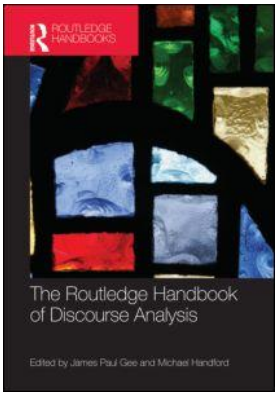

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Discourse geography

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Introduction: discourse, space and time

This chapter deals with the relation between discourse on the one hand, and space and time on the other. It is helpful from the outset to spell out how the terms *discourse*, *space*, and *time* will be used so as to avoid potential misinterpretations. "Discourse," Blommaert (2005: 2) observes, "is language-in-action." Specifically, it "comprises all forms of meaningful semiotic human activity seen in connection with social, cultural, and historical patterns and developments of use. …" (p. 3). Blommaert approaches such discourse by critically examining *voice*, i.e. "the way in which people manage to make themselves understood or fail to do so" (p. 4). Gu (2002a) looks at discourse (qua language-in-action) by adopting the perspective of human geography, in which discourse is viewed as a web of trajectories constructed by human actors' movements over space and time, while carrying out their daily routine activities. In this perspective, discourse (qua language-in-action) is regarded as being equivalent to social activity, and occurrences of such discourse are prototypically here-and-now, spatially–temporally bounded events, situated in specific *behavior settings* (Barker's 1968 terminology) and related to the performance of specific social actors.

Space and time are so fundamental to human existence, and we are so immersed in them, that everyone seems to have an intuitive grasp of what they are and to take them for granted. Philosophers, scientists, sociologists, anthropologists, geologists, theologians, and of course linguists all have invested interest in space and time. In the literature of mainstream linguistics space is traditionally associated with dialectology, time with historical linguistics. Various positions taken by linguists on space and time will be reviewed below. In this chapter space and time will be dealt with in terms of the spatial–temporal behavior displayed by individual social actors as well as by social systems (e.g. by a family, a city, a nation–state). This treatment subscribes to a position advanced in human geography—time geography in particular (see e.g. Hägerstrand, 1996 [1982], Carlstein *et al.* 1978a, 1978b). The phrase *discourse geography* is coined after *human geography* (see e.g. Fellmann *et al.* 1995; Agnew *et al.* 1996).[1]

The bulk of the chapter will address what is called the *land-borne situated discourse* (LBSD for short), in other words, the core of discourse geography. In what follows we shall first explain why this new terminology is necessary and useful. Then we shall review linguists' studies of space and time. The remaining part will deal with (1) the LBSD and human spatial–temporal behavior from the social actor's viewpoint, including (a) spatial–temporal behavior and trajectory-mediated chain of LBSDs, (b) the actor's activity zone and its impact on the LBSD, and (c) an ecological chain of discourse; and (2) the LBSD and human spatial–temporal behavior from the system's viewpoint, including (a) temporal structuring of LBSDs in present-day China, (b) urbanization

and spatial concentration of LBSD types, and (c) power, spatial–temporal behavior, and the LBSD's interactive order. The chapter concludes with a note on some theoretical issues.

All the data cited in this paper are taken from the Spoken Chinese Corpus of Situated Discourse (SCCSD; see Gu, 2002b, and www.multimodalgu.com for details).

The LBSD: the usefulness of this concept

Discourse (qua language-in-action), at its most concrete level and since the very beginning of speaking in *Homo sapiens*, always occurs in a particular spatial–temporal setting, as an oral–aural–visual event produced by one or more particular speakers. *It is an embodied form of discourse* in the following sense. First, it involves what Goffman calls "bodily activity" on the speaker/performer's side, and "naked senses" on the addressee/receiver's side. "When one speaks of experiencing someone else with one's naked senses, one usually implies the reception of embodied messages. This linkage of naked senses on one side and embodied transmission on the other provides one of the crucial communication conditions of face-to-face interaction" (Goffman, 1963: 15). As emphasized by Goffman, ordinarily in using the naked senses to receive embodied messages from others one also makes oneself available as a source of embodied messages for others. In other words, in face-to-face co-present interaction, one is both a giver and receiver of embodied messages via natural multimodality.

Physical co-presence, situated in a particular and specific spatial–temporal setting in a two-way embodied interaction, serves as the basis for proposing the phrase (and the concept of) "land-borne situated discourse." The compound *land-borne* is coined to highlight the fact that face-to-face co-presence makes it obligatory that the social actors (in Giddens' sense, see Giddens, 1981) must converge physically to a particular behavior setting. The physical convergence, on the other hand, demands that the social actors move over physical space and time. In addition, the fact that no one physically can be present simultaneously in two different places at a time, the LBSD therefore is both framed and enabled by human movements over space and time.

In the Chinese context, the LBSD had remained the only mode of discourse for over 390,000 years,[2] before the invention of oracle bone scripts in Shang Dynasty (1765–1122 BC), when the written word-borne discourse (WWBD) came into existence. The WWBD did not replace the LBSD, but only provided an extra dimension for discourse production, reproduction, and consumption. China witnessed the emergence of the air-borne situated discourse (ABSD) in the middle of the nineteenth century, when the telecommunications technology was used to air messages in the oral–aural mode. Towards the end of the twentieth-century China witnessed the emergence of still another mode of discourse, the web-borne situated discourse (WBSD). Elsewhere (Gu, 2009a) I have adopted Wittgenstein's metaphorization of language as an ancient city and explored, conceptually as well as demonstratively, how the cityscape of the Chinese language has been constructed through the four-borne discourses over its long evolutionary history. The Chinese language is shown to be a multi-dimensional city of historicity and mystery (for its future path is yet to be unfolded, and no one is able to predict with confidence how it will evolve).

Space and time in linguistics and discourse studies: a brief review of the literature

Space and time in everyday experience

No experience probably can be more elementary than that of space and time. Space in everyday experience of it is typically associated with *room* and *distance*, and time with *change*, *cycle* and

sequence. It seems that there would have been no way to detect time, or simply no sense of its existence, if everything, no matter what, had remained the same from beginning to end. *Cycle* involves changes with some regularity. The Chinese lunar calendar is based on cyclic changes due to the effects the moon has on the climate of the earth. Note that time, measured in terms of clock time and coordinated by the Universal Time or the Greenwich Mean Time, is a modern invention, not a natural occurrence such as *change* and *cycle* in the Chinese lunar calendar. Finally time is experienced when a series of events occur one after another.

Space and language

Space and language, as mentioned above, are traditionally associated in dialectology, and in dialect geography in particular. Nowadays the connections between the two are far more varied than ever before. Space, particularly the human usage of space, is conceptualized in term of language, as *space as language* (e.g. Lawson, 2001). Conversely, language, particularly conceptual constructs of linguistic meaning, is conceived of in terms of "mental spaces," as *language as space* (e.g. Fauconnier, 1985, Brandt, 2004, Dancygier and Sweetser, 2005). In the former, the term "space" literally refers to physical space, the term "language" being used figuratively. In the latter, "language" is literary, "space" figuratively. In other words, *space as language* and *language as mental spaces* show the conceptual supports between space and language.

Space as language, and language as space, are different from *language and space* as analyzed in Bloom *et al.* (1996), Pütz and Dirven (1996), Zee and Slack (2003), Levinson (2003), Levinson and Wilkins (2006), and Hickmann and Robert (2006). In these works, language and space are not conceptually connected, but are related to each other as the former encoding the latter. That is, the research question is: How does space get encoded in language? Lastly, there is research on *space in language*, in other words, sign language (Emmorey and Reilly, 1995). In *language and space*, space is considered to lie *externally* to language, whereas in *space in language* space is an *intrinsic element* of sign language.

Of the varied connections discussed above, *dialect geography* and *language and space* are the most pertinent to the current chapter. Dialect geography maps the relations between linguistic items such as sound, lexical variations, and human habitats. Language and space, as represented by Levinson (2003), is especially concerned with spatial cognition, e.g. *frames of reference* as expressed in spatial language and everyday thinking. Levinson's approach can be demonstrated by the examination of his sentence: "The statue by Giambologna is in front of the cathedral" (Levinson, 2003: 67). The Leibnizian notion of *space as relation* (see Urry, 1985: 21) is adopted here. The analyses go as follows. The statue is the *figure*, with the cathedral as the *ground*. The figure (i.e. the statue) is identified by way of adopting an *intrinsic frame of reference* (i.e. the front of the cathedral as an angle of reference, the front being an intrinsic facet of the cathedral).

It is important to note that space, in both dialect geography and *language and space*, is considered as being external to language. That is, it serves as a context or a container in which language is located. This chapter will depart from this traditional way of approaching space. We shall look at space in terms of *human spatial behavior*, and the research question is: In what ways does human spatial behavior frame and enable discourse production and reproduction? Before we dwell upon the notion of human spatial behavior (see pp. 00–00 below), let me use Levinson's sentence quoted above to illustrate the difference between the current study and Levinson's. The key questions we are concerned with are:

> What human activity is prototypically associated with the statue, and/or the front of the cathedral, and/or the cathedral itself?—This is the question about the *potential behavior pattern* associated with the three *behavior settings*;

What *activities* are visitors actually doing when they converge on the three behavior settings? How are the actual activities *framed* and *enabled* by the behavior settings?

Levinson and his associates often use such labels as "spatial language," "grammar of space," "language and space" to characterize their research. The present study uses the land-borne situated discourse as an umbrella term for easy reference. The fundamental difference between the two research frameworks lies in the fact that the cognitive approach takes language as a given, particularly as a coding system, whereas *our framework, labeled as "ecological approach," does not take language as given, but as an unfinished, open system constantly being produced and reproduced by human activities, of which the temporal and spatial behaviors are the two fundamental ones*.

Time and language

It is a truism that language changes over time, which has long been the subject matter of historical linguistics (about 200 years old; see Trask, 2000: 52). As is generally acknowledged, modern linguistics owns its inauguration to Saussure, one of whose "main achievements is the distinction between the diachronic (historical) study of language and the synchronic study of the language state (or *état de langue*) at any one particular moment" (Sanders, 2006: xx). Hale (2007: 4–6) observes that neogrammarian doctrine represented an attempt to implement diachronic generalizations about language directly, without a coherent synchronic theory of the nature of language as an object of study. To Saussure, such an attempt "is doomed from the outset: diachronic generalizations must hold over what are, in fact, a series of synchronic stages."

At this point it is worth noting that in the Saussurean theorization time is external to language. Similarly to space, it is regarded as a context, or a container in which language changes take place. This leads to the conceptualization of the relation between language and time as that of coding vs. being encoded, the view that underpins works such as Richards and co-authors' (1989) study of temporal representation, Arche's (2006) examination of how language encodes individuals in time, Sattig's (2006) exploration of temporal predication.

The linguistic encoding of time is generally represented in the tense system of the grammar that describes the states and events in the deictic world, i.e. the space–time world of the speaker. Besides the deictic world, there are of course other imaginable worlds, e.g. the worlds of desire, necessity, or possibility. These other imaginable worlds are represented in what is known as the modality system of the grammar. Guéron and Lecarme (2008) show that, in actual natural languages, the two systems are often intertwined and inseparable. They attempt to account for both the morpho-syntactic inseparability and the interpretive independence of tense and modality.

Time, however, can be argued to be an intrinsic property of language, namely time found in speech production.[3] Siegman and Feldstein (1979), for example, treat time as an integral dimension of speech. Similar views are also found in e.g. Chafe (1994). Moreover, time allocation (e.g. turn-taking) is a very important principle of organization in conversation (in this connection see the latest study by Auer *et al.* 1999).

Time, narrative and written discourse

This brief review of the literature cannot be complete with mentioning Ricoeur's study of narrative. Ricoeur is concerned with historical and fictional narrative. Historical narrative involves truth claims, while fictional narrative does not. But both narratives share some major presuppositions which in turn "have a common core."

> [W]hat is ultimately at stake in the case of the structural identity of the narrative function as well as in that of the truth claim of every narrative work, is the *temporal character of human experience*. The World unfolded by every narrative work is always a temporal world. Or, as will often be repeated in the course of this study: time becomes human time to the extent that it is organized after the manner of a narrative; narrative, in turn is meaningful to the extent that it portrays the features of temporal experience.
>
> *(1984: 3; italics mine)*[4]

What is insightful is that Ricoeur draws our attention to the temporal character of human experience that is the common core bridging humans' real-life experience, historical narrative and fictional narrative. Written discourses, narrative and non-narrative, produced by writing systems act, as it were, like time-freezing devices.

To wrap it up, this chapter will approach time, just like space, in terms of *human temporal behavior*, a concept that is associated with Ricoeur's temporal character of human experience and with speech production time (mentioned above).

Human agency, memory-dependent time, and Hägerstrand's time geography

Human agency, and Firth's "whole man"

To treat time and space as human spatial–temporal behavior puts human agency as the pivotal point of theorization. In linguistics as well as discourse analysis, theorization is almost universally being made without explicit reference to human agency. Statements such as "language does such and such …," "discourse or text does such and such …" are the norm. In this chapter, however, we shall depart from this tradition. Human agency plays a pivotal role in the theorization of the LBSD and of time–space.

Following Firth (1957: 19), we treat "human agency" as "the whole man, thinking and acting as a whole, in association with his fellows." Further, recall that, as discussed above, when the whole person interacts with her/his fellows, s/he interacts in a naturally multimodal way. Note also that the whole person is not a static one either. She has a personality that is both stable and changing over space and time, as initially discussed in Firth (1957: 177–189) and in sociology (e.g. Ewen, 1993). So, when the compound "social actor" is used in this chapter, that will be a short-hand phrase for this notion of "the whole person."

Memory-dependent time

As pointed out above, time in terms of clock or calendar (i.e. time-reckoning) is the modern invention. To human agency, what is more fundamental is what I propose to call memory-dependent time. This notion can be demonstrated by a 75-year-old man afflicted with Alzheimer's disease. Some of his daily activities in the hospital have been video-taped and included in the SCCSD.[5] He has lost his long-term memory almost completely, except for a few episodic memories still surviving. He cannot even recognize his own image in the mirror. His working and short-term memories are much weaker than in the normal person of his age. His experience of living (or his being) is almost all "present." This is a real-life case demonstrating Giddens' observation, based on Heidegger (1962), that "Being exists in the coming-to-be of presence" or simply in *presencing* (Giddens, 1995: 32).

It is important to note that Gidden's notion of "Being" (i.e. the coming-to-be of presence) is equally applicable to normal social actors. The difference between the normal and the Alzheimer's disease patient lies in the fact that the normal actor's working, short-term, and long-term memories function normally. Thanks to this normal functionality of memory systems, the ongoing here-and-now presencing (*situated presencing* hereafter) is constantly being saved in memories, thus generating the past, i.e. memory traces of what has happened. Situated presencing advances in response to human intentionality (including motive, desire, wish, affect, etc.), thus generating the sense of incoming future. As Bergson (1991: 78) vividly points out, the human body is

> an ever advancing boundary between the future and the past, as a pointed end, which our past is continually driving forward into our future. Whereas my body, taken at a single moment, is but a conductor interposed between the objects which influence it and those on which it acts.

The whole interactive process between intentionality (i.e. the future), situated presencing (i.e. the here-and-now action), and memory systems integrating the past, the present, and the future is graphically represented in Figure 38.1.

It is important to note that the tripartite division between the past, the present, and the future above is memory-dependent, and is constantly alternated and updated.

The human actor's situated presencing always has a duration, which extends from birth to death: simply, the life-span. All the things s/he has done during the life-span make up the contents of situated presencing. Think about this individual who happens to have remained illiterate across the life-span (note that there are about 116,000,000 such individuals in the present-day China alone: Gu, 2009a: 103). The life-span presencing is integrated crucially by the human memory, particularly by the long-term memory. Once the long-term memory is lost, the past, and probably the future too, will be erased. What is left is only the *situated presencing*, mediated by perceptual and working memories alone—we are back to the being of the Alzheimer's disease patient mentioned above.

Hägerstrand's time geography

Note that the human actor's situated presencing is not just temporal, but also spatial. Human actors are mobile agents. This leads us to very insightful studies known as Hägerstrand's time geography.

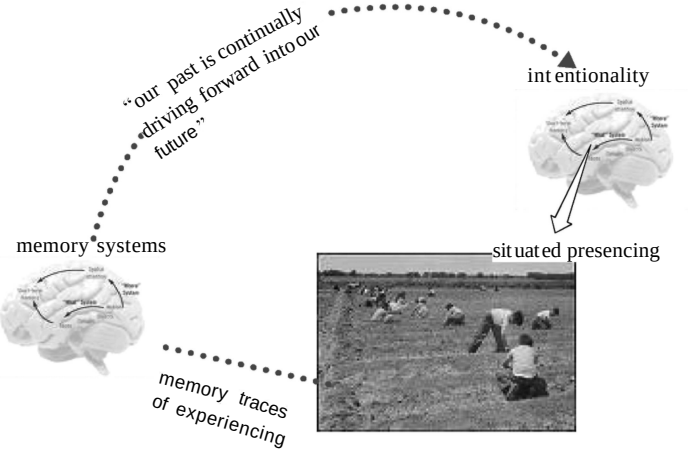

Figure 38.1 The interaction involving intentionality, the body and memory

Time geography studies human action, first and foremost, in terms of humans' movements over space and time. An individual's existence is seen as consisting of trajectories of space–time movements at varied scales, such as daily, weekly, monthly, yearly, or in life-long paths, involving travels from one "station" (i.e. a workplace, home, etc.) to another. This applies to the study of collective existence of a whole population, which is a *web* interwoven by all the individual members' trajectories. The interweaving of the web is framed by three major classes of constraint: (1) *capability constraints*, (2) *coupling constraints*, and (3) *authority constraints*. The capability constraints build on the fact that time is a valuable but limited resource. For instance large chunks of everyday time must be allocated to physiological necessities, e.g. sleeping and eating. For another person, given the means of transportation available, certain amounts of time must be spent on traveling from one station to another. The coupling constraints refer to the fact that the majority of human activities (what Hägerstrand calls "activity bundles") demand the co-presence of a group of individuals at a particular station together for a certain period of time. Finally, the authority constraints include the rights of access to space and time for given activities. There are laws, rules, economic barriers, power relationships, etc. that regulate who does or does not have access to some activities in some stations at specific times.

There are two points about time geography worth highlighting here. First, time and space are fundamentally treated as scare resources (in this connection see also Carlstein, 1982). The constraints imposed on the formation of human activity due to scarcity are rightly pointed out and given their theoretical importance. The enabling capability of time–space resources, however, is very much underplayed. It is very important to note that the memory-dependent time discussed above is totally compatible with the notion of time and space as scarce resources, found in time geography. *The memory-dependent time is intrinsically a human internal experience at the individual actor's level. The time and space as scare resources are at the social, collective level, playing dual roles of both constraining and enabling the actor's memory-dependent behavior.* (Remember that whether or not time and space are valuable is a social–cultural variable.)

Second, the term *constraint*, negative as it may sound, does not mean that Hägerstand regards an individual as a passive actor. On the contrary, in time geography, an individual is an active pursuer of a life-long "project." The three classes of constraint constitute in fact the necessary (though not sufficient) conditions in order for individuals to implement their projects. The preference of constraint to necessary condition analysis is consistent with Hägerstrand's contention that there is a need to be "able to pinpoint the reasons for 'non-events,' that is, to trace barriers which prevent certain types of events and stages from occurring" (cited in Pred, 1996: 640).

The LBSD and the individual actor's spatial–temporal behavior

The LBSD is a mode of discourse that is embodied in humans' natural multimodality and is being produced by human actors along the spatial–temporal paths, starting at the point of birth and ending at the point of death. This does not mean that the LBSD is a study of actors' individualistic discourse. On the contrary, human agents' spatial–temporal behavior is always interwoven, as emphasized by time geography. The LBSD is in essence a web of trajectories pursued by actors over space and time.

The trajectory-mediated LBSD

Gu (2002a) reports a study of Mr. X's trajectories on a week-path by audio-recording all his wakeful activities from the moment he got up in the morning to the time he went to bed at night. Adopting the same time–space notation scheme of Hägerstrand's, this study can be graphically represented as in Figure 38.2.

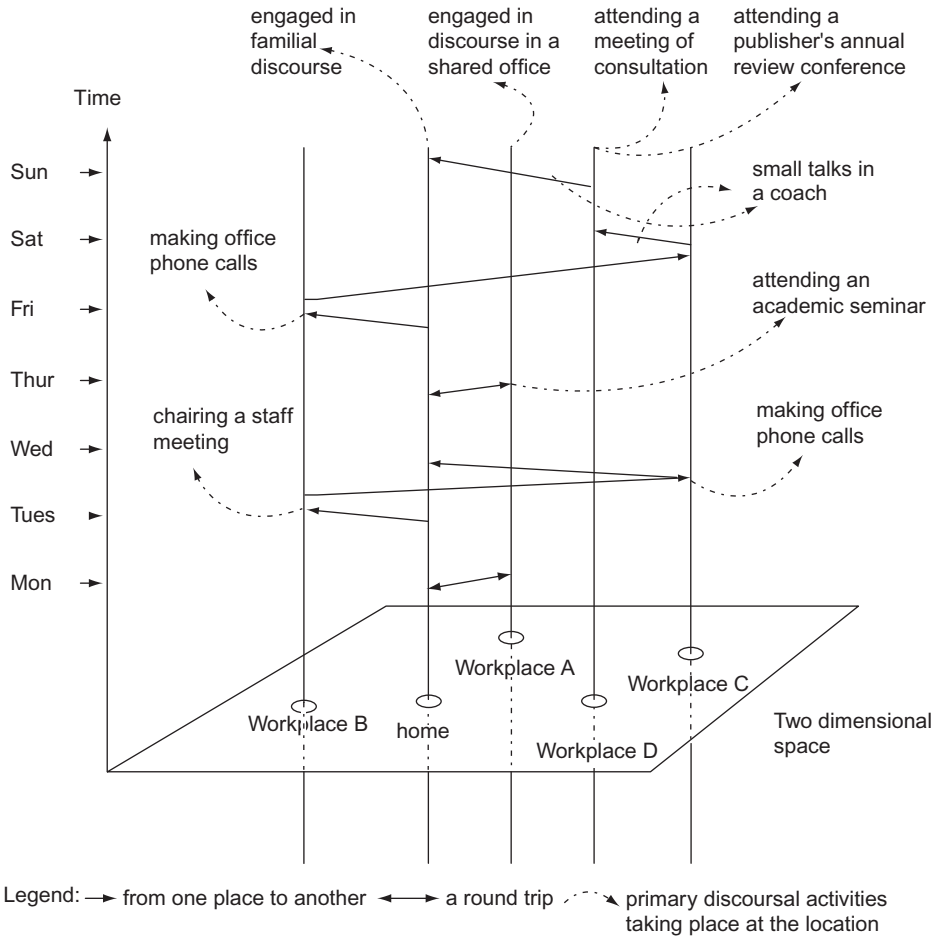

Figure 38.2 Mr. X's weekly trajectory of activities

Figure 38.2 clearly shows that Mr. X's week-path was very mobile. On Monday and Thursday he commuted from home to Workplace A. On Tuesday he left home for Workplace B, from which he traveled to Workplace C, and returned home afterwards. On Wednesday he stayed at home. On Friday he went to Workplace B, then to Workplace C, where he joined a coach trip to Workplace D. There he stayed for two days, Saturday and Sunday, before returning home on the Sunday evening.

This log of Mr. X's whereabouts, appearing quite mundane if not trivial, is significant to discourse studies and to discourse geography in particular, namely in the following ways. First, the spatial–temporal movements of actors count for one of the fundamental motor forces that maintain the dynamism of all the LBSDs in China (it is perhaps also true of all other languages in the world). Second, discoursal activities taking place at particular behavior settings, appearing to be independent and self-contained events by themselves, are in fact not isolated or disconnected ones. *The actors' spatial–temporal movements from one discoursal activity to another provide embodied cognitive links and connections, thus producing a chain of LBSDs mediated by an actor's trajectories of activity paths*. For ease of reference, this kind of chain will be referred to as *trajectory-mediated chain of LBSD*.

Third, the LBSD's trajectory-mediated chain is framed by what Carlstein calls "human time," i.e. "a temporal portion of a person" (Carlstein, 1982: 27), which in everyday parlance means a person's availability for a given activity.[6]

The actor's activity zone and its impact on the LBSD

Although modern transportations enable people to be more mobile than ever before, their accessibility and affordability are extremely varied from actor to actor. A CEO, for example, may spend most of his time on airplanes, whereas a herdsman (e.g. in Inner Mongolia) is found hardly going beyond a walking distance from home. The term *activity zone* is used to refer to the behavior settings an actor regularly visits. Urban commuters' activity zone includes workplace, transportation station, home, and local markets. Rural farmers' activity zone, on the other hand, includes the land being farmed, home, vegetable plots, and local markets. The activity zone impacts the LBSD in several ways. First, it routinizes the LBSD. Second, it makes some types of LBSD more frequent to the actor than others, e.g. workplace discourse, familial discourse, local market discourse thus becoming more frequent than others. Third, it may reserve or make loss of dialects or languages. The Inner Mongolian herdsmen of grandpa and grandma generation, thanks to their constrained activity zones, reserve the spoken Mongolian language. The mum/dad generation, on the other hand, thanks to their much broader activity zones, become bilingual, speaking Putonghua (the national standard language) at the workplace and Mongolian at home. The grandchildren generation, however, due to their activity zones in schools and close to the county town, have almost lost their spoken Mongolian, and have become monolingual like their grandpa and grandma—only not in Mongolian, but in Putonghua. Millions of Chinese migrant workers, for another instance, pour into major cities. Their activity zones become seasonal: when they find work, the host cities become their activity zones. When they go home for the Chinese New Year break or because they have lost their job, their former hometowns become their activity zones again. Many of them, particularly women migrant workers (as domestic helpers) become bidialectal as a result.

An ecological chain of discourse with the LBSD as its node

The LBSD's trajectory-mediated chain captures the interconnectivity between discourses that occur in different places. There is another interconnectivity forged by what I propose to call *ecological chain of discourse* with the LBSD as its node. This can be demonstrated by the ensuing chain of events (reconstructed on the basis of a real-life case).

A certain individual, let's call him Mr. Y, suffers from hay fever (as the result of his interaction with the physical environment). He sneezes like mad (non-verbal physiological behavior of an individualistic kind). He takes bus to go to a drug store. He enters into a node on the web of spatial–temporal trajectories, framed and enabled by the community. In the drug store—another node on the web of spatial–temporal trajectories—he talks about his hay fever to a girl assistant, who shows him a few choices and offers him some advice. He makes a choice and pays. This whole transaction would have been impossible without a drug manufacturer producing the drug. The latter, on the other hand, would never have been produced without research on anti-allergic drugs. Anti-allergic drug research, in turn, is motivated by the fact that Mr. Y is not the only one who sneezes on exposure to the pollen of flowering plants. Figure 38.3 is a graphic representation of Mr. Y's hay fever's ecological chain.

The LBSDs of a community consist of many such ecological chains. The significance of such ecological chains lies in the fact that it gives coherence and integrity to all the LBSDs as a whole.

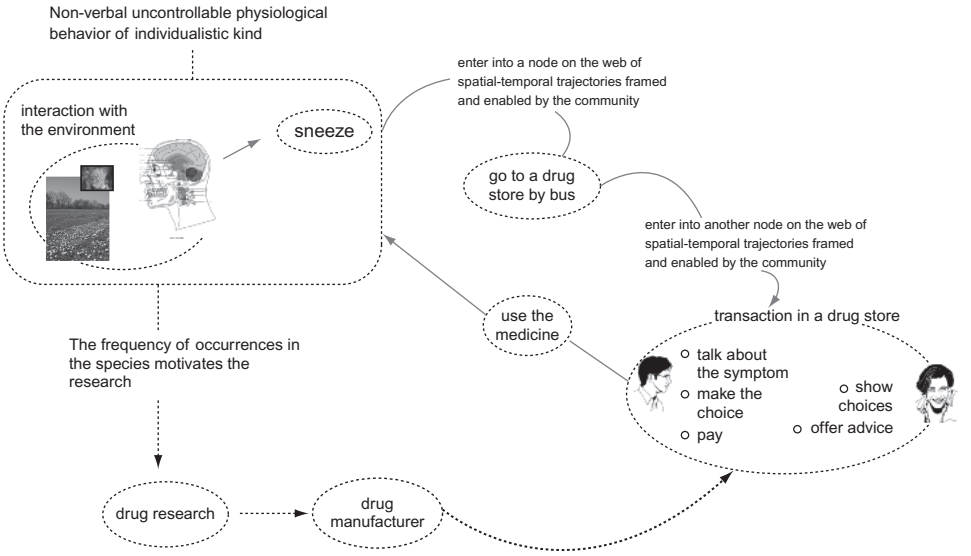

Figure 38.3 An ecological chain of activities

The LBSD and human spatial–temporal behavior from the system's point of view

The section above discussed the correlation between the social actor's spatial–temporal behavior and the LBSD. As shown in Hägerstrand's theory of time geography, the social actor's spatial–temporal behavior is under three major constraints. The third one, "authority constraints," regulates actors' individual behaviors in such a way that a spatial–temporal order for collectivities results from them. In this section we examine the correlation between a collective spatial–temporal order and the LBSD.

Temporal structuring of LBSDs in present-day China

There are two general types of temporal structuring in the present-day China. One is by adopting the Western calendar,[7] and the other by using the traditional Chinese lunar calendar. Both are officially valid, and citizens are free to choose one or both. But, in practice, the two types of calendar have divided the population into two types of actors: salary earners, and farmers. Salary earners' temporal behavior is structured by using the Western calendar, whereas farmers' by the lunar calendar. This is so because the lunar calendar is primarily based on the seasonal and climatic behavior of nature, which is crucial for farming. So the salary earner's temporal patterns of discourse are quite different from the farmer's. The former can be characterized as artificial temporality of workplace discourse, whereas the later is natural temporality of subsistence discourse. Table 38.1 tabulates the major differences between the two.

There are three points worth mentioning. First, there is no official monthly structuring for salary earners (as there is a yearly, seasonal, weekly, and daily structuring). An exception is perhaps to be found in the Muslim holy month of fasting and prayer. Second, farmers' agricultural activities are mainly consulted with the 24 jieqi (节气), lasting 15 days each. These represent weather patterns found mainly in the areas of the Yellow and Yangtze River. Third, at the bottom part of the table, attached are the potential hours for speaking per annum, and the estimated amount of

Table 38.1 Temporal patterns

Salary Earners		*Farmers*	
the Western calendar		*the Chinese lunar calendar*	
Yearly structuring	29-day discourse for public holidays	the same	
Seasonal structuring	no classroom discourse for 3 months	Seasonal structuring	subsistence discourse structured by the natural laws regarding the growth of crops or animals
Monthly structuring	?	Structuring by the weather patterns (24 jieqi)	
Weekly structuring	5-day workplace discourse		
Daily structuring	8-hour workplace discourse	Daily structuring	field labour discourse timed mainly by the solar behavior
potential hours for speaking per annum, and their estimated amount of syllables (equal to Chinese characters) that might be produced at normal tempo			
7-hour sleep per day x 365 = 2,555 hours; 17 waking hours per day x 365 = 6,205 hours per annum			
(1 minute x 45 syllables) x 60 = 2,700 syllables per hour; 17 waking hours x 2700 = 45,900 syllables per day; 6205 x 2700 = 16,753,500 syllables per annum			

syllables that might be produced at normal tempo.[7] Since Chinese characters are mostly monosyllabic, the amount of syllables is equivalent to the amount of spoken characters.

Gu (2002a) examines some workplace discourses over a time span running from 7 a.m. to 24 p.m. The home discourse is included, for contrast (see Figure 38.4). Four salient changes are noted. (1) People in private enterprises work much longer hours than those in state owned ones. (2) It is only in recent years that street markets in Beijing offer early morning service. This is in sharp contrast with street markets in southern parts of China, which have a long tradition of early morning service. (3) It is also quite a recent phenomenon that supermarkets in Beijing have long non-stop opening hours, from 8:00 a.m. to 8:30 p.m., or even to 10 p.m. (4) Evening classes are now taught at primary, secondary and tertiary levels. The practice used to be rare, but is now widespread. All these changes mean, with regard to workplace discourse, that Beijing citizens spend more time/space in workplace discourse than they used to do. In other words, they would spend less time/space in home discourse than they would do.

In view of physical time, Figure 38.4 shows an important feature of *discourse timetabling* at various degrees of strictness. At certain times of the day in a given region, the LBSD web can be extremely busy with all sorts of face-to-face discourses hotly being engaged in.

Urbanization, and spatial concentration of LBSD types

One of the biggest changes that China has recently witnessed is rapid urbanization, the scope of which is unprecedented in the whole Chinese history. Regarding the LBSD, this means that the country has increased its urban space and lost its former rural space. Demographically speaking, there

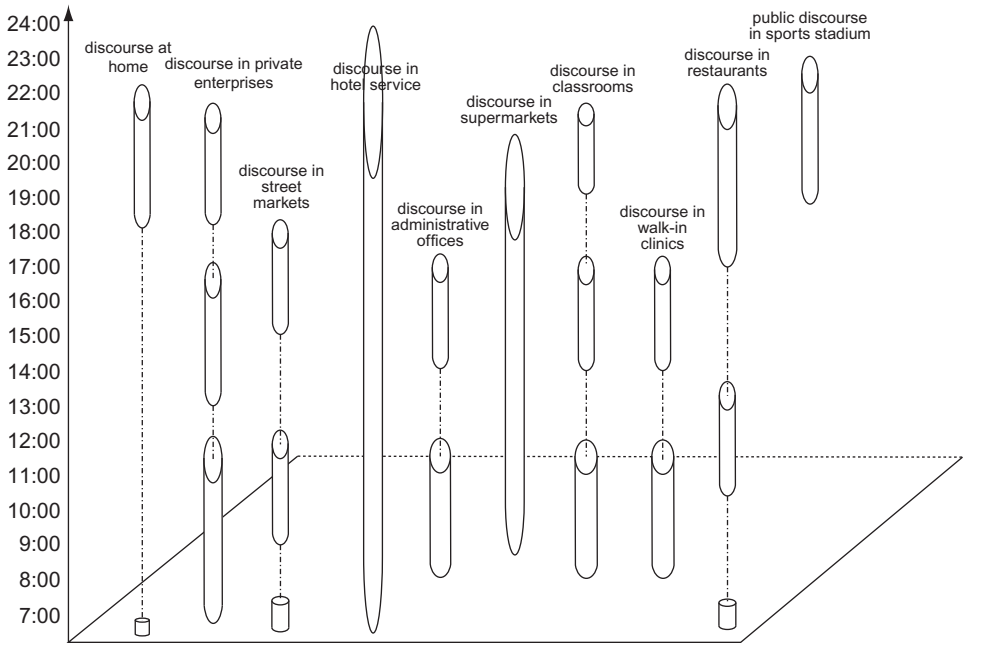

Figure 38.4 Temporal patterns of workplace discourse
Source: quoted from Gu (2002: 150)

are more people engaged in workplace discourse than in subsistence discourse. Thus their temporal patterns of discourse have also been changed as a result of their spatial migration into cities.

There is another phenomenon, to be called *cheng*-phenomena[9] in Chinese or "city-phenomenon" in English, co-occurring with urbanization. This label depicts the fact that areas are exclusively allocated for activities of similar types. In other words, the LBSD of a particular type gets densely concentrated at a particular zone of a city. Take Beijing for example. There are (1) such-and-such *cheng*, e.g. daxue cheng (大学城, university city), qipei cheng (汽配城，automobile city), yule cheng (娱乐城, fun city), jiaju cheng (家具城, furniture city), cha cheng (茶城，tea city), shiji cheng (世纪城，millennium city), keji cheng (科技城, technology city)； (2) such-and-such *zhongxin*, e.g. shangmao zhongxin (商贸中心，trade center), shimao zhongxin (世贸中心, global business center); (3) such-and-such *chang*, e.g. youle chang (游乐场，recreation ground), yundong chang (运动场, sports ground); (4) such-and-such *yitiaojie*, e.g. shipin yitiaojie (食品一条街，food and catering street), jinrong yitiaojie (金融一条街, bank and finance street), guwan yitiaojie (古玩一条街，antique street), dianzi yitiaojie (电子一条街, electronics street); and (5) such-and-such *qu*, e.g. waijiao qu (外交区，diplomatic quarters), junshi qu (军事区, military zone), lüyou qu (旅游区，tourist area), kaifa qu (开发区, development area).

These *cheng*, *chang*, *zhongxin*, *yitiaojie*, and *qu are* large-scale behavior settings where LBSDs of certain types are clustered for easy access. Nowadays, with the help of GoogleEarth, these clusters can be mapped to minute details.

Power, spatial–temporal behavior and the LBSD's interactive order

Time in everyday understanding is linear, that is, there is a sequential order. In time-reckoning, time is divided into units and made measurable (i.e. quantifiable). Space, on the other hand, is

three-dimensional—it has length, width, and height. In this section we examine the ways the Chinese social–cultural systems make use of these features of spatiality and temporality in framing and enabling social actors' spatial–temporal behaviors in the LBSD. The examination will be focused on the interaction between political–administrative power and spatiality/temporality.

Of all forms of power, the political–administrative form is granted dominating position in present-day China. That is, it overpowers all the other forms of power (for detailed discussion about Chinese power, see Gu, in press). Everything else being equal, its incumbents will be given priority in temporal sequences of events: to speak first, to walk in front of everybody else, and so on. A greater amount of time will be given to them too, if they wish to have it. The social use of three-dimensional space with regard to political–administrative power, as shown in Gu (2009b), is organized in terms of prominence. The center of the front row is considered as the most prominent position, and the degree of prominence decreases from this central reference point sidewise and row-wise. The Chinese spatial order framing the spatial behaviors between the incumbents of political-administrative power and those holding other forms of power is graphically represented in Figure 38.5.

It is interesting to note that, while in mainland China the spatial order is rather universal, this is not the case in Taiwan. In other words, the political–administrative power does not always enjoy priority in the local spatial–temporal behaviors of Taiwan. For instance, in an international conference I attended in 2009, the head of the department sat at the most important seat, as president of the conference—and not the university's vice-president. This would have been a serious breakdown of the spatial order, should it have happened on the mainland.

The Chinese temporal sequential order can be shown by contrasting it with the British. In the Hong Kong handover in 1997, on the British side, it was Chris Pattern who took the lead and first walked onto the stage with Prince Charles at the rear. On the Chinese side, it was President Jiang Zemin who took the lead and first walked onto the stage with Dong Qianhua at the rear. Should Dong Qianhua as Chris Pattern's counterpart have done the same, that would have been a totally unacceptable breakdown of temporal order.

Social space–time vs. social space–time

The phrase "*social space–time*" will be used by the author to conceptualize two interrelated phenomena. One sense refers to the scope of social mobility and to the freedom a social system provides for its members by way of laws, decrees, regulations, control of resources, values, and so

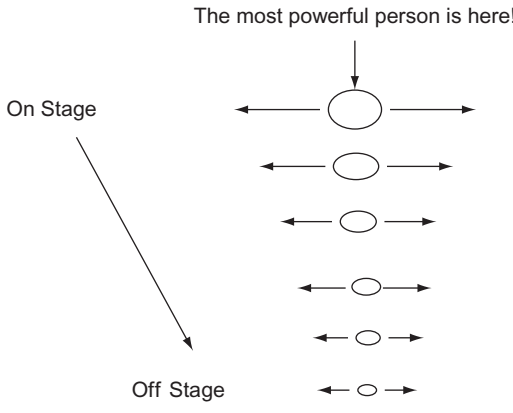

Figure 38.5 The Chinese spatial order
Source: quoted from Gu (2009b: 136)

on (recall Hagerstrand's third authority constraints). This sense will be marked through initial capital letters, "Social Space–Time." The other sense refers to the chances of making a living a social system offers its members. This sense is to be signaled through the usual spelling, "social space–time."

The previous section has shown the coupling of human bodily movement in physical space and time with individual members' everyday activities. This coupling provides a bridge linking bodily movements in physical space and time with Social Space–Time. The concept can be demonstrated with the age-old household registration practice, the earliest written record of which was found in West Zhou Dynasty (1121–771 BC). In Ming Dynasty (AD 1368–1644) there was a law with the ensuing article: "Farmers must remain within one *li* [a unit of distance]. Go out to labour in the morning and return home in the evening. Whereabouts must be made known to one another."[10] Whoever wants to leave beyond one hundred *li* must obtain a travel certificate (*luyin* 路引). While "one hundred *li*" is physical space, and from morning to evening is physical time, the fact that farmers and their behavior are bound by the law to this physical space–time is Social Space–Time. The farmers' chances for making a living within this Social Space–Time will be their social space–time.

In twenty-first-century China the law about household registration still remains in effect, although it is much less restrictive. Its consequences however are quite substantial. The fact that millions of migrant workers pour into cities to make a living shows that their Social Space–Time is thus made much broader than that of their non-migrant countryside compatriots. This does not improve their social space–time, since they cannot become registered as regular household members in their host cities, thus being denied access to the benefits the urban citizens enjoy. Migrant workers bring their LBSDs with them to the host cities. Their LBSDs are automatically made inferior to the urban LBSDs, and physically evaporate the moment they are being produced.

The delicate interaction between the Social Space–Time, and the social space–time can be shown in the following anecdote. In Beijing there are many street hawkers selling petty goods in streets and on flyovers. They hide themselves from 8 a.m. to 6 p.m., since during this time span the market control police is at work. They appear as if from nowhere after 6 p.m. Figure 38.6a is a photo picture of a flyover at 4:30 p.m, and Figure 38.6b a photo picture of the same flyover at 6:30 p.m.

The rules and regulations give no Social Space–Time to street hawkers, which is supposed to be reinforced by the market control police during its office hours. Once the police officers are off duty, there is no reinforcement for a certain period of time, which becomes the street hawkers' social space–time, granted by themselves.

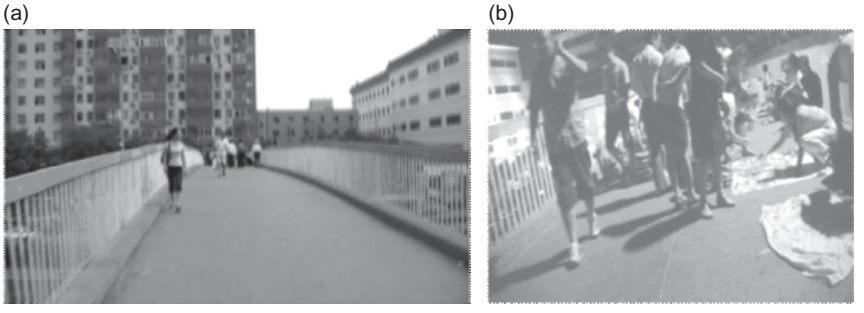

Figure 38.6 Social Space–Time vs. social space–time

Summing up

Discourse geography, as discussed so far, is a study of the correlation between discourse qua language-in-action and human spatial–temporal behaviors. This correlation is crystallized in the conceptualization of the land-borne situated discourse (LBSD). The LBSD, being both framed and enabled by human spatial–temporal behaviors, has several intrinsic properties: (1) it is a web interwoven by life-path trajectories of human activities; (2) it is regionalized by actors' activity zones; (3) the web of life-path trajectories is criss-crossed by an ecological chain of discourse/activities; (4) it is temporally structured by calendars and timetables; (5) it is spatially concentrated into clusters due to urbanization; and (6) it exhibits patterns of sequential and spatial order thanks to actors' differences in power relations.

Discourse geography: a final note

In this last section we explore some theoretical issues related to the conceptualization of discourse geography in terms that the LBSD has brought up.

As mentioned above, on top of the LBSD there are three more modes of discourse: the WWBD, the ABSD, and the WBSD. These four modes of discourse are not evenly distributed among cultures. The LBSD is prototypical of oral–aural cultures, i.e. of what Ong (1982) calls "primary orality cultures." There is no shortage of such cultures in the world, and in China alone there still exist a few dozen. Since these cultures do not have writing systems, the LBSD is the dominant mode of discourse.

Of the four modes of discourse, the LBSD, being interwoven, structured, and organized by human spatial–temporal behaviors over physical space and time, is not only the oldest, but also the most basic. We tend to be blind to the fact that language is first and foremost our mode of living, i.e. "the coming-to-be of presence." It is therefore fruitful to look at language as a multi-dimensional city, which is built by us and in which we live.

Further reading

Agnew, J., Livingstone, D. N. and Rogers, A. (eds.) (1996), *Human Geography: An Essential Anthology*, Oxford: Blackwell Publishers Ltd, and Carlstein, T. (1982) *Time Resources, Society and Ecology*. London: George Allen and Unwin Ltd.

For human geography and time geography, these books provide a scholarly treatment of the subject.

Gu, Y. (2009a) 'Four-borne discourses: towards language as a multi-dimensional city of history', in L. I. Wei and V. Cook (eds.) *Linguistics in the Real World*. London: Centinuum, pp. 98–121.

This paper has a preliminary discussion about the four-borne discourses.

Notes

1 Gu (2002a) tentatively introduced the term in this sense for the first time.
2 The Peking Man (Homo erectus, 400,000–200,000 BP; see Fairbank, 1997: 31) who was excavated in a Beijing suburb in 1929, was taken here as the landmark of pre-history. See Gu, 2009a: 99.
3 Saussure's notion of linearity (2001 [1983]: 103), being closely associated with speech production, can be argued to treat time as an intrinsic property of language. This sense of time is obviously different from the one that underlies his dichotomy between synchrony and diachrony, as discussed in 3.3 above.
4 It is obvious, as admitted by Ricoeur, that the relation between narrativity and temporality thus defined is circular. But it is argued that it is "not a vicious but a healthy circle, whose two halves mutually reinforce one another" (Ricoeur, 1984: 3).
5 Thanks to Dr. Liu Hongyan, who made the recording.

6 Carlstein (1982: 28–30) argues against using "convenient ways of obfuscating human time" such as using "labour," "effort," "energy," "convenience," etc., which are in essence time notions. Here I quite subscribe to Carlstein's position. The advantage of preferring "human time" to other expressions lies in the fact that it explicitly highlights the organizing as well as the integrating functions of time in human activities.
7 The Western calendar was officially adopted in 1949, the year the New China was founded. The traditional lunar calendar goes back as early as Xia Dynasty 2207–1766 BC, hence it is often called *xia li* 夏历.
8 The figure of 45 syllables per minute is based on a sample of four activities from the SCCSD. It is subject to fine-tuning when the sample population is increased. At this stage the figure is only suggestive at best.
9 Cheng 城 literally means city in English.
10 "农业者不出一里之间，朝出暮入，作息之道相互知," see 江立华, "中国户籍制度的历史考察。载《人口学与计划生育》2002 (01) .

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