特有的性質。
- 5. 在相互作用之下，投入物體會起變化或改頭換面。
- 6. 系統的產出——以能源、事物和資料為形式——來自演變(或過程)，它們又給系統帶來連續反饋。



Fig. 10 A simple input-output model of a system
圖10 投入——產出模式簡單