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Some Discussions on Spatial Concepts in Typology Studies of Chinese and Czech in the Process of Second Language Learning

Abstract

During the process of L2 learning, it is very likely for speakers to have conflict with their existing commitments to certain aspects of reality brought about by their first language: L2 categories and concepts may not fit well with speakers' reality, making it difficult for them to understand the proper meaning and use of a form. In other words, a conventional treatment of the world found in L1 has been given an ontological status. This language fits with the speakers' world precisely because the world has been represented according to the language itself. Nevertheless, it may be interesting to investigate the influence from L1 such as transfer and interference vis-a-vis the ontological commitment of L1 during the process of L2 learning and understanding. This approach shall make it possible to understand and to reexamine how concepts and categories in L1 are constructed, and also present assimilates and differences between L1 and L2. The main goal of this paper is to make some discussions on Taiwanese students' acquisition of spatial expression in Czech, and to investigate transfer and interference from their L1.

Keywords: Spatial expression, Language acquisition, Czech, Chinese

Introduction

This paper presents some discussions on Taiwan university students' acquisition of spatial expressions in the Czech language and investigates the transfer and interference from their L1. Typologically, Czech and Chinese have their own language-specific patterns for the expression of space semantic concept. Our language data reveals that it is not easy for Taiwanese students to specify properly the spatial expressions in Czech and they often express them in a wrong way. It is assumed that in the process of Czech language learning Taiwanese students more or less are subject of transfer and interference from their L1: they tend to project the way to express these spatial relations in Chinese onto Czech, too.

The first part of this paper intends to describe the idea of spatial expressions discussed in this paper and gives examples in Czech and in Chinese thereof. Although there exist many systematic categories related to spatial expressions in languages, this paper focuses on spatial prepositions only. Other spatial expressions will be discussed in my further studies. The second part of this paper presents language data and an analysis of how Taiwanese students describe spatial relations in their Czech texts. The final part of this paper is a short conclusion, which sums up the importance of cross-linguistic typological analysis, which brings more insights into the study of characteristics of the target languages, i.e. Czech and Chinese.

The main reason why this paper focuses on spatial prepositions is my observation that the prepositional system is one of the most difficult hurdles to overcome for Taiwanese

students during their learning of spatial expressions in Czech. To master the correct usage of spatial prepositions, students must first learn new lexical units and then understand the ways in which native speakers of that language express spatial relations. Languages have different spatial schemas and seldom match with each other exactly. It is assumed that a contrastive study with analysis of errors based on comparing students' L1 and their L2 learning clauses and texts is a useful approach to identify a possible origin of incorrect usage. Furthermore, such research result can benefit the preparation of related teaching materials, including e-learning software, for a more effective second language acquisition.

I. Spatial expressions in languages

Languages differ in their structuring of the spatial world. (Tamly, 2000) According to Levinson (2003), different languages have different ways to express the semantic concept – SPACE, which means how to explain and describe where an object is, or to say the spatial characteristics of such object. Furthermore, even in one language sometimes it is not easy to specify spatial expressions clearly, because different dimensions are necessary to be applied.

There are many systematic schemas related to the spatial expressions in languages. However, this paper will start with Lyons' idea about "place" (1977: 693) to investigate how Taiwanese students express spatial relations in Czech. Lyons points out that "places are not entities, so entities are not places; but, in so far as they occupy space, entities may serve to identify the spaces that they occupy." The examples followed with this argument are *I will meet you at the car.* and *John is with Petr.* In these two examples, "the car" and "Petr", these two entities, are used to indirectly identify a place, in terms of

the entity that it contains, as a property of a place. Lyons (1977, 480) further uses AT (X, Y) to interpret the grammatical relation in clause: X be located at Y; here AT is the term referring to the spatial relation of this clause. For example, in Czech (1) *Ona pracuje na univerzitě.* "She works at university." can be interpreted as *NA(ona, univerzita)*. Chinese sentence (2) *ta zai jia.* "He/she be-located home." can be interpreted as *ZAI(ta, jia)*. The example (1) also shows that in Czech this spatial relation is grammaticalized in the locative case of the reference object, with co-occurrence of locative preposition. However, in Chinese, as shown in the example (2), the spatial relation is expressed by the term *zai* as a relational predicate, which normally can be constructed as a copula on a par with the Chinese copula verb *shi* "to be", as *shi zai*. (Tai, 1993) The example (1) and (2) serve as starting points for me to focus further on these so-called spatial prepositions which refers to the spatial relations in languages.

According to Lyons (1977: 694), spatial relations in languages can be classified further: one is to treat Y as the GOAL, and the other as the SOURCE of locomotion. For example, in English, the prepositions "to, onto, into" can serve with the GOAL; "from, off, out of" serve with SOURCE. According to Gehrke (2005), if we use this schema in Czech, Czech goal and source prepositions can be classified as follows:

GOAL & SOURCE prepositions in Czech	
<i>DO</i> (+GEN ¹), <i>K</i> (+DAT)	"to"
<i>K</i> (+DAT), <i>VŮČI</i> (+DAT)	"towards"
<i>DO</i> (+GEN)	"into"
<i>NA</i> (+ACC)	"onto"
<i>OD</i> (+GEN)	"(away) from"

¹ Czech grammatical cases: NOM: nominative, ACC: accusative, DAT: dative, GEN: genitive, VOC: vocative, LOC: locative, INSTR: instrumental.

Z(+GEN)	“out of”
Exclusively directional prepositions in Czech	
K(+DAT)	“to(wards)”
NA(+ACC)	“onto”
VŮČI(+DAT)	“towards”
Exclusively locative prepositions in Czech	
NA (+LOC)	“on”
V(+LOC)	“in”

In other words, both positional and directional spatial relations in Czech can be expressed by prepositional phrases. In this paper, I will leave so-called complex prepositions in Czech, such as *vedle* “besides, apart from, next to”, *u* “by” and others, for which a further research shall be needed.² Also, at this point it is necessary to emphasize that in Czech the specification of spatial relations is mostly distributed over the whole of sentence, whereby many of the deictic expressions remain implicit. In addition to indices and expressions related to them, verbal prefixes and related prepositions are utilized. (Hirschová, 2007:191)

In contrast, the Chinese spatial conceptual system is more “integrated, subjective, intuitional, and experiential and vague.” (Xu, 2008) In Chinese, spatial relationships are expressed through a system of adpositions: such as the combination of *zai* with locative particles, which is frequently used in Chinese to represent time, space, boundaries and/or conditions of an ongoing action or status. (Liu et al., 1996: 280) According to Henne, Rongen & Hansen (1977: 19), a place word is a nominal which can occur as a focal object after the predicate, such as *zai* “to be located” or *dao* “to arrive in/at”. Marked place words are complex, i.e. containing a localizer suffix or locative

particle, such as *shang* “above, up” in (3) *zai zhuozi-shang* “on [the] table”. In other words, Chinese uses a double system of spatial expression: on the one hand a limited system of locative particles is used, and on the other hand either locative particles or predicates are used to express the spatial relationships which Czechs mostly express using prepositions.

The most common framework denoting spatial expressions in Chinese is: *zai* + noun (phrase) + (locative particle), as shown in the example (2) and (3). Li & Thompson (1981: 391) list 15 locative particles, as well as a series of compounds or prepositional phrases made up of the more basic forms. However, unlike the more or less fixed order. This paper will focus on two of the locative particles in such framework. The first is (i) *zai* + noun (phrase) + *shang*, and the second is (ii) *zai* + noun (phrase) + *li(mian)*.

The locative construction (i) *zai* + noun (phrase) + *shang* corresponds in very general terms to the English prepositions “on”, “above” and “over”. This construction implies that one object is above or on the top of another object in a locative relation. (ii) *zai* + noun (phrase) + *li(mian)* can be defined as in the locative relation when one object is contained within the limits/boundaries of another object. Let’s see the following examples:

(4) *Shu zai zhuozi-shang*. “Book is on [the] table.”

(5) *Shu zai daizi-li(mian)*. “Book is in [the] bag.”

In (4), it is ungrammatical if it is without the locative particle *shang*. It is the same with (5). If (5) is without the locative particle *li* or *limian*, **shu zai daizi* is not acceptable in Chinese. In Chinese, for such reference objects as *zhuozi* “table” and *daizi* “bag”, it is necessary to specify the relative spatial location of the object with the locative particles. They belong to the so-called marked place words according to Henne, Rongen &

² There are many references concerning the classification of Czech prepositions. Some classify them according to the connected grammatical cases or even according to the origins. (Cvrček, 2010: 283) The focus of this paper will be on the prepositions with special expressions.

Hansen (1977). In the sense of Li & Thompson (1981), they are classified according to the syllables. For mono-syllable terms, such as *jia* “home”, the locative particles are not necessary, as shown in the example (2): *ta zai jia*. “He/she be-located home.” However, for multi-syllable terms, such as *zhuozi* “table” and *daizi* “bag”, the locative particles are necessary.

To sum up, the spatial relations in Czech and Chinese are expressed in quite a different way. Both positional and directional spatial relations in Czech can be identified by prepositional phrases. However, in Chinese they can be expressed either by predicates, such as *zai*, or *dao*, or by co-occurrence of predicates and locative particles. In the following section, I will present some examples to show how Taiwanese students express spatial expressions in Czech.

II. Examples and discussions

The informants of this paper are Taiwanese students who learned the Czech language at least for one academic year and in their majority are at primary intermediate level; in average they have 6 hours of Czech courses per week. In this paper, there are four experiments and each experiment investigates how the Taiwanese students describe a set of spatial events displayed in pictures.

In the first experiment the students are shown a picture in which a girl put a book on the table, and the students are asked to describe what they see in the picture in Czech. They made the following sentences. The example (7) and (8) are typical sentences with error or question from the language data.

- (6) *Kniha byla na stole*. “[The] book was on [the] table.”
- (7) **Položila knihu na stole*. “She put [the] book on [the] table.”
- (8) ?*Položila knihu na desku stolu*. “She

put [the] book onto [the] table.”

The example (6) is correct, but the example (7) shall be revised into as *Položila knihu na stůl*. In (7), the spatial relation is directional, and preposition *na* shall be deemed as directional, following with a noun in accusative case. The example (8) is grammatically acceptable, but it is not used normal speech (unless the speaker wants to stress the location of the movement). It seems that Taiwanese students tend to emphasize the location of focal object related to reference object, such as *na desku stolu* “on [the] surface of [the] table” in (8), in order to point out the relative location to the object table clearly. This usage might be due to the interference, resulting from the use of elements from one language while speaking/writing another (Heydari, 2012: 1584), since in Chinese the locative particles hold similar function, which is to indicate whether the focal object is on the surface of, or inside, the reference object. (Tai, 1993: 352)

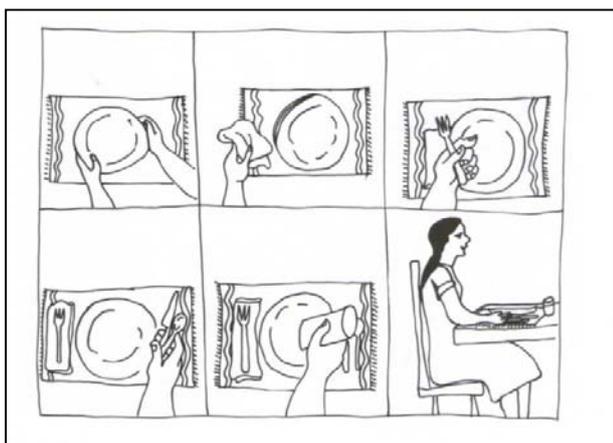
In the second picture the students were shown was a girl put a book in(to) a bag. Below are some of students’ descriptions of the picture in Czech.

- (9) *Kniha byla v tašce*. “[The] book was in [the] bag.”
- (10) **Dala knihu v tašce*. “She put [the] book in [the] bag.”
- (11) ?*Dala knihu dovnitř do tašky*. “She put [the] book into [the] bag.”

The example (9) is correct and the prepositional phrase *V+(LOC)* contains locative expression. The example (10) is not correct; it expresses directional relation because of the verb *dala*, so the preposition phrase *DO+(ACC)* shall be applied here, as shown in *Ona dala knihu do tašky*. Both (9) and (10) reveal one fact that when Taiwanese students see the picture; they immediately tend to interpret the locative expression,

which might be due to the interference from the usage of Chinese locative particles. The example (11) also reveals such usage tendency: in Czech *Dala knihu do tašky*. is sufficient to express the semantic meaning. To add *dovnitř* “inside/inward” is mainly to emphasize the locomotion of the object; however it is better to revise (11) into (12) *Vložila knihu do tašky*. “She put/input [the] book inside [the] bag.” In Czech, verbal prefixes and related prepositional phrases are co-utilized. Verbal prefixes can help contribute to the result state of event. The description of spatial relations can be seen as multi-dimensional since the semantics of lexical items depending on prepositions as well as the semantics of verbs modified by prefixes represent an important semantic contribution to the spatial description. (Hirschová, 2007:194)

In the third and fourth experiments the Taiwanese students were not only shown a single picture but a series of pictures. The third experiment is about a woman who makes her lunch preparations with setting the table before she finally sits down at the table and starts having a meal, as shown below.



The following text examples have been selected. All contain errors. I mark the errors with symbol *, and put the correct variants in parenthesis.

(12) *Ona položila talíř, vidličku, nůž a lžici na *stole (stůl) a čekala na*

večeři.

“She put a plate, a fork, a knife and a spoon on the table and waited for dinner.”

(13) *Dneska obědvám doma. Mám polévku. Nejdříve položím talíř na *stole (stůl). Beru ubrousek. Položím vidličku a ubrousek na levou stranu. Potom беру нůž a lžici. Nakonec přidám pepř a sůl. Všechno je připraveno! Můžu začít jíst!*

“Today I have lunch at home. I have a soup. First I put a plate on the table. I take a napkin. I put a fork and napkin on the left side. Then I take a knife and spoon. Finally I add pepper and salt. All is prepared! I can start to eat.”

(14) *Je čas na večeři a manželka ji začíná připravovat. Dnes manžel jel na služební cestu proto jenom musí připravit večeři jen pro jednu osobu. Pokládá talíř na *stole (stůl). Ubrousek a vidličku nalevo, nůž a lžice napravo. Nakonec si sedne za *stolem (stůl) a začíná jíst.*

“It is time for dinner and wife starts to prepare it. Today husband went on a business trip, so she only needs to prepare dinner for one person. She puts a plate on the table. Napkin and fork on the left side, knife and spoon on the right side. Finally she sits down at the table and starts to eat.”

In the examples (12) and (13), the errors are the same as occurred in the example (10). The prepositional phrases in (12) and (13) are used to express the directional meaning, so the Czech preposition *na* in these two examples shall be the directional one, *NA(+ACC)*.³ In (14), the first error is the same as in the previous: *Pokládá talíř na stole.*, instead of

³ The accusative of the term *stůl* “table” is as *stůl*; the locative of it is *stole*.

using *na stůl*. The second error in (14) is in the clause: *Nakonec si sedne za *stolem.*, which shall be corrected into *Nakonec si sedne za stůl*, due to the reason that the verb *sedne si* is to describe a motion of event; the prepositional phrase *ZA(+INSTR)* is used for a state of event, and not for a motion, so the example (14) has to be revised into *ZA(+ACC)*. There can be much discussions resulting from these error usages. Once again, the interference from L1 seems to be the likely reason for this kind of error usages. In Chinese, to express such semantic meaning, it is *Zuihou ta zuo zai zhuozhi houmian*. “Finally she sits down at the table.” There is the aforementioned framework of *zai + noun (phrase) + (locative particle)* in this clause. (see the second part of this paper) It seems to me that Taiwanese students tend to emphasize the locative expression in this clause, so they tend to use *ZA(+INSTR)*, instead of *ZA(+ACC)*. For Taiwanese students, it seems not easy to differentiate when it is necessary to identify motion of event in clause, which is assumed to be caused due to the interference from their L1. Another error in the example (15) also reveals such interference.

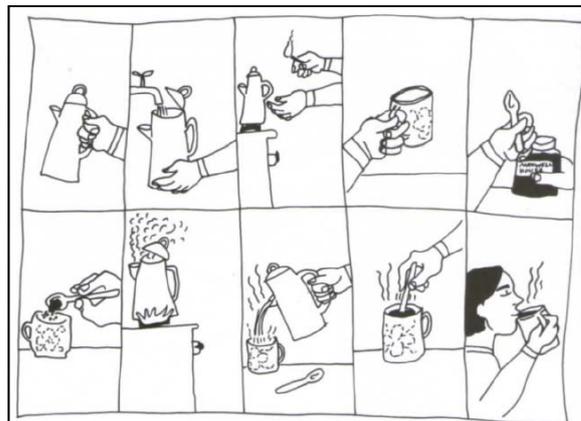
(15) *Nejdříve položila talíř na stůl, potom položila ještě ubrousek, vidličku, nůž, lžičku a skleničku. Nakonec se ona posadila *za stolem (ke stolu).*

“First she put a plate on the table, and then she put a napkin, a fork, a knife, a spoon and a glass. Finally she sat down behind the table.”

In (15), the clause is supposed to express the motion of the event, with the occurrence of the verb *posadila se*, so the prepositional phrase must be directional *ke stolu*, instead of locative *za stolem*. In summary, such spatial expressions are a difficult part in Czech language acquisition.

In the fourth experiment our students were

asked to describe the process of coffee making, as shown in the following series of pictures.



Below I selected these three texts.

(16) *Muž chce pít kávu. Vzal konvici a nalil vodu *v konvici (do konvice). Potom škrtnul sirkou, a uvařil vodu. Vzal dózu s kávou, nasypal kávu *v šálku (do šálku). Čekal, až se voda začne vařit, nalil vodu *v šálku (do šálku) a zamíchal lžičkou. Nakonec se napil dobré kávy.*

“A man wants to drink coffee. He took the kettle and poured water into the kettle. Then he struck a match, and boiled water. He took a coffee pot, and put some coffee into the mug. He waited until the water starts boiling, poured water into the mug, and stirred it with a spoon. Finally he drank a nice cup of coffee.”

(17) *Dneska je hezký den, a chci pít kávu. Nejdřív беру konvici a vodu dám *v konvici (do konvice). Potom škrtnu sirkou a voda bude velmi horká. Beru sklenici a kávu a dám kávu *v sklenici (do sklenice). Voda už je horká! Naliju vodu *v sklenici (do sklenice) a zamíchám. Ted' mám dobrou kávu a můžu pít!*

“Today is a nice day, and I want to drink coffee. First, I took the kettle and put the water into the kettle.

Then I struck a match and water will be very hot. I took one glass and coffee, and put coffee into the glass. Water is already hot! I pour the water into the glass and stir it. Now I have good coffee and can drink it!”

- (18) *Vzal jsem konvice a naplnila ji vodou. Škrtnul jsem sirkou, abych uvařil vodu. Potom vzal jsem šálek a dal jsem *v (do) něj kávu. Když se voda vařila, nalil jsem vodu *v šálku (do šálku) a zamíchal lžičkou. Nakonec, měl jsem chutnou kávu a vypil jsem ji.*

“I took the kettle and filled it with water. I struck a match to boil water. Then I took a mug and put coffee into it. When the water was boiled, I poured the water into the mug and stirred it with a spoon. Finally, I had a good coffee and drank it off.”

In the examples (16), (17) and (18), the errors are quite similar: **dám vodu v konvici*, **nalil jsem vodu v šálku*, **dám kávu v sklenici*, which shall be revised into *dám vodu do konvice*. “I put water into the kettle.”, *nalil jsem vodu do šálku*. “I poured water into the mug.”, *dám kávu do sklenice*. “I put coffee into a glass.” respectively. From these error usages of prepositional phrases, it seems that the Taiwanese students have the tendency to put emphasis on the location of focal object related to reference object, which is assumed due to interference from their L1, mainly the usages of locative particles. As a result, they use the preposition *v* “in” to stress locative expression. In Chinese, for the semantic meaning “to pour water in(to) a cup”, it is either (19) *Dao shui zai beizi li(mian)* or (20) *Dao shui jin beizi li(mian)*. The relation of the former clause is described as locative and can be interpreted as *ZAI(X, interior Y)*, and the latter one is directional and can be interpreted

as *DAO(X, interior Y)*⁴. The spatial relation of example (19) is necessary to be expressed by the co-occurrence of predicate *zai* and locative particle *li(mian)* “inside”. If without the locative particle, *?Dao shui zai beizi*. will be quite ambiguous. The meaning could be realized as to pour water either upon or in a cup. However, if with the locative particle *li(mian)*, the locative relation when one object is contained within the limits/boundaries of another object is clear in clause. (i.e. see the second section.) In summary, the prototype for the concept of enclosure may have the same cognitive basis in both Czech and Chinese, while its extensions to other less idea situations are different in these two languages. It seems that Czech preposition *v* “in” and Chinese locative particles *li(mian)* “inside” have the similar meaning, but their pragmatics are different.

III. Conclusion

According to the discussions in this paper, some spatial expressions of Chinese and Czech are different. Chinese employs a two-step strategy. First the copula verb *zai* “to be located” is used to indicate spatial relation of some kind. In the second step, locative particles such as *shang* “above, up” and *li(mian)* “inside” are used to further indicate whether the focal object is on the surface, or inside, of the reference object. However, both positional and directional spatial relations in Czech can be expressed by prepositional phrases. As mentioned at the beginning of this paper, Chinese and Czech have their own language-specific patterns for the expression of space concepts. In order to solve obstacles

⁴ The frameworks to express directional, dynamic spatial relation in Chinese can be prepositional phrases with or without locative particles, as shown in the example (20), or resultative verb compounds, such as *zou-jin* “go into” and *chuan-guo* “go through”.

in the process of L2 learning, it is important to recognize the different conceptual structures in different languages, because the error usages in L2 are due to the interference from their L1. Through studying such interference in the process of L2 learning, we can not only make the process of foreign language acquisition more effective, but can also achieve a better understanding of the typological differences between languages.

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