88 年 NSC 期中研究報告

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Contents

Part One

1. Preliminary Studies on Verbs of Communication

2. Preliminary Studies on Verbs of Attitude

3. Preliminary study on Verbs of Loving

Part Two

1. Method and Steps

2. Module-Attribute Representation of Verb Semantics-MARVS

3. MARVS Representation of Verbs of Communication

Part Three

Publications

1. Liu, Mei-chun, Chu-ren Huang, and Jia-ying Lee. 1999. Semantic Representation of Verbal Information - A Case from Mandarin Verbs of Judging. Presented at the ROCLING-12, Hsinchu, Taiwan.

2. Chu-ren Huang and Kathleen Ahrens. 1999. The Module-Attribute Representation of Verbal Semantics. Working Papers on Chinese Verbal Semantics (Vol. I). Taipei: Academia Sinica.

3. Lili Chang, Keh-Jiann Chen, and Chu-Ren Huang. 1999.
Alternation within Semantic Fields: A Study of Mandarin
Verbs of Emotion. Working Papers on Chinese Verbal
Semantics (Vol. I). Taipei: Academia Sinica.

4. Abstract to the 5th Conference on Conceptual Structure,
Discourse and Language (CSDL-5)

Part One

1. Preliminary Studies on Verbs of Communication

<u>詞彙語意初步報告</u>

● 談

談 1：mention

談 2：talk about

➢ 句法上的觀察：後接賓語時，「談1」必須加上介詞<i>到、及、起</i>，但是「談2」
　　　　　　　則不必。

　例：談 1　　一<u>談到</u>腸胃疾病，就令人連想到文明產物壓力

　　　　　　她該自認是個介入者嗎？ <u>談到</u>介入，是否高估了自己？

　　　　　　<u>談及</u>加拿大中文電視台器材及人手不足，自製節目缺乏等問題，

　　　　　　他<u>談起</u>一九七三年美澳在台維斯杯決賽對決的情形，

　　　　　　協商內容並未<u>談及</u>海峽交流基金會董監事員額•政府處理主獨會

　　　　　　態度等問題•

　　　　　　惟能統籌作合理運用，<u>談起</u>錢來才不致傷感情•

　　　　　　<u>談起</u>倫敦的音樂喜劇團秋天將來大會堂演出•

　　　談 2　　只要青春不要胖－－<u>談</u>青少年營養

　　　　　　在反托拉斯法領域之內<u>談</u>公平交易就難的多，

　　　　　　碧根鮑華一到馬賽時，就非常訝異法國足球界只<u>談</u>金錢和生意

　　　　　　的瘋狂狀況•

● 說

➢ 句法上的觀察：「說」之後都是接句賓。

　例　范又<u>說</u>：沒問題，可以了，二人隨而下船，以後便不知道了•

　　　消息人士<u>說</u>，歐爾修斯基願留巴爾塞洛維茲續任財政部長，

　　　比方<u>說</u>過敏的人不能吃葡萄柚和竹筍，

　　　她很幽怨地<u>說</u>：「我覺得好難過，他一聲也不響就走了。」

　　　她<u>說</u>你們父子是一個銅板的兩面，可惜背對背，誰也不認識誰•

　　　楊炳輝<u>說</u>因為要讓父母緊張關心才編謊言•

● 問

➢ 句法上的觀察：雙賓結構是特色。

　例　拿起一瓶<u>問</u>店員多少錢，店員含含糊糊的說一錢廿元。

　　　周潤發則<u>問</u>周星馳目前拍片的目標是賺錢或是得獎，

　　　他又<u>問</u>阿魯：「你知道這個地洞是誰挖的？」

　　　我們<u>問</u>客戶說，當初業務員來拜訪您，您是怎麼想法，

　　　有人曾經<u>問</u>過查理王子愛不愛黛安娜，

● 解釋類（說明、解釋）

➤ 句法上的觀察：句賓或名賓皆可。

說明：（名賓）　他準備了一篇絕食聲明，<u>說明</u>他這次絕食行動的動機和意義，

我認為此行的基本目的在說明我們關切的問題，

吳作棟並說明今後的施政方針，

　　　　（句賓）　這兩本小說集的相繼出現，<u>說明</u>了幽默小說已在台灣蔚然成風，

提氏可謂漁翁得利，同時也<u>說明</u>了華勒沙的聲望顯著下降，

當地里長與業者面對面溝通，<u>說明</u>百福社區是住宅區，希望業

者遷離，

解釋：（名賓）　該台為應各界的關懷特地發佈新聞，<u>解釋</u>停播事件的原因•

她老早已<u>解釋</u>無法親自出席的原因

政務總署向十九區政務專員<u>解釋</u>匯豐銀行遷冊事件，

　　　　（句賓）　ＮＨＫ通信衛星管理中心<u>解釋</u>說：只是普通狀況，

他<u>解釋</u>道：我們雙方一定會舉行一次會議•

製成後的天體圖可以幫助<u>解釋</u>銀河是怎樣形成的

談話類：談類（談、提、講）

A. Syntactic Behavior: argument structure

● Agent vs. Goal

	談(196 筆)	提(183 筆)	講(194 筆)
Agent only	41%(81)	52%(95)	37%(72)
Goal* only	4%(8)	N/A	3%(6)
Agent + Goal	6%(12)	2%(3)	3%(6)

*Goal appears with prepositions:和,跟,與,對,向,etc..

EXAMPLE:

a. Agent only

談：雖然<u>我們</u>整個夏天到秋天都在談著桂花的事

　　<u>儒家</u>並非只談高深的哲理

　　<u>兩人</u>興致勃勃的談兩岸音樂交流

提：<u>林先生</u>在一本書裡提過桂花醬的事

　　<u>我的老師</u>從來不提他的過去

　　<u>大男人</u>提這種問題，真不好意思

講：<u>佛家</u>講齋戒、不要殺生

　　<u>我國古代的人</u>最講信用了

　　<u>蔣介石</u>確實講過此話

b. Goal only

談：要能<u>和先生</u>談國際現勢，要能<u>和孩子</u>談熱門音樂

　　將從一些著名的柳琴樂曲開始，<u>與大家</u>談一談柳琴演奏特殊的演奏方法

提：N/A

講：有女孩子跟您住在一塊，所以那天才<u>跟您</u>講了那些話

　　有一次<u>跟我們</u>講拿破崙戰史，在滑鐵盧戰敗的原因

c. Agent + Goal

談：之後是由<u>姜蘭虹教授</u>和<u>我</u>談「國內外婦女社團發展概況與前瞻」

　　<u>兩個兒子</u>和<u>他們的爸爸</u>成天談足球

提：這幾年來，雖然<u>你</u>不再<u>對我</u>提同樣的問題

　　問題是，<u>我</u>該怎麼<u>跟她</u>提這件事呢？

講：<u>吳</u>說：「你不必<u>跟我</u>講了！」

　　<u>連隊長</u>也要<u>向我</u>講一聲呢

➢這三個動詞的主語即使不出現在同一個句子中（c-command），應該會隱藏在 discourse 裡面。

➢「談」的 goal 的地位比「提」或「聊」來得重要；另外，「談」的 agent 如果後面不跟著 goal，則 agent 的語意特徵會傾向[+plural]（42/81=52%）。

● 句法功能的表現

	談(196 筆)	提(183 筆)	講(194 筆)
Vt		29%(53)	33%(64)
Vi	40%(79)	27%(50)	
Relative clause	10%(19)		14%(27)

EXAMPLE:

a. Vt

談：趁著年輕力壯的時候，來談退休之事，
　　台灣其實最有資格在此關鍵時刻大談和平之道，

提：致趙元任信中，就提過魯迅若還活著的問題，
　　為協助中小企業渡過年關，經濟部再提改善融資措施。

講：禪宗講平常心，即淡泊自然。
　　原來人間社會也是戰場，是要講階級鬥爭的。

b. Vi

談：我們的政治必須提高到大家能夠開放的談、無懼的談，
　　李勝雄一提起辯護內容，根本就不願多談，

提：所以我就在此略過不提。
　　只要觸及結婚之事，他就顯得矛盾而不願提，

講：今天的情形我完全知道，不必你跟我講。
　　有能力維護自由、保障民主時，卻都不講了。

c. Relative Clause

談：中國人談的宗教二字各代表不同的兩個範疇，
　　就像今天我跟你們所談的也從經典出來，進行現代思考。
　　或者是覺得自己想要談的問題太簡單，怕被認為是「灌水」。

提：另外值得一提的是，有本報的讀者看到消息特地趕來
　　惟法院卻認為被告所提之證據僅能證明該軟體係一創作，
　　與會者對各單位所提的建議方案經充分討論已獲一致結論，

講：不要因為這個人很壞，就認為他講的話一定都錯。
　　今天我們所講的人力資源的開發，理念告訴我們它是…
　　我想要講的都是一些簡單易懂的事情，

➢「談」的賓語屬於 topic theme，且幾乎都是以名詞組的形式出現（98 筆及物動詞中只出現兩筆句賓：*每逢與人談話，就大談他旅遊世界多次，任何地方都去過兩次*）。

➢「講」當不及物動詞的比例超過半數，當及物動詞時賓語都是名詞組。

➢「提」的賓語可以是名賓，也可以是句賓（但之前必須和 negative 連用：*更別提非關係企業的廠商會調整利潤。* ）。

B. Event module

➢「談」可以 V — V 的形式出現，強調的不再是 topic 或 theme，而是 interaction/communication behavior，是屬於有 starting point 的 process。

➢

➢

- 另，在語料庫中，「說」沒有及物動詞的用法（語意是「數落」），當不及物動詞時，後面必接 quotation。

- 接下來將繼續觀察「問」類動詞，包括詢問、質問、盤問等。

● 談類（談、提、講）

➤ Preposition 的種類

	和	跟	與	為	向	對
談	11	5	5	N/A	N/A	N/A
提	1	2	N/A	N/A	N/A	1
講	1	5	N/A	1	1	3

● 初步觀察：問類（問、詢問、質問）

一、問（192 筆）

1. 問後可接 Goal（85 例）和 Theme（165 例）：

Agent<*<Goal：鄰居的太太為了桂花的事來問我。

接著以相同的問題問智藏禪師，得到的回答卻是...

Agent<*<Goal<Theme：有人問孔子：以德報怨，何如？

如果有人問我心情如何，我的回答是...

鄰居看到了便問他在尋找什麼？

Agent<*<Theme：這些學生多以個人的立場為出發點，去問一些務實或淺顯的問題。

最後可能會問，哪一種動物比較可貴？

莊子問：你們怎麼不動手去砍伐呢？

2. Theme 的形式可分為下列各種：

a. A not A：我們經常會問那人講不講理，有沒有感情。

b. Interrogative Phrase：別人若問：「你是人家的爸爸嗎？」

c. Noun Phrase（15 例）：他來到藥山禪師處問禪法。

d. Yes-No Question：於是叫來最年輕的四姨太，問她是否願意共赴黃泉。

二、質問（133 筆）

1. 質問後可接 Goal（57 例）和 Theme（119 例）：

Agent<*<Goal：陳水扁不滿此一答覆，再質問陳履安，此時，.....

立即由二十多名親友陪同到縣警局質問陳嫌，雙方對話半個小時...

Agent<*<Goal<Theme：吳某火大，質問梁某會不會騎車？

林正杰更質問錢復是誰准他在這幾天休假？

Agent<*<Theme：遭一位少年摑耳光並蠻橫地質問：出門怎麼可以不帶錢？

2. Theme 沒有 NP 的形式。

3. 質問可以當狀語（5 例）：他質問說，誰要來為這些黃色笑話負責？

三、詢問（65 筆）

1. 質問後可接 Goal（13 例）和 Theme（28 例）：

   Agent<*<Goal：乃由死者黃瑞興代警方下車詢問阿貓及廖某。

   Agent<*<Goal<Theme：忍不住詢問他為何要用這麼奇怪的藝名。

   Agent<*<Theme：當時凡是有人詢問他的頒位，他都不好意思說實話。

3. Theme 以 NP 的方式出現的比例很高（15/28=54%）

   例：可向人事室詢問有關的規章。

   　　仍會不時打電話詢問業務狀況。

● 初步觀察：吐露（46 筆）、披露（44 筆）

1. 吐露的 Agent 有[+animate]的特徵，Theme 則多以主觀經驗或態度為內容。

   例：吾爾開希並吐露在香港時說過的話「不想回憶，唯敢忘記」。

   　　連阿水向他的兒子連日明吐露身體不適。

   　　有的教師吐露心聲，暗示參與研習工作非其所願。

2. 披露的 Agent 有[-animate]的傾向（只有 2 例是[+animate]），Theme 的內容多以客觀的事實為主，有被動氏的情形（Theme 提前，19 例）。

   例：紐約時報並披露芮里受到上司申斥的事。

   　　據表示，為避免報告被披露，造成不必要的爭端…

   　　許多爭議性的問題也因此沒有被輿論披露。

   　　消息披露後，立即引起影藝圈內人士震驚。

● 初步觀察：問類（問、詢問、質問）
一、問（192 筆）

1. 問後可接 Goal（85 例）和 Theme（165 例）（Theme 可以提前，以介詞作為標記）：

Agent<Prep<Theme<*<Goal（4 例）：鄰居的太太為了桂花的事來問我。
接著以相同的問題問智藏禪師，得到的回答卻是…

Agent<*<Goal<Theme（81 例）：有人問孔子：以德報怨，何如？
如果有人問我心情如何，我的回答是…
鄰居看到了便問他在尋找什麼？

Agent<*<Theme（84 例）：這些學生多以個人的立場為出發點，去問一些務實或淺顯的問題。
最後可能會問，哪一種動物比較可貴？
莊子問：你們怎麼不動手去砍伐呢？

2. Theme 的形式可分為下列各種：
a. A not A：我們經常會問那人講不講理，有沒有感情。
b. Interrogative Phrase：別人若問：「你是人家的爸爸嗎？」
c. Noun Phrase（15 例）：他來到藥山禪師處問禪法。
→此處的「問」意近於 asking about。
d. Yes-No Question：於是叫來最年輕的四姨太，問她是否願意共赴黃泉。

3. 問是 speech act。

二、質問（133 筆）

1. 質問後可接 Goal（57 例）和 Theme（119 例）：

Agent<*<Goal：陳水扁不滿此一答覆，再質問陳履安，此時，…..
立即由二十多名親友陪同到縣警局質問陳嫌，雙方對話半個小時…

Agent<*<Goal<Theme：吳某火大，質問梁某會不會騎車？
林正杰更質問錢復是誰准他在這幾天休假？
→Goal 可以「向」作為標記提前（5 筆）：向上帝質問說：「上帝啊，….」

Agent<*<Theme：遭一位少年摑耳光並蠻橫地質問：出門怎麼可以不帶錢？

2. Theme 沒有 NP 的形式。
3. 質問可以當狀語（5 例）：他質問說，誰要來為這些黃色笑話負責？
4. 質問意近於 asking with a challenging attitude，可以允許焦點放在 manner 上。
5. 質問是 speech act verb。

三、詢問（65 筆）

1. 質問後可接 Goal（13 例）和 Theme（28 例）：

      Agent<*<Goal：乃由死者黃瑞興代警方下車詢問阿貓及廖某。

      Agent<*<Goal<Theme：忍不住詢問他為何要用這麼奇怪的藝名。

      Agent<*<Theme：當時凡是有人詢問他的頓位，他都不好意思說實話。

      →Goal 可以「向」作為標記提前（11例）：向人事室詢問有關的規章。

4. Theme 以 NP 的方式出現的比例很高（15/28=54%）

    例：可向人事室詢問有關的規章。

        仍會不時打電話詢問業務狀況。

5. 詢問意近於 report and asking event。

● 初步觀察：吐露（46筆）、披露（44筆）、透露（136筆）、敘述（79筆）、揭露（59筆）、述說（24筆）

1. 吐露的 Agent 有[+animate]的特徵，Theme 則多以經驗或態度為內容。

    →attitude-oriented theme

    例：吾爾開希並吐露在香港時說過的話「不想回憶，唯敢忘記」。

        連阿水向他的兒子連日明吐露身體不適。

        有的教師吐露心聲，暗示參與研習工作非其所願。

2. 披露的 Agent 有[-animate]的傾向（只有 2 例是[+animate]），Theme 的內容多以事實為主，有被動式的情形（Theme 提前，19例）。

    →state(fact)-oriented theme

    例：紐約時報並披露芮里受到上司申斥的事。

        據表示，為避免報告被披露，造成不必要的爭端…

        許多爭議性的問題也因此沒有被輿論披露。

        消息披露後，立即引起影藝圈內人士震驚。

3. 透露的 Agent 多半是[+animate]（97筆），但也有以 event 為 Agent 的情形（14筆）；Theme 多半是談話內容（Quotation，65筆）：

    例：[+animate]→委員會昨天鎮日研商，不願對外再透露意見。

            原告律師哈普拒絕透露賠償金額。

            張俊宏透露，此一動向是他在前日晚間與黃信介….

      Event→一枝梅花的開放，透露了冬天將去春天要來的消息。

            戈氏演說中透露仍不願撤換里茲可夫的訊息。

            石原與艾氏的勢不兩立，凌厲之餘透露不少情緒性動物本能發洩。

    Quotation→一位人士透露，在全國一片掃除安非他命的聲浪中，…

            據省議員透露，建築容積率最低標準，將放寬到至少…

            余陳月英昨天透露，她也是二二八事件的受難者家屬。

4. 敘述常常當名詞用（24筆），也有定語用法（9筆）；它當動詞時（46筆）的 Agent 通常是[+fiction]（23筆），[+animate]的情況只出現 9 次：

    例：名詞用法→這些敘述是真的嗎？

由以上的敘述我們知道：....

定語用法：而後以歷史的敘述方式陳述此一國度的衰亡。

在每一位敘述者的喉管理緊張波動。

[+fiction]：這是他在阿國發表的最後一首詩，敘述其逐步走向墳墓。

劇情則是敘述秦、晉大戰於嵴的故事。

內容敘述羅摩王子和妻子西輄被壞心的皇后趕出...

[+animate]：他不動聲色地敘述那樁殘酷的謀殺。

Winston 開始敘述優勝美地的故事。

5. 揭露的 Agent 和透露一樣也可以是 Event(5 筆)，[+animate](18 筆)，[-animate]
（3 筆）；有名詞用法（6 筆）；Theme 可以提前（15 筆），不一定要有介詞的
標記：

例：Event Agent→校方所表現的畏首畏尾心態，揭露出現存教育機構礙於招
生聲譽而不願自清自律的趨勢。

Animate Agent→保險業者應揭露其與重要公證人之間的往來資料。

Inanimate Agent→書中將揭露黛安娜及查理王子結婚爆炸性的內幕。

名詞用法→該項弊案的揭露，主要源自本月初的鎮民代表會定期總質
詢。

Theme 提前→該公司對此有關資訊卻未完全揭露。

新聞事件本身也有些隱藏的層面要在日後才會逐漸揭露。

6. 述說的 Agent 是[+animate]，即使不是[+animate]，也可以判定是擬人化的用
法：

例：[+animate]→何校長述說成立美語會話班的動機。

他述說過去談情經驗，可能因一方面碰到知己...

擬人化→猶如台中市的兩條維持生命的命脈，靜靜述說台中市的歷史。

我唯一記得，解能以單弦述說的，將僅僅剩下自己的故事。

討論類

● 討論〔198 筆〕

第一部份：句法表現

➤ 謂語用法（119/198=60%）

　　a.及物（81/198=41%）　　例：經過我的門前，不進房間跟我討論學問，

　　　　　　　　　　　　　　　　　我們來討論現代人的疲勞根源。

　　　　　　　　　　　　　　　　　和別人討論理財的話題並沒有什麼不對。

　　b. 不及物（38/198=19%）例：能解決的語研現象就拿出來討論。

　　　　　　　　　　　　　　　　　此間媒體，有的同情，有的討論，有的問。

　　　　　　　　　　　　　　　　　徵詢各界之意見逐步討論修正。

➤ 名物化（52/198=26%）　　例：有兩件事需要更多的討論。

　　　　　　　　　　　　　　　　尊重性的平等討論常使真理的火花迸發。

　　　　　　　　　　　　　　　　經過反覆的討論，再由邱老師修改。

➤ 定語（13/198=7%）　　　例：在此未預設討論者的立場。

　　　　　　　　　　　　　　　　用討論的方式，研究父親通常在什麼情況下...

➤ 關係子句（5/198=3%）　　例：這是我們要真切討論的主題。

　　　　　　　　　　　　　　　　今天與大家討論的是斯堪地那維亞半島婦女...

第二部分：觀察

➤ 動詞前的 Agent 有[+plural]的特徵（56/119=47%），呈現的方式除了複數形式

的人稱代名詞（我們、他們...）和集合名詞（委員會、參院...）之外，還包括

以連接詞（與、和、跟：19/119=16%）連接「討論的成員」：

　　例：我們來討論如何消除業障。（複數形式的人稱代名詞）

　　　　　國家統一委員會昨天討論國家統一綱領草案。（集合名詞）

　　　　　一位與大家一樣的國樂愛好者與大家討論分享。（連接詞）

➤ Theme 可以提前：今年的盈餘目標亦一併在會中討論。

➤ Agent 有兩例是[+Story]：這本書就是透過禪的本質來討論生活與工作的應有

態度與認識。

● 商量（104 筆）

第一部份：句法表現

➤謂語用法

    a.及物（28/104=27%）   例：兄弟兩人商量把她送到一所療養院去。

                      我還要和你商量一件事。

    b.不及物（65/104=63%）   例：戈巴契夫則生氣指責謝瓦事先未與他商量。

                      那巴西人不像要說話，便把他拉出去商量。

                      幾個人嘰嘰喳喳地商量了一陣，就都走了。

➤名物化（2 筆）   例：很流行的一句怨言：「真主義，假商量。」

➤定語（2 筆）   例：一坪只不過七八萬塊，而且還大有商量的空間，

➤狀語（1 筆）   例：他們那幫有錢的孩子也偷偷商量說，在學校裡....

➤關係子句（1 筆）例：這種求平安且有事時好商量的主意，

第二部分：觀察

➤即使是及物的用法，仍有許多賓語提前的現象（13 例）。

    例：任何條件都可以商量。

        由中油公司獨家壟斷，供料價格沒得商量。

        錢的問題都好商量。

➤動詞前的 Agent 和「討論」一樣，都有[+plural]的趨向。

    例：翠安和青青就在底下商量校刊的專題事宜。

        人人商量，事事妥協。

        代表團早在出發前就商量。

➤但[+plural]有 55%（51/93）是出現在連接詞加「商量的對象」之中：

    例：他說有緊急事情與我商量。

        農民以和農會商量。

        他和一位部屬商量。

● 研商（182 筆）

Syntactic Behavior

1.謂語用法（152/182=84%）

theme<*（22/152=14%）：衛生署與龍發堂應就此三個問題研商。

港務局針對水泥業提議研商中。

職棒的促銷活動現正由廣告業務部門及廣告公司研商中。

能否讓其入境，外交部將做進一步的研商。

Agent<*（20/152=13%）：該宮與大甲鎮公所共同研商。

經濟部能源委員會昨天鎮日研商，且不願再對外透露意見。

Agent<*<theme（110/152=72%）：（Q:25/110=23%；NP:72/110=65%）

例：工務局昨邀集各單位研商大計。

教育部邀集各相關單位研商中山體育場籌設大型會議中心可行性。

與 IC 零配件代理商、驛洲運通公司，共同研商中心未來如何藉由擴大業務範圍維持中心運轉。

工業局、國貿局、投審會等單位再次研商有關台海兩岸經貿管理辦法。

市府現正與住都局研商如何解決。

2.名物化（30/182=16%）：我們不是不答覆，我們需經過研商。

在黨政高層之間進行了高度秘密的研商。

Event Module：Process　　例：研商了將近一個小時。

和討論、商量的比較

Inherent Attribute：討論→discuss something so as to establish pros and cons.

商量→discuss something so as to settle an issue or to achieve an aim.

研商→？（與商量意近）

Role Module：討論→Agent/Theme

商量→Agent/Theme

研商→Agent/Theme

Role Internal Attributes

a.討論問題/?討論對策　　商量對策/?討論問題　　研商對策/?研商問題

b.　商量的 Agent 有 48%(45/93)是只有兩個 entity 的。

● 商討（185 筆）

Syntactic Behavior

1.謂語用法（162/185=88%）

Theme<* （2/162=1%）：電影北美地區發行權仍在商討中。
　　　　　　　　　　　是否發動社會救濟尚在商討中。
Agent<* （17/162=10%）：念頭一轉，與丈夫商討。
　　　　　　　　　　　因此對於差異點要要容忍，常溝通商討。
　　　　　　　　　　　監銀處只以中間人角色與買賣雙方商討。
Agent<*<theme （145/162=90%）：（Q:11/145=8%；NP:120/145=83%）
　　　　例：昨日上午所會首長聚會，係雙方首度商討上述事宜。
　　　　　　同時也和陳範成一方商討拿錢放人的妙計。
　　　　　　蕭萬長南下高雄商討仁大工業區污染問題。
　　　　　　外交部今將邀集有關單位商討撤僑事宜。
　　　　　　衛生署邀集中醫界代表商討對策。
2.名物化 （21/185=11%）：財政部與中央銀行歷經數次商討之後，決定…
　　　　　　　　　　經過兩個多小時的商討，兩人作出：修改國統會名稱…
3.定語 （2/185=1%）：商討的焦點，主要是有關雲林基礎工業區…

Event Module：Process　　例：經過兩個多小時的商討…

● 　商談（68筆）

Syntactic Behavior

1.謂語用法 （53/68=78%）
Theme<* （1/53=2%）：電影內容是什麼？林福地尚未與李翰祥商談。
Agent<* （15/53=28%）：歹徒決意集結古意茗藝館商談，犯罪計畫的日期並不
　　　　　　　　　　確定，導致…
　　　　　　　　　　建議國共直接接觸商談，雙方可以在一個中國的原則
　　　　　　　　　　下…
　　　　　　　　　　會議結束後，另三隊領隊再請趙士強至他處商談。
Agent<*<theme （37/53=70%）：（VP:7/37=19%；NP:30/37=81%）
　　　　例：李先立與鄉長黃榮吉商談工業區內養殖戶輔導就業問題。
　　　　　　目前正與台北市財政局商談代銷北市刮刮樂彩券問題。
　　　　　　環保署也尚未與該處商談合作細節。
　　　　　　陳清水與家人在台北寓所商談喪葬事宜。

2.名物化 （15/68=22%）：總經理黃武雄與台玻總經理林伯豐做數度密切商談。
　　　　　　　　　　雙方並展開數十場次商談。
3.定語 （2/68=3%）：雙方商談的內容有關人士拒絕透露。

表達類 V.S.告訴類

SYNTACTIC BEHAVIOR

謂語用法之 Argument Structure:

①Agent：

表達類：以 agent 當主語 或 以 theme 當主語

以 agent 當主語 ⇨ 民眾迭向該公司表達不滿

⇨ 總統已對中共明白表示…

⇨ 他不敢表露他那醫生的身份

⇨ 戲劇不但可表達人生的甘苦，社會的轉變

（由此例句看來表達類的主語以 expresser 來代替

agent 似乎更為恰當，而 expresser: 可以是人

或物，但物必須是 created piece)

以 theme 當主語⇨ 實行民主法治的決心無從表達

⇨ 開放政策和特區的建設政策，已表達得十分

全面

⇨心情有十會在言行遊玩中不知不覺表露出來

告訴類：以 agent 當主語，省略時均為 被V 句型

⇨ 公司會計打電話告訴我…

⇨ 他透過服務生告知李某…

⇨ 一種命名為 Swiss Lady 的手錶新產品還可以告知生男生

女的最佳時機

省略 ⇨ 據了解，部分增額國代已被告知不選修憲國代

（表一）

%	表達類			告訴類	
	表達 200	表示 200	表露 67	告訴 145	告知 200
以 agent 當主語	97.5	100	52.2	100	95(省略占 5)
以 theme 當主語	2.5	0	41.8	0	0

● "表示" 與 "告訴類" 在主語的用法上較類似

● 表露的句式多半為：(將) …表露無遺，共占 42%，強調 theme

② Goal：

表達類：無＞有（有 goal 時必屬 向….V 或 對…V 的句型）

有 ⇨ 向有關單位表達不滿 （向….V）

⇨ 對老立委表達同情的僅有一位讀者 （對…V）

無 ⇨ 開放政策已是表達得十分全面

告訴類：有＞無

有 ⇨ 好幾位議員告訴他….

⇨ 日本政府在九月底告知我國…

無　⇨ 七十八年的變更，主管機關並未發函告知….

（表二）

%	表達類			告訴類	
	表達 200	表示 200	表露 67	告訴 145	告知 200
*<goal	15.5	0.5	0	100	92
*<	81	99.5	100	0	8

- "告訴" 無賓語提前現象，而 "告知" 賓語提前現象(被告知)佔 35.5%
- 告訴的 goal 是 required，但告知的 goal 並不一定要出現
- 表（一）跟表（二）比可區分表示和告訴類
- "表露" 的 goal 不重要

③ Theme

- Theme 的語意分析：表達類的 theme 以主觀的態度爲主，而告訴類的 theme 以客觀的事件爲主

表達類：

subjective ⇨ 民眾迭向該公司表達不滿

(expresser-oriented ⇨ 表達支持態度/ 關切之意

property) ⇨ 黃未經徵求他的意見，突然辭職，表示強烈不滿

objective ⇨ 在會議上他即表示不競選

告訴類：

subjective ⇨ 無

objective ⇨ 告訴他暗殺成功

⇨ 葡萄王告知民眾購買保濟丸時要認明外盒包裝

⇨ 他也告知有意進行美容整型者一定要慎選醫生

（表三）

%	表達類			告訴類	
	表達 200	表示 200	表露 67	告訴 145	告知 200
subjective	43.5	7	18	0	0
objective	53	93	76	100	100

- 表達類的 theme 以主觀的態度爲主，而告訴類的 theme 以客觀的事件爲主
- 語法上表示屬表達類，但語意上來說表示和告訴類很像

● 　Theme 的語法表現：
　　　　　表達類：theme 當主詞 ⇨ 保七爭功心態表露無遺
　　　　　　　　　　theme 提前 ⇨ 將他的施政能力表露得更加清楚
　　　　　告訴類：theme 當主詞 ⇨ 無
　　　　　　　　　　theme 提前 ⇨ 英國外交部已把這項決定告知伊拉克當局
　　　　ps. Theme 提前時大多帶有一 overt marking (把...、將...)
　　　（表四）

%	表達類			告訴類	
	表達 200	表示 200	表露 67	告訴 145	告知 200
theme 當主詞	2.5	0	14	0	0
theme 提前	3.5	0	2	0	19.5

④ Means:
　　　　　表達類：⇨ 投資人以巨大的黃晚智布偶，表達不滿的情緒
　　　　　　　　　⇨ 孩子們用五顏六色的彩筆在畫紙上表達他們對台北的愛
　　　　　　　　　⇨ 黃信介也以點頭表示同意
　　　　　告訴類：⇨ 他當下以不卑不亢的神情，告訴陳水扁施政辯護的原則
　　　　　　　　　⇨ 交通局曾以電話告知公車處應該停駛
　　　　　　　　　⇨ 榮工處已經以書面文件告知沙國政府，一旦因合約緣故不

	表達類			告訴類	
	表達 200	表示 200	表露 67	告訴 145	告知 200
Means%	12.5	1	0	1	2.5

ROLE MODULE
表達類：expresser, expressed, (means)
告訴類：agent, goal, theme

EVENT MODULE
表達類：punctual
告訴類：punctual

解釋類

Syntactic Behavior

● 解釋 200 筆

謂語用法（148：74%）：

　　　agent<*<S（62：31%）：縣府人員解釋，北宜高速公路已開工，預期房
　　　　　　　　　　　　　市警局長廖兆祥解釋，——Ｏ勤務中心的電腦
　　　　　　　　　　　　　蔣彥士對外界解釋，雙方只是私人聚會，並非

　　　agent<*<VP（3：1.5%）：財政局長曾廣田解釋，已與主計處研商釐定…
　　　　　　　　　　　　　吳市長則解釋，未來擬撥一億元作爲用地取得

　　　agent<*<NP（12：6%）：事後他打電話給我，解釋他的立場
　　　　　　　　　　　　　科長表示，其實怎麼解釋法律，一般員工根本
　　　　　　　　　　　　　陳君毅一直沒有舉出具體的緣由來解釋這項決
　　　　　　　　　　　　　定

　　　theme<*< 成/爲-incremental theme（8：4%）：

　　　　　-NP comp：將閣揆的定位明確解釋成是總統治績的推動者
　　　　　　　　　　對於廠方解釋爲雨水管的說法，游縣長不能認同

　　　　　-S comp：中共當局對統一問題即使有些急，但還不能解釋爲中
　　　　　　　　　　共已預設時間表

　　　　　+R（2：1%）：談判代表應可解釋清楚
　　　　　　　　　　　　縣府要求謝玉解釋清楚，謝除再度說明外

　　　　　+∅　（56：28%）：判決書中認定，原告以反面解釋，不無牽強
　　　　　　　　　　　　經列席的代表解釋後，會議才順利進行

定語用法（12：6%）：以釋字二六一號解釋令來說，中華名國事實上也沒有任
　　　　　　　　　　中央選舉會官員表示，依照大法官會議二六一號解釋文
　　　　　　　　　　高爾夫俱樂部業者紛紛以此解釋函爲護身符，大施障眼

名物法（40：20%）：依內政部的解釋，戶籍謄本規費，服務成本不僅限於影印
　　　　　　　　　除非公所提出合理的解釋，他才不再追究
　　　　　　　　　財政部上述解釋，係針對中油高雄煉油廠相關請求所提出

● 說明 200 筆

謂語用法（116：58%）：

　　　agent<*<S（33：16.5%）：王永慶舉例說明，中國大陸 PVC 管材異常缺乏
　　　　　　　　　　　　　嫌疑人荊玉清雖一再向警方說明，他所販賣
　　　　　　　　　　　　　的均是仿造制式手槍的塑膠玩具槍
　　　　　　　　　　　　　楊博士當場解剖後並說明，致死原因爲肝臟破裂

　　　　　+動賓（3：1.5%）：大多數民眾在報繳中向警方說明是祖先留下
　　　　　　　　昨日除勒令拆除外，也說明將撤銷其公地使用許可
　　　　　+名賓（31：15.5%）：他要求兩單位說明不派員的理由
　　　　　　　　　　蔡萬霖在約見他以前沒有說明見面目的
　　　　　　　　　　遠流出版公司本書清楚說明個性及性向的涵義
　　　不及物--（49：24.5%）：央行將如何因應，官員則不願具體說明
　　　　　　　　被害人懼怕遭受報復，多不敢出面說明
　　　　　　　　縣府有關主管說明後，縣長林源朗肯定承諾解決時限
定語用法（48：24%）：說明書 / 說明會
名物法（36：18%）：該原則並對處罰額度有詳細的說明
　　　　　　事後已向證管會提出說明，官員表示，對於京華證券
　　　　　　被害人妻子及友人的說明，情節動人，過程緊張

●　解說 200 筆
謂語用法（110：55%）：
　　及物--　+句賓（17：8.5%）：管理員在現場解說，水塔絕無遭人破壞
　　　　　　　　　李宏徹解說，地質探測坑有三百公尺長
　　　　　　　　　經濟部官員解說，何以宜蘭不應成為石化工業設置區
　　　　　+動賓（1：0.5%）：李才雄現場解說，要小弟弟小妹妹學好，效
　　　　　　　　　法古代先賢向上
　　　　　+名賓（25：12.5%）：派員到各校解說生理衛生的貼身問題
　　　　　　　　　　昨天特別邀體育專家解說正確的有氧運動
　　　　　　　　　　作者偏重解說反諷觀念的發展
　　不及物--（67：33.5%）：有多位專業工程師在場解說，歡迎各界前往參觀
　　　　　　　　該局也將在古蹟內常駐古蹟講說員，現場為市民
　　　　　　　　解說
　　　　　　　　介紹產品時應一面解說，一面注意顧客的表情
定語用法（35：17.5%）：解說手冊 / 解說員
　　　　　　　他一個人要帶二、三班的學生，解說的效果大減
　　　　　　　加設自動式解說步道
名物法（55：27.5%）：如此不明不白、不切實際又不負責任的解說，如何能令
　　　　　　　農民信服
　　　　　　　觀者可藉著舞碼的解說，更能瞭解如何通過舞者的肢體
　　　　　　　語言，進入創作者的心

表一

解釋類句式分析			解釋 200	說明 200	解說 200
謂語功能	及物	*S	▓▓▓▓▓▓	33：16.5%	17：8.5%
		*VP	3：1.5%	3：1.5%	1：0.5%
		*NP	12：6%	31：15.5%	25：12.5%
	不及物	*成/為…	8：4%	0:0%	0:0%
		*Comp	2：1%	0:0%	0:0%
		*Ø	▓▓▓▓▓	▓▓▓▓▓	▓▓▓▓▓
定語功能			12：6%	▓▓▓▓▓	35：17.5%
名物化			40：20%	36：18%	55：27.5%

Argument Structure

① Agent

② Goal(marked)：有 goal 時均屬"向/為/對 ＜goal＜＊"的句型

　　　　-- 分局長林崇陽向周清玉解釋，此案因並非重大案件，因此，僅在中正

　　　　-- 昨天特別邀體育專家為衛生局和衛生所人員解說正確的有氧運動

　　　　-- 由中央各目的事業主管對參加講習人員解說二十二項特定目的事業法

③ Theme：

Theme 的語意分析：均為 objective

Theme 的語法表現：及物用法時，出現於動詞之後，以 S, VP, 或 NP 的方式出
　　　　　　　　　現 。不及物用法時，出現於動詞前，多屬"就/對 theme 多
　　　　　　　　　所/予以＜＊"，的句型。但大多數不及物用法時，是沒有 theme
　　　　　　　　　的。

　　　　及物-- 　除勒令拆除外，也說明將撤銷其公地使用許可
　　　　　　　　經濟部官員解說，何以宜蘭不應成為石化工業設置區
　　　　　　　　他打電話給我，解釋他的立場

　　　　不及物-- 針對青少年性知識問題予以宣傳與解說
　　　　　　　　在給總統的信中，特別就此點予以解釋
　　　　　　　　至於是否將延緩公佈調價案，他不願具體說明

表二

	解釋 148	說明 116	解說 110
Agent	148:100%	116:100%	110:100%
Goal	13:8.7%	13:11.2%	15:13.6%
Theme	88:59.4%	78:67.2%	58:52.7%

● goal 在解釋類動詞中並不重要

建議類

Syntactic Behavior

● 建議 200 筆

謂語用法 (141:70.5%):

    agent<*<S（18：9%）⇨ 高雄縣長余陳月瑛建議，大高雄都會區捷
運系統應該延伸至岡山鎮

    ⇨ 市府建議，目前交通部正訂定台灣地區海
上遊樂船舶活動管理辦法

    ⇨ 好友貨運公司在會中提案建議，自用小貨
車申領牌照應比照營業車辦理

    *< goal <VP（72：36%）⇨ 桃園市民劉珠建議大家，慎防睡前十忌

    ⇨ 他將建議中央成立消防警察局

    ⇨ 市議員侯永利建議全體議員發動漁
船到釣魚台舉行漁民示威大會

    agent<*<VP（50：25%）⇨ 張志滿委員更建議，可指派委員直接參
與協會的選訓會議

    ⇨ 如果主管農保的行政單位，不曉得如何去
收拾農保的爛攤子，張博雅建議不妨去請
教郝院長

    ⇨ 財政部的討論文件建議加速調高供款額

    *< ∅（1：0.5%）⇨ 許武勝亦表示，在其權限範圍將業者意見整
合後，將向行政單位建議，並反應業者心聲

定語用法（15：7.5%）⇨ 建議文/ 建議名單/ 建議地點/ 建議事項/ 建議案

    ⇨ 派兩人於海基會建議的十二日來台

    ⇨ 中共國務院台灣事物辦公室今晚就海基會給國台辦
回函中所建議的探是十一位漁民的辦法表示

名物化（44：22%）⇨ 七國領袖已承諾將提供主要為技術方面的建議，但非現
金援助

    ⇨ 以從整體發展台南市政建設為題，提出報告與諸多建議

    ⇨ 塑膠原料廠這項建議，無異是開倒車的行為

    ⇨ 美國不會接受將這兩個問題相連的任何建議

● 提議 200 筆

謂語用法（120：60%）:

    agent<*<S（29：14.5）⇨ 郝院長還提議凡是黃皮膚黃臉孔據華裔身
份的僑民皆可辦理登記選舉

    ⇨ 三位石化工業者提議丁二烯能以歐美平均計

　　　　　　　　　　　　　價方式供貨源

　　　　　　　　　　⇨ 他並提議台灣歸還中國之說應重新考慮

*<VP（79：39.5%）⇨ 謝長廷、盧修一兩位委員也提議保留條
　　　　　　　　　　　文

　　　　　　　　　⇨ 曾有人提議，最好將這些執行作業做通
　　　　　　　　　　盤考慮

　　　　　　　　　⇨ 周書府則提議，增列強姦犯亦不得適用
　　　　　　　　　　減刑

*<NP（1：0.5%）⇨ 戈巴契夫並未提議高峰會談的日期

*<∅（1：0.5%）⇨ 當初海部首相提議時盡量避開使用自衛隊的
　　　　　　　　　　字眼

+賓語提前（9：4.5%）⇨ 依憲法規定，立委修憲需由四分之一
　　　　　　　　　　　立委總額提議，在四分之三出席的情
　　　　　　　　　　　況下

　　　　　　　　　⇨ 當夜強盜楊姓被害人財物，是由在逃
　　　　　　　　　　的蔡姓少年提議，另有曾姓少年參與

+賓語提前< *<爲<comp（1：0.5%）⇨ 尤清表示，將在二月底
　　　　　前將球場土地使用規畫草案提議爲審查後再決定是否

定語用法（20：10%）⇨ 提議人

　　　　　　　　⇨ 至於歐市提議的另外兩點在數小時前已獲致解決

　　　　　　　　⇨ 至於費率方面則以縣府所提議的甲種費率爲準

名物化（60：3%）⇨ 民進黨議員陳光復附和這項提議，同時發表一份聲明書
　　　　　　　　表示…

　　　　　　⇨ 對於這個大膽的提議，台視新聞、節目、業務三部門則表
　　　　　　　顧慮

　　　　　⇨ 財政部雖對其中三項提議同意適度放寬，至於另三項…

<center>表一</center>

建議類句式分析			建議 200	提議 200
謂語用法	及物	+句賓	18：9%	29：14.5
		+ goal + VP	79：16%	--
		+動賓	50：25%	40：50.5%
		+名賓	--	1：0.5%
	不及物	+ ∅	1：0.5%	1：0.5%
		+賓語提前	--	9：4.5%
		+賓語提前< *<爲<comp	--	1：0.5%
定語用法			15：7.5%	20：10%
名物化			44：22%	60：3%

詞彙語意初步報告　1900/03/13
報告人　　張之玲

Argument Structure

① Agent: "提議"的 agent 均爲人或團體組織，但"建議"的 agent 除了人或團體組織外，有兩筆例外情形如下：

⇨前項研究建議，市府應將路邊收費停車、工友路外停車場及民營路外停車場做整體規畫

⇨財政部的討論文件建議加速調高供款額

② Goal:

當"提議"帶有 goal 時，goal 前均有 overt marking—向，此句型"向<goal< * " 共占 6：3% 。而"建議"除了有 4 筆在 goal 前有 overt marking—對或向，另有 72：36%是" * <goal<VP "的句型。由此，可假設"建議"的 goal 較爲重要。

③ Theme: Theme 出現的比例在"建議"與"提議"中各占 70%和 60%，均極重要。

Aspect

1. 　托兒所廁所改建工程已提議二十餘年

　　？托兒所廁所改建工程已建議二十餘年 (不能賓語提前)

2. 　他一直提議：他一連提了很多的方案

　　他一直建議我們坐車：持續地提出同一個方案

　　屢次提議

　　一再提議

　　一再建議

抱怨類

Syntactic Behavior

- 抱怨 200 筆

謂語用法（163：81.5%）：

    agent<*<S（73：36.5%）⇨ 學生家長抱怨，他們的孩子甫進國小一

                年級就十分懼怕寫作業

               ⇨ 許多登山老友向他抱怨，山路改為階梯

                後，大小步不由人

               ⇨ 王女墜亡前曾數度向她抱怨，王某生活

                不檢點，兩人並曾數次為此發生爭執

    agent<*<NP（2：1%）⇨ 顧客抱怨打不進來或很難接通的現象

               ⇨ 各區公所紛紛抱怨找不到投開票所管理員

                的情況

    agent<*<VP（21：10.5%）⇨ 沈富雄抱怨已經四十多小時未進食

               ⇨ 不少從業多年的攤販抱怨未能取得合法攤

                位而影響日後生計

               ⇨ 周星馳抱怨拍片太多

    Theme <招致、遭、受到<agent< *（67：33.5%）⇨ 新建攔砂壩的計

                 畫案，已經談了三年多，卻猶未見施工，

                 招致村民抱怨

               ⇨ 要道拓寬以後未能及時鋪設柏油，造

                成車輛行駛不便，迭遭民眾抱怨

定語用法（7：3.5%）⇨ 派員在門外向抱怨的民眾賠不是

              出貨期間未曾有催交，拒收及異樣抱怨之情事

              自九日開始完全斷水，廠商抱怨之聲四起

狀語用法（1：0.5%）⇨ 當他們回家時她抱怨地對她的丈夫說：你看電影上

名物化（29：14.5%）⇨ 對消費者的抱怨，市銀行經理王紹慶指出

              為減少市民對路燈經常失明之抱怨，公園處採取了

              不可否認有些教師對教導眷村小孩有諸多抱怨

- 埋怨 51 筆

謂語用法（36：70.5%）：

    agent<*<S（14：27%）⇨ 他埋怨，當地的環境污染似不如傳說的那麼

                嚴重

               ⇨ 經銷老板娘埋怨彩券生意似曇花一現

               ⇨ 居民卻埋怨消毒水味道太重

    *< patient < comp（11：21.5%）⇨ 業者埋怨衛生單位出爾反爾

⇨ 請別在偷吃我東西後還埋怨我小氣

⇨ 客戶埋怨萬興不即早通知

* < patient (4：7.8%) ⇨ 蘇聯民眾還在猛埋怨戈巴契夫

⇨ 沈某毫無埋怨他太太的意思

⇨ 誰也不能埋怨誰，各人有各人的立場

Theme < 令、惹得、讓<agent<* (6：11.7%) ⇨ 市警局包去所有功勞，令原專案小組人員埋怨不已

⇨ 市場收入不佳只有提高攤位租金，而惹得攤販們埋怨不已

⇨ 旅遊業者在旺季期間乘機提高收費價格達一、二倍，讓遊客埋怨不已

+∅ (1:1.9%) ⇨ 黃火亮在那裡工作了三十多年，從不埋怨

定語用法（5：9.8%）⇨ 現場埋怨之聲不絕於耳

⇨ 埋怨的話題 / 埋怨聲

狀語用法（4：7.8%）⇨ 居民埋怨說，德化社為日月潭風景區中重要的觀光據點

⇨ 業者更埋怨道，在前幾回的工資及購買的砂石仍無蹤跡

名物化（6：11.7%）⇨ 候選人埋怨的理由，除黨員投票需花錢買票外，連接下來

⇨ 取消載客獎金之後，的確曾引起駕駛員的埋怨

表一

抱怨類句式分析			抱怨 200	埋怨 51
謂語用法	及物	+句賓	73：36.5%	14：27%
		+動賓	21：10.5%	--
		+名賓	2：1%	--
		*< patient < comp	--	11：21.5%
		* < patient	--	4：7.8%
	不及物	+ ∅	--	1:1.9%
		Theme < *	67：33.5%	6：11.7%
定語用法			7：3.5%	5：9.8%
狀語用法			1：0.5%	4：7.8%
名物化			29：14.5%	6：11.7%

Argument Structure

① Agent: 均為人或團體組織 [+human]

② Goal: 當"抱怨、埋怨"帶有 goal 時，goal 前均有 overt marking—向或對，此句型為"向/對<goal< * "，各有 1 筆與 15 筆。

③ Theme：Theme 出現的比例均非常的高，是他們的必要論元之一，
且有人和事之分。埋怨是人，抱怨是事。

Aspect

① 開始抱怨/埋怨：with a starting point

② 他一直在抱怨/埋怨：could be continued

● Representation of Event-Structure Attributes of 抱怨類:

Module/ Attribute	抱怨	埋怨
Event Module	Bounded process ●////● Ex: 一再抱怨	Bounded process ●////● Ex: 一再埋怨
Inherent Attributes	Speech act of complaining	Hold someone's responsible of sth.
Role Module	Agent/(Goal)/Theme	Agent/(Goal)/Patient/Theme
Role- Internal Attritbutes	Theme is a statement.	Theme is a statement.

責怪類

Syntactic Behavior

● 責怪 67 筆

謂語用法（63：94%）：

  goal＜（被、加以）＜＊（7：10%）⇨ 學童被蚊子叮咬，校方、社區屢被責怪

    （goal 提前）　　　　　　⇨ 新手的補充權並不在縣警局，所以自然
                    不能加以責怪

                    ⇨ 一旦被知道，他們還會被責怪呢

  ＊＜goal＜theme（39：58%）⇨ 張某常責怪林女將他的退休俸花光

                  ⇨ 市府長官也責怪捷運局築了圍籬卻不動工

                  ⇨ 遊客打電話責怪墾管處故意刁難

  ＊＜goal（17：25%）⇨ 他在簡報過程中，並沒有動怒責怪主辦單位

              ⇨ 社區托兒所環境整潔，地毯全部換新，仍然飽受蚊害，
                幼童家長不斷責怪社區理事會

              ⇨ 他從頭到尾沒有責怪過張立群

定語用法（0：0%）

名物化用法（4：6%）⇨ 黨團書記呂進福還為此受到不少責怪

           ⇨ 他做了過多與能力不符的承諾，造成居民的質疑及責
            怪

           ⇨ 他並不會因上級的責怪而降低他對學生管教的熱心

● 指責 200 筆

謂語用法（142：71%）：

  goal＜（遭、受、被、引起 agent）＜＊（32:16%）

                ⇨ 國民黨政府造成黨政不分情形，以致國民黨屢遭指責

                ⇨ 福德坑屢受附近居民指責放流水至今仍不符標準

                ⇨ 市銀抽籤決定承銷人購買彩券的先後順序的過程缺乏
                  公信力，會被指責有黑箱作業的情形

  ＊＜goal＜theme（103：51.5%）⇨ 蔡啟芳昨發表致郝院長公開信中，指責
                          郝大帥官僚氣息出巡及國民黨政府不合理的
                          制度

                    ⇨ 他們強烈指責工務局在分組審查時不提出說
                      明

                    ⇨ 中共指責中華奧會成員自己意見就相左

                    ⇨ 陳源勝等人憤怒指責內埔鄉亂倒垃圾的行為

                    ⇨ 謝森中希望國人不要指責央行制度干預匯率
                      的政策

　　*＜goal　（10：5%）⇨ 北部的住戶常有滴水難求的情事發生，令水用戶困擾
　　　　　　　　　　　　　不已，因而交相指責水公司營運所

　　　　　　　　　　　⇨ 美伊雙方在這段日子裡不斷使用叫罵的情緒用詞來指
　　　　　　　　　　　　責對方

　　　　　　　　　　　⇨ 鄉民又因開放幅度的老問題交相指責省住都局官員

　　*＜theme（9：4.5%）⇨ 前任鎮長黃明樹指責，市場租定的訂定是必須經
　　　　　　　　　　　　　過代表會審議通過後才能生效

　　　　　　　　　　　⇨ 市議員陳學聖昨在議會指責目前警政風氣淪喪

　　　　　　　　　　　⇨ 郝院長對外發表言論指責仿冒是海盜行為

　　　　　　　　　　　⇨ 戴建三議員指責事實和理想有所差距

　　　　　　　　　　　⇨ 養豬業者強烈指責都是溪湖鎮公所惹的

　　　　　（4：2%）⇨ 有人語氣激動地大聲叫罵，指責市公所的<u>不是</u>

　　　　　　　　　　　⇨ 不要一昧指責非法補習班的<u>存在</u>

定語用法（8：4%）⇨ 最初賴勁麟指責口吻極濃，惹來董永雄些許不以為然

　　　　　　　　　⇨ 警方如果因為穿著制服反成為指責的目標，實在很冤

　　　　　　　　　⇨ 人道主義這個學術名詞只成了兩岸互相指責的藉口

狀語用法（1：0.5%）⇨ 謝里長指責說，這條新西街長約一百公尺

名物化用法（33：16.5%）⇨ 廖縣長針對營建署的指責曾激動的反駁

　　　　　　　　　　　⇨ 面對業者的指責，台北市分局刑事組長表示警方
　　　　　　　　　　　　一切依法辦理

　　　　　　　　　　　⇨ 陳議員這種指責只會嚴重打擊大家士氣

表一

責怪類句式分析		責怪 67	指責 200
謂語用法	goal＜（被….）＜*	10%	16%
	*＜goal＜theme	58%	51.5%
	*＜goal	25%	5%
	*＜theme	--	6.5%
定語用法		--	4%
狀語用法		--	0.5%
名物化		6%	16.5%

Argument Structure

① Agent: 均為人或團體組織

② Goal: "責怪"一定帶有 goal，不論是在動詞後或移於動詞前加以強調，因此對
"責怪"來說，goal 是必要論元之一。反之，"指責"有 13 筆的例子是不帶有 goal
的，相較之下，goal 在"指責"的角色不如在"責怪"中重要。

③ Theme：在"責怪"後不能直接加 theme，但在"指責"後即可。是以推測在"指
責"中 theme 比 goal 重要

Aspect

① 責怪/指責過他不守交通規則

② 他一直 責怪/指責 我：could be continued

● Representation of Event-Structure Attributes of 責怪類:

Module/ Attribute	責怪	指責
Event Module	Punctual /	Punctual /
Inherent Attributes		
Role Module	Agent/Goal/Theme	Agent/(Goal)/Theme
Role- Internal Attritbutes		

2. Preliminary Studies on Verbs of Attitude

Speaker-oriented

S→		Target	{converge (+/-volition)}

(volition 是 role-internal features，如何是好？see 接受動詞)

←S		Target	{diverge (+/-volition)}
S	‖	Target	{-converge, -diverge}
S←		Target	{accept}
S→		Target	{reject}
S	‖	Target	{-accept, -reject}

尊敬動詞：
    [converge]尊敬、推崇、敬重、敬佩、激賞、佩服、欽佩、尊重
    [diverge]瞧不起、看不起、看輕、看扁、不屑、貶低(+action)、嘲笑(action)、
        恥笑(action)

喜愛動詞：
    [converge]崇拜、著迷、傾心、愛慕、瘋狂、迷戀、崇拜、喜歡、愛、
        熱愛、欣賞（劉老師助理，已做，已報告）
    [diverge]討厭、恨、厭惡、受不了、唾棄、仇恨、反胃、有成見

取悅動詞：
    [converge, +action]討好、巴結、奉承、阿諛、吹捧、取悅、拍馬屁、逢迎、
        迎合、諂媚、獻殷勤、灌迷湯
    [diverge, +action]打壓、侮辱、羞辱、排斥、排擠、傾軋、欺負、醜化、中
        傷、扯後腿

羨慕動詞：
    [converge]羨慕、艷羨、稱羨
    [diverge]嫉妒、妒忌、眼紅、吃醋

接受動詞：
    [converge (+volition), +action]堅持、力持、秉持、抱持
    [converge (-volition), +action]遷就、將就、屈服
    [accept, +action]接受、承受、接納、笑納
    [diverge, +action]放棄、屏棄、捐棄、捨棄、逃避、割捨、躲避、撇開
    [reject, +action]拒絕、回絕、婉謝、推辭、辭謝、阻撓、廢除

偏袒動詞：
    [converge, +/-action]包庇、偏袒、偏心
    (??)[accept, +/-action]放任、縱容、姑息
    [-converge, -diverge]公正、嚴明

同情動詞：
    [converge]同情、可憐、憐憫、心疼、哀憐、愛憐、憐惜、憐憫
    [diverge]無情、狠心、殘忍、殘酷、殘暴、惡毒、毒辣、暴戾

敷衍動詞：

[-converge, -diverge]應付、敷衍、推託、搪塞、虛與委蛇、馬虎

感激動詞：

[converge]感激、感恩、感謝

[diverge]負心、薄情、過河拆橋、恩將仇報、翻臉不認人、兔死狗烹（以成語居多）

體貼動詞：

[converge, +action]體貼、周到、著想為…設想、貼心、知心

[diverge]敬而遠之、視同陌路、疏遠、生疏

信疑動詞：

[accept]相信、堅信、輕信、確信、聽信、預料、預期、料想

[-accept, -reject]懷疑、猜測、推測、猜想、半信半疑…（鳳儀，已做，已報告）

信任動詞：

[converge, -action]相信、信任、信賴、寵信

[-converge, -diverge]懷疑、生疑、多疑、狐疑、起疑、疑慮

[diverge]猜忌、猜疑…（鳳姐，已做，未報告）

滿意動詞：

[accept]滿意、稱心、看…順眼、中意、合意、稱意、差強人意

[-accept, -reject]失望、心寒、灰心

[reject]不滿、看…不順眼、絕望、掃興

[reject, +action]挑剔、吹毛求疵、刁難、雞蛋裡挑骨頭、找碴兒、攻擊、批評

計較動詞：

??[-accept, -reject, +action]計較、斤斤計較、錙銖必較

[accept]大而化之、有度量、寬容

責備動詞：

[reject, +action]責怪、怪罪、抱怨、斥責、譴責、非難、指責、指摘、苛責、訓斥、痛斥、數落、罵、

[accept, +action]原諒、包容、包涵、見諒、留情、高抬貴手、開恩、寬容、寬恕、諒解、擔待、饒恕

忍耐動詞：

[-accept, -reject]容忍、忍受

[-converge, -diverge]忍耐、克制

[accept, converge]禁不住、不由自主、忍不住、身不由己(-volition)、難忍

3. Preliminary study on Verbs of Loving

	喜 (40)	喜歡 (238)	喜愛 (131)	喜好 (28)	歡喜 (36)	愛 (245)	愛好 (41)	愛護 (38)	戀愛 (33)	熱愛 (41)	愛惜 (30)	珍惜 (72)	欣賞 (94)
N	28% (11) 喜、怒、哀、樂		22% (29) 有一種莫名的喜愛	61% (17) 符合個人的喜好與需求	44% (16) 加倍的歡喜與期待	43% (105) 一份堅持的愛	22% (9) 他也有同樣的愛好	16% (6) 父母對我的愛護	52% (17) 五十年代式的戀愛	24% (10) 表達對人生的熱愛	3% (1) 平時細心的愛惜保養	4.2% (3) 一個修行者對因緣的珍惜	2.1% (2) 同時也賣出了欣賞和讚美
V	7.5% (3) 喜干樽醉意	46% (110) 誰喜歡這份差事	31% (41) 消費者也喜愛	14% (4) 他喜好美國文化		34% (82) 他愛得如此艱難	7.3% (3) 舊金山人愛好音樂	63% (24) 要愛護動物	27% (9) 我們戀愛五年	34% (14) 她熱愛中國	90% (27) 要愛惜光陰	86% (62) 希望你珍惜	66% (62) 深具到場欣賞的價值
+V	30% (12) 此人喜搶鋒頭	45% (106) 她喜歡喝酒	9% (12) 喜愛打棒球	3.5% (1) 國人喜好追逐流行	2.7% (1) 歡喜喝一碗茶	16% (39) 青少年不愛讀書							
*+的 (agent 在前)		4.2% (10) 美國較不喜歡的國家	20% (26) 豢些自己喜愛的寵物	3.5% (1) 文人喜好聚集之場所		2% (5) 媽媽愛我們的心	2.4% (1) 爸爸愛好皮鞋的習慣	5.2% (2) 民眾愛護的民族文學		12% (5) 他們熱愛故鄉的情操很感人	3% (1) 他連他最愛惜的生命都放棄了	1.4% (1) 美伊雙方各自珍惜砲彈的態度有：	1% (1) 男女互相欣賞的因素有：
*+的 (agent 在後)		0.8% (2) 喜歡炫耀的人	16% (21) 喜愛棒球的球迷	14% (4) 喜好藝術的人		2.4% (6) 那些愛喝茶的朋友	24% (10) 愛好垂釣的人	13% (5) 長期愛護的旅客		24% (10) 一個熱愛文學的人	3% (1) 愛惜三毛的人		7.4% (7) 不懂欣賞的人看來
*+的 (agent -less)		1.6% (4) 看見喜歡的東西	2.2% (3) 收集喜愛的球棒卡	3.5% (1) 喜好和選擇的住宿設備		2.4% (6) 這一切愛的表現		2.6% (1) 了解應該愛護動物的道理	3% (1) 從戀愛的香迷中甦醒	2.4% (1) 加上熱愛民族的情操		8.3% (6) 最值得珍惜的本來面目	15% (14) 培養欣賞的能力
+的 (total)		6.7% (16)	38% (50)	21% (6)		7% (17)	27% (11)	21% (8)	3% (1)	39% (16)	6% (2)	9.7% (7)	23% (22)
定語	2.5% (1) 喜者		1.5% (2) 喜愛球隊的產品			0.8% (2) 愛鴿人	44% (18) 愛好者		18% (6) 戀愛長跑	2.4% (1) 熱忱程度			8.5% (8) 戲劇欣賞課
adj.	33% (13) 憂喜參半				11% (4) 寧靜歡喜的態度								
adv.					8.3% (3) 我歡喜的收下了								
子句		2.5% (6) 我不喜歡他瞎扯蛋											
述語					33% (12) 心裡暗自歡喜								

為什麼只有喜歡後面接子句？

愛名物化的比例(43%)相當高，喜歡卻沒有名物化的例子，相對的，喜歡用做動詞(46%)或助動詞(45%)的比例則高出愛(動詞 34%助動詞 16%)許多。

歡喜比較接近述語，並有用做形容詞及副詞的語料。

*在觀察語料中發現有許多「~的+N」、「~+V 的+N」、「~+N 的 N」的句式，便以該動詞的主事者位置為分類，列出主事者在前、後及無主事者的三種句式。愛戀動詞中喜愛(38%)、喜好(21%)、愛好(27%)、愛護(21%)、熱愛(39%)、欣賞(23%)等動詞皆有一定比例的上述句式。

喜好(61%)、愛好(22%)、戀愛(52%)名物化的比例皆比用做單純動詞的比例為高。

Part Two

1. Method and Steps

分析方法和步驟：

動詞詞彙語意分析可以從許多不同的角度下手，去掌握各種由詞彙語意決定的語言規律。在過去兩年的研究中，我們主要是從近義動詞和動詞語意場下手，其方法和步驟如下：

1.從下列幾點觀察整理近義動詞或同一語意場內動詞：
  a. 意義和詞類分項
  b. 語法功能異同：作謂語、定語、狀語、補語、名物化的分佈情形。
  c. 論元結構：所搭配的必要論元和非必要論元。
  d. 時態
  e. 搭配情形：作謂語時所搭配的狀語、補語、句型
              作定語時所搭配的名詞中心語
              作狀語或補語時所搭配的動詞中心語

2.找出近義動詞或同一語意場內動詞共有的語法表現，建構基本的事件訊息結構。例如：情緒動詞都可以接程度副詞「很、非常、十分・・・」，其事件結構中都帶有 state 的事件模組。又，情緒動詞的論元結構除了做出情緒反應的體驗者（experiencer）外，還應該帶有肇因事件（cause）。因為情緒動詞的前後常常會出現一個子句，表示引發該情緒的原因。雖然它出現的位置不一，見下例，卻表示共同的語意訊息。

    你那麼晚回來，讓媽媽覺得很難過。
    更令我感到難過的是他還有一個交往七年的女友。
    我很難過他這麼年輕就去世了。
    全家人也為了您出了車禍而感到難過。

3.找出近義詞或同一個語意場內動詞的用法差距，並設法以語意屬性解釋並區分之。例如情緒動詞雖然在時態上都屬狀態動詞，其事件結構中都帶有 state，但是可以再細分成兩大類，並以有無 boundary 來區分。又例如「趕」後接的名詞片語有詞義誘迫（meaning coercion），但是「追」後接的名詞片語沒有。當我們說「趕公車、趕報告」，是指「趕著『搭』公車、趕著『寫』報告」。這「公車」和「報告」出現在「趕」的後面是指涉一個事件，而非單純的名詞。而從「公車」延伸到「搭公車」是從公車的經驗知識結構中的主事層面（agentive）推導出來的。

分析範例：以「建、蓋、造」為例

中文裡「建、蓋、造」是近義詞，都可以翻譯作'build'，但觀察這三個動詞所接的賓語之後，我們發現其間的語意仍然有所區別：

（1）
a. 地主在河川地　蓋/建/?造　房子
b. 政府在山上　造/建/?蓋　水庫
c. 計畫與波音合作　造/*建/*蓋　飛機

從上面的例子，我們大致可以歸納出以下的觀點：「建」的賓語必須是建築體（building）；「蓋」的賓語只要是一般概念中的建築（architecture）就可以；「造」則需後接一個牽涉到內部設計的賓語。這些不同的語意需求使得「造」才可以在下列句子中出現：

（2）工程師　造/*建/*蓋　不出房子

此外，這三個動詞在時態組合（aspectual composition）上也有所不同。「建」可以用來表示把描述焦點放在事件結構的端點（event-endpoint）或完成狀態（completion of the activity）：

（3）房子　建/*蓋/*造　了三年了還沒人住

總之，雖然這三個動詞都有相同的論元模組（Role Module），都會接 incremental theme，但它們在事件模組（Event Module）和論元內部屬性（Role-internal Module）上仍有所區別：

（4）MARVS Representation of 建、蓋、造
建　　・/////・（Bounded Process）　　<Agent, Incremental Theme>
　　　　　　　　　　　　　　　　　　　　　　　│
　　　　　　　　　　　　　　　　　　　　　[architecture]
蓋　　・/////（Inchoative Process）　　<Agent, Incremental Theme>
　　　　　　　　　　　　　　　　　　　　　　　│
　　　　　　　　　　　　　　　　　　　　　[building]
造　　・/////（Inchoative Process）　　<Agent, Incremental Theme>
　　　　　　　　　　　　　　　　　　　　　　　│
　　　　　　　　　　　　　　　　　　　　　[design]

2. Module-Attribute Representation of Verb Semantics-MARVS

1. 動詞詞彙語意的表達方式

　　根據 Huang & Ahrens (1999) 及張、陳、黃(1999)的整理說明，我們可將目前所用的動詞詞彙語意的表達方式簡介如下：

　　　事件訊息結構中所含的訊息共有四種，分成兩個層面：第一個層面的訊息直指事件本身，包含了事件類型(Event Types)和事件內部屬性(Event-Internal Attributes)；第二個層面的訊息涉及事件的參與成分，包含了論元模組(Role Module)和論元內部屬性(Role-Internal Attributes)。事件類型也是由一個個語意單位所組合而成的，我們稱這些語意單位為事件模組(Event Module)，它和其他語意屬性不同處在於，這些事件模組可以互相結合，組合架構成一個個事件結構(Event Structure)，每個事件結構則代表一個事件類型。動詞的每個意義都有一特定的事件訊息結構，其整體架構如下：

(1) Module-Attribute Representation of Verbal Semantics (MARVS):
　　Verb – Sense$_i$ – Eventive Information

```
                              |
+-------------------------------------------------------+
|  Event Module       ---------      Role Module        |
|  事件模組                          論元模組            |
|     |                                 |               |
|  Event-Internal Attributes   Role-Internal Attributes |
|  事件內部屬性                      論元內部屬性        |
+-------------------------------------------------------+
```
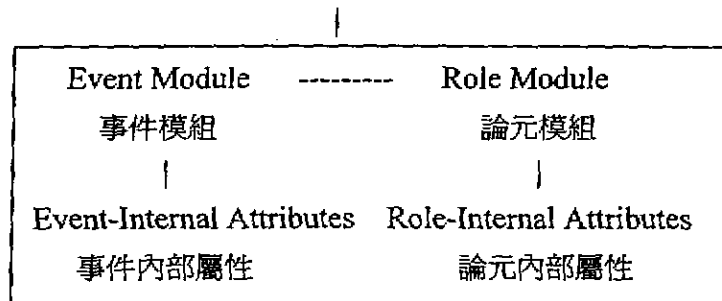
a. 事件類型(Event Types)及事件結構(Event Structure):

　　　一個動詞所能表達的事件類型主要是由五種基本事件模組(event module)組成。不同事件類型都是由這五種基本事件模組組合而成的。這五個模組描述了：a)事件的基本類型，包括了過程(process)、狀態(state)及階段(stage)、b)事件的長短、以及 c)事件的端點(boundary)。

　　　五個基本事件模組：　　　　　•　　　端點（Boundary）
　　　　　　　　　　　　　　　　/////　　過程（Process）
　　　　　　　　　　　　　　　　^^^^^　　階段（Stage）
　　　　　　　　　　　　　　　　-----　　狀態（State）
　　　　　　　　　　　　　　　　/　　　　瞬時（Punctuality）

　　　一個動詞所指涉的事件類型可能是單純的，也可能是組合的。在指涉事件的開端或終端時每個動詞各有不同呈現能力，有的能指涉開端和終端，有的只能指涉開端，有的只能指涉終端，有的開端終端通通不指涉。依照這些區別，我們可將至目前為止所找出的十三種事件類型區分為三大類：

（一）表示核心事件(nuclear event)的動詞：這一類動詞只能呈現一種單純的
　　事件型態。

/////	散步、旅行	(process)
-----	快樂、疲倦、恨...	(homogeneous state)
/	打算	(punctuality)
•	死、斷、醉	(completion)

（二）表示簡單事件(simplex event)的動詞：這一類動詞只能表示單一的事件
　　模組，但是可以同時指涉事件的端點。

•/////	下雨、開會、追趕、考慮...	(inchoative procee)
•/////•	建、製造、吃、吃飯...	(bounded process)

•^^^^	上升、下降、縮小、衰老...	(inchoative stage)
•^^^^•	凋謝	(bounded stage)

•----	高興、累、瘦、破、懂...	(inchoative state)

/•	打死、打破、騎累、答對...	(resultative)
⫻	出發、畢業、離開、抵達...	(completive punctuality)

（三）表示複合事件(composive event)的動詞：這類動詞可以指涉過程或過程
　　完成後的狀態，但是這兩種事件模組不能同時呈現。

•----	坐、躺、躲、包圍、放、知道...	(completive resultative)
•/////•---	穿、戴、掛、綁、連接、了解...	(dual process-state)

b. 事件內部屬性(Event-Internal Attributes)：

　　　本屬性是用來描述事件本身特質的屬性，與動詞的事件類型或論元無關。
而目前找到的特質屬性不多，有 control、factive 和 disposed。

c. 論元模組(Role Module)：

　　　動詞可攜帶的每個論元都視為其事件訊息結構上的一個屬性，共有
agent, theme, goal, experiencer, recepient, source, causer, location, range, target,
comparison, cause, incremental theme, locus.

d. 論元內部屬性(Role-Internal Attributes)：

論元內部屬性是指論元本身的特性，因為該特性會影響到動詞的使用狀況，所以特別標示出來，如：volition.

2. 動詞的詞彙語意區分和詞義延伸：

　　動詞詞意的區分是一個相當複雜難解的問題，大致上可以分成兩個重要議題：意義的區分和意義的延伸。而在意義的區分上，如何判定一個動詞具有幾個意義、如何區分一個動詞不同的意義、並找出區分動詞意義的原則是我們的首要目標。在意義的延伸上，我們認為動詞的意義延伸是經由邏輯推導或是經驗知識結構中的層面轉移而得到的，它和本義的差別在於意義焦點的轉移。

（一）時態改變：正走在街上[-boundary]/走了[+boundary]；他正在穿衣服/穿著一件襯衫。

（二）論元結構改變：行為(theme)端正/我們(agent)要端正社會風氣(theme)；他的打扮(theme)很奇怪/我(experiencer)正奇怪你怎麼不在家(goal)。

（三）論元類型改變：他跑操場/他專跑議會新聞；走小巷子/走學術路線；他送朋友出門/他送一批貨到南部。

3. MARVS Representation of Verbs of Communication

Verbs of Communication

● Information for MARV Representation of Event-Structure Attributes of 談類：

Module/ Attribute	談	提	講
Event Module	Process with a starting point ●////	Punctual /	Process with a starting point ●////
Inherent Attributes	Talk about a 'range' topic	mention	Talk about a specific(individualized) topic
Role Module	Agent, Theme	Agent, Theme	Agent, Theme
Role- Internal Attributes	Topic theme Co-agent goal	Goal is not an important role.	

➢用 duration 來測試是否是有 starting point 的動詞。

➢「提」是 punctual，後不接 duration：*這件事他提了三小時。

➢「講」有一延伸語意，從最中心的 repeated mention 轉成 emphasize：講信用。

➢這三個動詞加「起」後都會轉成 mention 義。

● 句法功能的表現

	談(196 筆)	提(183 筆)	講(194 筆)
Vt		29%(53)	33%(64)
Vi	40%(79)	27%(50)	
Relative clause	10%(19)		14%(27)

➢ Preposition 的種類

	和	跟	與	為	向	對
談	11	5	5	N/A	N/A	N/A
提	1	2	N/A	N/A	N/A	1
講	1	5	N/A	1	1	3

● Information for MARV Representation of Event-Structure Attributes of 問類：

Module/ Attribute	問	質問	詢問

Event Module	/Speech act verb	/Speech act verb	Process ////
Inherent Attributes	Ask or Ask about Ex:有人問孔子 問禪法	Asking with a challenging attitude	Report an asking event
Role Module	Agent,(Goal),Theme	Agent, (Goal), (Theme)	Agent, (Goal), (Theme)
Role- Internal Attributes	Theme must be: a. A not A b. Interrogative Phrase c. Noun Phrase d. Yes-No Question	Theme must be interrogative (no NP). Ex.吳某火大，質問 梁某會不會騎車？	Theme tends to be NP. Ex.可向人事室詢問有 關的規章。

≫問不可省略 Theme；質問可以只有 Goal，不一定要有 Theme：陳水扁不滿此
一答覆，再質問陳履安，此時…。

≫詢問和質問很像，都把焦點放在 Manner 上，但詢問的 Manner 沒有質問來得
強（質問可作狀語→他質問說：誰要來這些黃色笑話負責？）。

● Representation of Event-Structure Attributes of 說類:

Module/ Attribute	吐露	透露	披露	揭露	敘述	述說
Event Module	process with a starting point ●////	process with a starting point ●////	Punctual /	Punctual /	process with a starting point ●////	Process ////
Inherent Attributes	-Express -Capable of uttering message -Agent- oriented	-Say -Capable of conveying/ sending message -Agent- oriented	-Make something unknown being publicized through the media -Theme- oriented	-Make something negative to be known -Theme- oriented		
Role Module	Agent/ Theme	Agent/ Theme	Agent/ Theme	Agent/ Theme	Agent/ Theme	Agent/ Theme
Role- Internal Attributes	-Animate agent, -attitude oriented theme Ex.有的教 師吐露心	-Animate agent, -event agent, -Quotation theme Ex.張俊宏	-Media agent, -state(act) oriented theme Ex.紐約時 報披露芮	[±animate] agent, -event agent. -Theme: something being kept	-Agent: created work, narrator -[story] theme	-Animate agent Ex. 何校 長述說成 立美語會 話班的動 機。

聲，暗示參與研習工作非其所願。	透露.../一枝梅花的開放透露...	里受到上司申斥的事。	unknown Ex.書中將揭露黛安娜與查理王子結婚爆炸性的內幕。	Ex.劇情則是敘述秦、晉大戰於崤的故事。	

➢「說」之後會接 direct/ indirect quotation，但上列六組動詞除了「透露」之外都接 nominal activity（NP）。

● Representation of Event-Structure Attributes of 討論類:

Module/ Attribute	討論	商量	研商	商討	商談
Event Module	Process //// Ex.討論了三個小時	Process //// Ex.商量了三個鐘頭	Process //// Ex.研商了將近一個小時	Process //// Ex.經過兩個多小時的商討	Process ////
Inherent Attributes	Discuss something so as to establish pros and cons	Discuss something so as to settle an issue or to achieve an aim	Close to 研商		Exchange views on how to solve a problem,
Role Module	Agent, Theme	Agent, Incremental theme	Agent, Incremental theme	Agent, Theme	Agent, Theme
Role- Internal Attributes	[+humam,+plural]agent Ex.我們來討論如何消除業障。	[+humam,+plural]agent	[+humam,+plural]agent	[+humam,+plural]agent	[+humam,+plural]agent

➢ 是否有 literary 的用法？

　例：在信中與我　討論/*商量/*研商/商討/商談　搬家之事。

➢ 討論問題/?商量問題　　商量對策/?討論對策　　研商對策/?研商問題
　討論細節/商談細節/商討細節/?研商細節/?商量細節
　　➔討論: theme　　商量: incremental theme

The Range

← 討論　　商談　　　商討　　　研商　　　商量 →
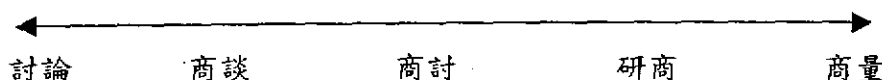
● Information for MARVS Representation of 表達類:

Module/Attribute	表達	表示	表露
Event Module	Punctual /	Punctual /	Punctual /
Event-Internal Attributes	Express something	Express statement Information-based	Express attitude Affection-based
Role Module	Expresser/Expressed (means)	Expresser/Expressed	Expresser/Expressed
Role- Internal Attritbutes	Expresser is a human or a created piece.	Expresser is a human or a created piece. Expressed is a statement.	Expresser is a human or a created piece. Expressed is an attitude.

⇨表達類的主語以 expresser 來代替 agent 似乎較爲恰當，expresser 可以是人或
物，但物必須是 created piece：戲劇不但可表達人生的甘苦，社會的轉變
⇨有 goal 時必屬 向....V 或 對...V 的句型：向有關單位表達不滿 （向....V）
　　　　　　　　　　對老立委表達同情的僅有一位讀者 （對...V）
⇨Theme 的 event type 是以 attitude 爲主：民眾迭向該公司表達不滿

　　　　　　表達
　　表示-----------表露
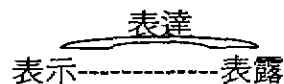
● Information for MARVS Representation of 告訴類:

Module/Attribute	告訴	告知	通知
Event Module	Punctual /	Punctual /	Punctual /
Event-Internal Attributes	Sending a message. Speech act	Sending a message.	Sending a message. Speech act
Role Module	Agent/Goal/Theme	Agent/(Goal)/Theme	Agent/Goal/(Theme)
Role- Internal Attritbutes	Theme is a statement.	Theme is a statement.	Theme is a statement.

⇨告訴的 goal 是 required，占 100%。而告知的 goal 並不一定要出現，占 92%：
　　好幾位議員告訴他....
　　七十八年的變更，主管機關並未發函告知....
⇨ Theme 的 event type 是以 statement 爲主：告訴他暗殺成功
⇨通知：一定要有 goal，不用有 theme
　　例：1) 告知喜訊：一定要有 theme
　　　　2) 通知某人：一定要有 goal

● Information for MARVS Representation of 解釋類:

Module/ Attribute	解釋 explain	說明 clarify	解說
Event Module	Telic, bounded process ●////● Ex: 一再解釋	Telic, bounded process ●////● Ex: 一再說明	process with a starting point ●//// Ex: *一再解說
Event-Internal Attributes	It requires a misunderstanding. Make something understood correctly. 大家都誤會這件事，可不可以請你解釋一下	It requires a presupposition that something is unclear. Make the unclear clear. 大家都不瞭解這件事，可不可以請你說明一下	It requires a presupposition of making something known. 大家都不知道這幅畫的意義，可否請你解說一下
Role Module	Agent/Theme/ incramental theme (theme-complement)	Agent/Theme	Agent/Theme
Role- Internal Attritbutes	Theme 是主觀態度或客觀事實 例:解釋你的看法/立場/態度 解釋法律	Theme 是主觀態度或客觀事實 例:說明你的看法/立場/態度 說明致死原因	Theme 只能是客觀事實(-emotional attitude)不能接 personal 的 attitude or emotional state *解說你的看法/立場/態度 解說反諷觀念的發展

⇨ 都有一個 result，purpose built-in，purpose of clearing sth.

解釋類句式分析		解釋 200	說明 200	解說 200
謂語功能	*> S	62：31%	33:16.5%	17:8.5%
	*> VP	3：1.5%	3：1.5%	1：0.5%
	*> NP	12：6%	31：15.5%	25：12.5%
	*>	56：28%	49：24.5%	67：33.5%
定語功能		12：6%	48：24%	35：17.5%
名物化		40：20%	36：18%	55：27.5%

⇨ 解釋為中共已預設時間表 / *說明為中共已預設時間表/ *解說為中共已預設時間表

⇨ 解釋清楚/ *說明清楚 /*解說清楚

論元結構	解釋 148	說明 116	解說 110
Agent	148：100%	116：100%	110：100%
Goal	13：8.7%	13：11.2%	15：13.6%
Theme	88：59.4%	78：67.2%	58：52.7%

⇨ 有 goal 時均屬"向/對/為 ＜goal ＜*"的句型,且所佔之百分比較低,故 goal 在解釋類動詞中並不重要

● Information for MARV Representation of 建議類:

Module/ Attribute	建議	提議
Event Module	Punctual / *我建議了三個小時	Punctual / *我提議了三個小時
Inherent Attributes	Presuppositional solution to an existing problem	
Role Module	Agent/(Goal)/Theme	Agent/ Theme
Role- Internal Attritbutes	Theme: irrealis.	Theme: irrealis.

⇨ 對於這個提議,我建議.../ *對於這個建議,我提議....

⇨ 當"提議"帶有 goal 時，goal 前均有 overt marking—向，此句型"向<goal< * " 共占 6：3% 。而"建議"除了有 4 筆在 goal 前有 overt marking—對或向，另有 72：36%是" * <goal<VP "的句型。由此，可假設"建議"的 goal 較為重要。

● Information for MARV Representation of 抱怨類:

Module/ Attribute	抱怨	埋怨
Event Module	Bounded process ●////● Ex: 一再抱怨	Bounded process ●////● Ex: 一再埋怨
Inherent Attributes	Speech act of complaining	Holding someone as responsible for something
Role Module	Agent/Theme	Agent/ Theme
Role- Internal Attritbutes	Theme is a statement. 抱怨的 theme 的 focus 是事件	Theme is a person. 埋怨的 theme 的 focus 是人(用人來表達不滿的事件)

⇨ 抱怨他不好好上課: goal(accused)並沒有出現在這個 event 中

⇨ 有 goal 時均有 overt marking

⇨ 埋怨父母 /*抱怨父母 / 抱怨父母的偏心

● Information for MARV Representation of 責怪類:

Module/ Attribute	責怪	指責
Event Module	Punctual /	Punctual /
Inherent Attributes	Evaluative state: holding someone as responsible. Goal-oriented	Speech act of blaming. Theme-oriented
Role Module	Agent/Goal/Theme 責怪+人+theme	Agent/Theme 指責+theme
Role- Internal Attritbutes	Goal 是說話的對象 也是責怪的對象 (Accused).	Theme is a statement, content, fact.

⇨ "責怪"一定帶有 goal,不論是在動詞後或宜於動詞錢加以強調,因此對"責怪"來說, goal 是必要論元之一. 反之, "指責"有 13 筆的例子是不帶有 goal 的,相較之下,goal 在"指責"的角色不如在"責怪"中重要.

⇨ 責怪主辦單位(有黑箱作業的情形) /指責非法補習班的存在

Role Module & Role-Internal Attributes:

	表達類	告訴類	解釋類	建議類	抱怨類	責怪類
Agent	Human Created piece	Human	Human	Human Media	Human	Human
Theme	Attitude	Statement	statement	Irrealis	Statement Person	Statement Person
Goal	marked	required	marked	marked	marked	required

Part Three

Publications

1. Liu, Mei-chun, Chu-ren Huang, and Jia-ying Lee.

1999. Semantic Representation of Verbal Information - A Case from Mandarin Verbs of Judging. Presented at the ROCLING-12, Hsinchu, Taiwan.

Semantic Representation of Verbal Information – A Case from Mandarin Verbs of Judging

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Abstract

This paper aims to introduce a recently-developed framework for lexical semantic representation of Mandarin verbal information, using verbs of judging as an illustration. The framework (MARVS) takes each verbal sense as conveying one unique eventive structure and seeks to represent all syntactically relevant information with modular and attributive characterization. By exploring the semantic-syntactic interdependencies pertaining to verbs of judging, the study is able to identify the meaning components that are crucial for syntactic distinction and ultimately represents the semantic information in a systematic and principled way with MARVS.

1. Introduction

Semantic representation has always been a central issue in Natural Language Processing (NLP). At the core of our semantic knowledge is the complex information encoded by verbs. The question as to how to fine-tune and distinguish the meaning lexicalized in each individual verb remains to be solved and presents a challenging task for semantic representation of Mandarin.

1.1 Semantic Representation and Verb Meanings

In order to represent verbal information, efforts of research have been made to identify the semantic factors that are syntactically crucial and to work out some general principles governing the mapping between lexical semantics and syntax. Traditionally, the main concern on verbal information is limited to their subcategorization frames and semantic restrictions. Most formal theories of linguistics assume that verbs are the structural head of the sentence and hence the concern is how many and what kind of argument(s) each verb can take. Clear distinctions of verb meanings are treated only as general tendencies in selectional preferences, and the semantic details of individual verbs are largely neglected. However, as pointed out in Liu, Huang and Chang (1999), recent development in lexical research has shifted the focus to investigating the grammatically-relevant semantic properties of verbs. Researchers believe that the full range of syntactic realization of a verb depends largely on the meaning of the verb, and attempts have been made to define and establish patterns of interdependencies between verb meanings and syntactic behavior (cf., Levin 1997, Pustejovsky 1995, Levin 1993, Atkins and Levin 1991, Atkins et al. 1988, etc.). In particular, Levin (1993) presents a comprehensive attempt and categorizes English verbs into semantically distinct classes on the basis of their argument alternation patterns. Pustejovsky (1995) proposed a generative framework of lexical information with a multi-layered representational scheme that includes Argument Structure, Event Structure, Qualia Structure, and Inheritance Structure. His goal is to fully represent the interaction of word meaning and compositional constraint.

In practice, Levin et al (1997) has suggested that careful consideration of the range of argument expression options exhibited by members of *various classes of verbs* may help reveal the syntactically-relevant meaning components. Based on corpus patterns of verb behavior, their case study on English verbs of sound (Levin et al 1997) has successfully factored out the grammatically crucial elements of verb meaning,

1.2 Lexical Semantic Studies of Mandarin Verbs to Date

Lexical studies on Mandarin verbal semantics have just started in recent years. Collaboration between Academia Sinica and National Chiao-Tung University has rendered some preliminary results based on a series of corpus-based studies (e.g. Chang et al 1999; Liu et al 1999; Liu, Huang, and Chang 1999; Liu et al 1998, Huang et al 1998, Tsai et al 1996, etc.). These studies can all be characterized as exploring the meaning contrast among verbs of the same semantic field by way of comparing their syntactic behavior observed in the Sinica Corpus. The earlier works focused mainly on differentiating near-synonym sets, with the goal to fine-tune the interaction between semantic features and syntactic realization. The scope was then expanded to a whole class of verbs. For example, Chang et al (1999) investigated all subgroups of 'emotion' verbs and pointed to the morphological make-up (VV vs. non-VV compounds) as the key to their syntactic variation. Liu, Huang and Chang (1999) explored verbs of surface contact and found that this group of verbs may take either the location or the substance to be the object (termed Locus-Locatum Alternation) and can be further divided into three sub-groups in terms of directional/ locational change of the substance. Taking the effect of *construction* (association of structural pattern and meaning) into consideration, Liu, Huang and Lee (1999) spelled out the importance of constructional inferences beyond lexical specification, using verb of rushing (趕) as an example.

As Liu , Huang and Lee (1999) pointed out, Mandarin lexical semantic studies are advancing but remain still in a pioneering and primitive stage. More comprehensive investigation is needed to identify the set of crucial semantic attributes as well as compositional principles that have syntactic consequences. This present study can then be viewed as one more effort in building a sound and solid foundation for further exploration of the wonder and wealth of lexical semantics of Mandarin verbs.

2. A Framework for Representing Mandarin Verb Semantics (MARVS)

The studies mentioned above all lead to one important question: What would be

a principled way of representing verbal distinctions in Mandarin? In Huang and Ahrens (1999), a lexically based model called Module-Attribute Representation of Verbal Semantics (MARVS) was proposed as a first step toward developing a comprehensive framework for detecting and representing Mandarin verb meanings.

2.1 Basic Constructs

The model takes each verbal sense as one *event structure* conveying distinct *eventive information* which consists of two modules: Event Module with event compositional information and Role Module with salient participant role information. Within each module, detailed specifications are represented as attributes: Inherent Attributes are features concerning the semantics of the event itself and Role-internal Attributes are features further specifying a participant role. The model can be schematized as follows:

(1) Module-Attribute Representation of Verbal Semantics (MARVS):

Verb – Sense$_i$ – Eventive Information

|

```
┌─────────────────────────────────────────────────────────┐
│                                                           │
│   Event Module    ---------    Role Module                │
│        |                           |                      │
│   Inherent Attribute         Role-Internal Attribute      │
│                                                           │
└─────────────────────────────────────────────────────────┘
```
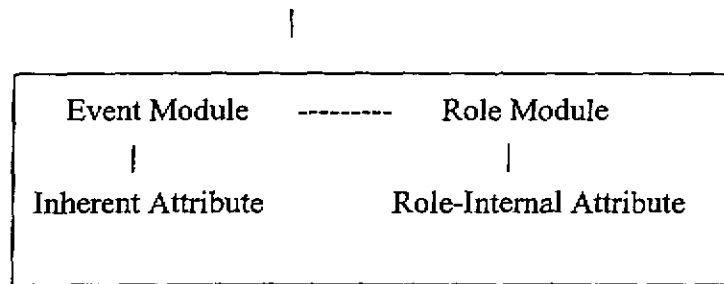
The model is built upon three theoretical premises. First, all grammatical information is encoded in the lexicon. Grammar is information-based and lexicon-driven. Second, verbs express eventive information. The identification of verbal senses is then dependent on the identification of event types and event structures. Third, the classification of information is twofold: structural vs. attributive. There are therefore two ways to break down verbal semantic information to atomic units. Structural components are viewed as modules while attributive information are treated as features.

More specifically, Event Modules are the basic building blocks of the event contour. There are five event modules:

- Boundary : an event module that can be identified with a temporal point and must be regarded as a whole (including Complete Event);
- Punctuality: an event module that represents an single occurrence of an activity that cannot be measured by duration.

- Process: an event module that represents an activity that has a time course; i.e. it can be measured in terms of temporal duration.
- State: a homogeneous event module in which the concept of temporal duration is irrelevant; i.e. it is neither punctural nor has a time course.
- Stage: an event module consisting of iterative sub-events.

The five modules can be symbolized as follows:

(2) Symbol Representaion of Event Modules
a. Boundary   •
b. Punctuality   /
c. Process   /////
d. State   ____
e. Stage   ∧∧∧∧

The five basic building blocks may be combined to render three event composition types attensted in Mandarin: Nucleus Event, Simplex Events, and Composite Events (for details of the these event types, please see Huang and Ahrens 1999).   The next section provides a simple illustration of the framework.

2.2 An Illustration with Verbs of Construction

There are three verbs in Mandarin which can all be translated as 'build' – 建、蓋、造, but their meanings are actually distinct if we observe carefully the typical object they take:

(3) Objects for Verbs of Building:
a. 地主在河川地 蓋／建／*造 房子。
b. 政府在山上造／建／*蓋 水庫
c. 計劃與波音合作造／*建／*蓋 飛機。

It is clear that 蓋 only occurs with objects denoting 'building', 建 takes an architecture as its object, while 造 requires the object to have some kind of internal design.   Their difference in the semantic requirement of the object (or the incremental theme) also explains why only 造 can be used in the following sentence:

(4) 工程師造／*建／*蓋 不出房子。

Since 工程師 'engineers' are not designers, they are not able to create any houses.

Besides, the three verbs also differ in aspectual composition. Only 建 can be used in the sentence below, pointing to the fact that 建 may allow a focus on the endpoint or completion of the activity:

(5) 房子建／*蓋／*造 了三年了還沒人住。

In sum, although the three verbs share the same Role Module (all taking an incremental theme), they can be differentiated in terms of Event Module and Role-internal Attribute, as specified below:

(6) MARVS Representation of 建、蓋、造

建	· ///// · (Bounded Porcess)	<Agent, Incremental Theme>
		[architecture]
蓋	· ///// (Inchoative Process)	<Agent, Incremental Theme>
		[building]
造	· ///// (Inchoative Process)	<Agent, Incremental Theme>
		[design]
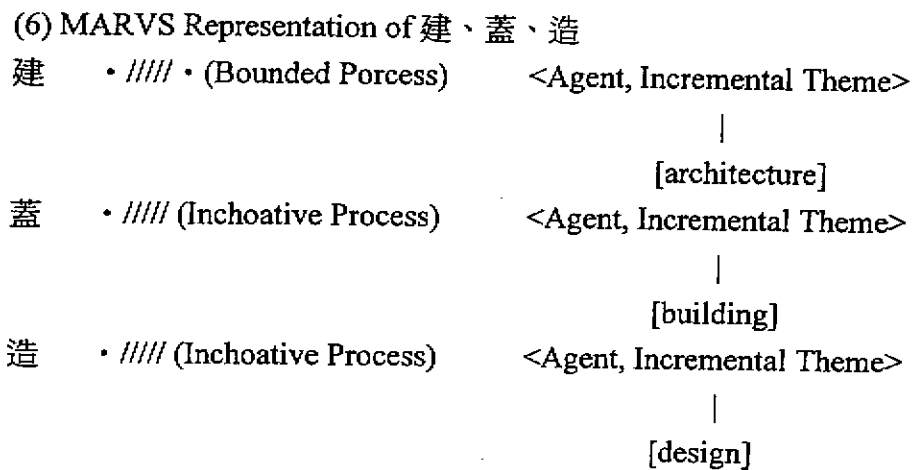
To show in more details how this framework can be used for differentiating as well as representing Mandarin verbal semantics, we investigate another group of verbs – verbs of judging – in the following sections.

3   Mandarin Verbs of Judging

Verbs of judging, as a semantic group, can be defined as verbs that describe a person's judgmental attitude towards another person (or institute) on a certain, presumably factual ground.   These verbs may be purely mental (eg. 滿意、不滿) or accompanied with speaking act (eg. 稱讚、責罵).   To narrow the scope of our study, we first look at verbs of negative judgement.   Its class members include: 不滿、埋怨、批評、指責、斥責、責備、責難、責罵、責怪、駁斥、痛斥、怒斥、罵、咒罵、叫罵、破口大罵, etc.

At first sight, we noticed that these verbs are quite heterogeneous in terms of

verbal kinetics, or the Stative vs. Active distinction:

(7) Distinction in Verbal Kinetics
Highly stative: 不滿
Highly active: 斥責、罵

It is also observable that the active verbs in this group can also be characterized as verbs of speaking in that they denote a verbal act outwardly reflecting the negative judgement.   One immediate question follows: does the distinction in kinetics bear any significant consequences in their syntactic behavior?   To answer the question, we looked carefully at their uses in the corpus and found that they have quite different distributions in the following aspects.

3.2 Grammatical Roles

These verbs differ in terms of the major grammatical functions they may be used for.   Although they all occur as verbs, their distributions among other grammatical functions vary.   Among all the verbs, 不滿 displays the widest range of grammatical roles: it may be used as adjectival modifier, as in (8a); adverbial modifier, as in (8b), nominal object or complement, as in (8c), and verbal predicate, as in (8d):

(8) Grammoatical Roles:
    a. Adjectival modifer: 人民的不滿情緒
    b. Adverbial Modifier: 陳水扁強烈不滿地指出…
    c. Nominal Complement: 大陸漁民仍表示不滿
    d. Verbal Predicate: 部份黨員不滿提名作業不符黨內民主

In the table below, we listed the distributional differences for six of the verbs in this group:

(9) Distribution among Major Grammatical Roles:

	不滿	批評	指責	斥責	責怪	罵
Total #	178	833	200	93	86	272
Adjectival	4%(8)	3%(24)	0	0	0	<1%(2)
Adverbial	2%(4)	0	0	0	0	0
Nominal	52%(92)	25%(208)	18%(34)	13%(12)	2% (2)	<1%(2)
Verbal	42%(80)	72%(601)	88%(166)	85%(81)	98%(86)	99%(268)

It is clear from the table that the mental verb-不滿, as the most stative verb in the group, is most flexible in its grammatical realization, while verbs with speech act, such as 指責, do not function as modifiers at all and their use as nominal complement is also significantly lower[1]. This syntactic difference can in part be attributed to their inherent properties in event denoting: Although they all involve some kind of judgmental evaluation, verbs like 不滿 are Attitude-denoting, focusing more on internal state change and thus more 'attributive', while speech act verbs like 指責、責罵 are Action-denoting, focusing more on the verbal act being performed as a result of the negative judgement. Verbs such as 批評、埋怨 are, on the other hand, either Attitude-denoting or Action-denoting since they may allow non-actional, attributive use:

(10) Attitude-Denoting Use with 批評、埋怨:
    a. Adjectival: 面對自己的 批評／埋怨 心態
    b. Adverbial: 埋怨地看著他

3.3   Argument Expression

When used as verbal predicates, most of the verbs display a similar range of argument expression. They can take a single NP-Goal, as in (11a), or a clausal complement denoting Goal with Cause, as in (11b):

(11) a. Goal: 埋怨／批評／指責　政府（or 政府的無能）
     b. Goal-Cause: 埋怨／批評／指責　政府 毫無行政效率 (or 執法不力)

Aside from this similarity, a clear difference is found with some Action-denoting verbs as they can also be used as quotation verbs with or without '說', where the content of speaking is taken as a salient argument:

(12) a. 以台語斥責說：車子是怎麼開的。
     遭中共人員斥責：這裡是大陸，不是香港。

Among the Action-denoting verbs, 罵 (and related members as 叫罵、謾罵) singles itself out as it does not allow any *inanimate* Goal, as shown in (13a), and its

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[1] The adjectival and nominal uses with 罵 are highly idiomatic and restricted, as show in the examples:

Ajectival: 罵話語彙

Nominal: 挨了一頓罵 (derived from 挨罵, which itself should be treated as a verb entry.)

occurrence with direct quotation is much higher than other speech verbs, as exemplified in (13b):

(13) a. 一再罵　政府／*政府的無能
　　　b. 上船就罵：他媽的，要給你死
　　　　　大聲叫罵：國民黨走狗。

It is obvious that 罵 differs from other Action-denoting verbs in its specification of the Goal-argument (if there is one) and its tendency of taking the content of speaking as its sole argument.　Here, as in English, a Manner of Speaking verb (i.e. 罵) can be used as a Content of Speaking verb (e.g. 說) to introduce direct quotations.

3.3　Passive Construction

It is widely known that Mandarin passive construction is semantically negative, i.e., associated with negative evaluation.　Therefore, we looked at the co-occurrence of these negative judgement verbs with the passive marker 被 or 遭.　What we found was that 不滿, as a highly stative and attitude-denoting verb, is incompatible with passive construction.　In the corpus, 不滿 never occurs with passive markers such as 被 or 遭, as shown below:

(14) Occurrence with Passive Markers

	不滿	批評	斥責	責怪	責備
Total #	178	833	93	86	49
被	0	6%(46)	3%(3)	2%(2)	10%(5)
遭(到/受)	0	8%(65)	13%(12)	1%(1)	8%(4)

This finding is not surprising given that stative verbs in general cannot be passivized, as an universal trend in most languages.

3.4 Degree vs. Manner Modifier

Another interesting observation related to the Attitude-denoting vs. Action-denoting distinction is that the two types of verbs display different patterns of adverbial modification.　Attitude-denoting verb 不滿 occurs only with *degree* modifier such as 強烈、十分、極度, etc., while the Action-denoting verbs occur predominantly with manner modifier, such as 大聲、嚴厲, etc., as made clear in the

table below:

(15) Different Types of Adverbial Modification

	不滿	批評	斥責	指責	責備
總筆數	178·	833	93	200	49
Degree	29%(51)	3%(22)	0	<1% (1)	2%(1)
Manner	0	6%(50)	12%(11)	7%(12)	6%(3)

And again, verbs capable of either attitude-denoting or action-denoting (eg. 批評、埋怨) display more evenly between both types of modification, as exemplified below:

(16) a. Degree:　強烈批評民政局
　　　　　　　更加埋怨對方
　　 b.　Manner:　嚴詞批評中共的對台政策
　　　　　　　大聲埋怨對方

4　MARVS Representation of Verbs of Judging

Adopting the representational scheme MARVS, as introduced in section 2, we can identify the meaning differences among verbs of judging in terms of the following Module-Attribute characterization, using 不滿、埋怨、指責、罵 as four representative verbs:

● With regard to Event Module, 不滿 differs from other verbs in that it denotes a state rather than a process.　More specifically, 不滿 encodes an effect state or inchoative state (schematized as ·＿＿), which allows an event focus on either the effect or the durative state.　Other verbs behave more like inchoative process (symbolized as · /////).　The difference between 埋怨 and 指責／罵 can then be captured with a further specification on Inherent Attribute: 埋怨 allows attitude-denoting, which enables it to be used as an adjectival or adverbial modifier.

● With regard to Role Module, 不滿 and 埋怨 both take a Goal or Goal-Cause as their argument, while 指責 may in addition take the Content (direct quotation) as a salient argument.　In contrast, although 罵 may also take a Goal-NP, it differs from the others in that it does not occur with Cause-argument; instead, it takes a Content-argument, as either a direct quotation or a clausal complement.　Furthermore, 罵 enforces a Role-internal restriction on the semantics of the Goal: it has to be animate.

(17) MARVS Representation of Four Types of Negative Judging Verbs

	不滿	埋怨	指責	罵
Event Module	· ___	· ///// ·	· /////	· /////
｜ Inherent Attribute	Attitude-denoting	Attitude-denoting Action-denoting	Action-denoting	Action-denoting Speech Act
Role Module	[Goal – (Cause)]	[Goal – (Cause)]	[Goal – (Cause)] [Content]	[Goal-(Content)] [Content]
｜ Role-Internal Attribute				Goal: +Animate

These four verbs are typical of four sub-groups of judgement verbs. Among them, the 指責-group seems to be the largest. It is also tentatively noted that the four-way distinction may apply to positive judgement verbs as well, with corresponding members such as 滿意、讚許、稱讚、誇. A follow-up study is needed to confirm the speculation. ·

5 Conclusion

This study has shown that based on corpus observation and analysis, the group of negative judging verbs can be further divided into four sub-groups, each with distinct syntactic behavior that stems from their unique properties in lexical meaning. The representational framework based on Module-Attribute taxonomy (MARVS) was adopted for systematic sense differentiation. The model helps to delimit and identify the meaning components that are syntactically crucial and provides a principled way to represent these features as well-defined eventive information.

Given that the processing of Mandarin depends largely on semantic information, a representational framework that is semantically-constrained is indeed needed. Focusing on verbal semantics, the present work can be seen as a preliminary effort towards developing a comprehensive model for knowledge representation as well as future application.

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The Module-Attribute Representation of Verbal Semantics

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Abstract

In this paper, we set forth a theory of lexical knowledge. we propose two types of modules: event structure modules and role modules, as well as two attributes: inherent attributes and role-internal attributes which are linked to the event structure module and role module respectively. These module-attribute semantic representations have associated grammatical consequences. Our data is drawn from a comprehensive corpus-based study of Mandarin Chinese verbal semantics.

1. Background

Generative theories have long assumed that lexical semantics are encoded on each and every lexical entry, and hence represent idiosyncracies of each lexical item. The assumption, however, goes back much farther than generative theories. For example, Levin [1993] pointed out that Bloomfield wrote in 1933: 'The lexicon is really an appendix of the language, a list of basic irregularities" (p. 274). As a consequence of this assumption, lexical semantics was not intensively studied within the generative framework because it was not expected to offer any interesting generalizations.

The notable exceptions, other than the short period of intensity of the generative semantics paradigm, were Jackendoff [1983] and Wierzbicka [1985]. However, as grammatical theories become more and more lexicon-driven, more in-depth theoretical and empirical studies of the lexicon have been carried out, and the above assumption is no longer valid. Levin [1993] in particular sounded the call for in-depth work on a theory of lexical knowledge. She writes that a theory of lexical knowledge:

> ...must provide linguistically motivated lexical entries for verbs which
> incorporate a representation of verb meaning and which allow the
> meanings of verbs to be properly associated with the syntactic ex-

pressions of their arguments (p.1).

This goal of a theory of lexical knowledge has not yet been attained, for reasons we will discuss in section 2 below. It is, however, a worthy goal, and is in fact, the goal of this paper - to provide a theory of lexical knowledge based on lexical semantic features that are associated with a verb and predict their associated syntactic expressions.

In what follows, we first look at why Levin's [1993] proposal of using diathesis alternations to ferret out meaning has fallen short of its goals, and propose a different way of looking for relevant syntactic behavior (Section 2). We next present two underlying assumptions of our theory of lexical knowledge (Section 3), and then present the theory - (Section 4). We summarize our paper in Section 5.

2. Verbal Semantics

Levin [1993] assumes that:

....the behavior of a verb, particularly with respect to the expression and
   interpretation of its arguments, is to a large extent, determined
   by its meaning. Thus, verb behavior can be used effectively to
   probe for linguistically relevant pertinent aspects of verb meaning'
   (p.1).

We agree with this assumption. But as we will discuss below we look at different aspects of verb behavior from Levin [1993].

Levin [1993] concentrates on the range of possible synactic alternations of a single verb (or a single verb class), and extracts semantic information from syntactic behavior. For example, she points out that *break* verbs (verbs such as break, crack, rip, shatter, snap,...) all can appear in the middle alternation, but cannot appear in the conative or body-part ascension alternation, while *cut* verbs (verbs such as cut, hack, saw, scratch, slash,...) can appear in all three alternations [1993: 7]. After comparing these two verb groups with two others, *touch* and *hit*, (and their respective alternations) she concludes that *break* is a pure change of state verb, and *cut* is verb of causing a change of state by moving something into contact with the entitty that changes state' (p. 8). The syntactic differences they display, she argues, are a direct result of their semantic differences.

However, there are two reasons we have not followed Levin in examining the relationship between a verb alternation and its associated semantics. First, although the work done by Levin [1993] in this area is impressive (determining 50 different types of alternations and over 125 different semantics classes of verbs), the sheer number of

possible permutations of alternations makes analysis difficult. In addition, when comparing verbs of very different meanings, as in the *cut* and *break* example above, it becomes hard to determine the relevant area of semantic difference. For example, in order to reach the generalization concerning *cut* and *break*, Levin had to look at two other verbs (*touch* and *hit*) and their respective diathesis alternations, as well as look at other verbs that could fit into those alternations, in order to determine the relevant semantics for *cut* and *break* for that one particular alternation [cf. 1993, pp. 5-8]. If she had picked different verbs instead of *touch* and *hit* or different diathesis alternations from the three that she did, she might not have been able to come up with a generalization at all. These factors may be contributing to the fact that there is currently no unified theory of lexical knowledge based on verbs alternations because scope of the undertaking is so vast.

Second, we, along with other scholars in our research group [Liu 1997] tried a pure-alternation based approach and found that it is not adequate for defining Mandarin verb classes. There are several possible reasons for this. The first is that diathesis alternations have not been extensively studied in Mandarin, unlike English, where as Levin notes, there were several important studies done on the verbs *cut, hit, break* and *touch* prior to her own work. The second reason has to do with the vastness of the enterprise as we mentioned above. How do you decide which verbs to compare? How do you decide which alternations are relevant? The third possibility is that Mandarin differs from English in such a way as to make alternations a non-viable option for prying into a verb's relevant semantics. Liu [1997] argues that that verb alternations are not suitable for extracting semantic generalizations from syntactic behavior in Mandarin Chinese because argument placement is relatively flexible.

If we agree,then, that syntactic behavior can shed light on the relevant semantics of a verb, and that (at least for Mandarin, if not for other languages as well) diathesis alternations, while originally promising, are not taking us where we want to go -- that is, towards a unified theory of lexical knowledge, what other type of behavior is available?

We concentrate on delimiting the lexical semantic distinctions between near-synonym pairs that differ slightly in both their syntactic behavior and in their semantics. Sometimes a semantic difference is apparent at first glance as in the case of *fang4* (put) and *bai3* (set), and sometimes it is not clear and only becomes apparent after we compare the syntactic differences, as in the case of *kuaile* and *gaoxing* 'happy'. (We will discuss both examples further in Section 5).

However, even in the cases where there is a difference in meaning, what we are looking for is the relevant difference in both syntax and semantics -- that is, along what semantic lines do these two words differ, and how is this difference related to their

synactic behavior (and vice versa)?

How do we determine these synactic and semantic differences? The answer to this question is explained in much more detail in Tsai et al. [1998] and Liu et al. [1997] (both papers have revised version included in this volume as well). But we will give a very brief sketch in what follows. First, we examine these near synonym pairs by first combing the Academia Sinica corpus for all relevant examples of the words in questions. These examples are then categorized according to their syntactic function. Third, each instance is classified into its argument structure type. Fourth, the aspectual type associated with each verb is determined, and fifth, the sentential type for each verb is also determined. We often find that near synonyms have several cases of complementary distribution of synactic functions and it usually these cases, along with our other analyses that allow us to formulate a hypothesis concerning the relevant nature of the semantic difference.

3. Assumptions

We share the following assumptions with some of the recent work in lexical semantic theories. The first assumption is that lexical semantic contents are mapped to the morphosyntactic level and can be used to predict grammatical behaviors [e.g. Dowty 1991, Levin 1993, Goldberg 1996]. What is crucial behind this assumption is that a mapping must be rule-governed and regular by definition. Hence the assumption entails that lexical semantic generalizations are not only worthy of studying but can also be verified by their grammatical realizations.

The second assumption is that lexical semantics is the (grammatical) level that mediates conceptual structures with grammatical representations [E.g. Bresnan and Kanerva 1988, Zaenan 1993, Pustejovsky 1995]. In other words, lexical semantics not only can be empirically verified with grammatical predictions but can also be justified by conceptual arguments.

In fact, we will take the second assumption further and make it our premise that lexical semantic representation is the grammaticalization of conceptual information. Based on the above assumptions, we propose that an adequate theory of verbal semantics must have the three following properties:

i) that lexical semantic information is represented in a way that can be linked directly to grammatical structures. We assume that such a representation in verbal semantics must be based on event structure.

ii) that lexical semantic information must have conceptual motivation. This justifies the inclusion of such information as qualia structure in lexical semantics

[Pustejovsky 1995].

iii) all lexical semantic attributes must be attested by representational clues: either collocating structure, selectional constraints, or distributional patterns.

This last premise is especially important because it restricts the type of evidence that may be brought to bear on the question of whether something shares a particular attribute or not, and limits the possibility of ad-hoc explanations. That is, it strongly focuses analyses in verbal semantics on corpus-based approached, since representational clues are best extracted from corpora.

In particular, in our work on lexical semantics we have concentrated on exploring the semantic and syntactic differences between near synonyms in the Sinica Corpus. We examined near synonyms in order to extract the contrasts that dictate their semantic and associated syntactic behaviors [Chief et al 1998, Huang et al. In Press, Liu et al. 1998, and Tsai et al. to appea]. Conceptually, each group of near synonyms that we study form a contrast set that is a constituent of a semantic field [Grandy 1992]. Our goal is to locate the linguistic relation that defines the contrast. In particular, we look for the semantic relation that can predict the difference in grammatical behaviors of the set. It is our strong hypothesis that syntactic variations, including Levin's [1993] alternations and morpho-semantic variations, can be predicted by logical implicatures of the semantic attributes encoded on the event structure of each verb.

4. Model-Attribute Representation

The Module-Attribute Representation of Verbal Semantics (MARVS) has two modules: an event module, and a role module. Inherent attributes are attached to the event module and role-internal attributes are attached to the role module. A sketch of the representation is given in Figure 1.

Verb – Sense$_i$ – Eventive Information

$$\|$$

Event Modules------------ Role Modules

Inherent Attributes   Role-internal attributes
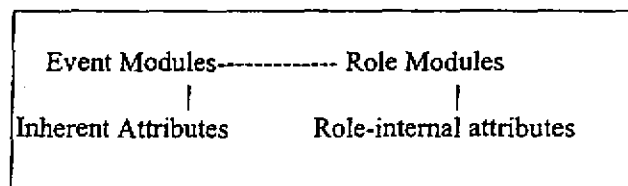
Figure 1 Module-Attribute Representation

It is important to note that the eventive information is attached to the sense of a verb. Verbs with different senses will have different eventive information. [Ahrens et al. (1998) gives a working definition and criteria for distinguishing between senses of nouns.]

The second important hypothesis of this proposal is that the event representation of a verb is the sum of all attested event realization of a particular the verb. In other words, it is possible that a complex lexical event representation is never fully instantiated; although each component is linguistically attested. This hypothesis is motivated by our desire to maintain the theoretical elegance of one-to-one mapping between verbal sense and event representations. It is also conceptually motivated by the fact that the same verb form is often used in natural languages to refer to different aspects of an extended event. For instance, the activity of 'sitting down' and the state of 'be sitting' share the same verb form. Similarly, in Chinese at least, the activity or 'putting on' and the state of 'wearing' some piece of clothing share the same verb form. Since they do have totally different (logical) event structures, previous theories may have to treat them as homophones. However, the conceptual tie is so salient that we feel it is counterintuitive to assign them to two different senses. We postulate that there will be conceptual/cognitive motivations to encode such complex event structures with one representation. Hence the contrastive event realization can be understood as the different (partial) realization of a same complex event under a particular event focus, and not as two senses.

The third crucial premise in this representation is that the event modules constitute the basic frame of verbal semantics. By making the two way distinction between modules and attributes, we assume that modules refer to pre-packaged semantic information while the attached attributes underlines more detailed description. The two types of modules also represent the two basic atomic terms in formal semantics: event and individuals. However, individuals are understood in the context (i.e. events) where they participate. Figure 1 shows clearly that Role Modules are attached to the Event Modules. There are strong motivations for such representation: first, role modules represent the participants of the event, thus cannot stand outside of the event representation; second, the participating roles can be partially predicted by the event types; and finally we will discuss hierarchical constraints (Section 4.3).

In what follows, we will first discuss event modules, and then the inherent attributes that are associated with the event modules (Section 4.1), and then we will discuss the role modules and the role-internal attributes that are associated with these modules (Section 4.2).

4.1 Event Modules

A central issue in lexical semantics, especially verbal semantics, is the representation of events [e.g. Jackendoff 1983 and Pustejovsky 1991]. A tradition shared by philosophical and linguistic semantics, as well as the cognitive sciences, is that there are only two basic types of entities: events and individuals. Hence a language must conceptually describe both events and individuals. Individuals are prototypically denoted by the referential properties of nominals. And events are denoted by verbs. Thus an adequate theory of verbal semantics must include a theory of event structures. Of course all semantic theories must also account for type-shifting and semantic coercions, such as the telic and agentive structures in Pustejovsky's [1995] nominal semantics.

In this section, we will concentrate on the basic building blocks of our verbal semantic theory. In particular, we will propose a theory where event structures can be composed from a small set of event modules and the backbone of verbal semantics is taken to be compositions of these event modules. This account is crucially different from the autonomous view of event structure [e.g. Vendler 1967], or the attribute-value view [Jackendoff 1983]. It shares some assumptions with Smith [1990], such as the viewpoint focus interpretation of aspectual facts. However, our modules and rules of combination are different.

4.1.1 An Inventory of Event Modules

Event modules are the building blocks of linguistic event structures. They can also be defined as atomic logical event structures. We have listed five atomic event structures below, along with their symbol. A brief explanation follows each event structure.

(1) •   Boundary (including a Complete Event)

Boundary is an event module that can be identified with a temporal point, and that must be regarded as a whole.

(2) /   Punctuality

Punctuality is an event module that represents an single occurrence of an activity that cannot be measured by duration.

(3) /////   Process

Process is an event module that represents an activity that has a time course, i.e. that can be measured in terms of its temporal duration.

(4) ____   State

State is a homogeneous event module in which the concept of temporal duration is irrelevant; i.e. it is neither punctual nor has a time course.

(5) ᴧᴧᴧᴧ   Stage

Stage is an event module consisting of iterative sub-events.

In sum, we postulate that these five atomic event structures are the only building blocks necessary to capture the range of complex linguistic event structure.

4.1.2 Tests for Event Modules

Since event modules are logically and conceptually primary units, each event module has logical entailments that can be attested with their grammatical behavior and/or their interpretation. A partial list of their verifiable entailments follows.

First, only boundaries (including stand-alone complete events) can be identified with a temporal point, such as in (6).

(6) *Complete event vs. other event*
    a. Sheme shihou V (le)
       When   V ASP
    b. Sheme shihou kaihui (le)?
       When   meeting
       'When does the meeting (start)?'
    c. *Sheme shihou dasuan (le)?   .
       When   plan

Second, since process encodes a time course, a durational phrase naturally measures the length of the time course, and can distinguish between process events and boundary/complete events, as (7) and (8) show.

(7) *Process vs. Complete Boundary*
    V le Duration
    V ASP Duration

(8)a. (*yizhi si) si le   san ge xiaoshi
       always die die ASP three CL hours
       '(He's) been dead for three hours.'
   b. (yizhi pao) pao le   san ge xiaoshi
       always run run ASP three CL hours
       '(He has kept on) running for three hous.'

Since complete and boundary events both have a delimiting temporal point (but

contain no time course), the durational phrase can only be interpreted as the distance between reference point in time and that delimiting temporal time (the death time in 8a). On the other hand, the durational phrase will be interpreted as a time course of an process (8b). The contrast in interpretation can also be underlined by the continuous adjunct *yilzhi2* 'always, keep on V-ing', which cannot co-occur with complete/boundary events.

4.1.3 Typology of Lexical Event Representations

In this section, we present three different types of event structures that are encoded on Chinese verbs: nucleus, simplex, and composite events. Note that we propose and follow the strong hypothesis that each sense of a verb form encodes a uniqe eventive information represenation. Hence each meaning realization can focus on different elements of that encoded event information but cannot refer to a different event representation. This is the One-Event-Representation-per-Sense hypothesis. Hence lexical event representations can be classified according to the complexity of their component event modules into three type: Nucleous, Simplex, and Composite event representation.

4.1.3.1 Nucleus Event Representation

In this theory, event structure modules are the nucleus events that cannot be further divided. Our claim is that human linguistic representation of events does not necessarily correspond to these logical and atomic events. We assume that conceptual and cognitive motivations entail that certain event module combinations be perceived as a whole, and thus be mentally and linguistically represented by a single event structure with compositional modules. In other words, we are proposing a non-homomorphism between logical event structure and (human) linguistic event structure. We will be focussing our study on the linguistic event structures since they are conceptually more interesting.

The verbs listed below in (9) have stand-alone event modules.

(9) a. *Completion (achievement)*
  - si3 'to die', po4 'to break'

b. *Punctuality*
  / da3suan4 'to plan to'

c. *Homogeneous State*
  ___ kuai4le4 'to be happy', pi2juan4 'to be tired'

d. *Process*
  //////// zou3 'walk', pao3 'run'

We haven't found any examples yet of the stage event module standing alone in a

verb in Mandarin. However, our hypothesis is that this list of nucleus events will not grow past the five listed here for any language.

4.1.3.2 Simplex Event Representations

Simplex events have one nucleus and may be bounded on either (or both) end(s). The verbs listed in (10) encode both a boundary and an associated non-instantaneous event.

(10) a. *Inchoative Process*

      •/////   xia4yu3 'to rain', kai1hui4 'to convene a meeting'

    b. *Bounded process*

      •/////•   jian4   'to build'

    c. *Resultative*

      /•   da3si3   'to hit and kill'

    d. *Completive Punctuality*

      ♪ chu4fa1 'set forth', bi4ye   'graduate', li2kai1   'go away'

    e. *Inchoative State* (Effect State)

      •____   gao1xing4   'to be glad'

    f. *Inchoative Stage*

      •^^^^   shang4sheng1   'to rise'

    g. *Bounded Stage*

      •^^^^•   diao1xie4   '(flowers) to wither'

We think we have exhausted the combinations for boundary events with the list above for Mandarin Chinese. Other languages may have other combinations.

4.1.3.3 Composite Event Representations

Composite events involve more than one nucleus event and may or may not be bounded. Two examples are given in (11). We expect this partial list of complex events to grow with further study for both Mandarin verbs and for verbs in other languages.

(11) a. *Completive Resultative*

      ♪ ____   zuo4 'to sit', tang3 'to lie [down]', bao1wei2   'to surround'

    b. *Dual Process-State*

      •/////•____   chuan1   'to wear',   dai   'to wear'

Let's take a closer look at the verb 'zuo4'. In (12a) the focus is on punctuality, while

in (12b) the focus is on state. In (12c) the focus is on the length/duration of state as delimited by the punctual event and a reference point. In (12d) the focus is on the manner of the state, with an implied (controllable) punctual event that could change the state.

(12) a. zuo SIT

    'Sit [down]!, Be seated!'

    b. ta zuo qianmian

    S/HE SIT FRONT

    'S/He is seated in the front.'

    c. ta zuo le san ge zhongtou

    S/HE SIT ASP THREE CLASS HOUR

    'S/He has been sitting for three hours.'

    d. haohao zuo SIT WELL

    'Sit straight!'

4.1.4 Inherent Attributes

In our module-attribute representation, inherent attributes are linked to the event structure modules (when necessary). Inherent Attributes are attributes which refer to the semantics of the event itself, such as [control], [effect], etc. Example (13) for example, shows that the two verbs 'gaoxing' and 'kuaile' differ in terms of the attribute of control (see Tsai et al. in this volume for more details of this relationship).

(13) *[control]*

    bie gaoxing/*bie kuaile

    NEG happy/NEG happy

    'Don't be happy.'

4.2 Role Modules

Role modules contain the focussed roles of the event that typically include all required (i.e. thematic) arguments but can also include optional arguments and adjuncts. The roles that we have considered are the following: Agent, Cause, Causer, Comparison, Experiencer, Goal, Instrument, Incremental Theme, Location, Locus, Manner, Range, Recipient, Source, Target, Theme, etc. We will illustrate how this module works with an optional argument. In example (14a), the focus is on incremental theme and therefore the measure phrase describes the resulting number of wounds. However, in (14b) there is no such focus and therefore the measure attached to the cognate object describes the frequency of the activity.

(14)a. ta ba shoubi ge le shiji-dao yi shi *juexin*
      s/he BA arm GE-PERF ten-plus-knife so show resolution
      'S/He cut more than ten wounds on his/her arm to show his/her resolution.'
   b. zai qing-di shen-shang kan le wu-shi-liu dao
      at love-foe body-top KAN-PERF 56 knife
      '[The person] hacked 56 times on his/her rival in love affair.'

4.2.1 Role-Internal Attributes

These attributes refer to the internal semantics of a particular focussed role (of the event), such as [sentience], [volition], [affectedness], [design], etc.

In (15) we give an example of the role internal attribute of Loc[design], which is the only role internal attribute that can specified with orientation.

(15) *Role Internal Attribute Loc [design]*
    a. na ge taishiyi bai dongbian/chao dong bai
       that CLS easy-chair set east-side/towards east set
       'Put that easychair so that it faces east.'
    b. *na ge taishiyi fang dongbian/chao dong fang
       that CLS easy-chair put east-side/towards east put

Some readers might wonder what the difference is between role-internal attributes and the selectional restrictions on lexical items that previous versions of transformation theories postulated. Role internal attributes interact with (context-induced) meaning to determine the appropriate reading, while selectional restrictions are projected from a fixed lexical entry. Moreoever, selectional restrictions do not allow for alternate interpretations based on context.

4.3 Hierarchial Constraints

All conditions being equal, a higher-level module (i.e. the event structure module) or attribute (i.e. inherent attribute) is preferred for generality and greater explanatory power. For instance, [control] will be preferred over [volition] if both offer an equally adequate account, since [control] is an inherent attribute belonging to the whole event; while [volition] is a role-internal attribute describing a participant of an event. If volition can be predicted by a [control] inherent attribute (and it usually can), then there is no need to list volition again in the role-internal attribute. The [control] inherent attribute will predict volition through the semantic relationship of implicature. If, however, a verb is hypothetically with the attribute [control], but has a non-volitional subject, then there is a place in the role-internal attribute to mark that fact and the usual inherent implicative

relationship between [control] and [volition] will be cancelled.

In addition, when a set of near synonyms include a covering term of a field, then the grammatical contrast will be neutralized to a marked/unmarked situation. In this case, the lack of clear-cut contrasts does not affect the legitimacy of a defining relation. Another near synonym forming a contrast set should be substituted to verify the claim. For instance, not all predicted grammatical contrasts demonstrate themselves between *gel* 'to slice' and *qiel* 'to cut [covering term]'. But when *gel* is contrasted with *ci4* 'to stab', then the proposed contrasting relation of [effect] is clearly evident.

5. Conclusion

In this paper we have set out the underpinnings of our new representation of lexical knowledge, known as the Module-Attribute Theory of Verbal Semantics (MARVS). This theory differs from previous attempts to understand lexical knowledge, especially the interaction of syntactic-semantic information in verbs, because it analyzes at near synonym pairs. It also differs in postulating Event Structure Modules, which may be combined to form a complex representations and attached to a verb. Inherent Attributes of the event, such as [control] and [effect], are attached to the Event Structure Module. If a verb has more than one event structure, it also, by definition, has a different linguistic sense and therefore should demonstrate a slightly different grammatical encoding. In addition, we postulate Role Modules and Role-internal attibutes that may be associated with this module. The eventive information of a verb (cf. Figure 1) must minimally contain the Event Module, although it may contain both types of modules and both attributes. It is the goal of this volume to demonstrate how this theory allows us to succinctly and successfully predict the interaction between lexical semantic attributes and surface grammatical representations.

3. Lili Chang, Keh-Jiann Chen, and Chu-Ren Huang. 1999. Alternation within Semantic Fields: A Study of Mandarin Verbs of Emotion. Working Papers on Chinese Verbal Semantics (Vol. I). Taipei: Academia Sinica.

Alternation Across Semantic Fields:
A Study of Mandarin Verbs of Emotion

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Abstract

In this paper we will explore the consistent contrast between VV-compounds and non-VV-compounds across seven subgroups of verbs of emotion. The distinctive syntactic features for the contrast include the distribution of the grammatical functions, the cooccurrence restrictions with head nouns and head verbs, the compatibilities with the imperative and evaluative constructions, the aspect, and the transitivity. We conclude that the contrast is motivated by event structure properties. To describe a state-type event, the speaker could choose to focus on the inchoative stage or the homogeneous stage of the event. In addition, since VV compounding has the function of type-shifting an event to a referential term, or to refer to its generic properties, it is natural to predict that VV compounding is a predominant source for the verbs of indicating homogeneity.

1. Introduction

Many recent linguistic studies explored how lexical meaning predicts syntactic regularities [Levin 1993, Pustejovsky 1995]. One important approach is to study the contrasts in near synonym pairs to identify the minimal semantic attributes that motivate the contrasts [Tsai et al 1998, Liu et al 1997 & 1998]. In this current study, we extend the range of the study to a semantic field, which contains more than one synonym pairs. Thus we can attest to the primary status of the proposed semantic attributes by showing that the generalization can be extended to the other synonym pairs in the same semantic field.

Tsai et al [1998] discussed the contrast between the synonym pair KUAILE 快樂 and GAOXING 高興 , and based on their findings we re-examine the contrast in a broader range, i.e. the verbs of emotion. We have four results from this study: 1) we find that the contrast is not specific to KUAILE and GAOXING, but to the whole semantic field of verbs of emotion; 2) we define the contrast more precisely; 3) we can trace the cause of the contrast; and 4) we can identify the influence of the compound structure.

In this paper we will examine seven types of emotion verbs, i.e. happy, depressed, sad, regret, angry, afraid and worried. All the observations and statistics in this paper are based on "Academia Sinica Balanced Corpus of Modern Mandarin Chinese" (abbreviated as "Sinica Corpus" in the following texts), which is a tagged Mandarin corpus containing a total of five million words [CKIP 1995]. We consider only the verbs with a frequency of over 40 in Sinica Corpus. The verbs under examination in the paper are listed in Table 1. There're totally 33 verbs. Four of them are monosyllabic and 29 of them are disyllabic.

Table 1. The verbs of emotion with a frequency of over 40 in the Sinica Corpus.

Subtype	Verbs and the frequency in Sinica Corpus
Happy	KUAILE 快樂(942), GAOXING 高興(669), YUKUAI 愉快(271), LE 樂(264), XIYUE 喜悅(156), KAIXIN 開心(152), HUANLE 歡樂(141), HUANXI 歡喜(107), KUAIHUO 快活(48), TONGKUAI 痛快(40)
Depressed	TONGKU 痛苦(443), TONG 痛(281), NANGUO 難過(232), CHENZHONG 沈重(83), JUSANG 沮喪(62), TONGXIN 痛心(48)
Sad	SHANGXIN 傷心(134), BEISHANG 悲傷(52)
Regret	YIHANG 遺憾(198), HOUHUI 後悔(102)
Angry	SHENGQI 生氣(295), QI 氣(126), FENNU 憤怒(112), QIFEN 氣憤(49)
Afraid	PA 怕(548), HAIPA 害怕(261), KONGJU 恐懼(149), WEIJU 畏懼(40)
Worried	DANXIN 擔心(609), FANNAO 煩惱(199), DANYOU 擔憂(64), FAN 煩(54), YOUXIN 憂心(46), KUNAO 苦惱(45)

2. Observations and generalization

According to Tsai et al (1998), the verbs GAOXING "to be happy" and KUAILE "to be glad" differ in the following four aspects: 1) GAOXING takes a sentential object (7%), while KUAILE cannot, 2) GAOXING takes the sentential-final particle LE (0.7%), while KUAILE cannot, 3) GAOXING never constitutes wish sentences but admits evaluational sentences (1.8%), while KUAILE occurs in wish sentences (2.2%) but never appears in evaluational sentences, and 4) GAOXING forms imperative sentences (1.1%), while KUAILE cannot.

We check the same distinctions with other verbs of emotion and we are surprised to find that most of the observed contrasts above are shared by each subtype of the verbs of emotion. In addition, new distinctions are also added to the list through our thorough observations. According to our study of the seven subtypes of the verbs of emotion, five distinctive features are proposed to make a bipartite classification of the verbs of emotion. The first two features are our new discoveries and are most useful in distinguishing the two groups.

a. the distribution of their various grammatical functions

b. the cooccurrence restriction with the head they modify

c. their appearances in imperative and evaluative constructions

d. verbal aspect or AKTIONSART

e. their transitivity

According to the five criteria all the 29 disyllabic verbs in Table 1 could be divided into two groups. Group A contains the verbs similar to GAOXING, and Group B contains the verbs similar to KUAILE. It's very interesting that for all seven subclasses there is a "default" verb that is the most frequent verb in each group, and for each subclass, the two most frequent verbs form a contrast pair. For the convenience of discussion, only the seven contrast pairs will be thoroughly studied in the following sections.

Table 2. The dichotomy of the verbs of emotion

Subtype	Group A	Group B
Happy	GAOXING 高興(669) KAIXIN 開心(152) TONGKUAI 痛快(40)	KUAILE 快樂(942) YUKUAI 愉快(271) XIYUE 喜悅(156) HUANLE 歡樂(141) HUANXI 歡喜(107) KUAIHUO 快活(48)
Depressed	NANGUO 難過(232) TONGXIN 痛心(48)	TONGKU 痛苦(443) CHENZHONG 沈重(83) JUSANG 沮喪(62)
Sad	SHANGXIN 傷心(134)	BEISHANG 悲傷(52)
Regret	HOUHUI 後悔(102)	YIHAN 遺憾(198)
Angry	SHENGQI 生氣(307)	FENNU 憤怒(112) QIFEN 氣憤(49)
Afraid	HAIPA 害怕(261)	KONGJU 恐懼(149) WEIJU 畏懼(40)
Worried	DANXIN 擔心(609) DANYOU 擔憂(64) YOUXIN 憂心(46)	FANNAO 煩惱(199) KUNAO 苦惱(45)

3. The distinctions

In this section we will examine the differences between the two groups from five syntactic aspects: their grammatical functions, their cooccurrence restrictions, the

appropriateness in the imperative and evaluative construction, the verbal aspect and the transitivity.

3.1 The grammatical functions

Generally speaking, Group A (i.e. GAOXING) verbs are predominantly used as a predicate, while Group B (i.e. KUAILE) verbs are much more often used as a nominalized event or a nominal modifier. We could see the tendency clearly from the following table. Taking the seven representative pairs as examples, we've found that Group A verbs show a very high tendency of being used as a predicate, i.e. no less than 76.12%, while Group B verbs show a lower tendency of no more than 40.38%. On the other hand, Group A verbs are seldom used as a nominalized event, i.e. no more than 3.07%, while Group B verbs are ten-times as likely to represent a nominalized event (frequency of no less than 26.43%.) Being a nominal modifier, the average frequency of Group B verbs is four times as Group A verbs, i.e. 14.20% to 3.73%.

Table 3. The distribution of syntactic functions of the seven pairs

Group A	Total	Pred.	Nom.	N.M.	Adjunct	Comp.	Else
GAOXING 高興	669	85.05%	0.30%	1.35%	11.96%	1.35%	0.00%
NANGUO 難過	232	86.64%	2.16%	2.59%	4.74%	3.88%	0.00%
SHANGXIN 傷心	134	76.12%	2.99%	11.19%	5.97%	3.73%	0.00%
HOUHUI 後悔	102	94.12%	0.00%	2.94%	2.94%	0.00%	0.00%
SHENGQI 生氣	271	87.82%	0.00%	4.06%	7.75%	0.37%	0.00%
HAIPA 害怕	261	93.10%	3.07%	2.68%	1.15%	0.00%	0.00%
DANXIN 擔心	609	96.72%	1.97%	1.31%	0.00%	0.00%	0.00%

Group B	Total	Pred.	Nom.	N.M.	Adjunct	Comp.	Else
KUAILE 快樂	942	37.79%	26.43%	24.84%	5.73%	5.20%	0.00%
TONGKU 痛苦	443	25.73%	45.60%	20.54%	6.09%	2.03%	0.00%
BEISHANG 悲傷	52	40.38%	28.85%	19.23%	9.62%	1.92%	0.00%
YIHANG 遺憾	198	34.85%	33.84%	3.54%	4.04%	0.00%	23.74%[1]
FENNU 憤怒	112	28.57%	37.50%	17.86%	16.07%	0.00%	0.00%
KONGJU 恐懼	149	23.49%	68.46%	7.38%	2.04%	0.00%	0.00%
FANNAO 煩惱	199	24.12%	69.85%	6.03%	0.00%	0.00%	0.00%

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[1] YIHAN could also be used to indicate speaker's judgement as shown in (i). In such cases, it functions as an evaluation adjunct.

(i) 這位　藝術家　的　作品，　很　遺憾地，　今年　無法　展出。
zhewei yishujia de zuopin hen yihandi jinnian wufa zhanchu
this artist 's works very regretfully this year couldn't exhibit
"It's regretful that the works of this artist can't be exhibited this years."

After showing the distribution of the grammatical functions of each verb, now we want to examine the ratio of the two groups in interpreting the same concept. So we have to compare the frequencies of verbs of the same subtype for the three distinctive functions. If there's also consistent contrast between the two groups, it indicates that each of the two groups of verbs do have its own distinctive communicative and functional significance. From the following table we could see that in Sinica Corpus Group A verbs are chosen as a predicate almost **six times** than Group B verbs. On the contrary, Group B verbs are chosen to indicate a nominalized event or a nominal modifier almost **seventeen times** than Group A verbs. The results tell us the most significant functions for distinguishing Group A and B are the functions of being a nominalied event and a nominal modifier.

Table 4. The ratio of Group A and B in being predicate and nom. & Nominal Modifier

Group A/B verbs	Predicate Frequency	Ratio of A over B	Nom. & N.M Frequency	Ratio of B over A
KUAILE 高興/GAOXING 快樂	569/356	1.59	11/483	43.91
NANGUO 難過/TONGKU 痛苦	201/114	1.76	11/293	26.64
SHANGXIN 傷心/BEISHANG 悲傷	102/21	4.86	19/25	1.32
HOUHUI 後悔/YIHAN 遺憾	96/69	1.39	3/74	24.67
SHENGQI 生氣/FENNU 憤怒	238/32	7.44	11/62	5.64
HAIPA 害怕/KONGJU 恐懼	243/35	6.94	15/113	7.53
DANYOU 擔心/FANNAO 煩惱	589/48	12.27	20/151	7.55
Average ratio		5.62		16.75

If we merge the two syntactic behaviors of being a nominalized event and a nominal modifier as the quantitative criterion to "being nominalized", we could effectively divide all the 29 verbs of emotion into Group A and B, as shown in Table 5.[2] We find from the following table, which is sorted according to the merged percentages of the two functions, that all verbs in Group B are precisely on the top part of the sorted list, while all verbs in Group A are precisely located at the bottom of the sorted list. Between two groups there's a very obvious gap: all verbs of Group B are nominalized over 24.49% and all verbs of Group A are nominalized less than 14.18%.

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[2] We may find that even though some verbs in Group B may shown low tendency of nominalization, the same verbs necessarily show a high tendency of being a nominal modifier, such as CHENZHONG 沈重 , KUAIHUO 快活 , and YUHUAI 愉快 .

Table 5. Sorted percentages of being a noun and a nominal modifier of the verbs of emotion

Verbs of Group B	Nom	N.M.	Nom. & N.M.	Verbs of Group A	Nom	N.M.	Nom. & N.M.
XIYUE喜悦	90.38%	1.92%	96.00%	SHANGXIN傷心	2.99%	11.19%	14.18%
HUANLE歡樂	31.91%	60.99%	92.91%	DANYOU擔憂	9.38%	0.00%	9.38%
FANNAO煩惱	69.85%	6.03%	75.88%	KAIXIN開心	1.97%	5.92%	7.89%
KONGJU恐懼	68.46%	7.38%	75.84%	YOUXIN憂心	6.52%	0.00%	6.52%
TONGKU痛苦	45.60%	20.54%	66.14%	HAIPA害怕	3.07%	2.68%	5.75%
FENNU憤怒	37.50%	17.86%	55.36%	NANGUO難過	2.16%	2.59%	4.75%
KUAILE快樂	26.43%	24.84%	51.27%	TONGXIN痛心	2.08%	2.08%	4.17%
CHENZHONG沈重	0.00%	48.19%	48.19%	SHENGQI生氣	0.00%	3.58%	3.58%
BEISHANG悲傷	28.85%	19.23%	48.08%	DANXIN擔心	1.97%	1.31%	3.28%
KUNAO苦惱	35.56%	11.11%	46.67%	HOUHUI後悔	0.98%	2.94%	2.94%
YIHANG遺憾	33.84%	3.54%	37.38%	GAOXING高興	0.30%	1.35%	1.65%
JUSANG沮喪	20.97%	12.90%	33.87%	TONGKUAI痛快	0.00%	0.00%	0.00%
KUAIHUO快活	6.25%	27.08%	33.33%				
HUANXI歡喜	21.50%	9.35%	30.84%				
YUKUAI愉快	7.75%	22.14%	29.89%				
WEIJU畏懼	22.50%	2.50%	25.00%				
QIFEN氣憤	20.41%	4.08%	24.49%				

3.2 The cooccurrence restriction with the head

When the verbs of the two groups are used as a nominal modifier or an adjunct, they show different degrees of cooccurence restrictions with the head they modify. Group A verbs can modify a very restricted set of nouns or verbs, while Group B verbs seems to be much freer.

Group A verbs can only modify six types of nouns, i.e. SHIHOU 時候 / SHI 時 "when", matter/story, mood, facial expressions, person and utterance. Many additional noun classes are modified by Group B, but not Group A, as shown in (1) and (2).

(1) 快樂的　童年　　／快樂的　婚姻　　／快樂的　上班族　　／快樂的　環境
    kuailede tongnian /kuailede hunyin /kuailede shangbanzu /kuailede huanjing
    happy childhood /happy marriage /happy workers /happy environment
    "happy childhood/ happy marriage/ happy workers/ happy environment"

(2) ? 高興的　　　童年　　/? 高興的　　婚姻　　/? 高興的　　上班族　　　/? 高興的　　環境

　　gaoxingde tongnian /gaoxingde hunyin /gaoxingde shangbanzu /gaoxingde huanjing

　　glad　　　childhood/glad　　marriage/glad　　　workers　/glad　　environment

　　"glad childhood / glad marriage / glad workers / glad environment"

As post-verbal adjuncts, both groups can modify transient activities, such as WAN DE HEN GAOXING 玩得很高興 "play happily" and WAN DE HEN KUAILE 玩得很快樂 "play happily". However, only Group B verbs can be the adjunct of non-transient (state-like) activities, such as HUO DE KUAILE 活得快樂 "live happily", GUO DE KUAILE 過得快樂 "live happily", and AO DE HEN TONGKU 熬得很痛苦 "endure terribly".

3.3 The imperative and evaluative constructions

Some verbs of emotion could be used in imperative sentences which contain the deontic modal verbs, as in (3). Many of them can also occur in the evaluative sentences which contain the verb ZHIDE 值得 "be worth" or the phrase MEI SHEME HAO ⋯ DE 沒什麼好⋯的 "be not worth", as in (4). In either case, they lose the prototypical "command" or "evaluation" meaning. Pragmatically both constructions with verbs of emotion have the same "dissuading" function.[3]

(3) 別　　傷心　　/ 莫　　傷心　　/ 不要　　傷心 ·

　　bie　shangxin /mo　shangxin /buyao　shangxin

　　don't sad　　/don't sad　　/don't　　sad.

　　"Please don't feel sad."

(4) 不　　值得　傷心　/ 沒　　什麼　　好　　傷心　　的 ·

　　bu　zhide shangxi /mei　sheme　hao　shangxin　de

　　NEG worth sad　　/without anything　worth sad　　　PARTICLE

　　"It doesn't worth to feel sad. /There's nothing deserve your sadness.

　　(Please don't feel sad.)"

From Sinica Corpus we find that 1) all Group A verbs appear in the imperative or the evaluative constructions, and 2) with only one major exception, i.e. the verb FANNAO, Group B verbs do not appear in the two constructions, as shown in Table 6.

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[3] In most cases, the verbs of emotion appear in the evaluation constructions are not just expressing speaker's judgement, but to "dissuade" the listener from the stated emotion.

Table 6. *The imperative and evaluative usages of the seven pairs*

Types	Group A				Group B			
	Verbs	Imp.	Eva.	Total	Verbs	Imp.	Eva.	Total
Happy	GAOXING 高興	6	6	12	KUAILE 快樂	0	0	0
Depressed	NANGUO 難過	10	1	11	TONGKU 痛苦	0	0	0
Sad	SHANGXIN 傷心	4	0	4	BEISHANG 悲傷	0	0	0
Regret	HOUHUI 後悔	3	0	3	YIHANG 遺憾	1	0	1
Angry	SHENGQI 生氣	12	0	12	FENNU 憤怒	0	0	0
Afraid	HAIPA 害怕	9	0	9	KONGJU 恐懼	0	0	0
Worried	DANXIN 擔心	78	2	80	FANNAO 煩惱	6	1	7

3.4 Verbal aspect or AKTIONSART

Verb of emotion expresses a mental state. It could indicate either a homogeneous state, as in (5), or an inchoative state, as in (6).

```
(5) 他    爲   此    事      傷心         不已﹒
    ta   wei  ci   shi    shangxin    buyi
    he   for  this matter sad         continuous
    "He feel sad for this for quite a long time."
```

```
(6) 他   一    想起     妻子  已經    死    了﹐   就     傷心      了   起來﹒
    ta   yi   xiangqi  qizi yijing  si   le    jiu    shangxin  le   qilai
    he   once think of wife already die  LE    then   sad       LE   asp.
    "He felt sad whenever the thought come into his mind that his wife has died."
```

The particle LE is used to indicate an inchoative state[4] and could also be used to distinguish the two groups. We find in Sinica Corpus that in each contrast pair, the verb in Group A associates with the particle LE more times as the one in Group B, as shown in Table 7.

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[4] Li & Thompson (1981), among others, characterized the sentential-final particle LE as marking a new state, and LE attached to a verb as marking the perfective aspect. However, the particle LE after the state verbs is used to indicate a change of the state, no matter it is located after the verb or the whole sentence.

Table 7. *Emotional verbs' association with the sentential final particle LE*

Types	Group A		Group B	
	Verbs	Frequency	Verbs	Frequency
Happy	GAOXING 高興	20	KUAILE 快樂	10
Depressed	NANGUO 難過	9	TONGKU 痛苦	0
Sad	SHANGXIN 傷心	2	BEISHANG 悲傷	1
Regret	HOUHUI 後悔	7	YIHANG 遺憾	0
Angry	SHENGQI 生氣	14	FENNU 憤怒	0
Afraid	HAIPA 害怕	5	KONGJU 恐懼	2
Worried	DANXIN 擔心	6	FANNAO 煩惱	3

3.5 Transitivity

The verbs of emotion take either a cause event or a goal[5] as the direct object. In last section we've shown that a verb of emotion could indicate an inchoative state. A new state does not happen without a cause and thus pragmatically all the emotion could be caused by an event. But syntactically only the verbs of happiness, afraid and worried usually take the cause event as the object. More precisely, only Group A verbs of happiness, afraid and worried could take the cause event as the direct object, while Group B verbs can't, as demonstrated in (5) and (6)[6], as well as Table 8.

(7) 他們　　很　　高興　　　張三　　　沒　　走· (Tsai 1998)
　　 tamen　hen　gaoxing　zhangsan　mei　zou
　　 they　 very　glad　　 John　　 doesn't　go
　　 "They were glad that John didn't go."

---

[5] A goal is a referential entity, and in most cases a human. Though the goal could also be viewed as the causer of the emotion, it could be easily distinguished from cause events.

[6] For those verbs which don't take the cause event as the direct object, the cause event shows up in other positions, such as an adjunct PP (i), or clause (ii).

(i) 為了 這 件 事,　 我　曾　傷心　了　好久·
　　 weile　zhe jian shi　 wou ceng shangxin le　hao jiu
　　 for　 this piece matter　I　ever sad　　 LE quite long time
　　 "I've felt sad for the matter for quite a long time."

(ii) 母　 子 竟 不得　 見面,　怎麼　 能 不　傷心　 呢?
　　 mu　 zi jing bude　jianmian zhenme neng bu　shangxin　ne
　　 mother son dare couldn't meet　how　 can　not sad　 NE
　　 "How can't they feel sad since the mother and the son can't meet each other."

(8) * 他們　　很　　快樂　張三　　　沒　　走・ (Tsai 1998)
　　　tamen　hen　kuaile　zhangsan　mei　zou
　　　they　very　glad　John　　　doesn't　go
　　　"They were happy that John didn't go."

As to the argument "goal", only the verbs of angry, afraid and worried semantically take this kind of argument and thus syntactically take them as the direct object. However, we've found in Sinica Corpus that only Group A verbs in those types could take the goal as the direct object, while Group B verbs as a rule don't take the goal as the direct object, as shown in the following table.

Table 8. *The transitive usages of the four representative pairs*

Group A	-Cause Event		-Goal	Group B	-Cause Event		-Goal
	-VP/S	-Event N	-Simple N		-VP/S	-event N	-Simple N
GAOXING 高興	69	3	0	KUAILE 快樂	0	0	0
SHENGQI 生氣	0	0	0/12[7]	FENNU 憤怒	0	0	0
HAIPA 害怕	68	9	8	KONGJU 恐懼	3	0	2
DANXIN 擔心	285	17	35	FANNAO 煩惱	2	0	2

4. Semantic explanation

In this section we will first summarize the contrast, and then propose a semantic explanation.

4.1 The distinctive features

In section 3 we've shown the syntactic basis for our bipartite classification of the verbs of emotion. There're five syntactic distinctive features and we should notice that each of them is not a YES-NO criterion. The two groups differ in term of tendency. One of the two groups dominate in each of the five grammatical representations, as shown in the following.

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[7] Generally speaking, SHENGQI is always an intransitive verbs, and the object can only be inserted to the verb, such as SHENG TA DE QI 生他的氣 .

Group A verbs:

1. Function mostly as a PREDICATE and seldom used as a noun or a nominal modifier;
2. Have strict cooccurrence restriction with the head when they are used as a nominal modifier or a post-verbal adjunct;
3. Often appear in imperative or evaluative constructions;
4. Often representing inchoative states; and
5. Often taking a cause event or a goal as their direct object.

Group B verbs:

1. Are more likely to be a NOMINALIZED EVENT or a NOMINAL MODIFIE than Group A verbs and they are not as often used as a verb as Group A verbs
2. Have wider range of cooccurrence restriction with the head when they are use as a nominal modiffier or a post-verbal adjunct.
3. Seldom used in imperative or evaluative constructions;
4. Rarely co-occur with inchoative state; and
5. Seldom take a cause event or a goal as their direct object.

4.2 The semantic basis for the bipartite classification

Take note that the 14 verbs we study form seven contrast pairs belonging to the same semantic field. If the same consistent contrasts differentiate all seven pairs, we may assume that there is a fundamental semantic motivation underlying all these contrasts. It will be highly unlikely if these five contrasts were each independently motivated and all seven contrast pairs have the identical distribution of all the semantic attributes involved.

It is also important to note that each two verbs in a contrast pair differ minimally in semantics and are mutually substitutable in many contexts. We may understand the behavioral contrasts we observed better by rephrasing the question as follows:

Why is Group A verbs chosen over Group B verbs (and vice versa) in construction X?

In light of this question, we will be more likely to identify the inherent semantic distinction between the two groups and the bipartite contrast may turn out to be the result of semantically primary contrast. In anticipation of this interpretation we summarize and reorganize the contrast between the two groups as follows:

Table 9. Contrasts in linguistic distribution

Linguistic Instantiation	Group A	Group B
Predicate	**Strong**	Weak
Inchoative states	**Predominate**	Rare
Transitivity	**Strong**	Weak
Imperative or evaluative constructions	**Predominate**	Rare
Adjuncts to non-transient activities	Rare	**Predominate**
Adjuncts to nouns	Weak	**Strong**
Nominalization	Rare	**Predominate**

From the above contrast, we can see that all the distinctive linguistic instantiations are related to event structure properties. Generally speaking, Group A is preferred to indicate **transition**, while Group B is preferred for **homogeneity**. In particular, when we want to indicate a change of state, such as with the change-of-state LE, we usually use Group A verbs. When an object or cause is represented to focus on the transition to new state, again Group A verbs are preferred. When dissuasion is intended, Group A verbs are usually used in the imperative and evaluative constructions.

On the other side, Group B verbs are preferred to indicate continuous and homogeneous states. That's why only Group B verbs are used to modify non-transient verbs and ascribe attributes to nouns. That's also why it is Group B verbs are preferred as deverbal nouns, since a referential entity is regarded as a whole unit and thus homogeneous composition is implied.

5. Discussion

In this section we will explore and explain the close relationship between the sub-lexical structure of these compound verbs and the bipartite classification.

5.1 The sub-lexical structure of these compound verbs

It is interesting to find that the inter structures of these compounds are related to the distinctions of the two groups. From the following lists we may find that 14 of 16 verbs in Group B are VV compounds, while all 13 verbs in Group A are not VV compounds.

Group A: GAOXING 高興 (non-VV), NANGUO 難過 (non-VV), HOUHUI 後悔 (non-VV), TONGKUAI 痛快 (non-VV), DANYOU 擔憂 (non-VV), SHENGQI 生氣 (non-VV), CHIJIN 吃驚 (non-VV), DANXIN 擔心 (non-VV), SHANGXIN 傷心 (non-VV), KAIXIN 開心 (non-VV), YOUXIN 憂心 (non-VV), TONGXIN 痛心 (non-VV), HAIPA 害怕 (non-VV)

Group B: KUAILE 快樂 (VV), XIYUE 喜悅 (VV), HUANLE 歡樂 (VV), FANNAO 煩 (VV) KONGJU 恐懼 (VV), TONGKU 痛苦 (VV), FENNU 憤怒 (VV), CHENZHONG 沈重 (VV), BEISHANG 悲傷 (VV), KUNAO 苦惱 (VV), YIHANG 遺憾 (AN or VO)[8], JUSANG 沮喪 (VV), KUAIHUO 快活 (VV or AV)[9], HUANXI 歡喜 (VV), YUKUAI 愉快 (VV), WEIJU 畏懼 (VV)

5.2 A semantic interpretation for the VV compounds

We have shown that all VV compounds under examination belong to Group B, which means that all VV compounds are usually used to indicate homogenous states. We argue that it's due to some semantic properties of VV compounds.

Generally, VV compounds are distinguished from the SV, VO, AV and VR compounds by the compounding process which incorporates different semantic components to the event structure. In contrast to the other major structures of verb compounding, VV compounds has an important characteristic. In all the other constructions, the V takes one more constituent to elaborate on the event to make it either more complete or more specific. In SV the subject is added to the event structure, in VO an object is incorporated into the event structure, in AV the manner of executing an action is described, and in VR the result of the action is clearly indicated. But a VV compound is leading to another direction. In VV, the concept of an event is "diffused" after combining two similar events, since speaker will extract the common attributes of the pair. It is a common morpho-lexical strategy in Mandarin to concatenate two antonyms or synonyms to form the concept of "kind" or "property". For example, the word DAXIAO 大小 , which is composed of DA "big" and XIAO "small", means "size".

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[8] YIHAN could be viewed as a VO compound verb, but also an AN compound noun, because it could be interpreted as an abbreviation of the idiom: YICHUZHIHAN 遺珠之憾 "the regret of missing one pearl", and thus be realized as a noun. If it's true, YIHAN is originally as a noun. As a verb of emotion, it is a denominal verb formed through abbreviation.

[9] The inner structure of KUAIHUO is hard to decide. It might be VV (happy and vivid) or AV (live happily).

Since the concept of an event is diffused or lifted to "kind/property", it's natural for the VV compounds to be chosen to indicate a homogeneous state, but awkward to indicate an inchoative state. That's why we usually select VV compounds to indicate a more referential context, such as a nominalized event or a nominal modifier. It's also a natural consequence that the VV verbs of emotion are seldom chosen to be used in imperative and evaluative constructions, since in both constructions transitional verbal characteristics are highlighted, which is contrary to the nature of a VV compound.

6. Conclusion

In this paper we have illustrated a consistent contrast in seven types of the verbs of emotion and also propose a semantic interpretation to the contrast. Generally speaking, Group A verbs could be used to indicate inchoative states, and thus are mainly used as a predicate and could be used transitively and in imperative and evaluative constructions. On the contrary, Group B verbs can only indicate homogeneous states, and thus show higher tendency of nominalization and are used as powerful modifiers in being a nominal modifier or an adjunct.

We have found that all VV compounds belong to the second group and proposed a semantic explanation for the distribution. In the process of composing an event structure, the VV compound is undergoing a process of merging two individual events and creates a fuzzy concept to contain both events, while the other compounds are undergoing a process of adding a component to the event structure and thus create a more concrete and precise concept.

On the research of the regularities between word meaning and it's syntactic behaviors, it's very important to distinguish the construction meaning and the core meaning. We believe that the regularities we've extracted from the VV compounds in the semantic field of emotion exist in all Mandarin VV compounds. A preliminary study shows that all VV compounds in Sinica Corpus do have a higher tendency of nominalization. We will continue our research on VV compounds and expect more findings on the construction meaning of compounds.

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4. Abstract to the 5th Conference on Conceptual Structure, Discourse and Language (CSDL-5)

Categorical Structure and Semantic Representation
of Mandarin Verbs of Communication

At the core of our conceptual structure is the complex information encoded by verbs. As semantic categories, classes of verbs are formed and organized with unique conceptual properties. Within each class, the meaning of an individual verb not only determines its syntactic behavior but also reflects the conceptual 'ingredients' that the lexicon is sensitive to. However, what exactly is the semantic distinction that underlies the categorization of verbal concepts? While extensive research has been done on English verbal semantics (cf. Levin et al 1997, Pustejovsky 1995, Levin 1993, Atkins and Levin 1991, Croft 1991, Jackendoff 1990, Atkins et al. 1988, etc.), the Mandarin verbal system remains to be explored. This paper aims to report a cognitive semantic study of Mandarin verbs of communication. By examining and defining the distinct sub-categories, this paper shows how the semantic-syntactic interdependencies can be utilized to establish the categorical structure for verbs of communication. The verbal information is then incorporated in a recently-developed framework for lexical semantic representation called MARVS (Module-Attribute Representation of Verbal Semantics, Huang and Ahrens 1999). The framework takes each verbal sense as conveying one unique eventive structure and seeks to represent all syntactically relevant information with modular and attributive characterization.

As a class, Mandarin verbs of communication involve four prototypical conceptual components: Message-sender, Audience, Message, and Purpose of Communication. Based on variations or conflation of the four components, the verbs can be grouped into seven sub-classes, each of which corresponds to a clustering of grammatical distinctions in role selection, argument placing, aspectual composition and domain for metaphorical extension. The sub-classes display a radial structure of their own by having a core member which is semantically 'underspecified' compared to the non-core members with further specifications. The semantic details that distinguish these members are pertaining to various role-internal or event-internal attributes. Take verbs of expressing as an example. The non-core members (*biaoshi* vs. *biaolu*) encode different types of object-theme: whether it is informational or attitudinal. Another example is the synonymous verbs of discussion, *taolun* vs. *shangliang* (both translated as 'discuss'). They differ mainly in that the object-theme of *shangliang* is 'measured out' by the verb (Tenny 1992) and should thus be characterized as an 'incremental theme' (Dowty 1991), while the object-theme of *taolun* is independent of the event.

By exploring the semantic-syntactic interdependencies pertaining to verbs of communication, the study is able to identify the meaning components that are crucial for conceptual distinction and ultimately represents the categorical information in a systematic and principled way.