Chapter 2

Ideational clause grammar:
the semantic system of FIGURE and the grammatical system of TRANSITIVITY

2.1   Introduction

The ideational metafunction is concerned with our experience of the world that is around us and inside us. The phenomena of our experience are comprehended as a realm of changes in which one quantum of change is construed as a figure, which is a configuration consisting of three types of element, namely process, participant and circumstance. The nucleus of this configuration is the process, plus a participant directly involved in it. There may be one or two additional participants and more than one attendant circumstance, depending on the nature of the process. There may be innumerable processes unfolding in the world around us, but they are construed semiotically into a small number of process types (see Halliday 1985/1994; Martin 1992; Matthiessen 1995; Halliday & Matthiessen 1999). And each process type corresponds to a different type of figure.

The figure is thus the fundamental unit of experiential semantics. It is realised congruently by the clause in its experiential guise, i.e. by the clause as representation. The clause as representation is the system of TRANSITIVITY. This system provides the resource for construing our experience of 'goings on' as structural configurations consisting of a process, participant(s) and/or circumstance(s), normally realised by verbal group, nominal group and prepositional phrase respectively. The order of elements in the configuration does not affect the ideational meaning; instead it is utilised in the textual metafunction as a grammatical resource (see Chapter 4 for further discussion).

The major concern in this chapter is the experiential mode of meaning. First, based on the analysis of three Chinese texts a semantic system of FIGURE will be constructed in Section 2.2. Then each type of figure in the system will be analysed semantically in Section 2.3. Based on the system of FIGURE, a description of the TRANSIVITY system will be proposed in Section 2.4. Finally, the system of TRANSITIVITY will be examined from three angles, namely from 'above', from 'around' and from 'below' in Section 2.5.

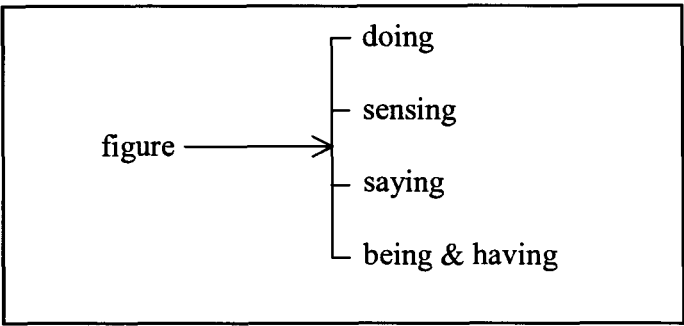## 2.2 Ideational semantics: the semantic system of FIGURE

According to Matthiessen (1995: 350), we can identify two aspects of a figure, namely its decomposition and configuration respectively, and the domain of experience that it represents. In the first aspect a figure is constructed as an organic configuration of parts as mentioned in the previous section. Each part has a specific relation to the figure as a whole (see Matthiessen 1995: 350-351; Halliday & Matthiessen 1999: 52-58). For example, feeling is a configuration of a senser and a phenomenon; kicking is a configuration of a doer and a goal; speaking is a configuration of a sayer, a receiver and a verbiage; and possessing is a configuration of a possessor and possession. In the second aspect a figure is represented according to the types of process configuration. The four general types of figure are 'doing & happening', 'sensing', 'saying' and 'being & having'. These four types of figure construe our experience towards the world of material reality, the world of consciousness, the world of symbolisation and the world of various modes of being respectively (Matthiessen 1995: 352).

On the one hand, these four general types of figure can be grouped into two general categories, namely sensing and saying vs. doing and being. The former can set up other figures as second-order, semiotic reality, which means it is able to project whereas the latter cannot. On the other hand, the process of sensing can be differentiated from the process of saying because the former is an interior symbolic process while the latter is an exterior symbolic one. Similarly the process of doing can be differentiated from the process of being as the former requires some input of energy to be actualised and it brings forth a change on a participant in the configuration over the time of occurrence, whereas the latter does not require any input of energy and it does not bring forth any changes. The similarities and differences of these four general types of figure are shown in Table 2.1. At this point the most general semantic system of FIGURE can be formulated systemically as in Figure 2.1.

Table 2.1: Similarities and differences of the four general types of figure

types of figure	types of experience	properties
sensing	the world of consciousness	ability to project + interior symbolic process
saying	the world of symbolisation	ability to project + exterior symbolic process
doing & happening	the world of material reality	unable to project + input energy > change
being & having	the world of various modes of being	unable to project + no input energy & no change

Figure 2.1: The most general semantic system of FIGURE

```
                        ┌─ doing
                        │
                        ├─ sensing
figure ─────────────→   │
                        ├─ saying
                        │
                        └─ being & having
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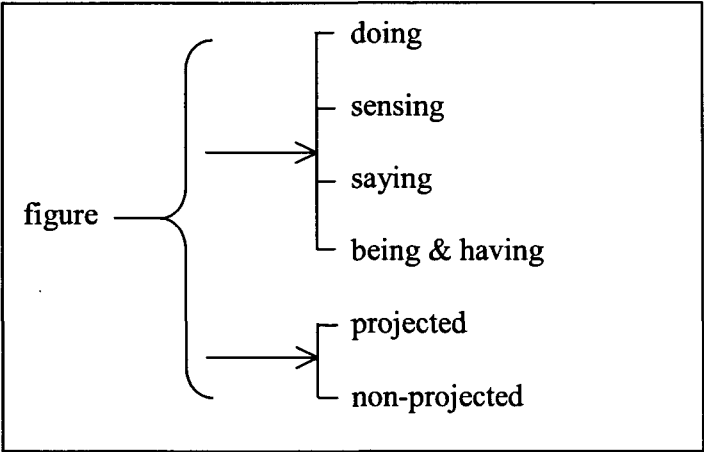
Each figure is either a 'projected' or 'non-projected' one. A projected figure, in Halliday and Matthiessen's (1999) terms, is set up as second-order, semiotic reality. The core paradigm is thus:

types of figure	projected	non-projected
doing	Ex. (2.1)	Ex. (2.2)
sensing	Ex. (2.3)	Ex. (2.4)
saying	Ex. (2.5)	Ex. (2.6)
being	Ex. (2.7)	Ex. (2.8)

Formulated systemically as in Figure 2.2, this gives two simultaneous systems [doing/ saying/ being/having] and [projected/non-projected].

Figure 2.2: Two central FIGURE systems

(2.1)

'nǐ you	zhēn really	jiù le save ASP	wǒmen, we	qīnài de péngyǒu,' dear NOM friend
Actor	VADV	Process: material	Goal	
(Verbiage as a paratactic projected clause)				

('You really saved us, my dear friend,')

jiāngjūn General	jīdòng de emotionally	shuō. say
Sayer	Manner	Process: verbal

(the General said emotionally.)

(2.2)

tā he	yǒushēngyǒusède descriptively	jiāng DISP: op	shouzhǐ finger	pā de 'pa'	tán le snap ASP	yī shēng. one MEAS
Actor	Manner		Goal	Manner	Process: material	Time (deictic)

(He snapped his figures descriptively.)

(2.3)

'wŏ I	réngrán still	rènwĕi think
Senser	VADV	Process: mental: cognitive

(I still think that ...)

nĭ you	nòng cuò le.' make wrong ASP
Carrier	Process/Attribute relational: ascriptive
(Phenomenon as a hypotactic projected clause)	

(... you are wrong.)

(2.4)

chúle   yī   kē   hóng bítóu hé   liăng piĕ   shàngqiào   de   réndān húzī   zhīwài, besides one MEAS red   nose and two   MEAS pointing upward NOM curled   moustache besides
Exclusion

	shēnme whatever	yĕ also	kànbùjiàn. cannot see
(Senser)	Phenomenon	VADV	Process: mental: perceptive

(Besides a red nose and two points of an upward curled moustache, nothing could be seen.)

(2.5)

'tā she	wèishénme Q-why	yào gàosù want tell	wǒ me
Sayer	Cause	Process: verbal	Receiver

(Why did she tell me that .....)

tā she	cóng měi-yǎo qù guò from NEG: pf go ASP	měiguó?' America
Actor	Process material: event	Range

(... she had never been in America?')

tā he	shuō, said
Sayer	Process: verbal

(he said,)

(2.6)

zhè huà this conversation	tā he	yǐ already	bù shì NEG be	dìyī cì first MEAS	shuō le. say ASP
Verbiage	Sayer	VADV		Time (deictic)	Process: verbal

(This matter he did not mention for the first time.)

(2.7)

'shì ya, yes	yīsìtǎnbǎo zhè gè dūshì Stamboul this MEAS city	wǒ I	huán still	měi dào gūo ne, NEG: pf visit ASP NTR: ass
	Range	Actor	VADV	Process: material

('Yes, Stamboul I have never been to before.)

cuòguò le missing ASP	jiù then	tài kèxī le, too pity NTR: ass	shì ba?' TAG
Carrier	VADV	Process/Attribute relational: ascriptive	

(Missing it will be a pity, won't it?)

báiluó Poirot	fùhè zhe shuō. agree ASP say
Sayer	Process: verbal

(Poirot agreed.)

(2.8)

zài zhè yīchànàjiān, at this very moment	tā she	díquè really	shì EMP	měilì beautiful	de. EMP
Location: temporal	Carrier	VADV		Process/Attribute relational: ascriptive	

(At this very moment, she was really beautiful.)

A projected figure can be projected as a fact as in (2.1) and (2.7), as an idea as in (2.3), or as a locution as in (2.5). At this point the semantic system of FIGURE has now been expanded as in Figure 2.3.

Figure 2.3: An expanded semantic system of FIGURE

Now the next step to further develop the system of FIGURE is to explore the four general types of figure in detail. We know that the nucleus of a figure is the process, plus one of the participants directly involved in it. Halliday and Matthiessen (1999: 466) have pointed out that there are "two perspectives on a process: a process is both an organiser of participants and an event that is instantiable in time." Viewed from the former perspective, i.e. the participant-organising perspective, it is the nature of the participant(s) organised by the process that distinguishes different subtypes of figure; whereas viewed from the latter perspective, i.e. the temporal instantiation perspective, it is the nature of the process unfolding through time that differentiates the subtypes. These two perspectives are associated with two grammatical units at different ranks, i.e. the participant-organisation perspective is associated with the clause while the temporal instantiation perspective is associated with the verbal group. The present study will adopt the participant-organising perspective to examine and then to differentiate the four general types of figure into further delicacy in Sections 2.2.1-4.

2.2.1 Figures of sensing

There are two participants in a figure of sensing, namely Senser and Phenomenon. In the corpus Sensers are construed as conscious beings engaged in an internal symbolising processing. The phenomenon of sensing can be construed as a simple participant or a projected idea, i.e. a second-order projected figure. When it is construed as a simple participant, it can be any kind of phenomenon – a conscious being, a simple non-conscious material thing, a simple non-conscious semiotic entity or a macro-thing.

Figures of sensing can be further differentiated into four subtypes, viz. figures of cognition, desideration, emotion and perception, by three properties concerning the Phenomenon. The first property concerns the nature of the Phenomenon, i.e. whether the Phenomenon is brought into existence by the process or whether it existed before the process begins to unfold. The Phenomenon in the former type represents for an idea created by the sensing process, whereas the Phenomenon in the latter denotes a fact which existed before the process.

Those figures of sensing in which the Phenomenon is brought into existence by the process can be further differentiated into two subtypes by a second property, i.e. whether the Phenomenon is construed as a proposition, an idea of information that can be validated as true or false as in (2.9), or as a proposal, an idea of an action that has not been actualised as in (2.10). The former constitutes a figure of cognition and the latter a figure of desideration.

(2.9)

wǒ I	réngrán still	rènwéi think	nǐ you	nòng cuò le.' make wrong ASP
Senser	VADV	Process: cognitive	Phenomenon as a hypotactic projected clause	
			Carrier	Process/Attribute relational: ascriptive

(I still think that you are wrong.)

(2.10)

'wŏ I	xiăng, ... think
Senser	Process: desiderative

(I think ...)

nin you	zài nàlĭ at there	shì EMP	yào want	tíng stop	jĭtiān several days	de EMP	ba?' NTR: int
Actor	Place (deictic)		Process mental	Process: doing	Range		

(...you would want to stay there for several days.)

Those figures of sensing which construe the Phenomenon as a pre-existing fact can also be differentiated into two subtypes by a third property, i.e. whether the process is caused by the Phenomenon or whether it ranges over the Phenomenon. The former constitutes a figure of emotion and the latter a figure of perception. In a figure of emotion the pre-existing Phenomenon produces an internal process of emotion in the Senser, whereas in a figure of perception the Senser actualises the process which ranges over a pre-existing Phenomenon. For exmple, (2.11) realises a figure of emotion while its dependent clause realises a figure of perception.

(2.11)

	hàipà afraid	zhè rén this person	kànjiàn see	tā he	kàn le kàn watch ASP watch	shŏubiăo, watch
(Senser)	Process: emotion					
		Senser	Process: perception			
				Senser	Process: perception	Phenomenon

((He) was afraid that the man saw had watched his watch.)

The four subtypes of 'sensing' are formulated systemically as in Figure 2.4 while the number of instances that each subtype of 'sensing' represents against the total number of the type 'sensing' deployed in the three Chinese text (Appendix D) is depicted in Figure 2.5.
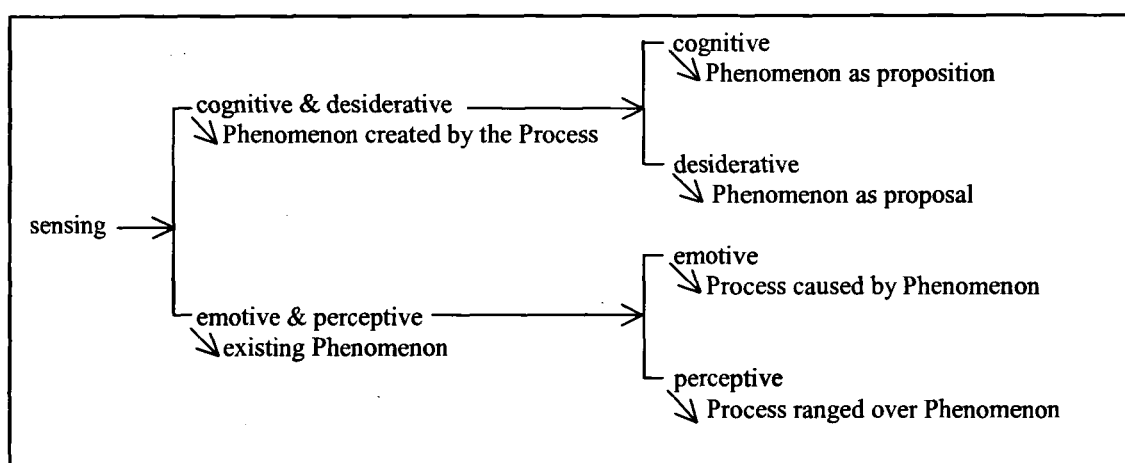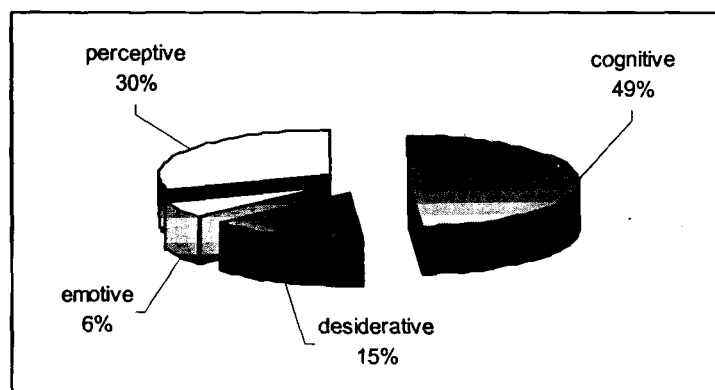
Figure 2.4: Four subtypes of 'sensing'

Figure 2.5: Proportion of the four subtypes of 'sensing'

2.2.2   Figures of saying

Saying is an exterior symbolic process. A figure of saying embodies at least two participants, namely the Sayer, i.e. the entity which does the process of saying, and the Verbiage, i.e. the subject matter of the talk. Figures of saying can be further differentiated into three subtypes, viz. figures of verbiage, quoting and reporting, by a property concerning the nature of the Verbiage, i.e. whether the Verbiage is manifested as a

participant in the figure or projected as a second-order semiotic figure. The former constitutes a figure of verbiage as in (2.12) while the latter can be further differentiated into two subtypes, namely figures of quoting and reporting. In a figure of quoting the Verbiage is quoted as a second-order semiotic figure as in (2.13), whereas in a figure of reporting the Verbiage is reported as a projected figure as in (2.14).

(2.12)

	yòu again	*tídào le* mention ASP	*fǎguó, bǐlìshí, guāngyóng yǔ róngyù děng lèisì de huàtí* France Belgium glory and honour etc similar NOM topic
(Sayer)	VADV	Process: verbal	Verbiage

(They made mention of France, Belgium, glory, honour and similar kinds of topic.)

(2.13)

dùbósīkè zhōngwèi Dubosc Lieutenant	*shuō,* say
Sayer	Process: verbal: quoting

(Lieutenant Dubosc said,)

'mingtiān, lǐbàiyī wǎnshàng tomorrow Monday night	*nín* you	*jiù* then	*dào* arrive	*yīsītǎnbǎo* Stamboul	*le.'* ASP
Location: temporal	Actor	VADV	Process: happening	Range	

('Tomorrow, Monday night, you will arrive Stamboul.')

(2.14)

tā she	*wèishénme* Q-why	*yào* *gàosù* have to tell	*wǒ* me
Sayer	Cause	Process: verbal: reporting	Receiver

(Why did she tell me that .....)

tā she	*cóng měiyǎo qù guò* from NEG: pf go ASP	*měiguó?* America
Actor	Process: doing	Range
Verbiage as a hypotactic projected clause		

(she had never been to America?')

These distinctions among verbiage, quoting and reporting are formulated systemically in Figure 2.6. The number of instances that each subtype of 'saying' represents against the total number of the type 'saying' deployed in the three texts is shown diagrammatically in Figure 2.7.
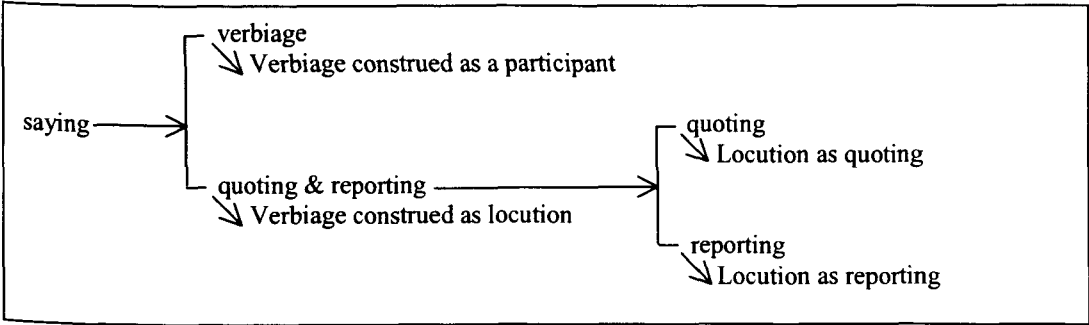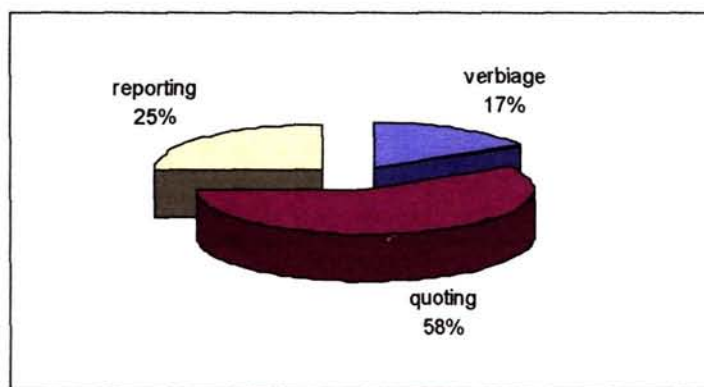
Figure 2.6: Three subtypes of 'saying'

Figure 2.7: Proportion of the three subtypes of 'saying'

2.2.3   Figures of doing

Figures of doing are concerned with the material world in which the process requires some input energy to be actualised, and it brings forth a change in the material world over the time of occurrence. This type of figure can be further differentiated into five subtypes, viz. figures of creation, transformation, behaviour, event and occurrence, by three variables, namely the number of participants in the figure, the nature of the participant and the process in which the participant is involved.

Firstly, there is at least one participant in a figure of doing, namely the Actor, which brings forth the change. It may consist of a second participant, the Goal, upon which the impact of the process is exerted. The Goal is either brought into existence by the process as in (2.15) or pre-existing but impacted by the process as in (2.16). The former constitutes a figure of creation while the latter constitutes a figure of transformation. The clause which realises a figure of doing with two participants is traditionally known as a 'transitive' clause.

(2.15)

wǒ I	gěi tā for she	shè le make ASP	gè quāntào – MEAS trap
Actor	Beneficiary	Process: material: creating	Goal

(I made a trap for her)

tā she	yě also	liū le jìn-qù. fall ASP enter-go
Actor	VADV	Process: material: behavioural

(She fell into it.)

(2.16)

tā he	yǒushēngyǒusède descriptively	jiāng DISP: op	shǒuzhǐ finger	pāde 'pa'	tán le snap ASP	yī shēng. one MEAS
Actor	Manner		Goal	Man-	Process: material: transforming	-ner

(He snapped his fingers descriptively.)

In addition to the Actor and the Goal, a figure of doing may consist of a further participant, the Beneficiary, which can be a recipient when there is a transfer of existing goods or a client when there is a provision of services. The clause which realises a figure of doing with three participants is traditionally known as a 'ditransitive' clause. It is treated as a special case of 'transitive' clause in the present study and does not constitute a new subtype at this level of delicacy.

When there is only one participant in the figure, the sole participant, namely the Actor (from a transitive perspective) or Medium (from an ergative perspective), can be either a conscious or non-conscious entity. When the participant is a non-conscious entity, it constitutes a figure of occurrence as in (2.17).

(2.17)

yi zhèn cìmiàn hánfēng one MEAS piercing face cold wind	xiàng yuètái toward platform	hūxiào ĕrguò, whistle pass
Actor	Location: spatial	Process: material: happening

(A piercing cold wind came whistling toward the platform.)

When the participant is a conscious entity, it may involve in either a symbolic or a non-symbolic process. The former constitutes a figure of behaviour and the latter constitutes a figure of event. The figure of behaviour can be interpreted as an active version of figures of saying and sensing. This means that a typical figure of behaviour construes saying and sensing as an activity, with a conscious being as the Actor/Behaver as in (2.18). Unlike figures of saying and sensing, this figure cannot report.

(2.18)

wèishénme Q-why	dàibĕnhàn xiăojiĕ Debenham Miss	yào have to	duì wŏ towards me	săhuăng?' lie
	Actor		Range	Process: material: behavioural

(Why did Miss Debenham lie to me?')

In contrast, the Actor/Particpator in a figure of behaviour does something or is involved in an activity which is non-symbolic in nature as in (2.19):

(2.19)

yĭ wei zhuōyuè de jūnguān one MEAS distinguished NOM officer	zìshā shĕnsĭ, suicide dead
Actor	Process: material: event

(A distinguished officer had committed suicide.)

The process in which the conscious entity involved may be an unintentional one as in (2.20). Apart from the Actor these three subtypes of 'doing', viz. behaviour, event and

occurrence, can embody a further participant, the Range. However, a subtype of 'doing' with Range does not create a new subtype at the present level of delicacy.

(2.20)

liǎng rén two person	*dōu* also	*dǎ le* hit ASP	*gè hánjìn.* MEAS shiver
Actor	VADV	Process material: participating	Range

(Both men shivered.)

At this point five subtypes of 'doing' can now be identified, namely figures of creation, transformation, event, behaviour and occurrence. They can be formulated systemically as in Figure 2.8 while the number of instances that each subtype represents against the total number of the type 'doing' in the corpus is displayed in Figure 2.9.
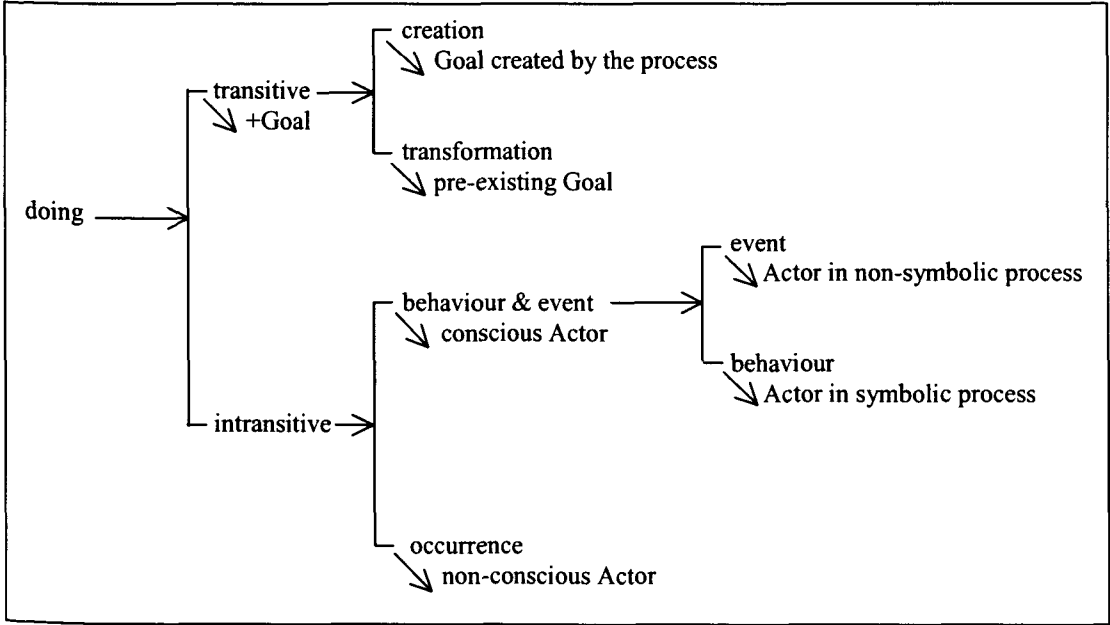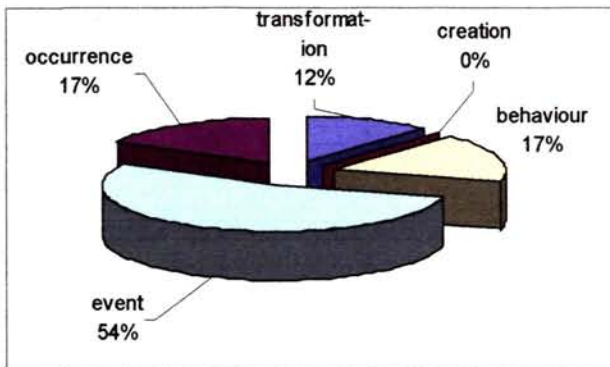
Figure 2.8: Six subtypes of 'doing'

Figure 2.9: Proportion of the six subtypes of 'doing'

2.2.4   Figures of being

Figures of being are concerned with the world of abstract relations. When the process of this figure unfolds over time, the only change is the temporal unfolding of the process itself. As no change is construed as taking place in the material world, no input of energy is required to actualise the process in this figure. Figures of being can be further differentiated into six subtypes, viz. figures of existence, circumstance, possession, categorisation, ascription and identification, by three properties.

The first property to differentiate different subtypes of 'being' is the number of participant involved in the figure. Here a figure of existence distinguishes itself from the other subtypes as there is only one participant, the Existent, in the figure as in (2.21). As Matthiessen (1995: 299) has put it, the "existential clauses constitute the limiting case of being." Halliday (1985/1994) takes an existential process as a minor process type, lying between the material and relational process type. It may be taken as a process type, which is separated from the relational process. However, the figure with an existential process is treated as a subtype of 'being' in the present study.

(2.21)

yǒu be	*yī gè lǐbài,* one MEAS week
Process: relational: existential	Existent

(There has been a week.)

The other subtypes of 'being' consist of two participants in the figure. They are differentiated from each other by the relationship between these two participants, i.e. whether the two participants are construed as standing in a symbolic relation, which constitutes a figure of identification, or a class-member relationship, which constitutes a figure of attribution. The two participants in the figure of identification, namely the Token and the Value, are standing in a symbolical relation, i.e. the Token is identified as the Value as in (2.22).

(2.22)

<< *mingzì* name	*jiào* call	*hèqiūlǐ báiluó>>* Hercule Poirot
Token	Process: relational: identifying	Value

(His name was Hercule Poirot)

The figure of attribution can be further differentiated into four subtypes, viz. figures of circumstance, possession, categorisation and ascription. These figures are differentiated from each other by an additional property, i.e. whether the participants, namely the Carrier and the Attribute, and/or the Process in the figure conflate with some additional semantic features. First, in a figure of circumstance the Process and the Attribute conflate with the Circumstance. This means that the figure of circumstance construes an entity, the Carrier, which is given a circumstantial Attribute as in (2.23).

(2.23)

[[*sǐzhě* *sǐwáng de*]] *shíjiàn* the deceased die SUB time	*yīng zài wǔyè zhì língchén èr shí zhījiàn.* must be/at mid-night to early morning two o'clock between
Carrier	Process/Circumstance relational: circumstantial

(The time of death must be between midnight and two in the morning.)

Second, in a figure of possession the Carrier conflates with the Possessor and the Attribute with the Possession. This means that the figure of possession construes an entity, namely the Carrier/Possess or who possesses something, namely the Attribute/Possession as in (2.24):

(2.24)

zhè liè huǒchē this MEAS train	*yǒu,* possess
Carrier/Possessor	Process: relational: possession

chuīshíchē,   cānchē,   yī jié wòpùchē   yǔ liǎng jié pǔtōng chēxiāng. kitchen coach   restaurant coach one MEAS sleeping coach and two MEAS economy coach
Attribute/ Possession

(The train consisted of a kitchen, a restaurant, a sleeping coach and two economy coaches.)

Third, in a figure of ascription the Process conflates with the Attribute which is semantically a simple quality as in (2.25).

(2.25)

'*shèngsūfēi,* Saint Sophie	*bànjí le.*' really fine ASP
Carrier	Process/Attribute relational: acription

('Saint Sophie is really fine.')

Finally, in a figure of categorisation the Carrier is assigned to a certain class, namely the Attribute as in (2.26).

(2.26)

'ābósīnuò shāngxiào, Arbuthnot Colonel	dàibĕnhàn xiǎojiĕ Debenham Miss
	Carrier

huòxŭ perhaps	kĕyĭ chēngzhīwèi can be called	yī wèi fēicháng kĕyĭ de rénwù.' one MEAS very suspicious NOM character
VADV	Process: relational: categorisation	Attribute

(Colonel Arthbutnot, Miss Debenham can perhaps be called a highly suspicious character.)

At this point the figure of being has now been expanded as in Figure 2.10. The proportion that each subtype of 'being' represents against the total number of the type 'being' in the corpus is displayed in Figure 2.11.

Figure 2.10: Six subtypes of 'being'

Figure 2.11: Proportion of the six subtypes of 'being'

2.2.5   Summary

In the previous sections I adopted Halliday and Matthiessen's (1999) participant-organisation perspective and took Matthiessen's (1995) four general types of figure as our point of departure. Based on the analysis of the three Chinese texts, I have expanded the semantic system of FIGURE to a more delicate level as shown in Figure 2.12. The similarities and differences between different subtypes of figure are summarised in Table 2.2.

Figure 2.12: The semantic system network of FIGURE

Table 2.2: Similarities and differences of different subtypes of figure

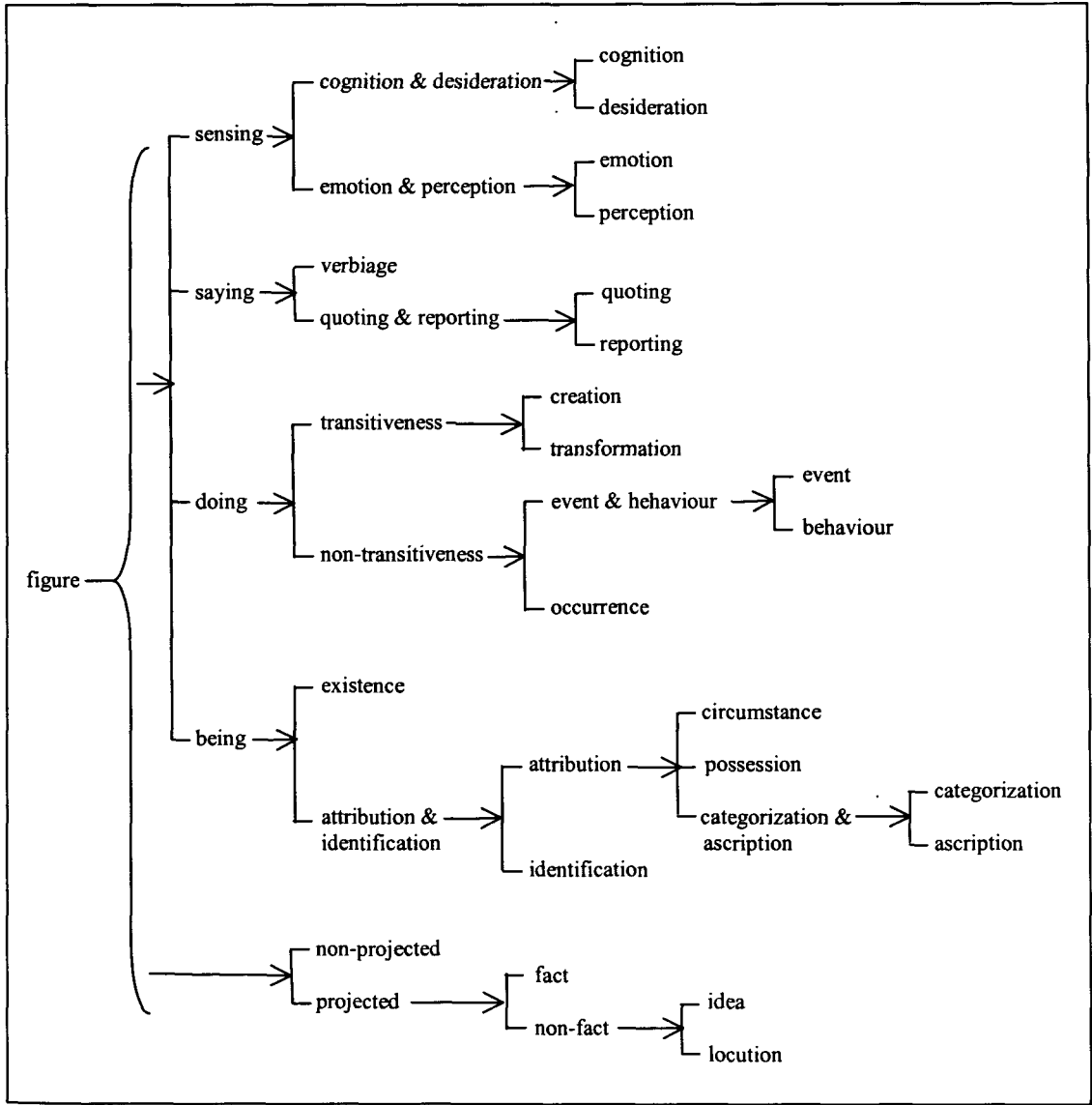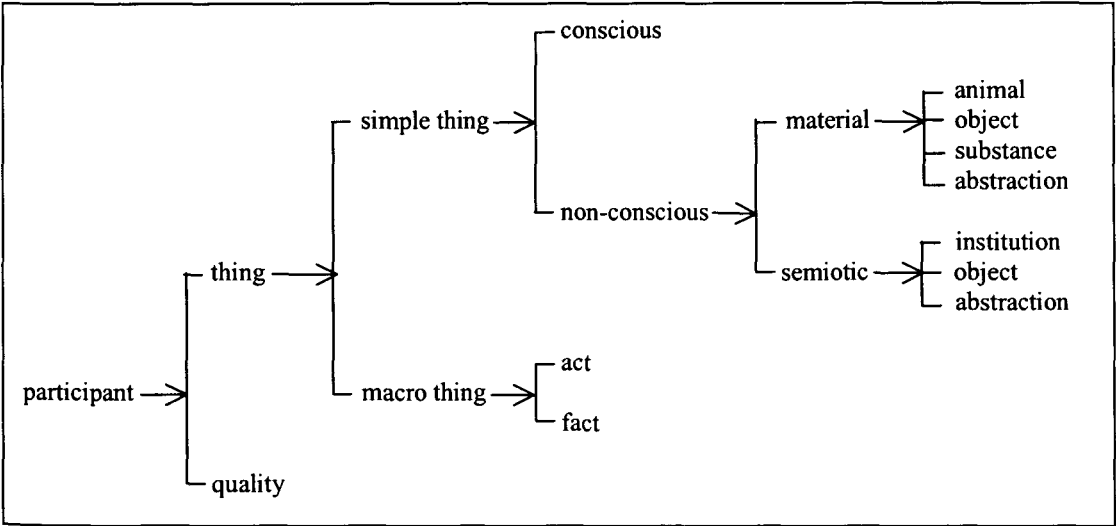| TYPES OF FIGURE	PROPERTIES
FIGURE OF DOING	construing our experience towards the world of material reality
Figure of transformation	unable to project; + Goal; pre-existing Goal changed by Process
Figure of creation	unable to project; + Goal; Goal created by Process
Figure of behaviour	unable to project; no Goal; conscious Actor; Actor in symbolic process
Figure of event	unable to project; no Goal; conscious Actor; Actor in non-symbolic process
Figure of occurrence	unable to project; no Goal; non-conscious Actor
FIGURE OF BEING	construing our experience towards the world of various modes of being
Figure of existence	unable to project; single participant
Figure of identification	unable to project; multi-participants; participants construed as standing in a symbolic relation
Figure of circumstance	unable to project; multi-participants; process assigned class-member relationship; (Process + Attribute)/Circumstance
Figure of possession	unable to project; multi-participants; process assigned class-member relationship; Carrier/Possessor + Attribute/Possession
Figure of categorisation	unable to project; multi-participants; process assigned class-member relationship; Attribute construed as a certain class
Figure of ascription	unable to project; multi-participants; process assigned class-member relationship; Attribute/Process construed as simple quality
FIGURE OF SENSING	construing our experience towards the world of consciousness
Figure of cognition	able to project; interior symbolic processing; Phenomenon created by Process; Phenomenon as proposition
Figure of desideration	able to project; interior symbolic processing; Phenomenon created by Process; Phenomenon as proposal
Figure of emotion	able to project; interior symbolic processing; existing Phenomenon; Process caused by Phenomenon
Figure of perception	able to project; interior symbolic processing; pre-existing Phenomenon; Process ranges over Phenomenon
FIGURE OF SAYING	construing our experience towards the world of symbolisation
Figure of verbiage	able to project; exterior symbolic processing; Verbiage construed as Participant
Figure of quoting	able to project; exterior symbolic processing; Verbiage construed as locution; locution as quoting
Figure of reporting	able to project; exterior symbolic processing; Verbiage construed as locution; locution as reporting

2.3   Semantic analysis of different figure types

Halliday and Matthiessen (1999) have pointed out that the participant in a figure can be either a 'thing' or a 'quality'. When it is a 'thing', it can be either a 'simple' or 'macro' thing. Their classification of the semantic features of a participant has been simplified and formulated systemically as a typology in Figure 2.13. In this section, all the participants in the three texts are analysed according to the semantic features depicted in the typology in order to gain a more comprehensive idea of each figure type.

Figure 2.13: A typology of the semantic features of participant

2.3.1   Figures of sensing and their subtypes

The Senser and the Phenomenon are the two participants in a figure of sensing. It can be observed that all the Sensers in the corpus are construed as conscious entities that are engaging in an internal symbolising processing. The phenomenon of sensing on the other hand can be construed as a simple participant realised by a nominal group or a projected idea, i.e. a second-order figure, realised by a projected clause. When it is construed as a participant, the data show that it can be a conscious being, a simple non-conscious material thing, a simple non-conscious semiotic entity, or a macro-thing. When it is construed as a projected idea realised by a projected clause, the projected clause is more likely to be a hypotactic clause (reporting) than a paratactic one (quoting).

Figures of sensing have been differentiated into four subtypes, namely cognition, desideration, emotion and perception. The semantic analysis of these subtypes is shown in Table 2.3.

Table 2.3: Semantic analysis of the participants in figures of sensing

	conscious	animal	object	substance	abstract.	institut.	object	abstract.	act	fact	quality
cognition											
Senser	16	0	0	0	0	0	0	0	0	0	0
Phenomenon	0	0	0	0	5	0	0	0	1	0	0
desideration											
Senser	6	0	0	0	0	0	0	0	0	0	0
Phenomenon	0	0	0	0	0	0	0	0	4	1	0
perception											
Senser	10	0	0	0	0	0	0	0	0	0	0
Phenomenon	2	0	3	0	1	0	0	0	1	0	0
emotion											
Senser	2	0	0	0	0	0	0	0	0	0	0
Phenomenon	0	0	0	0	0	0	0	0	0	0	0
SENSING											
Senser	34	0	0	0	0	0	0	0	0	0	0
Phenomenon	2	0	3	0	1	0	0	0	6	1	0

- **Figures of cognition**

A typical figure of cognition construes a conscious entity, here always a human being, involved in a conscious cognitive process like thinking, knowing, understanding and remembering. The phenomenon, as mentioned, can be construed as a simple participant or a projected idea. When it is construed as a simple participant realised by a nominal group as in clause (13) (of Appendix H), the data suggest that it is more likely to be construed as a non-conscious semiotic abstraction than a macro thing; whereas when it is

construed as a projected idea, it is more likely to be reported in a hypotactic projected clause as in (40) than to be quoted in a paratactic clause as in (201).

There are different modes of cognitive process. The following modes are found in the three texts (Appendix H), viz. *lějiě* (understand) in clause (13), *zhī* (know) in (34), *jìdé* (remember) in (39), *xiǎodé* (know) in (48), *xiǎng* (think) in (61) and (181), *rènwěi* (think) in (125), *dǒng* (understand) in (153) and (173), *wùhuì* (misunderstand) in (165), *zhīdào* (know) in (172), (182) and (191), *pànduàn* (judge) in (179), and *lùndìng* in (200). They can be used to differentiate figures of cognition at greater delicacy. However, this move is beyond the scope of the present study and will be left for future investigation.

- **Figures of desideration**

A typical figure of this subtype construes a conscious being which expresses a wish to actualise an action or a state that has not been realised. As in figures of cognition, all the Sensers of this subtype construe conscious entities, here always human beings, while the phenomena of consideration can also be realised by either a participant realised by a nominal group as in (149) or a second-order figure realised by a hypotactic projected clause as in (85). When the Phenomena are construed as simple participants, the data indicate that all of them are macro things. When they are construed as projected ideas, there is no instance where they are realised by paratactic projected clauses.

There are different modes of desiderative process. The most common ones in the corpus include *yào* (want) as in (67) and (149), *dànyuàn* (wish) as in (85) and (90), and *xiǎng* (want) as in (150).

- **Figures of emotion**

A typical figure of emotion construes a conscious entity, the Senser, whose emotion is caused by a pre-existing participant, the Phenomenon. There are only two occurrences in the three texts (Appendix H) and in both instances, the phenomena are realised by hypotactic projected clauses.

- **Figures of perception**

A typical figure of perception construes a conscious entity, the Senser, which is involved in a process of perception ranging over some pre-existing phenomenon. As in all other figures of sensing, the Senser in this figure construes a conscious being. Also as in all other figures of sensing, the phenomenon of this figure is realised either by a participant as in (73) or by a hypotactic projected clause as in (96). Unlike figures of cognition, there is no instance in the corpus where the Phenomenon is realised by a paratactic projected clause.

As for the process, human conscious perception usually involves the following: our eyes, seeing; our ears, hearing; our hands, feeling; our noses, smelling; and our tongues, tasting. In the corpus the five types of perception can be further divided into different modes, for instances, *tīng* (hear) in (27) and *tīngshuō* (hearsay) in (95) about hearing, and *kàn-bù-jiàn* (cannot see) in (7), *miáo* (glance) in (73), *kàn-le-kàn* (have a quick look) in (78), *zhùyì* (notice) in (158) about seeing.

2.3.2 Figures of saying & their subtypes

Saying is an exterior symbolic process. A figure of saying usually embodies two participants, the Sayer and the Verbiage. There are three subtypes in this figure, viz. verbiage, quoting and reporting. The semantic analysis of these subtypes is summarised in Table 2.4. It can be observed that all the Sayers in the three Chinese texts are conscious entities, i.e. human beings. However, saying as a conscious exterior symbolic process is not restricted to human consciousness, especially in some registers like children literature. Example (2.27) is taken from a Chinese fairy tale where the Sayer in (2.27) is a little dog.

(2.27)

'hǎo a! good	wǒ I	jiè then	bǎ DISP: op	tā it	mài sell	gěi nǐ, ' to you
	Actor	VADV		Goal	Process: material	Beneficiary

('Good! I will sell it to you then,')

xiǎo gǒu little dog	shuō. say
Sayer	Process: verbal

(the little dog said.)

There may be a third participant in a figure of saying, namely the Receiver. It can usually be recovered from the context when it is not explicated in the clause. Sometimes the Receiver can be the Sayer him/herself as in (2.28). In this example the Sayer, Poirot, was talking to himself.

(2.28)

'wǒ I	kàn see	wǒ I	shī EMP	yǒu diǎn shénjīng shuāiruò le. ' be MEAS mental weak ASP
Senser	Process: mental: cognitive			
		Carrier		Process/Attribute relational: ascriptive

(I think I suffer from the nerves.)

báiloú Poirot	shoū zhe say ASP
Sayer	Process: verbal: quoting

(As Poirot was speaking,)

 (he)	chóngyòu again	shàng le ascent ASP	chuáng bed
Actor	VADV	Process: material	Range

(he returned to bed again.)

Sometimes there may not be a specific addressee in a figure of saying as in (2.29), in which the train conductor or attendant had the duty to make a public announcement such as the following even when there was no passenger on the platform.

(2.29)

chē wài train outside	yōu be	rén person	zài hǎn, at/be shout
Location: spatial	Process: existential	Existent	
		Sayer	Process: verbal: quoting

(Outside the train, someone shouted,)

'shàng ascend	chē le. ' train ASP
Process: material: doing	Range
Verbiage of the previous clause	

('Embark.')

In addition, it is difficult to tell if there is any particular addressee in an exclamation. Of course, it may be argued that if there is no other participant in the context, an exclamation can be considered as addressing the Sayer himself.

The semantic analysis of the three participants, namely Sayer, Receiver and Verbiage, in the figure of saying and its subtypes is shown in Table 2.4.

Table 2.4: Semantic analysis of the participants in figures of saying

	conscious	animal	object	substance	abstract.	institut.	object	abstract.	act	fact	quality
verbiage											
Sayer	3	0	0	0	0	0	0	0	0	0	0
Receiver	1	0	0	0	0	0	0	0	0	0	0
Verbiage	0	0	0	0	0	1	0	1	0	0	0
quoting											
Sayer	14	0	0	0	0	0	0	0	0	0	0
Receiver	1	0	0	0	0	0	0	0	0	0	0
Quoted (14)											
reporting											
Sayer	6	0	0	0	0	0	0	0	0	0	0
Receiver	2	0	0	0	0	0	0	0	0	0	0
Reported (6)											
SAYING											
Sayer	23	0	0	0	0	0	0	0	0	0	0
Receiver	4	0	0	0	0	0	0	0	0	0	0

Header tree structure: participant → thing / quality; thing → simple thing / macro thing; simple thing → conscious / non-conscious; non-conscious → material / semiotic; material → animal, object, substance, abstract.; semiotic → institut., object, abstract.; macro thing → act, fact.

- **Figures with a Verbiage**

The data indicate that figures with a verbiage are relatively rare in the Chinese translation of an English-language novel of this kind. All the Sayers in this figure type are human beings despite the fact that a process of saying need not involve human consciousness, whereas the Verbiages can be semiotic things or macro things. There are several modes of saying in the corpus, for examples, *tídào* (mention) in (44), *shuō* (say) in (56) and *wèn* (ask) in (124). The occurrences however are too few to suggest whether there is any relation between the modes of saying and the subtypes of saying.

- **Figures of quoting**

This subtype is the most frequent one among the three subtypes in the three texts. Similar to figures with a verbiage, figures of quoting can also take a third participant, namely the Receiver, though its occurrence is relatively rare. There are different modes of saying in this figure like *shuō* (say) in (29), (38), (54), (69), (91), (100), (111), (118), (123), (148), (162) and (169), *fùhè* (agree) in (60), and *yīng* (reply) in (84). Among them *shuō* (say) is the most frequent one.

- **Figures of reporting**

Like the other subtypes of saying, this figure can also take a Receiver. There are different modes of saying in this figure like *shuō* (say) in (166), *biǎoshì* (note) in (42), *gàosù* (tell) in (115) and (156), *zhǐchū* (point out) in (189) and (197). Unlike figures of quoting in which *shuō* (say) is the predominant mode of saying, this figure tends to resort evenly to the various modes.

2.3.3   Figures of doing and their subtypes

Figures of doing are concerned with the physical world in which the process requires some input energy to be actualized, and it brings forth a change in the material world over the time of occurrence. In general the Actors in the figures of transformation, creation, event and behaviour construe mainly conscious beings; they, however, extend to serve as a model for construing some abstract phenomena. In contrast, the Actor (the Medium in the ergative sense) in the figure of occurrence, as defined, is typically a non-conscious thing; it can be a material object, substance or abstraction, a semiotic abstraction, or even a macro thing. The semantic analysis of these subtypes is shown in Table 2.5.

Table 2.5: Semantic analysis of the participants in figures of doing

	conscious	animal	object	substance	abstract.	institut.	object	abstract.	act	fact	quality
transformation Actor	7	0	0	2	0	0	0	0	0	0	0
Goal	4	0	2	0	1	0	0	2	0	0	0
creation Actor	0	0	0	0	0	0	0	0	0	0	0
Goal	0	0	0	0	0	0	0	0	0	0	0
event Actor	37	0	3	0	3	0	0	0	0	0	0
Range	1	0	10	0	6	0	0	4	5	3	0
behaviour Actor	12	0	0	0	0	0	0	0	0	0	0
Range	3	0	3	0	1	0	0	2	0	0	1
Beneficiary	1	0	0	0	0	0	0	0	0	0	0
occurrence Actor	0	0	4	1	2	0	0	4	3	0	0
DOING Actor	56	0	3	2	3	0	0	0	0	0	0
Goal	4	0	2	0	1	0	0	3	0	0	0

(Column headers derive from the tree: participant → thing / quality; thing → simple thing / macro thing; simple thing → conscious / non-conscious; non-conscious → material (animal, object, substance) / semiotic (abstract., institut., object, abstract.); macro thing → act, fact.)

- **Figures of transformation**

A typical figure of transformation construes a conscious being, namely the Actor, who does a deed, encoded in the Process, which impacts on a pre-existing conscious being or non-conscious material entity or abstraction, i.e. the Goal. It construes a change in the physical world that can be perceived. In the corpus such a concrete material process can extend to serve as a model for construing some abstract phenomena. For example, the Actor can extend to construe some material substances instead of a conscious being, e.g. *tuōlúsīshān zhōng de dàxuě* (the heavy snow at Taurus) in (86), whereas the Goal can extend to construe some non-conscious material abstractions like *wǒ yī mìng* (my life) as in (40) or some semiotic abstractions like *fǎguó lùjūn de róngyù* (the honour of the French Army) as in (31).

- **Figures of creation**

A typical figure of creation construes a conscious entity that does a deed which creates another participant. In this sense this type of figure also construes a change in the material world that can be perceived. Though there is no instance of this figure in the three texts, there are some in the Chinese corpus.

- **Figures of event**

A typical figure of event construes a conscious being that does something intentionally or is involved in an involuntary activity as in (2.30). Structurally, both intentional and unintentional activities can be further subdivided into two subtypes, with range and without range. A figure of event with range shades into the figure types of transformation and creation because there is a second participant, namely the Range, in the figure. In figures of transformation and creation, the second participant, i.e. the Goal, is actually brought into existence by the process or it exists prior to, but is affected by, the process in some way, whereas in a figure of event, the second participant, i.e. the Range, cannot be interpreted as being impacted by the process but specifies the scope of the event. For instance, *zhè cì tánhuà* (this conversation) in (2.31) is neither brought into existence nor affected by the process in a material sense.

(2.30)

liǎng rén two person	*dōu* also	*dǎ le* hit ASP	*gè hánjìn.* MEAS shiver
Actor	VADV	Process: material: participating	Range
simple thing: conscious			macro thing: act

(Both men shivered.)

(2.31)

liǎng rén two person	*rèqíngyōngbào de* heartily and embracingly	*jiéshù le* finish ASP	*zhè cì tánhuà.* this MEAS conversation
Actor	Manner	Process: material: participating	Range
simple thing: conscious			macro thing: act

(They embraced each other heartily and finished the conversation.)

In contrast, there is only one participant, namely the Actor, in the second subtype of acting. This subtype of figure construes an Actor who is involved in an activity which is specified by the Process itself such as (2.32).

(2.32)

yī wèi zhuōyuè de jūnguān one MEAS distinguished NOM officer	*zìshā shēnsǐ,* suicide dead
Actor	Process: material: participating
simple thing: conscious	

(A distinguished officer had committed suicide.)

There are a total of 40 figures of event in the three texts; 57.1% belong to the first subtype and 42.9% belong to the second. Like figures of transformation, figures of event also extend to serve as a model for construing some abstract phenomenon. In this case, the Actor can be a material object like *jiāolù de miànkǒng* (anxious faces) in (23) as well as a material abstraction like *tā de yǎnguāng* (her gaze) in (146) and (147).

- **Figures of behaviour**

A typical figure of behaviour construes saying/sensing as activity, like *tánhuà* (talk) in (4) and *kàn le yī yǎn* (glance) in (82). Unlike figures of saying and sensing, figures of behaviour cannot report. All the Actors of this subtype in the three texts construe conscious beings.

Apart from the Actor, there can be a second participant in a figure of acting. This second participant can be either a Beneficiary or a Range. For example, the second participant *gè wei* (everyone of you) in (2.33) is a Beneficiary because it benefits from the process, whereas the participant *wǒ* (I) in (2.34) can hardly claim to benefit at all since it is a Range.

(2.33)

wǒ I	*xiànzài* now	*gěi gè wei* for every MEAS	*fēnxī shuō-míng,* explain say-clear
Actor	Time (deictic)	Beneficiary	Process: material: behavioural
simple thing: conscious		simple thing: conscious	

(Now I will explain it clearly for everyone of you.)

(2.34)

wèishénme Q-why	*dàiběnhàn xiǎojiě* Debenham Miss	*dui wǒ* towards me	*sǎhuǎng?'* lie
	Actor	Range	Process material: behavioural
	simple thing: conscious	simple thing: conscious	

(Why did Miss Debenham lie to me?')

• **Figures of occurrence**

Unlike all other types of doing, a typical figure of occurrence construes a non-conscious entity which is associated with an unintentional action. In the three texts this non-conscious entity can be a material object like *huǒchē* (train) as in (57), a material substance like *hán fēng* (cold wind) as in (71) or a material abstraction like *piqi* (temper) as in (16). It can also be a semiotic concept like *yáoyán* (rumour) as in (14) or a macro thing like the ellipsed participant which is referring to "the trip being blocked by the heavy snow at Taurus" as in (89). Occasionaly it may be difficult to interpret the sole participant in this figure type as an Actor who does the deed from a transitive perspective. Rather, it may be better to interpret it as the Medium through which the happening

unfolds from an ergative perspective. So it is taken as the Actor/Medium in the present study (see Chapter 5 for further discussion).

2.3.4   Figures of being and their subtypes

Figures of being are associated with the world of abstract relations. Unlike figures of doing, figures of being unfold over time, the only change being the temporal unfolding of the process itself. There are six subtypes of 'being', viz. figures of existence, circumstance, possession, ascription, categorisation and identification. The semantic analysis of these subtypes is shown in Table 2.6.

Table 2.6: Semantic analysis of the participants in figures of being

	conscious	animal	object	substance	abstract.	institut.	object	abstract.	act	fact	quality
circumstance											
Carrier	2	0	1	0	1	0	0	0	0	0	0
Attribute	0	0	1	0	2	0	0	1	0	0	0
possession											
Carrier	0	0	1	0	0	0	0	1	0	0	0
Attribute	0	0	1	0	0	0	0	1	0	0	0
acription											
Carrier	6	0	1	1	2	0	1	3	0	4	6
Attribute	0	0	0	0	0	0	0	4	5	3	25
categorisation											
Carrier	4	0	0	0	0	0	0	1	1	1	0
Attribute	4	0	0	0	0	0	0	2	1	1	0
idntification											
Token	1	0	0	0	1	0	1	1	0	1	0
Value	1	0	0	0	1	0	1	2	0	1	0
existence											
Existent	3	0	2	0	0	0	0	3	0	0	0
BEING											
Carrier	13	0	3	1	4	0	2	6	1	6	6
Attribute	5	0	2	0	3	0	1	6	1	2	25

The column headers derive from a tree: participant → thing / quality; thing → simple thing / macro thing; simple thing → conscious / non-conscious; non-conscious → material / semiotic; material → animal, object, substance, abstract.; semiotic → institut., object, abstract.; macro thing → act, fact.

- **Figures of existence**

In a figure of existence, a new entity is introduced into the text. This entity is always construed as the sole participant, namely the Existent, in the figure. In the three texts the Existent can be a non-conscious material object like *yì lièchē* (a train) in (1), a conscious being like *niánqīng fǎguó lùjūn zhōngwèi* (a young French Army Lieutenant) in (3) or even a temporal concept like *yī gè lǐbài* (one week) in (18).

The process of this figure is typically realised by the verb *yǒu* (be) as in (18), (177) and (195). However, some other verbs also serve the same function of introducing new entities into the text, for example, *tíngkào* (stop) in (1), *zhàn* (stand) in (3), *chà* (differ) in (75), and *fāxiàn* (find, discover) in (186) and (188).

Examples (2.35) and (2.36) are two typical existential figures in which the process is realised by the verb *yǒu* (be). In (2.35) there exists a circumstance in front of the process. This circumstance, however, is structurally different from other circumstances in the sense that there is no preverb at phrase-initial position. This thus leads to an alternative interpretation of it, namely that any clause-initial circumstantial phrase without a proverb is treated as a participant (c.f. Ho 1993; McDonald 1998).

(2.35)

zhēnpò bèn àn solve this case	*yǒu* be	*liǎng xiàng kěnéng de lùndiǎn.* two MEAS probable NOM point of view
Cause: purpose	Process: relational: existential	Existent
		simple thing: non-conscious: semiotic: abstraction

(To solve the case, there are two ways.)

(2.36)

yǒu be	*jǐ míng lǚkè* several MEAS traveler
Process: relational: existential	Existent
	simple thing: conscious

(There are several travelers.)

• Figures of circumstance

A typical figure of circumstance construes an entity, namely the Carrier, which is given a circumstantial attribute. The Carrier, like the Existent in a figure of existence, theoretically has no semantic constraint on its nature. However in a Chinese translation of an English-language novel of this sort, the Carrier construes either a conscious being or a non-conscious material thing, but not a semiotic conception. However, the number of occurrences is too small for the above observation to be conclusive.

The circumstantial attribute is realised by the construction of Process ^ Attribute, which resembles a circumstantial phrase. It is in fact agnate with a minor process because all the processes in this subtype of figure are realised by verbs which take the same form as a preverb in Chinese as in (2.37) and (2.38).

(2.37)

zhè wěi jiāngjūn, this MEAS General	*yě* also	*dùnshí* immediately	*kànlái niánqīng le* look like younger ASP	*shílái suì.* about ten year
Carrier	VADV	VADV	Process/ Circumstance relational: circumstance	Time (deictic)
Simple thing: conscious			Simple thing: non-conscious: semiotic: abstraction	

(The General had immediately looked ten years younger.)

(2.38)

[[sǐ zhě sǐwáng de]] shíjiàn the deceased die SUB time	yīng zài wǔyè zhì língchén èr shí zhījiàn. must be/at mid-night to early morning two o'clock between
Carrier	Process/Circumstance relational: circumstantial
Simple thing: non-conscious: semiotic: abstraction	Simple thing: non-conscious: semiotic: abstraction

(The time of death must be between midnight and two in the morning.)

- **Figures of possession**

A typical figure of possession construes an entity, i.e. the Carrier/Possessor, who possesses something, i.e. the Attribute/Possession. There are only two figures of possession in the three texts. It might be expected that the Carrier/Possessor construes a conscious being. Both figures however construe abstract phenomena; the Carrier/Possessor in (2) construes a non-conscious material object while the one in (20) construes a semiotic abstraction. The typical verb in this figure is *you* (have/possess/own/consist) but some other verbs can also serve this purpose.

- **Figures of ascription**

Figures of ascription are the most frequent figure among the six subtypes of 'being'. A typical figure of ascription construes a participant, i.e. the Carrier, which is given some qualities, realised by the Process, which is conflated with the Attribute. One of the characteristics of this figure is that there is no semantic restriction on the nature of the Carrier. The data show that the Carriers can be some conscious entities as in (47), (113), (119), (120), (126), (135) and (145), material objects as in (108), material substances as in (94), material abstractions as in (8) and (68), semiotic objects as in (92), semiotic abstractions as in (15), (66) and (180), macro acts as in (64), (96), (163) and (167, or macro facts as in (36), (83), (93), (102), (104) and (164).

- **Figures of categorisation**

In a typical figure of categorisation, a participant, i.e. the Carrier, is assigned to a certain class, i.e. the Attribute. Like figures of ascription, the semantic nature of the Carrier in this figure type can be very wide. Unlike figures of ascription, the Attribute in a figure of categorisation is always construed as a participant as in (2.39). In addition, there is a very high tendency (87.5%) for the Carrier and the Attribute to have the same semantic nature as in clause (10), (50), (53), (101), (112), (194) and (201). Furthermore, the Carrier and the Attribute in this figure are always situated at the same level of abstraction, but differ only at the level of generality as member to class or subtype to type. For example, *dàibĕnhàn xiăojiĕ* (Miss Debenham), which is a conscious being, is categorised as the class of *yī wèi fēicháng kĕyí de rénwù* (a highly suspicious character) as in (2.39). The Carrier and the Attribute in this figure are not reversible. And when the Attribute comes before the Carrier, there is a sense of afterthought.

(2.39)

'*ābósīnuò shāngxiào,* Arbuthnot Colonel	*dàibĕnhàn xiăojiĕ* Debenham Miss
	Carrier
	simple thing: conscious

huòxŭ perhaps	*kĕyí chēngzhīwèi* can be called	*yī wèi fēicháng kĕyí de rénwù.*' one MEAS very suspicious NOM character
VADV	Process: relational: categorising	Attribute
		simple thing: conscious

(Colonel Arthbutnot, Miss Debenham can perhaps be called a highly suspicious character.)

There is only one occurrence in the three texts in which the semantic nature of the Carrier is different from that of the Attribute presented in (2.40). In this example, the Carrier *biăoxiàn* (performance) is a macro thing, which is an extended reference to the act in the previous clause, whereas the Attribute *qìgài* (spirit) is a simple non-conscious semiotic abstraction.

(2.40)

ránér	dubósīkè zhongwèi zài zhíwù shàng de biǎoxiàn
however	Dubosc Lieutenant at duty upon ASSOC performance
PCON	Carrier
	macro thing: act

què	shì	yī fù dàzhangfū de qìgài.
really	be	one MEAS manhood NOM spirit
VADV	Process: relational: categorising	Attribute
		simple thing: non-conscious: semiotic: abstraction

(However, Lieutenant Dubosc performed his duty manfully.)

- **Figures of identification**

In a typical figure of identification, one participant, i.e. the Token, is equated to another participant, i.e. the Value. As the two participants in the figure are symbolically related, they are theoretically reversible. Unlike the Carrier and the Attribute in a figure of categorisation, the Token and the Value here are situated at different levels of abstraction but are identical in terms of their semantic nature. The process in this figure is typically realised by the verb *shè* (be) as in (46), (176), (184), but some other verbs can also serve the same function, for instance *jiào* (call) in (37).

2.4 The system of TRANSITIVITY

In the previous sections, the core concern was to examine and construct a semantic system of FIGURE, which provides the resources for us to construe quanta of change in the phenomena of our experience. In this section, the major concern is the system of TRANSITIVITY that provides the grammatical resources to realise different types of figure in Chinese. There have been some alternative descriptions of the system of TRANSITIVITY in Chinese and the ones relevant to the present study are listed in Table 2.7.

Table 2.7: Alternative descriptions of the TRANSIVITITY system in Chinese

Fang, McDonald & Cheng 1987	Zhou 1997; Halliday & McDonald in press	Long 1981; McDonald 1998
action	material	material
	mental	mental
	verbal	verbal
relation	relational	relational
state		ascriptive

Different criteria for the classification and/or different purposes of the description may result in a somewhat different taxonomy. Halliday & McDonald (in press: 370) note that there are two basic issues that come up in the classification of process types in Chinese: first, the relationship between the system of TRANSITIVITY and the systems of ASPECT and PHASE and second, the scope of the relational type. Since they have discussed the issue, I will not go into any further details here. The present study will adopt Zhou's (1997) and Halliday and McDonald's (in press) description as a point of departure to expand the system to greater delicacy.

There are four major types of figure, namely sensing, saying, doing and being. These are construed in the ideational clause grammar as four different transitivity types, representing the system of PROCESS TYPE. Figures of sensing are realised by mental process clauses; saying by verbal process clauses; doing by material process clauses; and finally being by relational process clauses. The realisational relation between figure and process type can be outlined as in Figure 2.14. The various subtypes of figure are realised

by further options in the system of TRANSITIVITY as shown in Table 2.8. A system of TRANSITIVITY in Chinese is proposed as in Figure 2.15, which will be examined in the following sections. Comparing the grammatical system of TRANSITIVITY with the semantic system of FIGURE, we can grasp how the language is grammaticalised to encode the set of figures which construe our experience of the world around us and inside us.

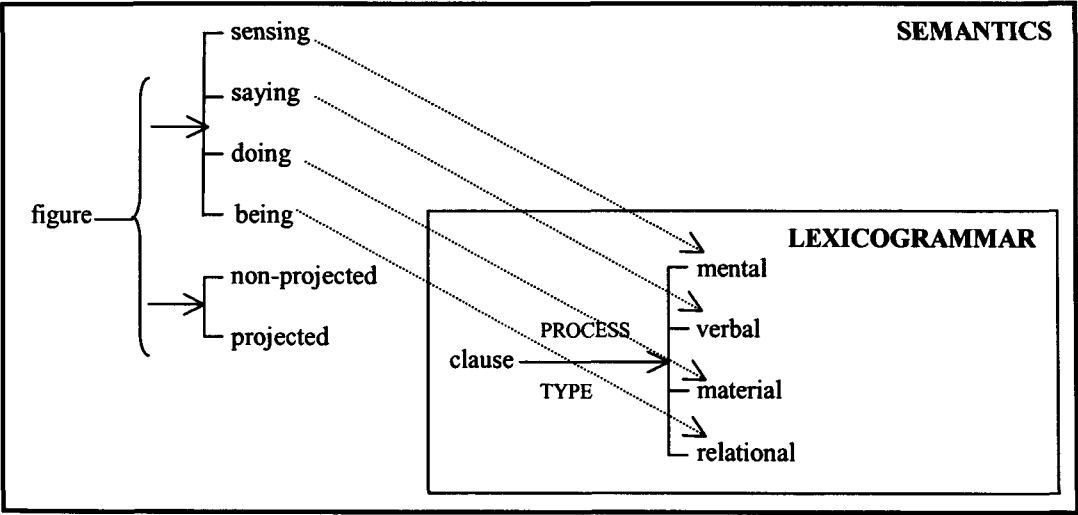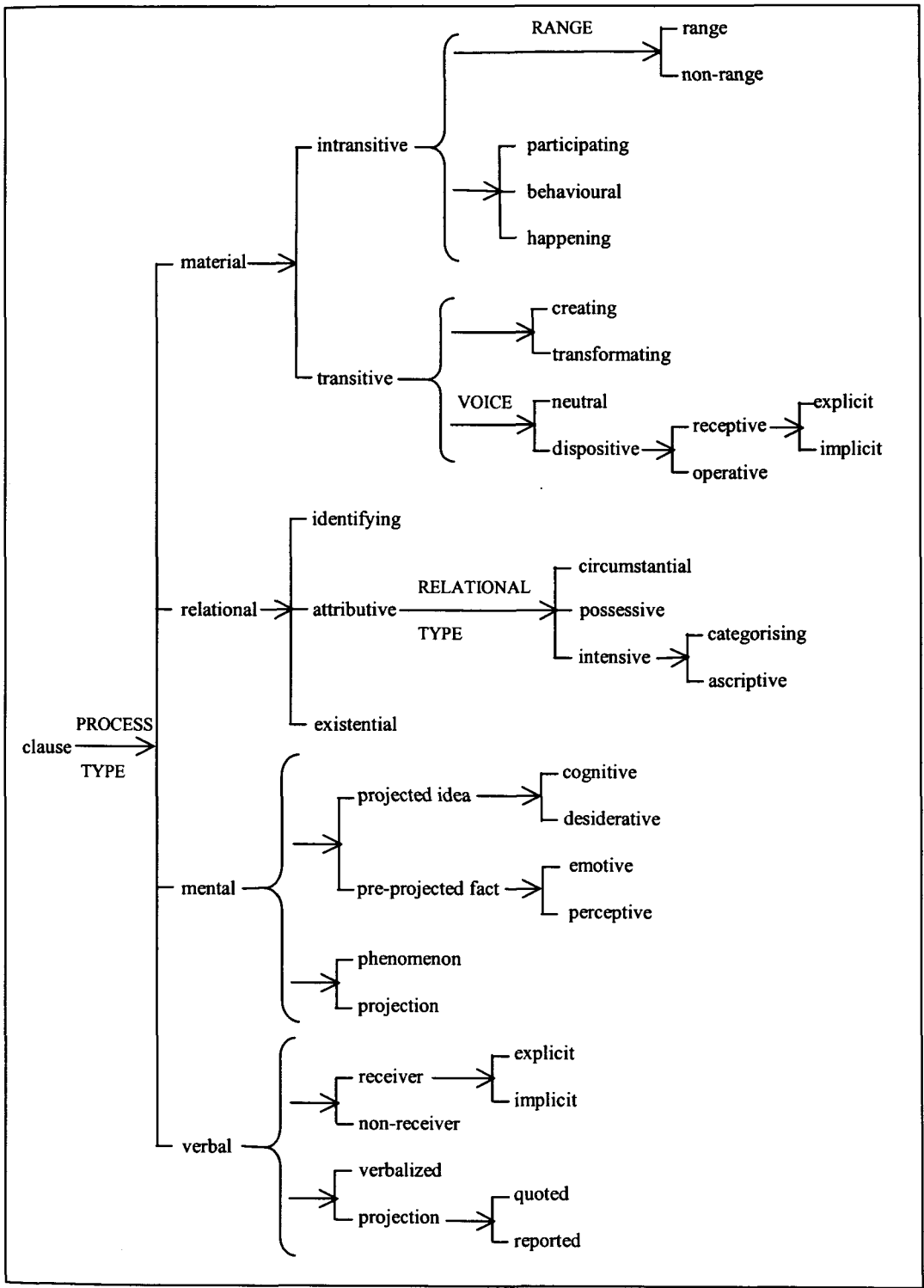Figure 2.14: Realisational relation between FIGURE and PROCESS TYPE

Table 2.8: Subtypes of figure and their realisation in the system of TRANSITIVITY

FIGURE TYPES	REALISATION PROCESS IN TRANSITIVITY SYSTEM
DOING	clause ➔ material (material process)
transformation	clause ➔ material ➔ transitive ➔ changing + VOICE (transformative process)
creation	clause ➔ material ➔ transitive ➔ creating + VOICE (creative process)
event	clause ➔ material ➔ intention ➔ participating + RANGE (participating process)
behaviour	clause ➔ material ➔ intention ➔ behaviour + RANGE (behavioural process)
occurrence	clause ➔ material ➔ unintention ➔ happening + RANGE (happening process)
BEING	clause ➔ relational (relational process)
existence	clause ➔ relational ➔ existential (existential process)
circumstance	clause ➔ relational ➔ attributive ➔ circumstantial (circumstantial process)
possession	clause ➔ relational ➔ attributive ➔ possessive (possessive process)
categorisation	clause ➔ relational ➔ attributive ➔ intensive ➔ categorical (categorising process)
ascription	clause ➔ relational ➔ attributive ➔ intensive ➔ ascriptive (ascriptive process)
identification	clause ➔ relational ➔ identifying (identifying process)
SENSING	clause ➔ mental (mental process)
cognition	clause ➔ mental ➔ post-projected idea ➔ cognitive + PROJECTION (cognitive process)
desideration	clause ➔ mental ➔ post-projected idea ➔ desiderative + PROJECTION (desiderative process)
emotion	clause ➔ mental ➔ pre-projected fact ➔ emotive + PROJECTION (emotive process)
perception	clause ➔ mental ➔ pre-projected fact ➔ perceptive + PROJECTION (perceptive process)
SAYING	clause ➔ verbal + RECEIVER (verbal process)
verbiage	clause ➔ verbal ➔ verbiage + RECEEIVER (verbalised process)
quoting	clause ➔ verbal ➔ projection ➔ quoting + RECEIVER (quoted process)
reporting	clause ➔ verbal ➔ projection ➔ reporting + RECEIVER (reported process)

Figure 2.15: The system of TRANSITIVITY

```
                                              RANGE          ┌─ range
                                         ┌──────────────────►│
                                         │                   └─ non-range
                           intransitive ─┤
                                         │                   ┌─ participating
                                         │             ──────►─ behavioural
                                         │                   └─ happening
            material ──────►─┤
                                         │                   ┌─ creating
                                         │             ──────►─ transformating
                           transitive ───┤
                                         │   VOICE   ┌─ neutral
                                         │    ──────►│                    ┌─ explicit
                                         │           └─ dispositive ──►─ receptive ──►│
                                         │                         ┌─ operative    └─ implicit

                           ┌─ identifying
                           │                       ┌─ circumstantial
                           │         RELATIONAL    │
            relational ──►─┤─ attributive ─────────►─ possessive
                           │         TYPE          │              ┌─ categorising
                           │                       └─ intensive ──►│
                           │                                       └─ ascriptive
                           └─ existential

clause ──►─┤
 PROCESS                                            ┌─ cognitive
 TYPE                   ┌─ projected idea ─────────►│
                        │                           └─ desiderative
            mental ─────┤
                        │                           ┌─ emotive
                        │─ pre-projected fact ─────►│
                        │                           └─ perceptive
                        │  ┌─ phenomenon
                        └──►│
                           └─ projection

                        ┌─ receiver ──────►┌─ explicit
                        │─              │   └─ implicit
            verbal ─────┤  └─ non-receiver
                        │  ┌─ verbalized
                        └──►│             ┌─ quoted
                           └─ projection ──►│
                                          └─ reported
```

Each figure is encoded in a clause which means that a clause is the entry condition for the system of PROCESS TYPE. This system has four primary options, viz. 'material', 'relational', 'mental' and 'verbal'. The choice of material process leads to two further options, namely 'intransitive' and 'transitive'. The choice of intransitive process leads to three subprocess types, i.e. 'participating', 'behavioural' and 'happening', which realise figures of event, behaviour and occurrence respectively. [Participating/behavioural/ happening] intersects with the options in the system of RANGE. In the system of RANGE, one can choose to include or exclude a participant, namely the Range, in the clause. Therefore, the three subprocess types, namely [participating/behavioural/happening], intersect with the two options of RANGE, [range/-]. The choice of transitive process also leads to two subprocess types, i.e. 'creative' and 'transformative', which realise figures of creation and transformation respectively. [Creating/ transforming] intersects with the options in the system of VOICE[3]. The VOICE system will be left out of consideration for the time being but will be discussed in Chapter 5 in detail because this system is interpreted as a resource bridging between clause grammar (Chapters 1 to 4) and discourse semantics (Chapter 6).

There are three primary options in the relational clause, viz. 'identification', 'attribution' and 'existence', in which the choice of attributive process leads to the system of RELATION TYPE, where there are three further options, namely 'circumstantial', 'possessive' and 'intensive', whereas the choice of intensive process in turn leads to the options of 'categorising' and 'ascriptive'. The six options of relational process clause, viz. 'identifying', 'circumstantial', 'possessive', 'categorising', 'ascriptive' and 'existential', realise the six subtypes of 'being', viz. figures of identification, circumstance, possession, categorisation, ascription, and existence.

There are four further options in the mental process, namely 'cognitive', 'desiderative', 'em)tive' and 'perceptive', which realise grammatically the four figure types of sensing, namely figures of cognition, desideration, emotion and perception. In addition,

---

[3] In general transitive material clauses lead to the system of VOICE. However, under some circumstances both the *ba-* and the *bei-* constructions have been extended into intransitive material clauses and other clause types.

[cognitive/desiderative/emotive/perceptive] intersects with [phenomenon/pro-jection]. The option of 'phenomenon' realises the situation when the phenomenon of sensing is construed as a simple participant, whereas the option of 'projection' realises the phenomenon of sensing when it is construed as a projected idea, i.e. a second order semiotic figure.

The choice of verbal process leads to the options of verbalised process, which is realised by a clause simplex, and process of projected locution, which is realised by a clause complex. The process of projected locution leads to two further options, namely 'quoted' and 'reported'. The process of quoted is realised by a paratactic projected clause of locution while the process of reported is realized by a hypotactic projected clause. These three options of verbal processes, viz. 'verbalised', 'quoted' and 'reported', realise the three figure types of saying, namely figures of verbiage, quoting and reporting. In addition, [verbalised/quoted/reported] intersects with [receiver/ -], i.e. whether or not there is a third participant, the Receiver, in the configuration. The choice of 'receiver' leads further to the options of representing the Receiver explicitly or leaving it implicit in the clause.

In short, while the four general figures, namely doing, being, sensing and saying, are grammmmatically realised by the four general process types, namely material, relational, mental and verbal, the subtypes of each general figure are realised by the subprocess types at a more delicate level of the lexicogrammatical system. In this way the system of TRANSITIVITY grammaticalises the language to construe our experience of the world through the configuration of a limited set of figures.

2.5   Three approaches to the system of TRANSITIVITY

In the previous section, a description of the system of TRANSITIVITY was proposed which realised the semantic system of FIGURE grammatically. The proposed system sets up a one-to-one mapping between FIGURE and TRANSITIVITY so that the options in the grammatical system can be considered as congruent realizations of their counterparts in the sematnics system, representing the typical ways of saying thing. This will be the first step to the future study of the possibility of ideational metaphors, which represent other possibilities or options in the language 'potential' available to speakers or writers. But how do we know that this system is part of the grammar of Chinese? In this section, the question will be answered through an exploration of the proposed system from three angles, i.e. "from above", "from around" and "from below" (for details, see Halliday & Matthiessen 1997).

2.5.1   Approaching the system from above

Approaching the system "from above", the main concern is the semantic features that are realised by the set of terms in the grammatical system, i.e. the meanings that these terms convey. The system of TRANSITIVITY has to do with the construal of our experience of the world around us and inside us. It thus distinguishes itself in terms of meaning from the system of MOOD, which has to do with the negotiation of speech-functional roles in dialogue, or from the system of THEME, which has to do with the distribution of prominence as the text unfolds. This means that the system of TRANSITIVITY differentiates itself semantically from the other grammatical systems in the interpersonal and textual metafunctions.

In the system of TRANSITITIVY, the four general process types, namely material, relational, mental and verbal, distinguish themselves from each other semantically because each type realises a different figure type in the semantic system of FIGURE as shown in Figure 2.14. Each figure type in turn construes a distinctive quantum of change that we can distinguish in our experience of the 'goings on' in the world. At a more delicate level, the various subprocesses of each general process type also distinguish themselves from each other semantically as each subprocess type realises a different

subtype of figure in the system of FIGURE as shown in Table 2.8 on page 96. In short, every option in the system of TRANSITIVITY distinguishes itself from the others in terms of the meaning that it conveys.

2.5.2 Approaching the system from below

Approaching the system "from below", the concern is the grammatical structures, the grammatical or lexical items and/or the phonological features that realise the various options of the system. As mentioned, a figure is construed as the configuration of one or more participants involved in a process unfolding in a certain circumstance. The participant(s), process and circumstance(s) are realised by separate elements in a clause. In this section, we will examine the grammatical structure and the grammatical or lexical items that realise these elements.

2.5.2.1 Analysis of grammatical structures

In relational clauses, different subtypes may be characterised by with different structural configurations. Table 2.9 shows the different subtypes of the relational clause and their structural configurations.

Table 2.9: Relational subtypes and their structural configurations

relational subtypes	Process	Participant 1	Participant 2
existential	+	Existent	
circumstantial	+	Carrier	(Process^Attribute) / Circumstance
possessive	+	Carrier/Possessor	Attribute/Possession
ascriptive	Process/Attribute	Carrier	Attribute/Process
categorising	+	Carrier	Attribute
identifying	+	Token	Value

Similarly in material clauses, different sub-types are characterised by different structural configurations as shown in Table 2.10.

Table 2.10: Material subtypes and their structural configurations

material subtypes	Process	Actor/Medium	Goal	Range	Beneficiary
transforming	+	Actor/Transformer	+		(+)
creating	+	Actor/Creator	+		(+)
participating	+	Actor/Participator		(+)	
behavioural	+	Actor/Behaver		(+)	
happening	+	Actor/Medium		(+)	

In a mental clause, the phenomenon of sensing can be construed either as a simple participant realised by a nominal group in the clause or as a second-order figure realised by a projected clause. A projected clause theoretically can be either a paratactic clause or a hypotactic one. However, the data show that only in the cognitive subtype can the Phenomenon be realised by a paratactic clause; the subtypes are shown in Table 2.11.

Table 2.11: Mental subtypes and their structural configurations

mental subtypes	Process	Senser	Phenomenon	Quoted	Reported
cognitive	+	+	+	+	+
desiderative	+	+	+		+
perceptive	+	+	+		+
emotive	+	+	+		+

In a verbal clause, the subject matter of saying can be either construed as a simple participant realised by a nominal group in the clause or as a second-order figure realised by a projected clause. A projected clause theoretically can be either a paratactic clause or a hypotactic one. Table 2.12 shows the different subtypes of verbal clauses and their structural configurations.

Table 2.12: Verbal subtypes and their structural configurations

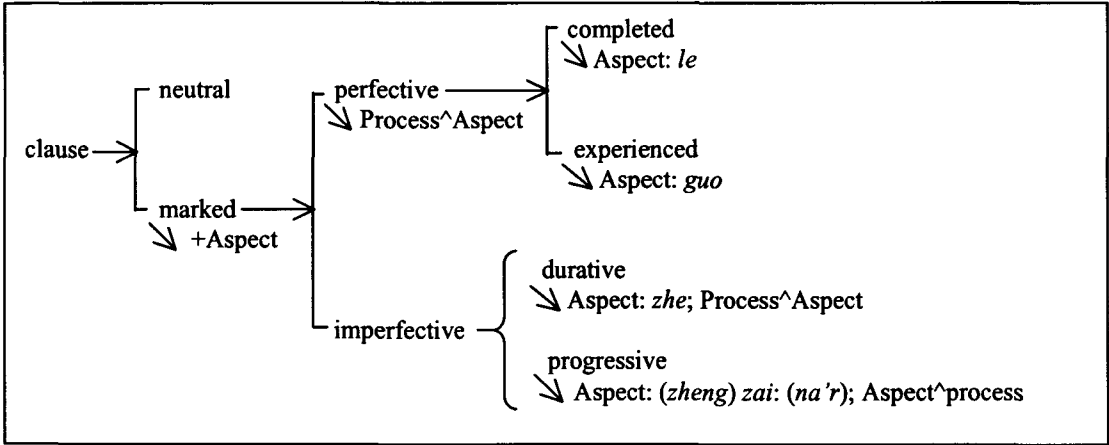| verbal subtypes	Process	Sayer	Verbiage	Quoted	Reported
verbalised	+	+	+		
quoted	+	+		+	
reported	+	+			+

2.5.2.2 Analysis of grammatical and lexical items

We have examined the grammatical structure of various process types in the previous section. In this section, we will explore the grammatical and lexical items.

In Chinese the participant in the configuration is usually realised by a nominal group or a rank-shifted clause while the process is realised by a verbal group. However, the process in an ascriptive clause usually conflates with the Attribute and is realised by a "stative" verb, traditionally known as an adjective group. In addition, the process in a categorical clause is sometimes optional.
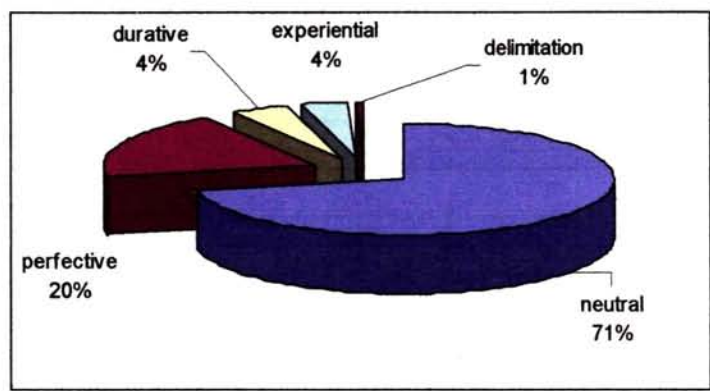
In general the verbal groups of different process types have different characteristics which distinguish themselves from each other. One of the characteristics concerns the use of aspectual particles. There is no tense in the Chinese language, whereas the temporal profile of the process with respect to the time of speaking is mainly indicated by temporal adverbs and aspect. The system of ASPECT is in fact fully grammaticalised in Chinese. Figure 2.16 is taken from McDonald (1998: 279). A more expanded system of ASPECT can be found in Halliday & McDonald (in press: 379).

Figure 2.16: The basic system of ASPECT (McDonald 1998: 279)

```
                                              ┌ completed
                                              │ ↘ Aspect: le
              ┌ neutral        ┌ perfective ──→
              │                │ ↘ Process^Aspect
  clause ──→ ─┤                │              └ experienced
              │                │                 ↘ Aspect: guo
              └ marked ──→ ─────┤
                 ↘ +Aspect     │              ┌ durative
                               │              │ ↘ Aspect: zhe; Process^Aspect
                               └ imperfective ─┤
                                              │ progressive
                                              └ ↘ Aspect: (zheng) zai: (na'r); Aspect^process
```

In the three texts 71% of the clauses are not marked with any aspectual marker, i.e. they are 'neutral', and 29% are marked. They are marked by different types of aspect, namely *le* (perfective), which indicates a completed process; *guo* (experiential), which means that the participant has been involved in the same sort of the process before; and both *zhe* (durative), which indicates "an ongoing posture or state resulting from an activity" (Li & Thompson 1981: 236), and *zai* (progressive), which indicates the on-going nature of the process (see Li & Thompson 1981: 217-226 and McDonald 1998 for details). As there is only one instance of progressive aspect in the three texts, I will include it in the durative category in Figures 2.17-8 and Table 2.13. Apart from the aspects of perfective, progressive, durative and experiential, Li & Thompson (1981: 232) have identified a delimitation aspect which means "doing an action "a little bit", or for a short period of time." This is grammatically realised by the reduplication of the verb. The number of instances that each type of aspect represents compared with the total number of aspectual particles in the three Chinese texts is shown in Figure 2.17. 'Perfective' is the most frequent type of aspect while 'delimitation' is the least frequent type in the three texts.

Figure 2.17: Proportion of different aspect types

The number of occurrences of aspect in respect of the four general process types is shown in Figure 2.18. This figure shows us diagrammatically a general picture of the distribution of different aspectual markers employed in the four general process types. A more delicate summary table is presented in Table 2.13. This table is organised around two axes, with four major process types and their subtypes in the vertical axis and the options of aspect in the horizontal axis.

Figure 2.18: Occurrence of aspect in different process types

Table 2.13: Process types and the choice of aspects

PROCESS TYPES		ASPECT				
		unmarked	marked			
		neutral	perfective	durative	experiential	delimitation
material*	transforming	3 33%	5 56%	--	1 11%	--
	creating	--	--	--	--	--
	participating 1	12 52%	6 26%	2 9%	3 13%	--
	participating 2	11 65%	4 24%	2 11%	--	--
	participating 3	2 67%	1 33%	--	--	--
	behavioural	7 54%	3 23%	2 15%	1 8%	--
	happening	11 79%	2 14%	1 7%	--	--
	sub-total	**46 58.2%**	**21 26.6%**	**7 8.9%**	**5 6.3%**	**0 0.0%**
mental	cognitive	14 87%	2 13%	--	--	--
	desiderative	6 100%	--	--	--	--
	perceptive	5 50%	2 20%	--	2 20%	1 10%
	emotive	2 100%	--	--	--	--
	sub-total	**27 79.4%**	**4 11.8%**	**0 0.0%**	**2 5.9%**	**1 2.9%**
verbal	verbalised	1 33%	2 67%	--	--	--
	quoted	12 86%	1 7%	1 7%	--	--
	reported	6 100%	--	--	--	--
	sub-total	**19 82.6%**	**3 13.0%**	**1 4.4%**	**0 0.0%**	**0 0.0%**
relational	existential	5 63%	2 25%	1 12%	--	--
	circumstantial	2 50%	2 50%	--	--	--
	possessive	1 50%	1 50%	--	--	--
	ascriptive	22 92%	2 8%	--	--	--
	categorising	7 100%	--	--	--	--
	identifying	6 100%	--	--	--	--
	sub-total	**43 84.3%**	**7 13.7%**	**1 2%**	**0 0.0%**	**0 0.0%**
TOTAL		**135 72.2%**	**35 18.7%**	**9 4.8%**	**7 3.8%**	**1 0.5%**

* In this table, participating processes are subdivided into three types: participating (1) = intentional participating process with RANGE; participating (2) = intentional participating process without RANGE; and participating (3) = unintentional participating process.

In general the four major process types are distinct in respect of their use of aspect. The following observations are based on the corpus:

(1) Material processes set themselves apart from the other three major types of processes in at least two respects. First, it is far less likely for material processes to be marked as 'neutral' than the other process types, with 58.2% in material processes, 79.4% in mental processes, 82.6% in verbal processes and 84.3% in relational processes. To put it in another way, material processes are more likely to be marked with aspect than the other process types. Second, most of the subtypes of material process can pick up the whole range of aspects, namely perfective, durative and experiential, whereas the subtypes of the other three major processes are more likely to pick up the perfective aspect but not the durative and experiential ones.

(2) Relational processes are least likely to be marked with aspect. When a relational clause is marked with an aspect, it is most likely to be marked with 'perfective'. There is only one instance in which the relational process (of an existential type) is marked with another type of aspect (durative) as shown in (2.52).

(2.52)

. zài dēng wòpù chēxiāng de jiētī shàng at ascending sleeping coach ASSOC step upon	zhàn zhe stand ASP
Location: spatial	Process: existential

yī míng [[chuān yàoyǎn jūnfú de]] niánqīng fǎguó lùjūn zhōngwèi, one MEAS wear resplendent uniform CC young French army lieutenant
Existent

(By the step leading up into the sleeping coach stood a young French army lieutenant who was resplendent in uniform.)

In this instance the verb zhàn (stand) normally realises a material process instead of a relational one; it is classified here as an existential process because it also serves the function of introducing a new participant into the context. So we can conclude that relational processes are very unlikely to be marked with aspect and when they are, it is usually, if not always, the perfective aspect. Among the other subtypes of relative process, categorising processes and identifying processes are not marked with any aspect at all in the three texts.

(3) Lying in between the material and relational processes are mental and verbal processes. Both types of process are most likely to be marked as 'neutral', with 79.4% and 82.6% respectively. When they are marked with an aspect, the aspect is very likely to be the perfective. In the three texts there is no instance where the mental process is marked with durative and limitation aspects and where the verbal process is marked with experiential and limitation ones.

In short, the four major process types are distinct in respect of the use of aspect in two directions: first, the probability that they are marked by aspect and second, the range of aspectual markers that they are likely to pick up. However, when we examine the corpus at a more delicate level, i.e. the various subtypes of each general process type, we can see that on the one hand, some subtypes in the same process type can also be differentiated from the others in respect of the use of aspect and, on the other hand, some subtypes seem to share some features across the boundaries of the four major process types. To put it in another way there are indications that there exist clines between the subtypes within each major process type as well as between the major process types.

(1) Among the subtypes of material process, transforming processes and creating processes are more likely to be marked by perfective aspect than to be unmarked or 'neutral': 56% of transforming processes are marked by perfective aspect while 33% are 'unmarked', compared with 100% and 0% of creatiing processes respectively. This feature differentiates the transforming and creating processes not only from the other subtypes of material process, but also from the subtypes of the other major processes as well.

(2) The process of happening seems to lie at the transition between the material and relational processes types. On the one hand, it is distinct from the other subtypes of material processes by picking up a much higher percentage of the unmarked 'neutral' forms, 79% compared with an average of 58.2% in material processes. On the other hand, it exhibits a particular similarity with the existential process in the relational process type, with 79% of processes of happening marked as 'neutral', 14% as 'perfective' and 7% as

'durative', compared with 63% of existential processes marked as 'neutral', 25% as 'perfective' and as 12%'durative'.

(3) Among the subtypes of mental process, perceptive and cognitive processes are distinct from desiderative and emotive processes by their ability to be marked with perfective aspect. Though both perceptive and cognitive processes can theoretically pick up an experiential marker, only perceptive processes are marked with experiential aspect in the three texts. On the other hand, perceptive processes differentiate themselves from the other subtypes of mental process by a significantly low percentage of unmarked 'neutral', 50% compared with an average of 82%. In this respect, perceptive processes behave like the material process type in general, and active processes in particular, rather than like mental processes. This specific feature of perceptive processes can be explained semantically because the active process in material clauses is in fact the active version of mental processes, especially the perceptive ones. This means that perceptive processes seem to lie on the borderline with active processes between the mental and material process types.

(4) In contrast, cognitive processes seem to shade into the verbal process type. The percentage of cognitive processes that are marked with the neutral, perfective, durative and experiential aspects are 87%, 13%, 0% and 0% respectively, compared with 83%, 13% 4% and 0% in the case of the verbal process.
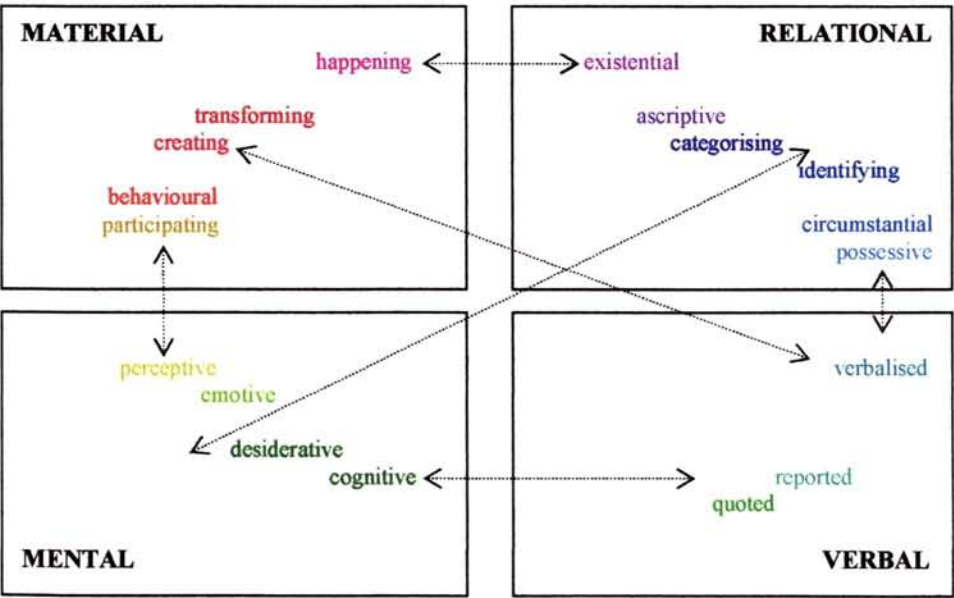
(5) Among the subtypes of relational process, existential processes have similar features to the process of happening in the material process type, as already mentioned. It also sets itself off from the other relational subtypes by its ability to be marked with durative aspect.

(6) Categorising and identifying processes differentiate themselves from the other relational subtypes in their inability to be marked with any aspect marker. In this respect they are similar to desiderative and emotive processes in the mental process types.

(7) Lastly, among the subtypes of verbal process, verbalised processes are distinct from quoted and reported processes in that a significantly high percentage of verbalised process is marked with 'perfective', 67% compared with an average of 13% in verbal processes. In this respect, the contrast between verbalised processes with quoted and reported processes is similar to the contrast between transforming and creating processes with the other subtypes of the material process.

This forms a very interesting semiotic picture. In general the four major process types are distinct from each other in respect of the use of aspect. However, at a more delicate level, i.e. the various subtypes of each general process type, there exist clines between the subtypes within each major process type as well as between the major process types. These subtypes seem to lie on a sort of three-dimensional sphere which is shown in a two-dimensionally in Figure 2.19. The present study cannot go into further detail here due to limitations of space. However, it is certainly a very interesting issue to be explored in future studies.

Figure 2.19: Location of various subtypes of process on a semiotic sphere

2.5.3   Approaching the system from around

Approaching the system "from around", the central focus is the system itself, especially the set of terms available in it. The central oppositions in the system of TRANSITIVITY for material clauses have to do with [transitive/intransitive], i.e. whether the process exerts some sort of impact on the Goal. The choice of 'intransitive' leads to the oppositions of [participating/behavioural/happening]. These three subtypes in turn intersect [range/-]. In contrast, the choice of transitive leads to another two subtypes, namely [creating/transforming]. They intersect with the system of VOICE simultaneously.

In relational clauses, the primary options are 'identifying', 'attributive' and 'existential'. Among them, only the choice of 'attributive' leads to the system of RELATION TYPE, with the options of 'circumstantial', 'possessive' and 'intensive'. Then the choice of intensive in turn leads to the options of 'categorising' and 'ascriptive'.

In mental clauses, the central oppositions have to do with the nature of the content of consciousness, i.e. [pre-projected fact/post-projected idea]. They lead to the four subtypes of mental process, namely 'cognitive', 'desiderative', 'emotive' and 'perceptive'. On the other hand, the content of consciousness itself can be construed as a participant, i.e. the Phenomenon, in the configuration or projected as idea, i.e. a second-order semiotic figure realised by a projected clause. This means that the four sub-types of mental process intersect with [Phenomenon/Projection].

Lastly, verbal clauses, like mental clauses, also lead to the system of PROJECTION. However, PROJECTION here distinguishes three subtypes of verbal process, viz. 'verbalised', 'quoted' and 'reported'. As external symbolising processes, the three subtypes in turn intersect with the option of [receiver/-]. When there is a Receiver in the configuration, there is an option of whether to state the Receiver explicitly in the clause or to leave it implicit in the context.

In sum, the summary system of TRANSITIVITY proposed here has been examined firstly "from above", then "from below" and lastly "from around" the system. We find that the

four general types of process and their subtypes realise different semiotic configurations in the semantic system of FIGURE at the semantic stratum. They in turn are realised by different structural configurations and have different features in respect of the use of aspectual markers. The choice of each general process type leads to different options and subsystems. At this point we can conclude that the proposed system is part of the grammar of Chinese. This system provides the resource for construing our experience of 'goings-on' as structural configurations. This means that it is the grammatical system of TRANSITIVITY which realises the system network of FIGURE at the semantic stratum.

2.6 Contrastive analysis of the system of TRANSIVITY in Chinese and English

As mentioned in Chapter 1, the description of Chinese grammar in the present study is purpose-oriented – hoping to shed light on the task of translating between Chinese and English, and to support the task of teaching Chinese to English speakers. In this section, the central concern is the similarities and differences between the systems of TRANSITIVITY in the two languages. The comparisons are approached from three angles: from above, around and below. Approaching the comparison from 'around', the central focus is on the system network of the two languages, especially on the sets of terms available in them. Approaching the comparison from 'above', the main concern is the semantic features that are realised by these sets of terms, i.e. the meanings that these terms convey. And approaching the comparison from 'below', the concern is the grammatical structures, the grammatical or lexical items and/or the phonological features that realise the terms. In addition to taking these three approaches to a comparison of Chinese with English the relative frequency with which the various options in the system networks have been chosen in the corpus will be compared. Since languages vary according to context and the variation is systemic. Their relative frequencies reflect their "conditioned probabilities", which are the first step to understand their "register variation" (see also "distributional probabilities" in Halliday 1956; Nesbitt & Plum 1988; "conditioned probabilities" in Halliday 1991; Mcdonald 1998).

The TRANSITIVITY system in English has been explored thoroughly in many publications, with some alternative descriptions of the system offered. Table 2.14 summarises those descriptions that are most relevant to this thesis.

Table 2.14: Some alternative descriptions of transitivity in English

Three major types	Four major types	Six major types
Halliday 1976	Matthiessen 1995; Halliday & Matthiessen 1999	Halliday 1985/1994; Martin, Matthiessen & Painter 1997
material	material	material
		behaviour
mental	mental	mental
	verbal	verbal
relational	relational	relational
		existential

In order to facilitate the comparison of TRANSITIVITY in the grammars of Chinese and English, I have developed my own description of the TRANSITIVITY system in English. This description is based on the English texts which are the source texts of the three translations, i.e. the Chinese target texts, upon which the description of the TRANSITIVITY system in Chinese is based. Following a similar approach as in the previous sections and making reference to the other alternative descriptions in Table 2.14, but Matthiessen (1995) and Halliday and Matthiessen (1999) in particular, a transitivity analysis of the corpus was carried out based on the description shown in Figure 2.19.
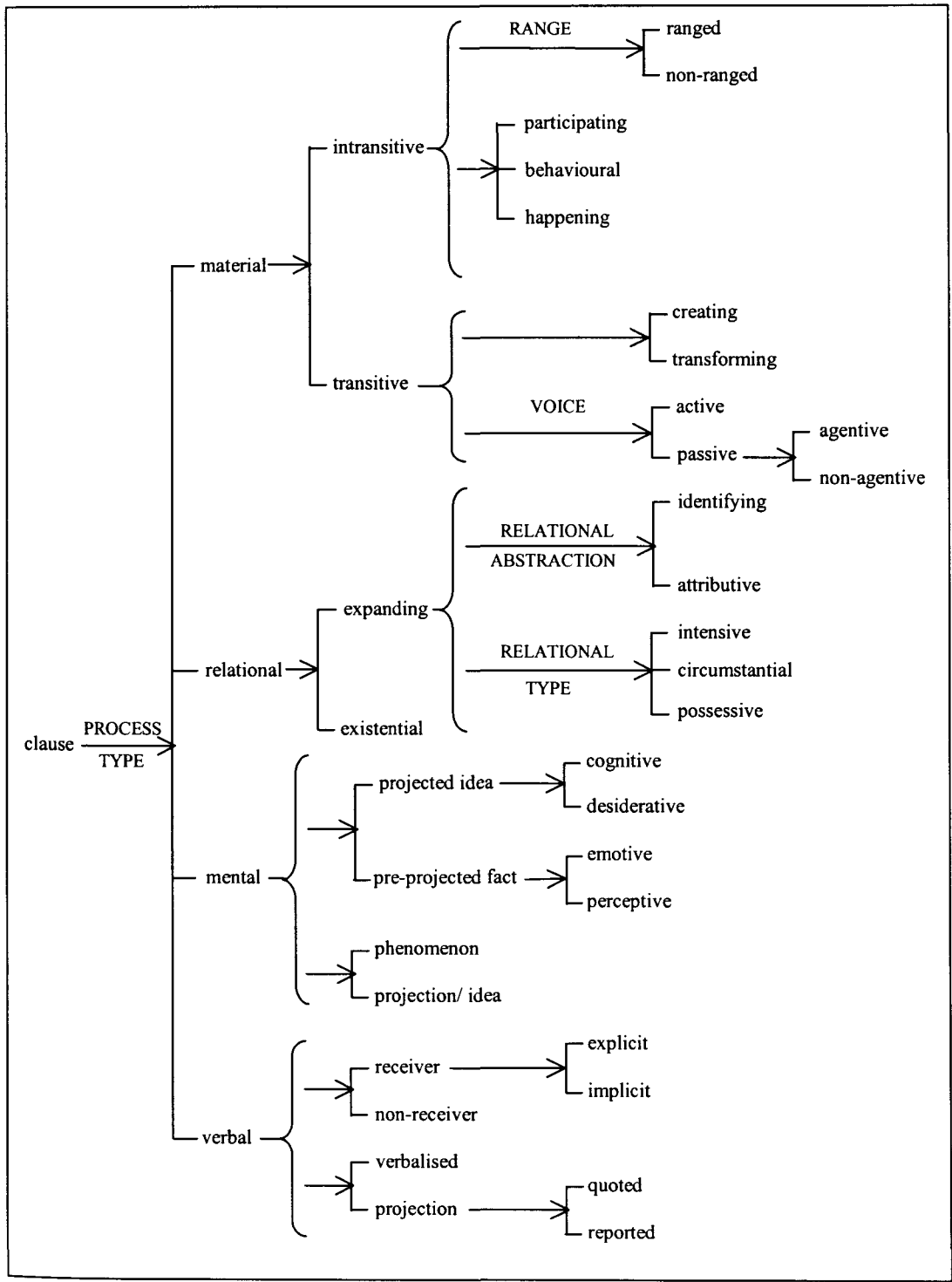
2.6.1 Approaching the system from around

The system networks of TRANSITIVITY in Chinese (Figure 2.15) and in English (Figure 2.20) exhibit a striking degree of resemblance at the most general level. Both networks provide the same set of process types – 'material', 'relational', 'mental' and 'verbal'. However, there are two significant differences at a more delicate level. The first difference is concerned with the system of VOICE (for details, see Chapter 5) while the second one is concerned with relational processes.

In Chinese there are three general types of relational process: 'identifying', 'attributive' and 'existential'. The identifying process leads to the system of VOICE. The attributive process leads to the system of RELATIONAL TYPE, which provides three further options,

represented by the features 'intensive', 'circumstantial' and 'possessive'. The intensive process is either 'categorising' or 'ascriptive'.

Figure 2.20: The system of TRANSITIVITY in English

In English, relational processes are either 'expanding' or 'existential'. The expanding process leads to two simultaneous systems: RELATIONAL TYPE, which leads to the same set of terms as in Chinese, and RELATIONAL ABSTRACTION, which leads to the options of 'identifying' and 'attributive'.

There are thus two major differences between relational processes in the two languages. First, in Chinese, the option of 'identifying' does not lead to a system of RELATIONAL TYPE. In contrast, the 'identifying' feature in English can intersect with one of the three features in the system RELATIONAL TYPE. There are therefore three subcategories of the RELATIONAL TYPE in English, represented by the features 'identifying/intensive', 'identifying/circumstantial' and 'identifying/possessive'. Second, in Chinese the intensive process is either 'categorising' or 'ascriptive'. This distinction is not available in the English system. As a result, there are a total of six relational process types in Chinese but seven in English at this level of delicacy. In Table 2.15, I list some examples in the Chinese and English corpuses for comparison.

Table 2.15: Examples of relational clauses in Chinese and English

Chinese translation	English original text
identifying (1) *tā shì quán jiā de kāixīn guǒ* 　 s/he be whole family POSS happy fruit (2) *mào chuān wòpù lièchē zhǎng de* 　 masquerade sleeping coach Wagon Lit SUB *nà gè nánrén huò nǚrén shì shuí?* that MEAS man or woman be who	**identifying: intensive** (1) She was the delight of the house. (2) Who was the man or woman masquerading in Wagon Lit uniform?
attributive: intensive: categorising (3) ---------- *díquè bù shì* 　 (this duty) really NEG be *lìng rén xiànmù de chāishì,* make people envy NOM duty	(3) (This duty) was not one to be envied.
(4) *jīntiān* --------- *lǐbàitiān.* 　 today (be) Sunday	**identifying: circumstantial** (4) Today is Sunday.

attributive: possessive (5) *xiù yǒu xìng míng suōxiě H zìmǔ* embroider have name initial H alphabet *de shǒupà shì shuí de?* ASSOC hankerchief be who POSS	**identifying: possessive** (5) The hankerchief marked with the initial H, whose is it?
(6) *zhè liè huǒchē yǒu chuīshì chē,* this MEAS train possess kitchen coach *cānchē, yī jié wòpù* restaurant coach one MEAS sleeping coach *yǔ liǎng jié pǔtōng chēxiāng.* and two MEAS economy coach	**attributive: possessive** (6) It consisted of a kitchen and dinning-car, a sleeping-car and two local coaches.
attributive: intensive: ascriptive (7) *shèngsūfēi, bānjí le.'* Saint Sophie really fine ASP	**attributive: intensive** (7) La Sainte Sophic, it is very fine.
attributive: circumstance (8) [[*sǐzhě sǐwáng de*]] *shíjiàn yīng* the deceased die SUB time must *zài wǔyè zhì língchén èr shí zhījiàn.* be/at mid-night to early morning two o'clock between	**attributive: circumstance** (8) The time of death was between midnight and two in the morning.

existential
(9) *yǒu   yī gè   lǐbài.*
    be   one MEAS week
 	
(10) *zài dēng   wòpù   chēxiāng de   jiētī shàng*
     at ascending sleeping coach ASSOC step upon
 	
zhàn zhe yī míng [[*chuān yàoyǎn   jūnfú   de*]]
stand ASP one MEAS   wear resplendent uniform CC
 	
niánqīng fǎguó   lùjūn   zhōngwèi.
young   French   army   lieutenant
	existential
	(9) There had been a week.
	
	(10) By the step leading up into the sleeping-car stood a young French lieutent, resplendent in uniform.

The second major difference between the two languages concerns TENSE. In English the choice of temporal finiteness leads to a system of PRIMARY TENSE, a system which does not exist in Chinese. Instead, the temporal profile of the Predicator with respect to the time of speaking, indicated in English by primary tense, is mainly indicated by temporal adverbs and aspect. The system of ASPECT is fully grammaticalised in Chinese, as shown in Figure 2.16.

2.6.2 Approaching the system from above

In general, the TRANSITIVITY systems of the two languages provide the same set of options – 'material', 'relational', 'mental' and 'verbal'. This means that they construe the same set of figures. However, at a higher degree of delicacy there are some subtle semantic differences between them. In English it is possible for both identifying and attributive clauses to embody an additional semantic feature of 'possessive' or 'circumstantial'. In Chinese, only attributive clauses can intersect with these additional meanings but not identifying clauses. On the other hand, it is possible for intensive attributive clauses in Chinese to embody an additional semantic feature of 'categorising' or 'ascriptive' but not in English.

Second, the semantic features realised by the system of ASPECT in Chinese have a different focus in comparison with the system of PRIMARY TENSE in English. ASPECT expresses how the speaker views the situation while PRIMARY TENSE shows the temporal location of the event with respect to the time of speaking. Here, I will try to see how the two systems are associated with each other in the two corpuses. Table 2.16 shows some of the examples found in the the three Chinese translation (Appendix D) and their corresponding English original text. These examples show how different tenses in the original English texts had been translated into different aspects in the Chinese texts; whereas, Table 2.17 shows the number of instances and percentages.

Tale 2.16: Examples of Chinese aspects and English tenses

ASPECTS	TENSES
Neutral (1). *yì zhèn cìmiàn hánfēng xiàng* one MEAS piercing face cold wind toward *yuètái hūxiào ěrguò.* platform whistle pass	**Past** (1). A cold wind **came** whistling down the platform.
(2). *"bāěrgàn nàbiān fēngxuě hěn dà."* Balkans there snow very large	**Present** (2). "In the Balkans there **is** much snow."
(3). '*míngtiān, lǐbàiyī wǎnshàng nín jiù dào* tomorrow Monday night you then arrive *yīsītǎnbǎo le.*' Stamboul NTR: ass	**Future** (3). Tomorrow, Monday evening, you **will be** in Stamboul.
(4). *yī wèi zhuōyuè de jūnguān zìshā shēnsǐ,* one MEAS distinguished NOM officer suicide dead	**Past: past** (4). A very distinguished officer **had committed** suicide.
(5). *wǒ měi-yǒu gǎo cuò.* I NEG: pf make wrong	**Present: present** (5). 'I **am making** no mistake.'
Perfective (6). *lián ěrduō yě dài-shàng le ěrmào,* even ear also wear ASP ear muffs	**Past** (6). (he) **muffled** up to the ear.
(7). *jiāngjūn – tā zhè wèi dǐngtóushàngsī jiāngjūn –* General he this MEAS superior General *de píqì yuèfā bùkě shōushí le.* POSS temper become unable control ASP	**Past: past** (7). The General – his General's – temper **had grown** worse and worse.

(8). *yǒuguān běn àn   de   gè   zhǒng shìshí,*
    concern this case ASSOC every MEAS   fact,
 	
gè   wèi   dōu   zhīdào   le.
every MEAS also   know   ASP
 	
(9). *wǒ   réngrán rènwéi nǐ   nòng   cuò   le.*'
    I   still   think   you   make   wrong ASP
	Present
	(8). 'Now you all **know** the facts of the case.'
	
	(9). 'I still think you **are** wrong.'

(10). *Nǐ wǎnjiù le fǎguó lùjūn de róngyù –* you save ASP France army ASSOC honour.	**Present past** (10). 'You **have saved** the honour of the French Army.

(11). *'nǐ bù huì nòng cuò le ma?'* you NEG possible make wrong ASP NTR: int	**Present present** (11). '**Aren't** you possibly **making** a mistake?'
Experiential (12). *'kě shì, wǒ yě jìdé,* but I also remember *nín bùshì yě jiù guò wǒ yī mìng ma?'* you NEG also save ASP I one life NTR: int	**Past** (12). 'But indeed do I not remember that once you **saved** my life?
(13). *dùbósīke ǒurán tīng guò tā yǔ* Dubosc occasinally hear ASP he and *zhè wèi mòshēng kèrén de yī xiē tánhuà* this MEAS stranger guest POSS one MEAS conversation	**Past: past** (13). Dubosc **had overheard** part of a conversation between him and the stranger.
(14). *'shì ya, yīsītǎnbǎo zhè gè dūshì wǒ huán* yes Stamboul this MEAS city I still *měi dào gūo ne,* NEG: pf visit ASP NTR: ass	**Present; past** (14) '*Mais oui.* Stamboul, it is a city I **have never visited.**'
Durative (15). *zài dēng wòpǔ chēxiāng de jiētī shàng* at ascending sleeping coach ASSOC step upon *zhàn zhe yī míng [[chuān yàoyǎn jūnfú de]]* stand ASP one MEAS wear resplendent uniform CC *niánqīng fǎguó lùjūn zhōngwèi,* young French army lieutenant	**Past** (15). By the step leading up into the sleeping-car **stood** a young French lieutent, resplendent in uniform.
(16). *Tā nà cuō xuěbái de měi xū* he that MEAS snow white NOM beautiful moustache *suí zhe shàngxià chàndòng* follow ASP up and down tremble	**Past present** (16). His great white moustache (was) **trembling** as he spoke.
Delimitation (17). ------ *cháo shàngfāng wǒpùchēxiāng de* (he) toward upward sleeping coach ASSOC *chuānghù kàn le yī yǎn* window watch ASP one eye	**Past present** (17). (He **was**) **glancing** up at the window of the sleeping-car above them.
(18). *báiluó qīngqīng diǎn le diǎn tóu.* Poirot slightly nod ASP nod head	**Past** (18). Poirot **nodded** his head slightly.

Table 2.17: Relative frequency of the English clauses marked with aspects in the Chinese
translation

TENSES	ASPECTS										TOTAL	
	neutral		perfective		experential		durative		delimitation			
past	46	58.2%	20	25.3%	2	2.5%	8	10.2%	3	3.80%	79	100%
past: past	10	47.6%	6	28.6%	4	19.0%	1	4.8%	0	0.0%	21	100%
past: present	0	0.0%	0	0.0%	0	0.0%	2	66.7%	1	33.3%	3	100%
present	35	94.6%	2	5.4%	0	0.0%	0	0.0%	0	0.0%	37	100%
present: past	2	50.0%	2	50.0%	0	0.0%	0	0.0%	0	0.0%	4	100%
present: present	2	28.6%	3	42.8%	2	28.6%	0	0.0%	0	0.0%	7	100%
future	7	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	100%

We can see that the three primary tenses in English are strongly associated with the neutral aspect, i.e. 'unmarked', in Chinese. 'Unmarked' here means both 'structurally without marked' and 'probability unmarked', i.e. relatively high in probability from others. Among them, the past tense has a comparatively weak association with neutral aspect. This means that the English clauses with past tense are more likely to be marked with an aspect (mainly perfective) in the Chinese translation than clauses with the other two primary tenses. Among the four types of aspect, a perfective aspect indicates a 'bounded' event (cf. Li & Thompson 1981: 185). Typically, a 'bounded' event is complete and has therefore happened in the past (except in the case of an existential process).

Table 2.18 focuses on the instances of the English clauses (with secondary tenses), which are marked with Chinese aspects in the Chinese translation.

Table 2.18: Relative frequency of the association between Chinese aspects and English
Secondary tenses in the three texts

TENSES	ASPECT								TOTAL	
	perfective		experential		durative		delimitation			
past: past	6	54.5%	4	36.4%	1	4.8%	0	0.0%	11	100%
past: present	0	0.0%	0	0.0%	2	66.7%	1	33.3%	3	100%
present: past	2	100.0%	0	0.0%	0	0.0%	0	0.0%	2	100%
present: present	3	60.0%	2	40.0%	0	0.0%	0	0.0%	5	100%

We can see that:

(1)   both the past-past and the present-past tenses are strongly assocated with the perfective aspect. As mentioned, a 'bounded' event is complete and has therefore happened in the past.

(2)   the past-past tense is also strongly associated with the experiential aspect. An experiential aspect indicates an event that the speaker has experienced before. Although such an event always happened in the past, it is not the temporal profile but the experience of the event that the speaker is focused on.

(3)   the past-present tense is strongly associated with the durative aspect. A durative aspect signals the ongoing nature of an event. Its semantic range is closest to the 'present' option of the secondary tense rather than the 'present' option of the PRIMARY TENSE.

(4)   none of the tenses shows strong association with the delimitation aspect. In fact, the semantic range expressed by the delimitation aspect does not have any counterpart in the TENSE system but is encoded in temporal adverbs in English.

(5)   the present-present tense shows strong association with the perfective and experiential aspects. The finding can be accounted for by the fact that all the examples of present-present are found in projected clauses and all of them encode some "bounded" events.

2.6.3 Approaching the system from below

In approaching the comparison of Chinese and English from below, I will not deal with the order of grammatical constituents in the clause – since the order of the components in a clause is a textual resource instead of an ideational one – but instead with the number and the nature of the components that build up the 'figure'. In general, each process type is realized by the same set of components in both languages. However, there are some differences in material clauses and relational clauses. The differences in the case of material clauses are concerned with the system of VOICE, and these will be discussed in Section 5.8, whereas those in relational clauses are discussed below.

The differences in the case of relational clauses are quite significant. First, in both languages, the most common verb in identifying clauses is *shì* (be). However, unlike in English, the verb *shì* (be) can be left implicit in Chinese as in (2.52):

(2.52)

'jintian today	----------------	*libaitian,'* Sunday
Token	(Process: identifying)	Value

('Today (is) Sunday,')

Second, in English the Subject of the prototypical existential clause is *there*, rather than the Existent. But while *there* occupies the clause initial position in the unmarked case, it does not serve any participant role in the figure. In Chinese *there* does not function as Subject; instead, the clause initial position is either occupied by the Process *yǒu* (be) or a circumstance. When existential clauses begin with a circumstance, the preverb in front of it is usually absent, leaving it looking like a nominal group. However, it is grammatically acceptable for the preverb to be present. In contrast, when the circumstance follows the Existent, the preverb is always present in the clause.

Third, in English, the typical process of attributive intensive clauses is realised by the verb *be*, which is not a part of the Attribute. In Chinese, attributive intensive clauses are either 'categorising' or 'ascriptive'. Similar to the case of English, the process in

categorizing clauses is also realised by a verbal group, which is not a part of the Attribute. However, the process in ascriptive clauses is always conflated with the Attribute, which is semantically a simple quality. In this respect, this resembles the specific group of verbs in English such as suffice, stink, figure and matter where the process is also conflated with the Attribute. So the difference between the two languages should be read in the light of systemic probability.

Fourth, while identifying possessive clauses and attributive possessive clauses can be distinguished from each other syntactically in English, in Chinese possessive clauses are always 'attributive' because the Possessor and the Possession in the clause are not reversible.

2.6.4 Relative frequency of various options

A difference in the relative frequency of a given process type between the two languages may be due to two reasons. First, it may be due to a grammatical difference, where a given option is either not available in the system or its usage is strictly constrained structurally. Second, it may reflect differences in systemic probabilities, i.e. the systemic categories are not the same in the two languages. To make a comparison between Chinese and English possible, the relative frequency of the identifying clause in Chinese is contrasted with the total of clauses of the identifying intensive, identifying/circumstantial and identifying/possessive in English. Similarly, the relative frequency of the attributive/intensive clause in English is contrasted with the total of clauses of the attributive/ascriptive and attributive/categorising types in Chinese. As a result of collapsing these options, when there are differences found between the two languages, they are not due to the availability of the options in the system but instead constitute systemic differences in probability.

The data show that clauses expressing happening, identifying, circumstance and existence occur less frequently in Chinese than in English. On the other hand, clauses expressing participating (without Range), event, cognition and perception occur more frequently in Chinese than in English. The results of the comparison are given in Table 2.19. In the

table, a minimum of five instances is used as a cut-off, which indicates a statistically significant difference between the Chinese and the English data. They are shown in bold in the table. They include material processes of acting (with range), all the expanding relational processes (besides possessive processes), and mental processes of cognition and perception.

Figure 2.21 compares the number of occurrences of different process types in the Chinese with the English data. The categories of the X-axis (horizontal axis) follow the same order as in Table 2.19 but only show every alternative category.

Figure 2.21: Number of occurrences of different process types in Chinese and English
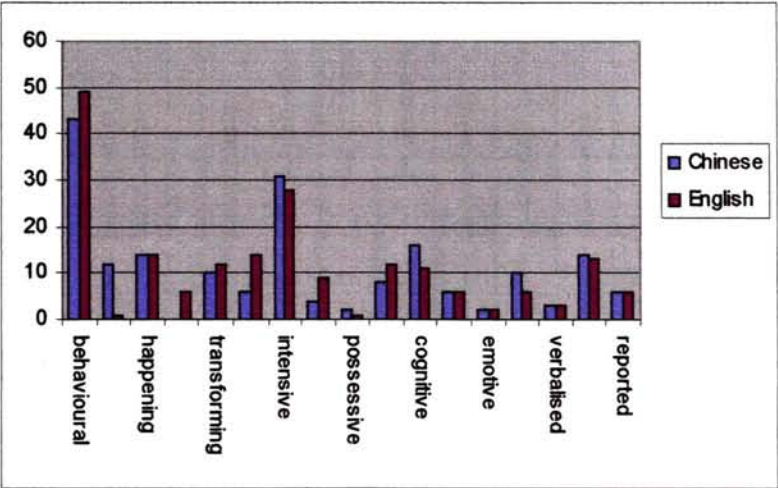
Table 2.19: Relative frequency of various process types in Chinese and English

process types		occurrence			
		Chinese		**English**	
Chinese / English					
intransitive → participating (1)		23	11.39%	25	12.50%
participating (2)		17	8.41%	11	5.50%
participating (3)		3	1.49%	13	6.50%
behavioural		12	5.94%	1	0.50%
happening		14	6.93%	14	7.00%
transitive → creating		0	0.00%	6	3.00%
transforming		10	4.95%	12	6.00%
identifying — intensive		6	2.97%	13	6.50%
identifying — circumstantial				0	0.00%
identifying — possessive				1	0.50%
ascriptive — intensive		24	11.87%	28	14.00%
categorising — intensive		7	3.47%		
attributive — circumstantial		4	1.98%	9	4.50%
attributive — possessive		2	0.99%	1	0.50%
existential		8	3.96%	12	6.00%
cognitive		16	7.92%	11	5.50%
desiderative		6	2.97%	6	3.00%
emotive		2	0.99%	2	1.00%
perceptive		10	4.95%	6	3.00%
verbalised		3	1.49%	3	1.50%
quoted		14	6.93%	13	6.50%
reported		6	2.97%	6	3.00%
minor clause		13	6.43%	7	3.50%
TOTAL		202	100%	200	100%

Process types tree: PROCESS TYPES → material (intransitive / transitive); relational → expanding (identifying: intensive, circumstantial, possessive; attributive: ascriptive, categorising) / existential; mental (cognitive, desiderative, emotive, perceptive); verbal (verbalised, quoted, reported); minor clause.

2.7 Conclusion

In this chapter, the central concern is the experiential mode of meaning, i.e. the construing of our experience of the world that is around us and inside us. The phenomena of our experience are comprehended as a realm of changes in which one quantum of change is construed as a figure. A figure is presented as a structural configuration consisting of process, participant and circumstance. There are four general types of figure, namely 'sensing', 'saying', 'doing' and 'being', which construe our experience towards the world of consciousness, the world of symbolisation, the world of material reality and the world of various modes of being respectively. A figure can either be 'projected', i.e. setting up as second-order, semiotic reality, or 'non-projected'.

Adopting the participant-organising perspective, the present study has differentiated each general type of figure into several subtypes; each subtype has its own distinctive properties in terms of the nature of the participant(s) organised by the process. Then a semantic analysis of the participant(s) in every subtype has been conducted, which further foregrounds the semantic feature of the participant(s) in each subtype. And finally, the general types of figure and their subtypes have been formulated systemically as a system network in Figure 2.12.

Then a grammatical system network of TRANSITIVITY has been proposed as in Figure 2.15. This proposed system sets up a one-to-one mapping with the system of FIGURE so that the options in the grammatical system can be considered as congruent realisations for their counterparts in the semantic system, representing the typical ways of saying thing. In this respect, it opens up the possibility of 'ideational metaphor', which represents other options in the language 'potential' available to language users.

The proposed system of TRANSITIVITY is examined from three angles, namely above, around and below. Examining the system 'from above', the main concern is the semantic features that are realised by the set of options in the grammatical system; examining the system 'from around', the central focus is the system itself, especially the set of terms available in it; whereas examining the system 'from below', the concern is the

grammatical structures, the grammatical or lexical items and/or the phonological features that realise the various options of the system. The result of the analysis suggests that the proposed system is part of the grammar of Chinese. This system is a systemic description of the resources which construe our experience of 'goings-on' as structural configuration. To put it in another way, it is the grammatical system which realises the semantic system network of FIGURE. Apart from this, the present study has also found that on the one hand, the four major process types differentiate themselves from each other in terms of their use of aspect. On the other hand, at a more delicate level, there exist clines between the various subtypes within each major process type as well as between the major process types themselves. These subtypes seem to lie on a sort of three-dimensional sphere. However, the present study cannot go into further detail in this avenue due to limitations of space.

Lastly, the system networks of TRANSITIVITY in Chinese and in English have been compared. The comparisons are also approached from the three angles: "above", "around" and "below". The major differences between the two networks arise from the systems of RELATIONAL TYPE, ASPECT and TENSE. In addition, the relative frequency with which the various options in the system networks have been chosen in the two language corpuses has been compared. The differences in relative frequency reflect the systemic differences in "conditioned probabilities", which lead to the possibility of the study of "register variation". The understanding of the above differences certainly sheds light on the task of translating between the two languages as well as to support the task of teaching Chinese to English speakers.