CHAPTER 1

THINKING GEOGRAPHICALLY

Goals of this chapter

- To understand the distinctive elements of a geographical mode of thinking
- To elaborate on key concepts such as location, distance, territory, place, and scale
- To apply these concepts to economic phenomena

1.1 Introduction

In February 2004, while still a 19-year-old undergraduate student at Harvard, Mark Zuckerberg created a social networking website called Facebook. Six months later, his company had established itself in California’s Silicon Valley, just outside the campus of Stanford University. By the end of 2010, Time magazine had lauded Zuckerberg as its Person of the Year, a critically-acclaimed movie had told the story of the company’s creation, and by 2012 around 850 million people worldwide were Facebook subscribers. In other words, more than one-tenth of the world’s population had an account. When Facebook shares were floated in 2012, the company was valued at US$80–100 billion – more than many long-established media corporations, like News Corporation or Time Warner, and more than many of the iconic corporate entities of a previous generation, such as Sony or General Motors.

Facebook’s value was not, however, based on its income, assets, or profits. In 2011, its profits amounted to about $1 billion, largely generated through advertising revenue. Rather, the price tag reflected recognition of the potential value attached to its 850 million subscribers and its dominance in terms of web traffic (The Economist, 2012). In 2010, Facebook accounted for 8.9% of all
web visits in the United States (even exceeding Google’s 7.2%). Subscribers to Facebook spent about 700 billion minutes interacting with its site every month (an average of almost 17 hours per month for each user) (Facebook, 2011). This amounts to a huge potential for earnings, through advertising, linked applications, and online games.

Facebook might seem an odd example to use in introducing the field of Economic Geography. To most of its users, after all, Facebook is primarily a venue for social networking, for staying in touch with friends and sharing photographs, thoughts, invitations, and so on, rather than engaging in economic activity. Its product is free to use and does not require any economic transactions on the part of users, beyond their prior purchase of a computer or mobile phone and a contract with an internet service provider. Furthermore, communications on Facebook seldom concern “work-related” activities, as many employers are acutely aware!

In addition to being apparently noneconomic, Facebook might also seem to make geography itself irrelevant. Time spent on Facebook appears to involve no interaction with the earth’s physical systems, and the company’s product is, to its users, weightless and virtual. Facebook would also seem to eradicate the impediments created by geographical space. Its own home page depicts a graphic of social linkages transcending a map of the globe (see Figure 1.1). Distances, places, borders, and other markers of geographical space appear to offer little hindrance to the spread of an individual’s network of friends through the site, and the possibilities for communication. Users can stay in touch with a network of friends almost regardless of where on earth they are located, and the difference in connection times between various locations is almost imperceptible. Perhaps more than any other business, then, Facebook would seem to exemplify the end of geographical space.

![Figure 1.1 Facebook – the transcendence of geographical distance?](image)
If we look a little closer, though, Facebook and its business operations provide both an economic and a geographical story. Clearly Facebook is an economic phenomenon. As a business itself, Facebook employed around 3,000 people in 2011 and generated sales of nearly US$4 billion. But its product also represents an economic tool used by many other businesses to reach and connect with clients and customers, both as a networking device in its own right and as a venue for advertising that might once have appeared in newspapers or magazines. Facebook also represents a platform on which developers are creating software applications, thereby generating economic activity well beyond the company itself. Facebook estimates that entrepreneurs and software developers in 190 countries work with its platform. Looked at from a different angle, Facebook and the internet more generally provide channels through which networks of solidarity and struggle might be created between workers around the world (a theme we will return to in Chapter 6).

Facebook is also a profoundly geographical story. Here we take “geographical” to mean the patterning of activities (in this case, economic activities) on the earth’s surface. The central questions asked by economic geographers are how economic patterns across space are configured, and why things happen where they do. But space itself is not a straightforward idea, as it is more than just the canvas on which such patterns are imprinted. If that were the limit of our interest in space, then we would simply be describing patterns rather than trying to explain them. Rather, space is an active part of explaining geographical patterns, meaning that economic activities are shaped by spatial relations – space is not just where things happen, it is also why things happen where they do. Seeing space as an explanatory factor in this way involves thinking carefully about what we mean by space. In this chapter we develop four conceptions of space and illustrate their meaning with reference to the Facebook example.

The first concept is location (Section 1.2), which involves the positioning of people and objects relative to each other. A key variable here is distance. Overcoming distance requires time and money and so it determines a great deal about how the economic landscape is configured. This is true whether we are thinking about traded goods being moved, people commuting to work, or shoppers traveling to retail outlets. We will examine, in particular, some of the classic models that economic geographers have used to demonstrate how the cost of distance (sometimes called the “friction of distance”) affects location in space.

A second geographical conception of space is territory (Section 1.3). If location and distance are about coordinates on a map and the physical space that separates them, then territory is about carving out defined portions of space and exercising power over them. The primary form of territorial power is exercised by governments, who can affect both economic activities within their territories and economic flows across their borders.
Third, we consider the concept of place (Section 1.4). Places are formed when space takes on certain unique characteristics that are meaningful to the people who interact with them. Places may have cultural or political significance, but they also shape economic patterns in important ways. Economic places do not, however, just create themselves internally – rather they are the product of various flows across space that intersect differently in different places to generate one-of-a-kind outcomes. It is the uniqueness of those outcomes that plays a part in determining where economic activities will “take place.”

Finally, we will think about scale (Section 1.5). Both territories and places are defined areas of space, but they might represent a range of different scales – state territories vary widely in size, and while a house is a place, so too is Beijing or South Wales. This might seem a rather straightforward idea, but scale becomes complicated when we are thinking about space in economic life. Which scale should we focus our attention upon? How do different scales relate to each other?

### 1.2 Location and Distance

Perhaps the most basic way of thinking about space is as a grid of points that we can describe using a system of coordinates. Detailed maps do this quite effectively using longitude and latitude. The lecture hall where your class takes place could easily be described in these terms. It could be given precise global coordinates and you could then also describe your own location in that classroom through a regular pattern of rows and seats (3rd row, 4th seat from the end, etc.). This conception of space, based on some kind of definable measure of position, is often referred to as absolute space. It is the space of geometry and mathematics, and allows the specification of point locations, lines, and areas. Space in this instance is simply a grid for defining an absolute position.

Taking space as a grid of coordinates also allows us to go one stage further. We can examine the location of people and things in space in terms of their position in relation to each other. This is, in fact, far more important than simply knowing the coordinates of something on a map, as it allows us to start thinking about patterns in economic space – what kinds of things are happening where, and why this might be so. The absolute space of distance helps us with this explanation because overcoming distance requires time and money and so is nearly always a factor in determining the location of economic activities. As raw materials and finished goods are transported for longer distances, for example, the more expensive they become or the more they deteriorate in quality. As people decide where to shop, they must factor in the costs in time and money of traveling to retail outlets at varying distances away. In an urban center, a labor market can usually only be created out of those people who are close enough to commute to work at the beginning and end of the work day. This means that most cities have a labor market represented by areas within 1–2 hours of commuting time.
It is also important to note that the distance between points on a map is not necessarily the most significant factor in determining the effect of location on economic activities. It may, for example, be quicker to get from New York to Amsterdam than to get from Green Bay, Wisconsin, to Austin, Texas, even though the trans-Atlantic journey is much longer in terms of absolute distance. Likewise, it may be less expensive to ship large quantities of manufactured goods from China to California than it is to move them from California to urban centers across the United States. What matters, then, is not absolute distance measured on a map, but rather relative distance, measured in freight/transport costs or travel time. This is, in turn, dependent on the configuration of transportation modes and intersections. Relative space is, then, frequently more important in economic terms than absolute space.

For many years, absolute and relative locations were the key conceptions of space used by economic geographers as they sought to understand how the “friction of distance” affected the spatial pattern of economic activities. A classic early version of this idea was provided in the early 19th century by Johann von Thünen, who examined the way distance affected agricultural land use patterns (see Box 1.1). Another German theorist, Walter Christaller, applied a similar style of thinking to the patterns of cities, towns, and villages that develop across economic space (to be discussed further in Chapter 11).

The key point to note in both von Thünen’s and Christaller’s ideas was that they saw space in terms of relative location – between producers and marketplaces, and between marketplaces and consumers. By establishing certain assumptions and by analyzing how distance affected relationships, they were able to develop models that could predict how economic activities might be arranged in space. This was a powerful way of thinking and inspired a great deal of subsequent research in Economic Geography, much of it developing a more sophisticated mathematical version of the analyses produced in these early models. Such approaches are often labeled “locational analysis” or “spatial science,” indicating their ambition to find principles that underpin the arrangement of economic activities in space. The effects of distance and transport costs on patterns in economic space also formed the basis for studies by economists developing what they term “the new economic geography” (see Box 1.2).

If we return to the example of Facebook, we might at first imagine that the study of location and distance has little to offer. It is certainly true that relative space has been greatly disrupted by the networks created through internet connectivity. It is, for example, just as easy to connect on Facebook whether a person is in New York, New Delhi, or New Zealand. And to a certain extent, the internet allows real economic transactions to take place without any “friction of distance.” Buying applications, music/video downloads, or software are all possible regardless of where the consumer, or the business selling those products, is located. Other kinds of production may also be facilitated by the internet. Even physical products, like this book, can be created using the internet to overcome distance (for example, as draft chapters are circulated by email between authors located in the U.K., Canada, and Singapore, and publishers in the U.S.).
KEY CONCEPT

Box 1.1  J. von Thünen, land use, and bid-rent curves

One of the earliest examples of an attempt to analyze the effect of distance on patterns of land use was developed by a German landowner almost 200 years ago. Johann-Heinrich von Thünen (1783–1850) was trying to find a logical way of understanding how to use land on his estate in order to maximize economic benefits. Using a very simple model he showed that the different value and transportation costs of various crops meant that they would “bid” for the use of a particular parcel of land at different rates as distance from a market town increased. The result was a pattern of rings around a town in which distance dictated agricultural land use. Some land uses, such as dairy cows, produced a commodity that was heavy to transport, easily perished, and needed on a daily basis.

Under these circumstances this land use would “bid” a high price for land close to the market center, but this would rapidly fall away since beyond a certain distance it would not be possible to transport the milk to the market without it spoiling.

Agricultural crops, on the other hand, yielded less daily income from a given area of land, and would only require seasonal transportation. They would thus bid less for land near the center, but could continue at much greater distances (described by a “bid-rent curve,” Figure 1.2a). Once a variety of products were assessed in this way, von Thünen showed that a pattern of concentric land use rings would result around the market center, all calculated based on the transport cost of the products (Figure 1.2a). This model made a variety of assumptions – for example, that transport costs were directly proportional to distance, that the landscape, soil fertility, etc. were uniform in all directions, and that there was only one market center for agricultural products.

Obviously, the pattern would begin to get more complicated once these assumptions were relaxed (Figure 1.2b). If we think about contemporary food systems, in which for example Eastern Canada is supplied with fresh salad from California, Mexico, and other places, von Thünen’s scheme begins to look very dated. Nevertheless, the model does capture the essence of how the costs associated with distance can affect the spatial structure of economic activity.

Although our technological ability to overcome some of these distances greatly expands the size of the “circles,” a similar calculation is still being made. Another context in which bid-rent curves have been applied is in the urban setting, where prices and land use patterns (e.g., of office, commercial, residential, or industrial activities) are often directly related to their distance from a central business district.
Nevertheless, location is still surprisingly important even for internet applications, and several examples illustrate this point. First, Facebook’s business is based on selling advertising space. This advertising is targeted, including by geographical area, so that the ads that users see on their Facebook pages will generally be those that relate to services or products in their immediate geographical area.
FURTHER THINKING

Box 1.2  Paul Krugman and geographical economics

Paul Krugman was awarded the Nobel Prize for Economics in 2008 in recognition of his work on economic geography and international trade.

Although Krugman has achieved fame as a columnist for the *New York Times*, writing for a popular audience, the work for which he was awarded the prize was quite abstract. It involved the development of a model that showed why an economy will, over time, tend to develop core regions of manufacturing and peripheral regions based on agricultural production. Of particular interest here are the ways in which Krugman (1991a and b) treats transportation costs. He assumes that transport costs are proportional to distance and operate like an “iceberg,” meaning that the greater the distance traveled the less value a product retains (because it “melts away”).

He then shows that a number of processes take place.

First, if a manufacturer locates in proximity to other manufacturers (e.g., in the same urban center), then it will benefit from the lower transport costs for its components that are being supplied from other local factories. Second, he shows that because manufactured goods are less expensive in that location (due to lower transport costs), the wages of workers who are buying them will be worth relatively more, and thus it will be more attractive as a place to work. Third, transport costs to reach a large market will also be reduced by locating in proximity to that market – and as the attractiveness of that market draws more manufacturers, their workers will also become part of the market. Finally, he shows that if transport costs across space are low enough, then there will be a tendency for manufacturing producers (and population) to concentrate in a core area and from there, they will supply a population dispersed across space.

For all of these reasons, a process can be triggered in which manufacturing activities and population will concentrate in one area, creating a core and periphery across economic space. This will not happen in a context where transport costs are very high, but will become feasible as they fall. Which area will be the core, and which the periphery, can be affected by quite small differences at key points in time, but will then lead to large differences as these processes play out—a widening gap between core and periphery due to what can be termed “cumulative causation.” To derive this result, Krugman used what he later termed “aggressively unrealistic” assumptions. His purpose was not to describe the real world, but to characterize mathematically the operation of an idealized model. He does point out, however, that the model makes intuitive sense and
think geographically

that real-world cases provide some support for his ideas. For example, manufactured goods were produced in small towns in the United States as farming settlement spread westward in the 18th and 19th centuries. But as the railroad reduced transport costs it became possible for manufacturing to concentrate in a few urban centers, which grew rapidly and whose predominance has been largely maintained. Krugman’s model initiated a generation of research in Economics, known as Geographical Economics, that has sought to incorporate the role of space into the modeling of economic development and trade flows.

The process for placing advertisements does not involve paying a fixed price, but instead bids are accepted by Facebook based on either each “view” of an advertisement or each “click” on the hyperlink embedded in the advertisement. Bidders decide what they can afford to pay to reach their desired population and market area. Thus, proximity still matters, because many advertisers are ultimately more interested in reaching people who are nearby.

Distance matters in another sense too. To get almost instantaneous connections, the location of computer servers (where data are stored and processed) is important. Although Facebook still has all of its servers in the United States, this is likely to change in the coming years, and Google has already recognized the need to locate servers around the world in order to deliver the response times that users have come to expect. But computer servers must also be placed with certain locational requirements in mind. For example, server farms or data centers need huge amounts of electrical power and so it pays to be near a cheap supply of electricity, such as a hydroelectric power plant. The heat generated by this kind of power consumption also means that large amounts of cooling water are needed, and so this too shapes locational decisions. Finally, and perhaps most obviously, the locations of such data centers need to be in areas that have very good connectivity to the internet. In each of these ways, then, essential elements of internet infrastructure do in fact have locational requirements to be near certain key inputs for their “production” process.

Surprisingly perhaps, these locational requirements are similar to some of the factors that would have shaped the very earliest geographical patterns of manufacturing industries. In 18th century Europe, a textile or flour mill would have located next to a river in order to generate power (using a water wheel) and to serve as a transportation corridor for raw materials and finished products. In principle, these requirements are not so different from a data center’s need for electrical power and a good location on a network for moving data. In both cases, the spatial pattern of economic activity is shaped by distance and proximity to certain production requirements. Space as distance, then, can be as important now for Facebook as it was 300 years ago for a flour mill in determining where in space activities will happen.
1.3 Territory

So far, the way in which we have thought about space has largely reduced it to the role of physical distances in explaining the pattern of economic activities across the landscape. As we have seen, there are certainly merits to this approach – as the time and cost associated with overcoming distance are undoubtedly important factors in determining where things are located.

Space is, however, more complicated than just the existence of distance. It can also be viewed as having qualities that distinguish one area from another. An especially important attribute of spaces is the power to control them in some way. This brings us to the concept of territory, which can be defined as “a bounded space under the control of a group of people, usually a state” (Elden, 2009, xxv). Thus, while locations and distances are indicated on a map of the world by gridlines and a scale, territories are defined by the lines and shading that indicate the entities that control various areas.

Control over territory can have important implications. National governments have the power to police, guard, and enforce the boundaries of their territory. This means that they can control what flows across those boundaries, including workers, products, and money. Even in a globalizing world there is little doubt that national governments still exercise many powers in this respect (as we will discuss in greater detail in Chapter 4). Where states surrender such powers, it is often to other territorial entities that are themselves state-like, such as the European Union.

Territorial space also implies the power to exert some degree of control over certain processes within those boundaries. In the case of national states, this is clearly manifested in a range of ways – from education and training programs that are run by governments, to laws concerning property, pollution, contracts, and employment relations, to welfare, unemployment benefits and tax policy. In these and many other ways, governments shape the nature of economic activity within their borders quite fundamentally. Governments are also usually the single largest employer and purchaser of goods and services. It is not hard to see, then, why control over borders, and over economic activities within them, would make national territories a key dimension that shapes where economic activities happen.

National states, may, however surrender part of their absolute control over territory to others. City governments, for example, often take on the role of land use planners and thus decide what kinds of activities will be allowed in which locations. Through inspectors, enforcement officers, and of course police departments, the location and conduct of economic activity is also closely regulated.

Ownership of land may also allow private entities to exercise control in economically important ways. Consider, for example, a shopping mall, which in many respects is a territorial entity carved out in space. The managers of the mall are permitted, by virtue of their ownership of the facility, to exercise some degree of territorial control over it. They can, for example, shape what
kinds of activities occur within the mall, including decisions about the type and mix of retail tenants (discussed further in Chapter 11). They can also “police” the behavior of people within the mall, by denying access to those they see as undesirable and by disallowing certain activities – try lying down for a nap or selling some home-baked cookies in a shopping mall, and you will likely find out fairly quickly that it is a closely controlled territory!

Returning to the example of Facebook, we can see several ways in which territorial control is influential. Figure 1.3 shows a map of Facebook linkages around the world. Created in 2010, it plots the connections between Facebook “friends” across global space. The map became an object of some fascination in China when it was released as it clearly shows the country as a “dark” area without Facebook friend connections. In reporting on the map, the Wall Street Journal quoted one Chinese blogger as asking, “Here is the Facebook map. This octopus-like creature hasn’t been able to invade our territory, should we be happy and content with this?” The reason that Facebook is absent from China is because the national government has exercised its territorial power to block flows across its national borders – in this case blocking the Facebook site within China. This occurred in July 2009 after the national government in China became fearful that political dissidents in some peripheral regions were using social networking sites to organize their resistance.

Whereas China blocked Facebook from engaging in business within its territory, national governments may also actively seek to attract certain economic activities. We noted earlier that internet data centers have certain locational requirements, but they may also be lured by the promotional activities and incentives that governments offer. Since the collapse of its financial system in 2008, Iceland has attempted to promote itself as a prime location for data centers. With a surplus of very low cost electrical power, much of it generated geothermally, and a cool climate, the country has certain natural advantages for the location of data centers. But the government has also moved to ensure that its taxation regime
is attractive to locators of data centers, has invested in high-capacity underwater
cables to ensure fast connections to the global internet, and has mounted a cam-
paign to “sell” the various benefits of locating within its territory: its promotional
campaign sells Iceland as “the coolest location for data centres.” The Icelandic
state, as a territorial entity, has thus sought to render itself attractive to this
growing sector in a variety of ways through its regulatory power over territory.

1.4 Place

Place represents a third conception of space and is distinct from both location
and territory in important ways. In one sense a place is indeed a location, as it
occupies specific coordinates on the earth’s surface. But it is not the occupation
of a singular location that defines a place. Rather, a place is a unique ensemble
of human and physical features on the earth’s surface, including environmental
conditions, physical and human landscapes, cultural practices, social life, and
economic activities.

Where do these distinctive features of a place come from? Some are part
of the physical environment and owe little to the impacts of human activity.
These should not be forgotten as they matter a great deal in determining the
resources that form the basis for a place’s economic development (as we will
discuss in Chapter 5). They also matter in terms of the attractiveness of places
for human settlement. But the characteristics of a place are also fundamentally
shaped by human activity. Forms of government, religious traditions, linguistic
groups, norms relating to gender roles, architecture, artistic expression, ways of
interacting with other people, levels of wealth and inequalities of wealth, the types
of work that people do, the shops that exist and the things that they sell – these
are all human activities that give rise to unique characteristics of particular places,
and they may vary greatly even within the same territorial spaces. New York
City, for example, is a quite different place from the capital of New York state in
Albany. Vancouver is a distinctive place in itself, but the Kitsilano neighborhood
is a quite different place from New Westminster.

These differences in human society between places are to some extent created
in situ – that is, they are created internally within such places. Traditions of art,
different styles of architecture, and styles of social interaction might emerge as
distinctive and quirky features of a particular place. They are also reproduced
through the everyday behavior of people in that place. There would, after all,
be no such thing as a distinctive New York attitude and way of behaving unless
New Yorkers themselves performed that style every day! The characteristics of a
place may also emerge because of chance happenings. Detroit, for example, may
not have become North America’s 20th-century center of auto manufacturing if
Henry Ford had not been born nearby, nor would Rochester, New York, have
been the headquarters of the Eastman Kodak company if George Eastman had
not been raised in upstate New York. On the other hand, we could equally argue that the conditions for these innovators to establish new industries were created by precisely those places in which they were raised.

For the most part, though, differences between places are created as much by the connections between places as they are by processes that are internal to them. We can therefore think of any given place as a unique knot of linkages tying it to many other places. The role that a place plays in larger structures explains a lot about its characteristics. New York City and Hong Kong are wealthy cities, but they remain so in large part because of the paramount role that they play in a globalized financial system. Each has concentrations of major banks and financial institutions with global reach, and billions of dollars worth of transactions are completed daily among these global financial centers (described in greater detail in Chapter 7). Sydney (Australia) and Vancouver (Canada) have economies that are shaped in part by their centrality in flows of migration to their respective countries. Oxford, England, is a city defined by its role as a major center of higher education and research, but this role exists because the university represents a node in various networks of research funds, students, faculty, and knowledge exchange. Places, then, can be seen as the “coming together” of flows across space to create unique intersections in particular locations. This conception of place is what Doreen Massey (1994) calls a “global sense of place.”

It is, however, important to remember that places are not just the outcome of contemporary connections. They are also the result of historical place-making from different periods of time, each layered on top of the period before. This historical layering process is another reason why no two places are alike. We cannot understand the grandeur and wealth of London without acknowledging its role at the heart of a global empire over the last few centuries. Nor can we fully understand Manila or Mumbai without thinking about the ways in which centuries of colonialism shaped their societies, cultures, and economies. Even the most remote village is shaped by these historical connections, and their contemporary consequences, in a most profound way.

Understanding the uniqueness of places is, therefore, complicated. It requires us to think about both historical and contemporary processes and how they have shaped a place, and how the characteristics of a place in the past shaped (without actually determining) what it could become in the future. It also requires us to examine not just what the place itself is like, but also the part it plays in larger structures and processes – studying a place is not therefore about studying just that place. Furthermore, studying places is about recognizing how diverse factors, from the natural environment, to cultural practices, to economic activities, are all interconnected. This encounter with the complexities of a specific place is, in many ways, a quintessentially geographical undertaking.

It is also worth pointing out that this geographical approach to the world requires a somewhat different mindset than we might find in other disciplines, and especially Economics. Taking a geographical approach to patterns of economic
activity requires us to see them in all the complexity and messiness of the real-world places in which they are situated. This does not mean that there are no bigger forces operating that shape these activities, but it does mean that we are seeking to understand them as unique instances in real and lived places, rather than as ways of deriving model “laws” or principles. While economists are often seeking universally applicable generalizations (a “science” of economic processes), economic geographers are usually going in the opposite direction – trying to understand why certain things happen in specific places in the context of all the richness and complexity of that place.

We can illustrate this approach by returning to the example of Facebook. We noted at the beginning of this chapter that Mark Zuckerberg started the website while still a student at Harvard University (near Boston), but within months he had moved to California’s Silicon Valley. Palo Alto, just south of San Francisco, became the company’s new home, situating it at the heart of a major global center for software development. The qualities of that place are an important part of the Facebook story. Facebook’s first home was in the Stanford University Business Park – an environment established precisely to assist new start-up companies needing office space, and particularly those established by the university’s faculty and graduates. The company’s first significant investment, in June 2004, came from Peter Thiel, who several years earlier had cofounded the online payment system Paypal with a group of fellow Stanford graduates. An important part of Palo Alto’s quality as a place, then, was the presence of both an entrepreneurial atmosphere and a willingness to bet venture capital on new companies. Silicon Valley also represented a rich pool of workers for a new high-tech company. Facebook’s employees were drawn from various sources, but many had previous experience with new start-up ventures in Silicon Valley.

The important point to note here is that Silicon Valley represents a place where information, ideas, capital, and highly skilled workers all come together in a way that fosters the development of firms like Facebook. To understand truly the emergence of Silicon Valley as the place it is today, we would also have to examine the role of American government defence expenditure in the area in the second half of the 20th century, and various other features of California’s historical development (for more on California, see Chapter 3). The development of Facebook needed these unique features of Silicon Valley, and, as Facebook has developed, it further enhances these qualities of Silicon Valley as a place (for more on high-tech clusters like Silicon Valley, see Chapter 12).

A second, but quite different, example from the Facebook story also illustrates the distinctiveness of places and how they might shape economic opportunities. We noted earlier that the global map of Facebook “friend” connections (Figure 1.3) shows a large dark area over China, due to the government’s application of its territorial power to exclude. It is also worth noting, however, that Japan is also rather underrepresented. While 60% of internet users in the United States are now Facebook subscribers, the proportion in Japan in less than 2%
THINKING GEOGRAPHICALLY (Tabuchi, 2011). Instead, Japanese users have been drawn to other social network sites, especially Mixi. The near absence of Facebook in Japan is not because of language barriers (it is available in Japanese) or because of the actions of a territorial government. Rather, we see a distinctively place-based explanation for why Facebook has not captivated Japanese users. This revolves around the culture of internet usage in Japan that rejects the openness of Facebook, where real names and pictures are used, and favors instead the use of pseudonyms or false identities when connecting to others online. The idea that strangers might see personal information or even photographs is quite alien to Japanese internet culture. The result is that although there was an US$8.5 billion online advertising industry in Japan in 2009, Facebook captured relatively little of it. Here we see place operating in a quite different way. A company’s product that has been so successful in so many places was found to be “out of place” in a different cultural context. This form of place-based cultural limit to the global spread of transnational corporations is discussed further in Chapter 10.

1.5 Scale

In the discussions above we have discussed territories that range from national states to shopping malls. We have also discussed places from the suburb of Palo Alto in California, to New York City, to Japan as a whole. This implies that we need to give some explicit consideration to the issue of scale.

When used in relation to a map, scale refers to the way in which distances on the ground are represented. A map scale of 1:50,000, for example, would represent 500 meters of real-world distance with one centimeter on the map. But scale is more commonly discussed in relation to different levels or sizes, and when these are applied to space we are usually talking about variously sized areas. We can identify a long list of scales that have already been used in our discussion of Facebook (see Figure 1.4):

- A global scale allows us to understand the full scope and reach of Facebook’s client base and business. Around 80% of the company’s subscribers are outside the United States, and it is the dominant social network site in many countries in the Americas, Europe, Africa, and Asia.
- The macro-regional scale is larger than the national scale, but more defined than the global. It usually refers to a group of countries that should be considered together – for example, because of some kind of economic commonality. The European Union would be one example. Thus, one part of Facebook’s global corporate structure is a European headquarters located in Dublin, Ireland.
- The national scale is the most important scale at which Facebook must comply with the regulations imposed by territorial states. It is also often the
scale at which internet service providers (crucial intermediaries in Facebook’s business) usually operate. And, as we have seen in Japan, place-based cultures that demand certain types of internet applications may also be nationally defined.

- The *regional* scale may represent a territorial unit of control (for example a subnational state or province with jurisdiction over certain issues); but a region may also represent the scale at which advertisers on Facebook are targeting their potential customers; or we might think about Facebook’s headquarters in the regional cluster of high technology development stretching along the Santa Clara Valley south of San Francisco.

- The *urban* scale is where most of our everyday economic activities take place, including the daily journey to work of around 1,000 Facebook employees at their Palo Alto headquarters. A city may be significant in other ways too – when Facebook sought to raise very large amounts of capital in early 2011, it turned to the New York investment bank Goldman Sachs. The bank’s location in downtown Manhattan among a major cluster of financial firms is just as important as Facebook’s location in the Silicon Valley high-tech cluster.

- The *local* scale might reflect the immediate neighbors located close to Facebook’s headquarters, such as Google and Stanford University, creating flows of people, ideas, and competitive pressures that drive new innovation.

- The *workplace*, or the *home*, are scales where many of the micro-processes of everyday life are played out. Facebook’s headquarters features open-plan desk space designed for frequent interaction and innovation. The home lives of its employees will shape why they work there in many complex ways (while the home lives of other people may dictate that employment in a high-pressure environment with long hours of work is not possible).

- Finally, the *body* is the scale at which we all occupy, navigate, and experience space. And the “coding” that we carry around through our bodies (our gender, ethnicity, sexuality, citizenship, linguistic skills, education, cultural style, etc.) often shapes the ways in which we are treated in our economic transactions. The body may be important in another sense too – an individual or small group of individuals (Mark Zuckerberg, Henry Ford, and George Eastman have all been mentioned in this chapter) may be a critical player whose personality and background shapes an entire economic sector.

These scales are useful frameworks for thinking about economic processes, but there are three important points to remember that refine our understanding of scale.

The first point is that scales are not hierarchical. It is tempting to assume that larger scales determine what goes on at smaller scales. The economic world is, in fact, more complicated than this. Clearly even a global firm like Facebook is unable, in this instance, to override the national territorial power of a state,
such as China. Likewise, the wealth and power of Wall Street financiers may play a significant role in shaping the national economic policy of the United States. Finally, we can note that while the high-technology sector (Facebook, Apple, Google, etc.) may be truly global in scale, its important functions are played out in specific regions such as Silicon Valley in California. And, of course, innovative new ideas that will change the world occur in the workplaces, kitchens, bedrooms, and coffee shops of the world. Thus, scales may vary in size, but this does not necessarily mean that greater size implies greater power.

A second point to make is that economic processes work at multiple scales simultaneously. To try to understand a set of processes at one scale alone will inevitably produce a very incomplete picture of what is happening. In 2011, when Facebook opened its first self-owned data center in Prineville, Oregon (see Box 1.3), decisions would have been made at many different scales. On a global and continental scale, it was clearly decided that the servers should be in the United States, while on a national scale the Northwest of the country was chosen as somewhere with a climate that would not exacerbate cooling costs. Incentives from local governments and the availability of a suitable site also played a part at a yet smaller scale. In other words, the dynamic behind the geography of this particular economic activity is working at several scales simultaneously. The purpose of geographical analysis is not, therefore, to pick the “correct” scale to focus upon, but rather to keep multiple scales in mind at the same time. To think at just one scale usually provides a very partial and misleading understanding.
CASE STUDY

Box 1.3 Why Prineville?

In April 2011, Facebook opened its own data center (see Figure 1.5) in Prineville, Oregon, a community of about 9,000 (see Figure 1.6). Until that point, the company had leased data center capacity from other providers. The facility in Oregon reportedly has the capacity to handle all of Facebook’s current data traffic and storage needs, but the company has plans for further expansions. Why would Prineville represent the chosen location for such a facility?

Data centers are vast warehouses of computing power, and the conventional factors explaining their location include the need for a large electrical power supply, a copious supply of cooling water, and good internet connectivity. As noted earlier in this chapter, these kinds of requirements can be accommodated within a locational analysis – one that seeks to understand what an economic activity needs to be near.

A locational analysis of Facebook’s Prineville site provides some indications of why the facility was located there, although interestingly the explanations are rather different from the ones we might expect. Rather than be near plentiful supplies of cheap electricity – for example, from hydro generation – the facility will draw power from a local utility company that uses mostly coal. However, the utility was able to meet Facebook’s

Figure 1.5 Facebook’s data center in Prineville, and an extension facility under construction
needs, perhaps due to excess capacity created by local deindustrialization. Formerly home to a thriving wood products industry, Prineville had seen a long-term decline, with the last mill and another major employer (a tire manufacturer) having left by 2008. By late 2010, unemployment rates were close to 20%. Nor did Prineville provide plentiful quantities of cooling water. In fact, central Oregon is known as the “high desert” as it sits in a rain shadow zone, and local water supply is far from plentiful. Prineville does, however, offer other physical locational advantages. A relatively dry climate helps with the cooling mechanism used in the data center, which involves evaporative cooling rather than air conditioning.

But such locational considerations of proximity and distance only take the explanation so far. Another dimension of Facebook’s locational decision concerned the incentives on offer from local governments. Prineville is in one of the state of Oregon’s “long-term rural enterprise zones,” which provide for up to 15 years of exemption from property and corporate income tax. The ability to provide security for the facility was also a major consideration. Here, the location of the site in a very remote location is an advantage – on a bluff above a valley surrounded by forested hills in
the interior of Oregon. Thus, the territorial space of government economic jurisdiction was important, and so was the ability to secure territorial control over the site itself.

Had Facebook been seeking to lure highly mobile software engineers to work at their data center, they would likely have looked elsewhere, to places like Silicon Valley. But attracting large numbers of highly technical employees was not an issue. When fully operational, the data center requires only around 35 full-time workers, from security guards, to maintenance workers, to computer technicians. The local site manager for Facebook was quoted as saying that “We’re the blue collar guys of the tech industry, and we’re really proud of that… This is a factory. It’s just a different kind of factory than you might be used to. It’s not a sawmill or a plywood mill, but it’s a factory nonetheless.” In that sense, Facebook identified a place with the right kind of local work culture.

As this brief example suggests, understanding the location of an economic activity requires several conceptions of space. Location and distance are important in understanding why proximity to certain requirements will always matter. But territorial control was also clearly a factor. Finally, place matters, even where it apparently does not. In this case there was no imperative to locate somewhere to which people would be attracted, as employment requirements were small, and there would be advantages to creating a stable workforce in a small town – quite different from the frenetic mobility characterizing Facebook headquarters.

Finally, we need to avoid the temptation to see these scales as somehow naturally occurring. Each of the scales listed above is humanly created in two senses. First, and most obviously, a scale such as “the national” or “the urban” refers to entities that we have collectively created. Nations and cities are not naturally occurring phenomena! Second, and less obviously, each of these scales is being actively constructed and reconstructed with ongoing changes in our economies and societies – a process called the “production of scale.” There was a time, for example, when the national economies of the industrialized world were reasonably self-contained and governments could think about economic policies at the national scale. Many would argue that Western European and North American economies could be thought of in these terms from the 1940s to the 1970s. It is important to point out that this was not the experience of many former European colonies for whom national autonomy was much more constrained – here we might have to think about “empire” as a scale of analysis. But the national scale also proved unstable in Europe and North America. The expansion of trade, flows of investment capital, and the reach of transnational corporations since the 1970s have facilitated a globalizing era in which it is very
difficult to think about economic management operating solely at the national scale. The scale of our capitalist economy has thus been reworked, and in this sense, scale is constantly being produced.

Alongside the rise of global processes, many would also argue that we now live in an economic world in which it is urban centers and regions that are the nodes of growth and innovation (Scott, 1998). It is networks of world cities that drive the global financial system (New York, London, Tokyo, Frankfurt, Hong Kong, Singapore, etc.) and major manufacturing centers are located in regions such as Guangdong province in China, and export processing zones across many developing countries. It is, therefore, increasingly the characteristics and connections of these urban regions that shape the geography of global economic activity. Again, then, we see scale being restlessly restructured in the context of a dynamic capitalist economy (an issue we return to in Chapter 3).

1.6 Summary

There are many popular conceptions about what geographers study. If you are a student of geography, you will have heard most of them. Geography, it is often assumed, is about maps (knowing where things are located, and how borders are configured), the natural environment (rivers, mountains, volcanoes, glaciers, etc.), and places (going there for field trips, knowing capital cities, etc.).

This chapter has shown that these preconceptions of Geography hold elements of truth, but in fact geographical analysis is about much more. The old stereotype about geographers and their maps is accurate in so far as we are certainly concerned with questions about where things are located and how physical distance affects patterns of economic activity. The notions of space that arise from thinking geographically in this way are also central to the geographical analyses that have become popular in the discipline of Economics. In Figure 1.7, this kind of space is represented by grid lines across which locations and distances can be measured.

The lines on a map that define the territories controlled by states or other entities are also key elements of geographical analysis. But we are less interested in where exactly a border is located than what its effects might be on economic activities within it, or economic flows across it. It is therefore the carving up of space into controlled or managed units that makes territory an important concept. The zones shaded on Figure 1.7 indicate how territory may “color in” space in this way.

If location gives us lines and dots on a map, and territory shades them in and indicates who controls them, then places – in all of their richness, uniqueness, and complexity – are utterly impossible to convey using a map. They are fashioned out of every possible dimension that differentiates space: the natural environment, landscape, cultural life, political processes, types of work, the things that get produced, consumption patterns, and so on. This does not, however, imply that
places cannot be understood in relation to larger processes or ideas. When we study a place we certainly need to think about big ideas such as capitalism, gender ideology, and identity. But we do so in order to understand the place, not in order to find ways of making it fit with certain universal principles. Nor does the study of place imply that the place alone is studied – places are created out of historical and contemporary connections with other places across space. In Figure 1.7, the complexity of place is depicted using a layered pattern – one that suggests the unique sedimentation of characteristics over time, shaped both internally and by relationships or flows across space.

Finally, all of these spatial concepts are discussed with an implicit framework of scale that structures them. The global, the national, the regional, and the urban are all scales that can be used to “frame” our understanding of the economic. But we have to remember to pay attention to multiple scales at the same time – to take in the whole canvas as well as the detailed brushstrokes. We also have to remember that scales are humanly produced and much of the restructuring of our economic lives is a reworking of the scales at which they are constituted.

By now it should be clear that space is far more than just the canvas on which geographical patterns are mapped out. It is space that creates geographical patterns through the influence of distance, territory, and place upon economic activities. In other words, space is an active agent in shaping economic geography. At the same time, however, every geographical pattern that emerges is itself a reshaping of space; when a place like Silicon Valley is created, it is more than just a pattern of existing economic activity – it is also a magnet for future activities as well. Space has been altered for the future. When a newly scaled territory is
created, like the European Union, the opportunities for business and for labor are reworked. And when a new subway or mass transit line reaches an outer suburb, the relative distance to that location has been permanently changed. We are, then, always producing space, and it is the role of geographers to understand not just how patterns in space are changing, but also how space itself is changing.

Notes on the references

- Doreen Massey’s (1994) collection of essays remains some of the best and clearest thinking on the subject of place, but Cresswell (2004) also provides an excellent overview.
- Although not focused on economic issues, Stuart Elden’s (2009) *Terror and Territory* provides a clear and sophisticated meditation on the implications of territory.
- Keil and Mahon (2009) provide an excellent review of the geographical literature on scale.
- Barnes et al. (2012) and Leyshon et al. (2011) bring together excellent collections of statements by economic geographers about the state of the field.
- Hudson (2004) provides a challenging geographical conceptualization of the spaces, flows, and circuits of economic activities.

Sample essay questions

- Is space the canvas on which economic geographical patterns are mapped out, or does it play a role in shaping those patterns?
- What is territory, and how does it affect the conduct of economic activity?
- How is “place” different from “location”?
- Why is scale more than simply the physical space in which social processes happen?

Resources for further learning

- [http://people.hofstra.edu/geotrans/index.html](http://people.hofstra.edu/geotrans/index.html). The Geography of Transport Systems website at Hofstra University has extensive materials that explain the role of distance in the formation of geographical patterns.
- [http://faculty.washington.edu/krumme/ebg/contents.html#location](http://faculty.washington.edu/krumme/ebg/contents.html#location). Gunter Krumme’s website on “Economic and Business Geography” at the University of Washington has a wealth of information about key economic geographical ideas.
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• A complete lecture series on the Economic Geography of the Industrial World, by Richard Walker University of California, Berkeley, is available as a free download on iTunes.

References