Conditional Reasoning as a Reflection of Mind[*]

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The analysis of conditionals is "no fussy little grammatical exercise."
——Nelson Goodman

Unlike logicians, linguists approach conditionals from the perspective of how human beings document meanings carried by linguistic conversations, and further-more, the working of mental spaces for the processing of conditionals. This paper aims to investigate, via the examination of Chinese conditionals as used in conver-sation, the claim offered in previous studies—the hypotheticality and optionality associated with *if*-clauses make them likely vehicles for interpersonal functions in conversation where issues of "face" must also be attended to.

Our basic assumption is that linguistic structures become identifiable because they serve fundamental communicative needs for speakers in natural context, whereas communicative needs are the recurrent actions humans perform through the medium of language (Du Bois 1985). We would argue for the invalidity of Sweetser's (1990) classification of conditionals in the analysis of data collected from face-to-face conversation. In other words, it will be shown that natural discourse yields significant findings not observed in previous proposals based largely on recalled or constructed examples taken out of context, because they provide the most valid evidence opening a window onto the mystery of the human mind. Grammar should thus be viewed as the sediments of interactional and cognitive operations in human conceptualization.

The various uses of conditionals identified in this study also reflect that newly-recruited meaning may be related to the prototypical meaning when the speaker's subjective evaluation on the current speech context comes into play. It is therefore suggested that grammar does "guide our elaborate conceptual work with an admirable economy of overt indications." (Fauconnier 2003:251)

Key words: metaphor, blending, conditionals, conversational interaction

1. Introduction

A preoccupation with "truth" has been the traditional focus of many earlier studies on conditionals, especially those done by philosophers. This interest in truth values has,

as a result, limited such studies to their semantics, where conditionals are taken as an epitome of human rational capacity. Linguists, however, approach conditionals from a different perspective, for truth values are, as Turner (1996) has correctly argued, irrelevant in determining the conditional meaning: the importance on "anxiety about clearly specifying antecedents, consequents, and principles of causal connection" should not be over-emphasized.

Linguists generally agree that conditionals cover a wide range of linguistic constructions, and a series of parameters to define them are required for a systematic study of them. Two parameters commonly used are: 1) the {if P, then Q} frame, i.e., a protasis (the *if*-clause) and an apodosis (the *then*-clause); and 2) the role of *if*: the relation between P and Q mostly represents folk logics rather than formal logics (Comrie 1986).[1] Because clashes between language and logics are often found in the understanding of the conditionals, many even reject the analysis of *if*-clauses as logical antecedents (Dudman 1984), and come up with three functions associated with the lexical item *if*: as a builder for conditional mental spaces (Fauconnier 1985), as a marker of non-assertiveness to introduce speaker's unassertable assumption, and as an introducer of a construction by connecting P and Q in a given cognitive domain (Dancygier 1998). From a cognitive/ linguistic point of view, it is the issue of how human beings document the meanings carried by the linguistic conventions, and furthermore, the working of mental spaces for the processing of conditionals (Sweetser 1990) that are of special interest in the study of conditionals.

Crucial to the mental space analysis (Fauconnier 1985, 1990) is the idea that domains related to the current speech interaction are generally privileged with respect to mental space construction: they are automatically "accessible" for interpretation. Most linguistic analyses of the conditionals are however based on recalled or constructed examples taken out of context. With Haiman's (1978) treatment of "conditionals as topics"—the antecedent of the conditional also functions pragmatically as the topic of the ongoing communication between the speaker and hearer—we witness the initial attempt to advance the study of conditionals to the domain of discourse. Haiman's observation, though lucid, represents only one step ahead of the previous proposals that limited the study of conditionals to the domain of mathematical logic, primarily because

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[1] In conversation, it is the folk logics, rather than the formal logics, that is at work for a conditional sentence. For instance, the negative value of the *if*-clause will bring negative reading of the subordinate clause in the conditional *If you mow the lawn, I'll give you $5*. As a result, the speaker will not give the money if the addressee does not have the lawn mowed.

he relies alone on the notion of "invited inference" (Geis & Zwicky 1971) to account for how people often infer {if not p, then not q} upon hearing {if p, then q}. It fails to capture the crucial semantic-vs.-pragmatic scope of conditionals: The meaning conveyed by conditionals is seen as something "implied" by the speaker and/or "inferred" by the hearer. It does not really provide a true understanding of the interaction significant in terms of the linguistic exchange in context.

As a result, this paper tries to go one step beyond by examining the use of Chinese conditionals as found in naturally occurring conversational contexts. We intend to investigate how hypotheticality and optionality associated with *if*-clauses make them likely vehicles for interpersonal functions in conversation, where issues of "face" must also be attended to. Specifically, we conduct this research with the following research questions in mind: a) What linguistic theory may successfully account for the use of the conditionals as found in our data? Do we need to modify some existing theories in order to explain adequately the uses of the conditionals identified in our study? b) What motivates the use of conditionals in conveying hypotheticality? Is it true that the conditional, with its implication of alternatives, is useful in conversation when speakers are concerned with their "face" (Goffman 1981, Brown & Levinson 1987)? This study aims to understand language form and its meaning from interpersonal and interactional perspectives.

2. Types of conditional relationship

Various relations link the propositional protasis (the *if*-clause, P) with the apodosis (the *then*-clause, Q). Some of these links can be seen by focusing on verb forms, as seen in English conditionals. They are differentiated by the verbal forms as well as the complex verbal system of compatibility relations between the two parts of a conditional sentence (Fillmore 1990). Sweetser (1990), based on Fillmore's (1990) work on conditional constructions, examines aspects of conditional interpretation and finds that it adds compositionality in the relationship between the forms and meanings of the varied manifestations of conditionals in English. She claims that conditionals, like many kinds of conjunctions, are interpretable as joining clauses in different ways and can be classified into three different domains: the content (causal) domain, the epistemic domain, and the speech act domain. We shall review, in light of Chinese examples, the three types of conditionals Sweetser identifies.

2.1 Content-based conditionals

The interpretation most familiar to linguists and philosophers concerns content-based

conditionals, also called Predicative Conditionals (Dancygier 1992), a construction in which the content of the two clauses is semantically related. This type of conditional is understood by relating the content of the P and Q to each other: P is typically understood as providing a situation which causes or results in the state of affairs signaled by Q. The contents of the two clauses of this type share a relation in a way that the apodosis content at least would be predictable from the protasis content, as illustrated in (1):

(1) Cosmetics
685   ...(0.7)那   在   鼻子   的   地方,_
              na   zai   bizi   de   difang
              that at   nose   DE   place
686   ..   還   有   一些,_
              hai   you   yixie
              still   have   some
687   ..   就是,_
              jiushi
              namely
688   ...(0.7)我   不   曉得   是   什麼.\
              wo   bu   xiaode   shi   sheme
              1S   NEG   know   SHI   what
689   ...   是   黑斑   嗎._
              shi   heiban   ma
              SHI   black.speck   QM
690   ..   還是   什麼   的.\
              haishi   sheme   de
              or   what   DM

'On the nose, there are some…I don't know what they are exactly. Are they black specks or something else?'

691   K: ..你   黑斑   是,_
              ni   heiban   shi
              2S   black.speck   SHI
692   ..一點   一點   黑黑   的.\
              yidian   yidian   heihei   de
              one.spot   one.spot   black.black   DE
693   ..那   你   **如果**   擠   出來   是   條狀,_
              ..na   ni   ruguo   ji   chulai   shi   tiaozhuang
              NA   2S   if   squeeze   out   SHI   string.shape

694   ..那是   黑頭   粉刺.\
        nashi   heitou   fenci
        that.SHI   black.head   acnes
'Your black specks are spot-like. If you squeeze them and they turn out to be string-like, then they are black-head acnes.'

Here the relationship between the protasis (IU693, 'If the black specks are string-like') and the apodosis (IU694, 'then they are black-head acnes.') is causal in the content domain. No other epistemic markers indicate possible further interpretation of this conditional within other cognitive domains.

2.2 Epistemic conditionals

Cases labeled as epistemic conditionals exhibit conditional relationship having to do with the speaker's reasoning processes. That is, "knowledge of the truth of the hypothetical premise expressed in the protasis would be a sufficient condition for concluding the truth of the proposition expressed in the apodosis" (Sweetser 1990:116), as in {*If he typed her thesis, he loves her.*}.

For epistemic conditionals, the conditional relationship is between the speaker's belief in the truth of the protasis and the speaker's conclusion about the apodosis: There exists no content causal relation between the protasis and the apodosis. The connection between the two is most readily interpreted as expressing an epistemic causal relation, as in (2).

(2)   Department
    1   我 被 他 問 了   兩次   我   覺得,_
        wo bei ta wen le   liangci   wo   juede
        1S BEI 3S ask ASP two.times 1S   feel
    2   ..<J kimotsi J> 不   太 好 那 樣子.\
        <J kimotsi J> bu   tai hao na yangzi
          mood   NEG too good that way
'I was asked by him twice and I didn't feel very good about it.'

    3   A: ...(2.8) 但是   我   覺得,_
              danshi wo juede
              But   1S feel

4	..	**要是**	我	我	也	會	覺得	\<J kimotsi J>	不
		yaoshi	wo	wo	ye	hui	juede	\<J kimotsi J>	bu
		if	1S	1S	also	will	feel	mood	NEG

太　好.\
tai　hao
too　good

'But I think if I were you I wouldn't feel good about it either.'

5	B:	hm.\

'Hm.'

In this example, the protasis and the apodosis (both contained within IU4, {*If I were you, I would not feel good about it either.*}) together express Speaker A's belief based on his epistemic viewpoint. Such a viewpoint is further emphasized by the occurrence of the verb *juede* (覺得) 'feel.'

2.3 Speech act conditionals

Speech act conditionals refer to those in which an *if*-clause sets constraints on the performance of the main clause action, as in {*If I don't get to see you before you leave, have a nice trip.*}. The speaker presents the performance of a speech act as taking place in the conditional mental world established by the protasis; it is almost impossible to get a content-level reading for this type of conditional, as in (3):

(3)　Cosmetics

564　H:　..所以,_
　　　　 suoyi
　　　　 so

565　　　..需要　資料　　　**的話**,_
　　　　 xuyao　ziliao　　dehua
　　　　 need　information　in.case

566　　　..可以　直接　打,_
　　　　 keyi　zhijie　da
　　　　 MOD　just　dial

567　　　7053798　的　　電話.\
　　　　 7053798　de　dianhua
　　　　 7053798　DE　telephone

'So, if you need any information, you can dial 7053798.'

In this example, the relation of conditionality operates only on the speech act domain. H, as a radio program host, performs the speech act of suggestion (by giving a phone number, as in IU566-567) via setting up a felicity condition denoted by the protasis (IU565, 'If you need any information').

3. A discourse approach to the study of conditionals

In Sweetser's (1990) analysis, speech act conditionals modify verbal actions so that they may feel "less assertive and certain" than their non-conditional counterparts. It is only respect to the speech-act type that Sweetser (1990:131) makes reference to interactional discourse since it "may help to show how the speech act fits into the structure of the jointly constructed conversational world."

Even so, it was not until recently that the pragmatics of conditionals has been explored via text or discourse-based studies. Ford (2002) in her study attempts to look into the way conditionals are used by speakers in naturally occurring conversation. She argues that the conversational functions of conditionals are organized with reference to clusters of tasks they serve—from the encoding of interactionally difficult information in a hedged fashion, to the invitation of the hearer's action. The idea that conditionals may serve the function of inviting the hearer's action hints at the possibility that politeness may come into play when accounting for the use of conditionals in naturally occurring data. Avoiding rudeness is often used as an explanation in justifying the use of a speech act.

3.1 Methodology of the present study

Our basic assumption for the present study is that linguistic structures become identifiable because they serve fundamental communicative needs for speakers in natural context, whereas the communicative needs are recurrent actions humans perform through the medium of language (Du Bois 1985). With this in mind, we believe the employment of the conjunction *if*, or its equivalents, has as its goal to understand what jobs this conjunction does for its users in conversation.

Discourse analysis methodology is adopted as a basis for our investigation. Certain findings from conversation analysis (CA) are consulted, though the observations made in the present study are not grounded completely in the manner stipulated by the CA method. A much more detailed analysis of the sequential contexts of each occurrence of the conditional clause is required. We believe that the spontaneous data chosen for this study should reveal functions that are rare or even non-existent in invented or constructed conditional sentences.

The data for this study come from seven files of talk exchange between adult speakers of Chinese in casual settings, which consists of face-to-face conversations, radio call-in show and educational television programs we collected over the years.[2] Most of these speakers are on familiar terms with one another. The transcription includes notation of overlaps, pauses, and so on, following the transcription convention of Du Bois et al. (1993).

In carrying out this research, we chose from our data all cases which fit into the so-called conditionals as defined earlier. We also included in our collection instances in which one or the other of these parts was missing but strongly projected (see the appendix for a comprehensive listing of the forms as found in the conditionals.) We collected a database of approximately 81 examples, with a total length of some 67 minutes and examined them for recurrent interactional and grammatical features.

3.2 The chain type

In some instances of conditionals, which we shall call the Chain Type, more than one type of conditional relationship can be identified. The Chain Type seems to suggest a type of relational implication: they all start from the content domain, with the possibility of entering further into the epistemic domain, and finally to the speech act domain.

3.2.1 Content-epistemic-speech act

Besides the three prototypical conditional types, there are instances that should be interpreted in more than one way. For example, some start as a content-type conditional, but should really be interpreted also epistemically, or as a verbal expression carrying with it illocutionary force, as shown in (4):

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[2] The collection of the data was made possible via NSC grants from 1995-1997.

Data:	Punishment	(10'26")
	Conchi	(5'00")
	Cosmetics	(12'54")
	Department	(9'6")
	Counsel	(4'46")
	RS005	(5'35")
	Dorm	(20'10")
	Total length:	67'58"

(4) Punishment
    434   Q: ...所以,\
               suoyi
               so
    435   ...uh,
    436   ...(0.9) 如果　說　　孩子　已經..　自己,_
               ruguo shuo　haizi　yijing　ziji
               if　　COMP　kid　already　himself
    437   ...hoN.
    438   ...uh=,
    439   ..去　　面對　　這樣　　的　　一　　個,_
               qu　miandui　zheyang　de　yi　ge
               go　face　　this　　DE　one　GE
    440   ..一　　個,\
               yi　ge
               one　GE
    441   ..不　　舒服　　　的　後果　　　[了].
               bu　shufu　　de　houguo　　[le]
               NEG　comfortable　DE　consequence　[DM]
'So, if the children have already faced this uncomfortable consequence themselves.'

    442   X: [umhm].
    443   Q: ...(0.8) 或者　　是　　父母親　　對　他　處罰　　的,
               huozhe　shi　fumuqin　dui　ta　chufa　de
               or　　SHI　parents　to　3S　punish　DE
    444   ..　那樣子　[不　舒服]　　的　後果,
               nayangzi　[bu　shufu]　　de　houguo
               that.kind　[NEG　comfortable]　DE　consequences
'Or the uncomfortable consequences such as being punished by their parents,'

    445   X: [umhm].
    446   Q: ...在　　這些--
               zai　zhe-xie
               at　these
    447   這　兩　　種　　情況　　之下--
               zhe　liang　zhong　qingkuang　zhixia
               these　two　CL　situation　under

448   <MRC 之後 MRC>,\
     <MRC zhihou MRC>
       afterwards

449   ...那麼,\
    name
    then

450   ..父母親 呢,_
    fumuqin ne
    parents DM

451   ...都 要 來 好好 的 抱抱 [你的] 孩子.\
    dou yau lai haohao de baobao [ni-de] haizi
    all need come good DE hug [2S DE] kids

452 X: [um].\

453 Q: ...然後 要 告訴 他,_
     ranhou yao gaosu ta
     then need tell 3S

454   ...你 愛 他.\
    ni ai ta
    2S love 3S

'Under these two situations, all parents need to give their children a hug and then tell them you love them.'

This example consists of a protasis marked by *ruguo* (如果) 'if' (IU436-444, summarized by IU447), and an apodosis (IU449-454) stating the consequence as a result of the hypothesis that the child himself has already faced the unpleasant situation. This conditional sentence should be classified as the content domain conditional, based on its semantic content alone. However, this example certainly conveys the speaker's opinion and viewpoint as well since the apodosis expresses an action believed to be desirable by the speaker given the situation as described in the protasis. When the discourse context is taken into consideration, this conditional serves the additional function of giving suggestions or making recommendations to the audience, most of whom are parents seeking professional advice on parenting, as is appropriate in an educational program. As a result, this example clearly demonstrates functions on three different domains: content at the syntactic and semantic level; epistemic at the semantic and pragmatic level; and speech act with illocutionary force at the pragmatic and discourse level.

3.2.2 Content-epistemic

Similarly, a content conditional (5) can also yield an epistemic reading and stop there:

(5)   Dorm

6   **如果** 不是 他 拿 著 那 一 本 我們--
   ruguo bushi ta na zhe na yi ben women
   if NEG 3S hold ASP that one CL 1P

7   …就是 那 種 住宿 的 單子 的 話,_
   jiu-shi na zhong zhusu de danzi de hua
   namely that CL accommodation DE paper DE words

8   然後 上面 都 有 我們 的…什麼 相片 啊,_
   ranhou shangmian dou you women de sheme xiangpian a
   then up all have 1P DE what photos DM

9   我 會 覺得 他 搞不好 是 什麼.. 騙- 騙 人
   wo hui juede ta gaobuhao shi sheme pian pian ren
   1S MOD feel 3S do.NEG.good SHI what lie lie people
   還是 什麼 的.\
   haishi sheme de
   or what DE

'If it wasn't because he was holding the dormitory notebook which has all our pictures in it, I'd have thought that he was a liar or something.'

In terms of the proposition in this example, there is a causal relationship between the *if*-clause and the main clause. According to Sweetser's (1990) classification, examples of this type should fall into the domain of content conditional, in which there is a particular logical/causal/sequential relationship observed between protasis and apodosis. However, this example also involves epistemicity in that phrases such as *wo hui juede* (我會覺得) 'I would feel' and *gaobuhao* (搞不好) 'maybe,' which are strong indicators of speaker's epistemic stance. As a result, the conditional extends from the content domain to the epistemic domain.

3.3 Epistemic-speech act

An epistemic conditional can of course convey intended illocutionary force as well, as illustrated in (6):

(6) RS005

1   ..   所以   呢,_
              suoyi   ne
              so   DM

2   ..   **如果說,_**
              ruguoshuo
              if.COMP

3   ..   平常   沒有   跟   孩子=,_
              pingchang   meiyou   gen   haizi
              usually   NEG   with   children

4   …   沒有   孩子   討論   [習慣   的話   oh],_
              meiyou   haizi   taolun   [xiguan   dehua   oh]
              NEG   children   discuss   [habit   in.case   oh]
'So, if you don't have the habit of discussing with children,'

5   A: [unh-unh-unh-unh].\
6   B: ..   真的   有時候,_
              zhende   youshihou
              really   sometimes

7   ..   我們   會   覺得,_
              wo-men   hui   juede
              1P   MOD   feel

8   …   妳   怎麼^   這麼   的,_
              ni   zeme^   zheme   de
              2S   how^   so   DE

9   ..   這麼   的   不   講理,_
              zheme   de   bu   jiangli
              so   DE   NEG   reasonable

10   ..   [或是   怎麼   這麼]   不   懂事.\
              [huoshi   zeme   zheme]   bu   dongshi
              [or   how   so]   NEG   considerate
'Sometimes we would really feel how you could be so inconsiderate,'

11   A: [unhunhun]./
12   B: ..   [我們   已經]   很   忙   了,_
              [women   yijing]   hen   mang   le
              [1P   already]   very   busy   DM
'We are already quite busy,'

13	A:		[unh-unh]₂.\		
14	B:	..	妳	還	要,_
			ni	hai	yao
			2S	still	need
15		..	有	這些	動作	出來.\
			you	zhexie	dongzuo	chulai
			have	these	actions	out

'And you are still behaving like that.'

This example is at first treated as an epistemic conditional because the conditional clause introduced by *ruguoshuo* (如果說) 'if' (IU2) does not necessarily indicate a cause-and-effect relationship with the main clause. In other words, the protasis is not the necessary condition for the apodosis to happen. Furthermore, the phrase *juede* (覺得) 'feel' in IU7 clearly marks the speaker's epistemic stance, which functions also as a mitigator to soften the utterance that might seem too harsh for the hearer. When we take the speech context into consideration, we tend to take this example uttered by a child expert on a radio talk show as a piece of advice he offers to parents with reference to the handling of their children's emotions. The expert may have sensed that it is improper, especially in a face-to-face interaction, to carry an authoritative tone at all times, so he opts to modify and soften the force of his speech by *juede* (覺得) 'feel'.

4. Analysis and findings

If there should be a hierarchy, we would say that all these conditionals start from the content domain, and then enter, depending on context, either the epistemic domain or the speech act domain alone, or trigger a chain reading yielding a content-epistemic-speech act sequence in terms of the domains discussed.

4.1 Conditional constructions identified

For ease of discussion, we summarize the result of our analysis in Table 1 below:

Table 1: Frequency of conditional types as grounded by contexts

Original Domains	Tokens	Possible further interpretations	Tokens	Genre	Frequency
Content	49 (60.49%)	Content→Epistemic	34		41.98%
		Content→Epistemic→Speech-act	5	5 by experts	6.17%
		Content→Speech-act	2	2 by experts	2.47%
		Content only	8		9.88%
Epistemic	24 (29.63%)	Epistemic→Speech-act	8	3 by experts 5 conversation	9.88%
		Epistemic only	16		19.75%
Speech-act	8 (9.88%)				9.88%
Total	81 (100%)				100%

According to the findings presented in Table 1, content conditionals should be taken as the major type we identified (60.49%), followed by epistemic conditionals (29.63%), and then followed by the speech act conditionals (9.88%). Another way of looking at the findings is however to count as the speech act category all those that yield a speech act interpretation. This will give us 23 tokens (adding 15 to the category: 7 from the content domain and 8 from the epistemic domain) for the speech-act type. If we calculate the epistemic examples by following the same method, 34 from the content type can be added to the epistemic conditionals, making the epistemic the most prevalent type among the three domains (a total of 58 tokens).

Our reasoning is influenced not only by subset relations between categories, but also by complexities of cognitive category structure. Linguistic forms simply serve as cues to prompt frames so as to activate our knowledge about the concept coded, while utterance meaning, generated by the process of conceptual blending, is a product emerging from interaction between what the context gives us and what is evoked by the form. The form itself does not represent meaning. We shall discuss below our analysis and findings in light of the theoretical frameworks together with the cognitive mechanisms involved.

4.2 Blending theory as structured reasoning processes

The conditionals afford a unique glimpse of the power in building cognitive structures—they open up the possibility for us to talk about the various possible meanings associated with the conditions by a few specific parameters of interpretation (Sweetser 1996). The interpretation of the conditionals becomes possible because the conditional constructions create coherent mental spaces (Fauconnier 1985). Mental spaces

refer not only to very partial or more complete cognitive "world" or "situation" constructions, but also to a variety of non-world-like structures which can be connected and mapped onto other cognitive structures. Much of the diversity of interpretation can be attributed to the fact that the spaces themselves can be related to the linguistic form in a variety of ways. An *if*-clause sets up a mental space which is the background for the construal of the *then*-clause.

Fauconnier (1985) observed that conjunctions like *if* set up a particular kind of mental space, distinct from our base space. The conditional construction exists precisely to set up a relationship between a conditional mental space and a proposition which applies specifically within that space, so subordination of the apodosis content to the protasis space is part of the deal.

Blending theory (Fauconnier & Turner 2002) explains how the hypothetical world is blended with the real world, in order to create an emergent structure. It suggests that people use simplified, partial models, and use rhetorical goals to restrict their inferences. The conceptual integration occurring in conditional spaces is a case in which projection mappings are used to evoke different patterns of inference, affective responses, and action frames. Structuring the blended space to represent the hypothetical content involves the establishment of abstract relational correspondences that can result in productive inference. The blend can be set up to promote scalar reasoning, which involves inferences that arise from a pragmatic scale, a set of propositions ordered along some dimension such that elements are related by material implication.

As the example below shows, the *if* protasis in IU350-353 activates a blending network, combining the information from the hypothetical world with those in the real situation. An emergent meaning is led by *then* in IU354-361, inviting the hearers to ponder the possibility of an undesirable but highly probable outcome: their children's misbehavior to people other than their own parents.

(7) Punishment

350 Q: (0)所以　當　　他　**如果**　跟　　你　的,_
　　　　suoyi　dang　ta　ruguo　gen　ni　de
　　　　so　　when　3S　if　　with　2S　POSS

351　　..說話　　的　口氣　不,_
　　　　shuohua　de　kouqi　bu
　　　　speak　　DE　tone　NEG

352　　不　　怎麼　好,\
　　　　bu　zeme　hao
　　　　NEG　how　good

353   ..而   你   又   沒有   及時   去   糾正   他,

       er   ni   you   meiyou   jishi   qu   jiuzheng   ta

       and   2S   still   NEG   in time   go   correct   3S

354   ...那麼,\

       name

       then

355   ..他..對--

       ta dui

       3S to

356   ...父--

       fu

       father

357   ..uh=,

358   ..對   父母親   都   可以   這樣   說話,\

       dui   fumuqin   dou   keyi   zheyang   shuohua

       to   parents   even   MOD   this way   speak

'So if he didn't talk to you in a good manner and you didn't correct him in time, then he might talk to his parents in the same way too.'

359 X: (0)um.

360 Q: (0)那麼   可能   他   在   外面   跟   別人   講話

       name   keneng   ta   zai   waimian   gen   bieren   jianghua

       then   maybe   3S   at   outside   with   others   speak

       的   時候,\

       de   shihou

       DE   time

361   .. 他   也   很   自然的   可以   口氣   不   好.\

       ta   ye   hen   zirande   keyi   kouqi   bu   hao

       3S   too   very   natural   MOD   tone   NEG   good

'Then, when he talks to others, he may naturally talk in a bad tone.'

The figure below illustrates how the conditional structure joins ideas from the two input spaces to create inference necessary for the comprehension of this conditional.
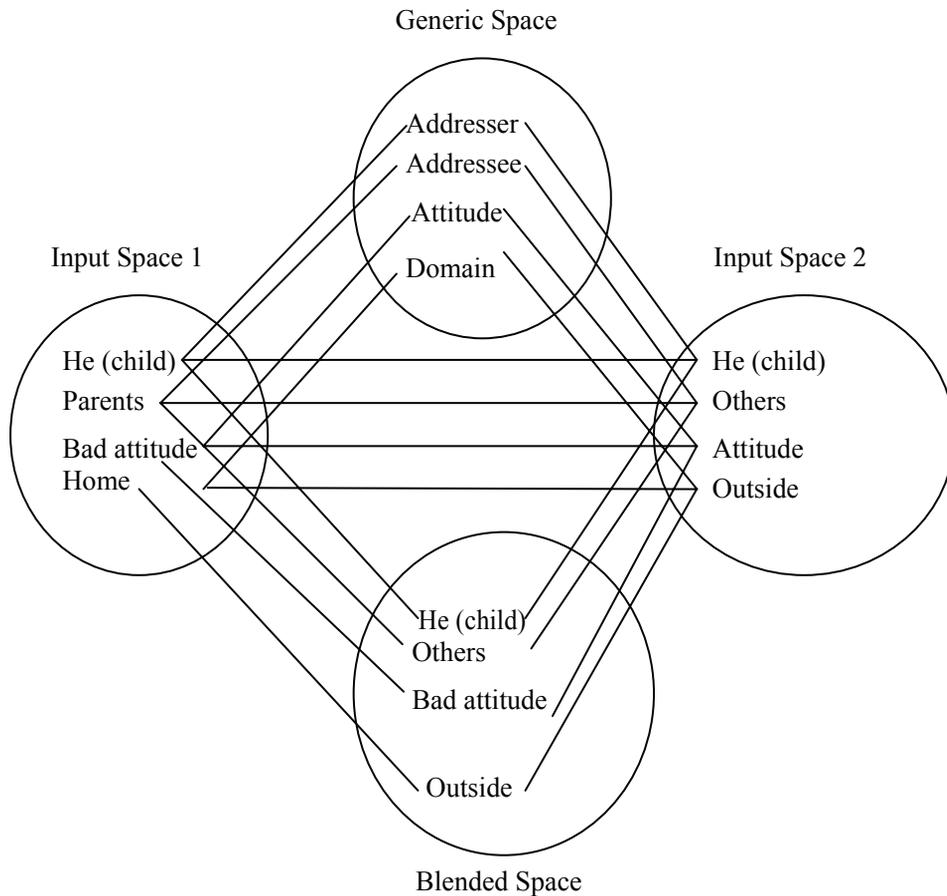
Generic Space

Addresser
Addressee
Attitude
Domain

Input Space 1

He (child)
Parents
Bad attitude
Home

Input Space 2

He (child)
Others
Attitude
Outside

He (child)
Others
Bad attitude
Outside

Blended Space

Figure 1: The blending network of example (7)

By presenting the protasis {*If he did not talk to you in a good manner and you did not correct him in time*}, this conditional structure invites the hearer to infer the apodosis indicated by the modal 'might' {*he might talk to his parents in the same manner*}, based on our common knowledge. Understanding the relationship between the input and the hypothetical involves appreciation of the mappings between the elements and relations in the two spaces. Meaning construction for conditionals involves thus the projection of partial structure into a blended space, and makes extensive use of cross-space mappings. While the meaning construction in conditionals is often invoked for planning and evaluation of future events, the same processes of meaning construction are also used to promote particular construal, to highlight shared experience. The hypothetical blend can be used to set up frames so as to promote the speaker's desired construal of the events:

{*When he talks to others, he may talk in the same unpleasant manner.*}.

Hypothetical thinking lies in our building of the mental spaces where the irrealis world is conceptualized. As human beings are equipped with this capacity for imagination, we are able to perform all sorts of mental operations in the irrealis world, some of which are more cognitively accessible depending on their relevance to their own experiences.

5. Interpretation: undesirability

Conditionals being a way of expressing the hypothetical, state something not necessarily true in the real world and work only in the cognitive world established upon the interlocutors' beliefs where the hypotheticals are viewed as one space exerting forced pretension with respect to the "real" one. The incongruity of the two will generate, after being integrated via blending, a somewhat different and new reading via the reasoning process. We therefore suggest that undesirability of the apodosis may be the driving force for the intersubjective nature in terms of hypotheticality associated with the protasis.

5.1 Driving force: intersubjectivity

Blending theory has little problem dealing with most content conditionals, whose interpretation depends largely upon our reasoning and inferencing ability. The Blending theory reflects co-activation of the real world and the hypothetical world, rendering the emergent structure as the apodosis. However, the theory alone may not be able to answer all the linguistic phenomena of conditionals: The reasoning process of the apodosis is largely dependent upon the speaker's subjective inference, as is often evident from the use of the modal *keneng* (可能) 'maybe,' say in IU360 of (7). This modal, a typical cue of the so-called "epistemic conditional," reflects the speaker's epistemic stance. Blending theory explains merely the composition of semantic content, but fails to explain the speaker's provocation of his subjective reasoning by a conditional structure.

Fillmore (1990) proposes that a basic element of conditional meaning is epistemic stance, the speaker's mental association with or dissociation from the world of the protasis. Akatsuka (2002) states that three sorts of epistemic stance—positive, neutral, and negative[3]—are typically associated with the epistemic conditionals, each indicating

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[3] In the case of positive epistemic stance, the speaker accepts the truth of the proposition expressed in the subordinate. Thus, in *When Pat opened the door, the dog escaped* the speaker accepts the idea that Pat did indeed open the door and asserts that the dog escaped. In the case

the degree of the speaker's commitment to the actuality of the proposition expressed. The various uses of conditionals fit into the axis of the epistemic scale proposed by Akatsuka (1986): Conditionals reflect the speaker's attitude within the irrealis division of the epistemic scale in terms of the speaker's subjective evaluation of the ontological reality of a given situation. Epistemic conditionals express the speaker's perspective grounded by his own beliefs, which seems pretty much in line with the claim made by the theory of subjectification (Langacker 1999), that the speaker tends to view an objective scene from his own viewpoint, placing his own values, attitudes, beliefs, and judgment on the entity being profiled, as reflected by the epistemic use of conditionals. Langacker's (1999) theory however fails when the illocutionary effect of the conditional at the discourse level is considered. The conditional structure as seen in (7) renders a hortative interpretation: The television program host Q, an expert in child education, attempts to make a suggestion to all parents in general. The role played by such an expert host should be seriously considered in order to come up with the intended interpretation that a piece of advice is what is to be conveyed by the conditional construction, an instance of the so-called "speech act conditional." Such pragmatic concern cannot be generated by appealing to either Blending Theory or the Theory of Subjectification. It is necessary to take into consideration felicity conditions as well as the hearer's inferencing ability in order to understand the speech act forces expressed by this conditional.

This hearer-involvement is the intersubjectivity advanced by Traugott (1999) in her treatment of the interactional nature in communication. Conditionals in this regard provide a linguistic means to avoid a direct speech act, so as to decrease the assertability of a statement. Conditionals facilitate a good way to hedge the speaker's concern of interaction and the addressee's concern in terms of face-saving.

The fact that the intersubjective concerns stem from a very subjective use of the conditionals, namely the epistemic conditional, supports further Traugott's (1999) claim that intersubjectification may serve as concomitant of subjectification at a later stage. In our data, conditionals with intersubjective motivation do often correlate with an undesirable consequence, which is hazardous to the addressee's negative face. In other words, the possible face-threatening act imposed on the addressee as expressed in the

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of neutral epistemic stance, the speaker takes no stand on the truth of the proposition expressed by the subordinate clause, as in *If Pat left the door open, the dog undoubtedly escaped*. The speaker does not know whether or not Pat left the door open, but asserts an unfortunate consequence of such a state of affairs. And in the case of negative epistemic stance, the speaker assumes that P is not true, where P is a proposition derivable from the form of the antecedent clause. Thus, in *If Pat had left the door open, the dog would have escaped*, we hear the sentence as revealing the speaker's belief that Pat did not leave the door open.

apodosis may explain why the speaker appeals to the use of the hypothetical in an intersubjective sense. If the proposition conveyed by the apodosis is, on the contrary, an act of verbal compliment, the speaker might be more motivated to express it in a direct way so as to satisfy the addressee's positive face.

Intersubjectification should therefore be regarded on the other hand as an extension of subjectification in that the hearer becomes involved into the concern by mitigating the subjective evaluation of the presupposed ground taken by the speaker. Such mitigation is triggered most probably by the speaker's concern over the hearer's negative face—to soften the impact of what may have been a face-threatening act.

5.2 Pragmatic concerns: hypotheticality

The fundamental connection between hypotheticality, uncertainty, and the uses of conditionals in interaction is that the *if*-clause format allows propositions to be offered with a low level of speaker commitment to their epistemological status. It may sometimes be used not to strongly assert what is presented in the conditional clause, but rather be used as a ticket into the turn—to tie what will be said to what has come before.

Difference in stance means that the speaker is endowed with different choices made possible by linguistic options. This makes the conditional construction a fitting vehicle for encoding information in a hedged manner—speakers can say what they want to say and at the same time, remain in some sense uncommitted to what they are saying. In fact, the hypothetical format, represented here in the *if*-clause, treats its content as provisional and less than certain, suggesting that an alternative is always implicitly acknowledged. We are in line with Palmer's (1986) claim in assuming that the propositions contained in conditionals "are not put forward as matters of fact, but simply as propositions to be entertained."

When the cognitive aspect based on the semantics and pragmatics of conditionals is considered, Akatsuka (1986) contributes insightfully to our understanding of the pragmatics of conditionals. Akatsuka (2002) further suggests that the speaker's attitude or evaluative stance of desirability is often encoded by natural language conditionals. This view is verified in our finding: The epistemic type is still the most common interpretation that we identify from the conditional constructions. In human communication, we tend to convey primarily our subjective opinions through our language. This inevitably leads to the result that the 'pure' content conditionals are the least common conditional type in spoken data of an interactional nature, which suggests in a way that it is pragmatic uses that the conditional constructions are typically associated with.

Such pragmatic concern makes examples such as (8) a challenge to our analysis:

(8) 我 很 討厭 她, 如果 你 不 介意 我 說 實話 的 話
    wo hen taoyan ta ruguo ni bu jieyi wo shuo shihua de hua
    1S very dislike 3S, if 2S NEG mind 1S say truth DE words
    'I dislike her very much, if you don't mind my telling the truth.'

Example (8) fits into what Dancygier & Sweetser (2000) classify as the so-called "Metalinguistic Space" conditionals. Although it resembles Sweetser's (1990) speech act conditionals—they modify verbal actions so that they may "feel less assertive and certain than their non-conditional counterparts," they are actually used mainly for the purpose of managing politeness. The interactional uses of conditionals in natural conversational data show that the *if*-clauses (in ex. (8) {*If you don't mind my telling the truth.*}) are themselves vehicles for the action performed ({*I dislike her very much.*}), be it a request, a directive, or the statement of a problematic contingency. Sweetser's speech act category suffers from one limitation: The conditional construction used out of a face concern will be formatted such that the *if*-clause encodes a constraint on the applicability of the main clause action. Considering the context where the conditional is used, hypotheticality is appealed with its implication of alternatives to mitigate or hedge, and thereby to avoid the potential rudeness caused by the socially awkward utterance of disliking a person in conversation. The implicit contribution of the speech setting to the interpretation of conditionals should not be underestimated, as is acknowledged by both Langacker (1991) and Fauconnier (1990).

    Brown & Levinson (1987) in their cross-linguistic analysis of politeness did mention the use of hypotheticality as "avoiding coercion." They note that in using a conditional, one is able to show that "it is not assumed that the hypothetical world is close to" the real one. They also point to the use of what have been referred to as speech act conditionals, in which the protasis portion (the *if*-clause) is combined with direct or indirect requests as a way of formulating a polite request, somewhat similar to (8), where the politeness and face considerations figure prominently in their contexts of use, choosing conditionals as the linguistic forms for maneuvering through the interactionally delicate territory.

    By submitting oneself to the reading of the polite request denoted by the protasis {*If you don't mind my saying so.*}, the speaker in (8) uses the conditional not as a proposition with negative conviction, but as a pre-sequence so that the speaker is prepared to expect the contrary. This mitigated mood provides further *prima facie* evidence of the speaker's attention to the "self" of the addressee in a social sense, i.e., that of intersubjectification. We again are convinced that subjectification alone does not account for the subtlety of (8).

6. Concluding remarks

This paper has pinpointed the important roles played by context and the pragmatic concerns necessary in the interpretation of Chinese conditionals as they are used in spontaneous spoken discourse. Blending theory is important in that it helps us understand the reasoning processes involved in the interpretation of conditional meaning, although it should be modified to include intersubjectification to account satisfactorily for the interactional nature and the intricacy of human communication. Conditionals are shown to be employed quite routinely so as to link the speaker's knowledge and the addressee's situation in order to create a blend in which the features of two disparate entities are combined. We see that one motivation for using a hypothetical statement is presumably to evoke a frame which is unavailable in the current context. In using the conditional, the speaker does not seek to transform the actual into the hypothetical, but to present a context in which his point will be readily evident. Furthermore, hypotheticality provides one alternative to hedge, as a means to avoid the potential rudeness in terms of human interaction.

This research thus provides a dynamic piece of evidence to support the claim that natural language conditionals are an important device in encoding the speaker's evaluative stance of desirability, while highlighting the relevance of the current theory of linguistic intersubjectification (Traugott 1999) in understanding the use of language as seen in natural conversation. Cases from the present corpus data suggest that conversational uses of conditionals are intimately connected to local contexts and to recurrent practices of speakers engaged in naturally occurring interaction. Viewing grammar as the sediments of interactional and cognitive operation in human conceptualization, we are again convinced that interactional data occurring in natural context provide the most valid evidence opening a window onto the mystery of the human mind.

The various uses of conditionals as seen in the present study indicate that newly-recruited meaning may be related to prototypical meaning, when considering the speaker's subjective evaluation on the current speech context. Grammar may not provide from this perspective the whole landscape, but it does show that language "serves as a powerful means of prompting dynamic on-line constructions of meaning that go far beyond anything explicitly provided by the lexical and grammatical forms," and grammar does "guide our elaborate conceptual work with an admirable economy of overt indications." (Fauconnier 2003:251). Givon's (1979) claim that discourse-pragmatics plays a decisive role in explaining the syntax of human language is again supported via our investigation of the Chinese conditionals. Human language cannot be described exhaustively without reference to the communicative principles underlying the structure of discourse.

Appendix

The forms and tokens of the conditional constructions identified.

Form	Tokens	Percentage
如果…的話	12	14.81%
如果	23	28.40%
如果…就…	3	3.70%
…的話，就…	1	1.23%
要是…（的話）	3	3.70%
…的話	16	19.75%
…的時候	10	12.35%
當…（的時候）	3	3.70%
要不然的話	1	1.23%
即使	1	1.23%
假設	1	1.23%
假如…然後	1	1.23%
在…情況之下	1	1.23%
換了我	1	1.23%
就算	1	1.23%
要..就…； 要…就… （成對）	1	1.23%
Zero Marker	2	2.47%
Total	81	100%

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條件句與人類心智之反映

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　　語言學家對於條件句的處理方式，往往與邏輯學家不同。語言學家由言談語意出發，兼及心理空間理論對條件句運作之處理。本文採認知語言學的視角，根據中文言談中條件句的使用，觀察條件子句所蘊含的假設性和選擇性是否爲達成言談中人際溝通功能之主要依據，並討論此功能與人類對於「面子」的禮貌需求兩者之間的關係。

　　語言的結構可以反映出人類在自然語境中基本的溝通需要。我們對實際口語語料的分析結果，無法完全呼應 Sweetser (1990) 對於條件句的分類，因爲她沒有以自然語料爲佐證，故無法考慮到上下文及語境的問題。唯有自然語料方能讓我們一窺人類心智的奧祕。

　　由本文所歸納出的條件句的多種用法，我們認爲新賦予的意義應該和原有的原型意義有所關連，而說話者對當時語境的主觀認定常爲語意處理的重要依歸。本文肯定 Fauconnier (2003:251) 的看法：語法的確 「以相當經濟明顯的方式引導我們複雜細緻的概念運作」。

關鍵詞：隱喻，概念混成，條件句，言談互動